Business Papers 2023

MID-WESTERN REGIONAL COUNCIL

ORDINARY MEETING
WEDNESDAY 16 AUGUST 2023

SEPARATELY ATTACHED ATTACHMENTS

A prosperous and progressive community we proudly call home

Mid-Western Regional Council

ATTACHMENTS

KFC MUDGEE

33 HORATIO STREET, MUDGEE, NSW 2850

AUGUST 2021

FOR DA APPROVAL

ARCHITECTURAL DRAWINGS

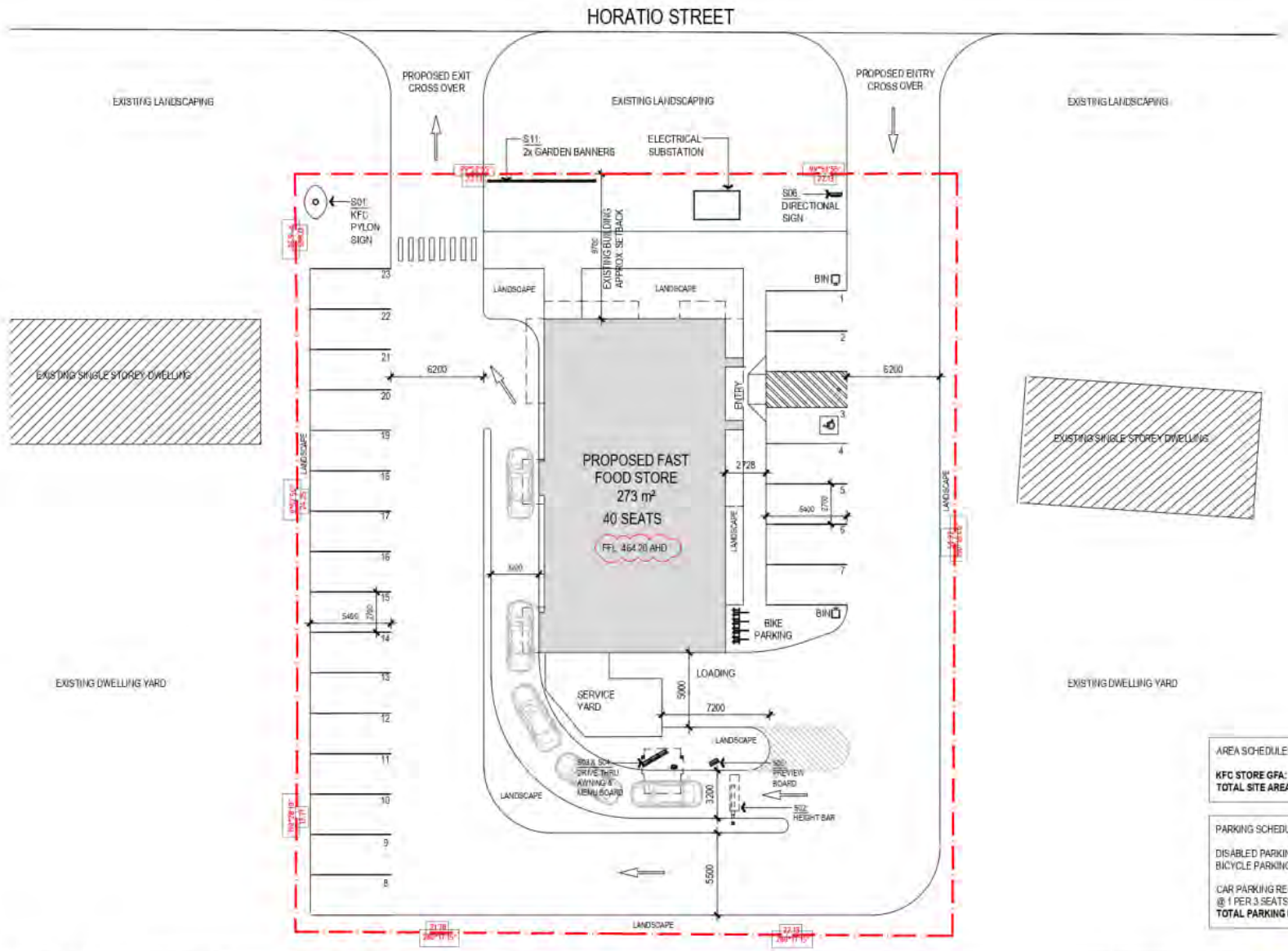
DRAWING No.	DRAWING TITLE
TP000	COVER SHEET
TP100	PROPOSED SITE PLAN
TP110	PROPOSED LANDSCAPE PLAN
TP200	PROPOSED FLOOR PLAN
TP201	PROPOSED ROOF PLAN
TP300	PROPOSED ELEVATIONS SHEET 1
TP301	PROPOSED ELEVATIONS SHEET 2
TP302	PROPOSED 3D VIEWS
TP400	SIGNAGE DETAILS

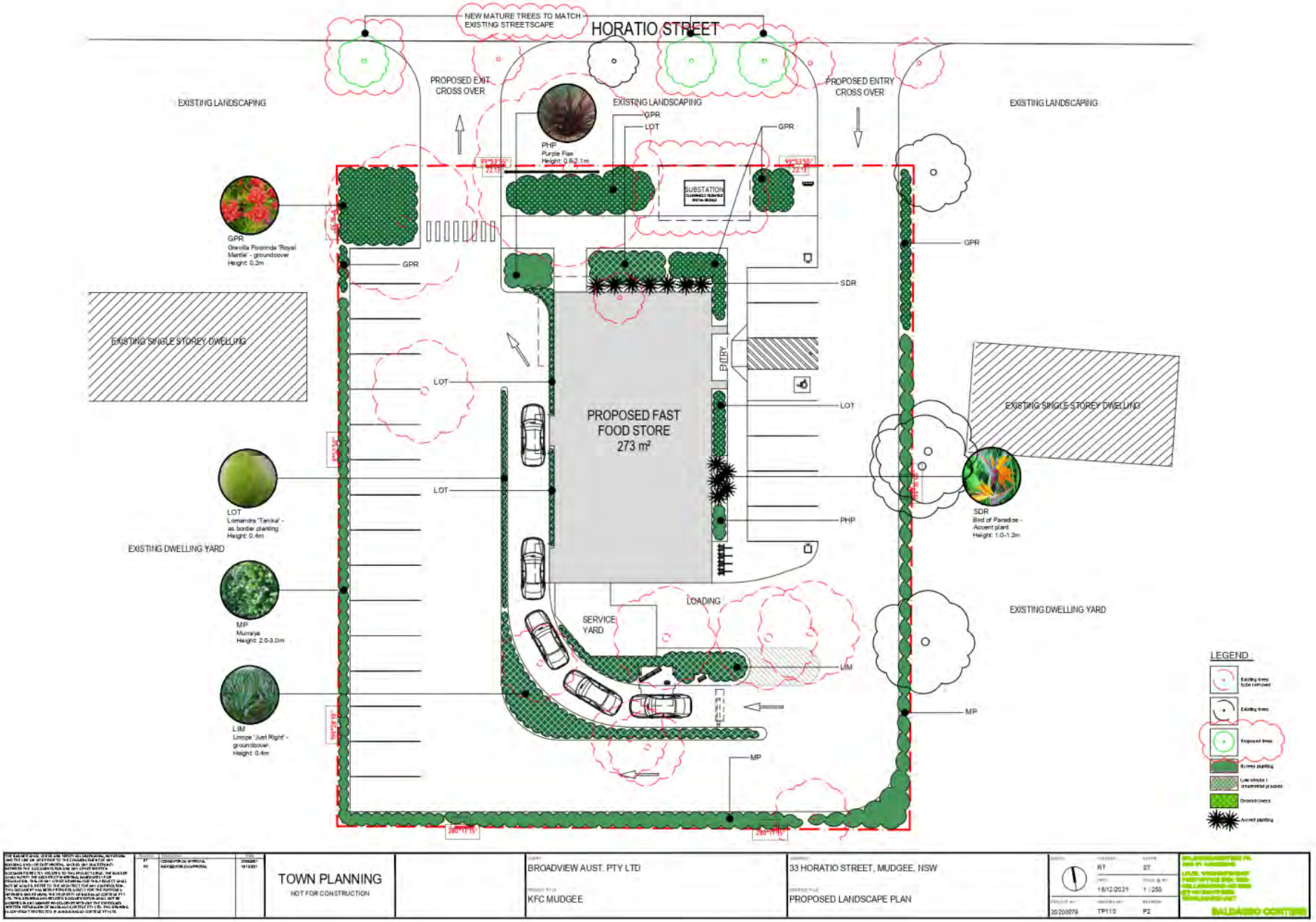
TOWN PLANNING
NOT FOR CONSTRUCTION

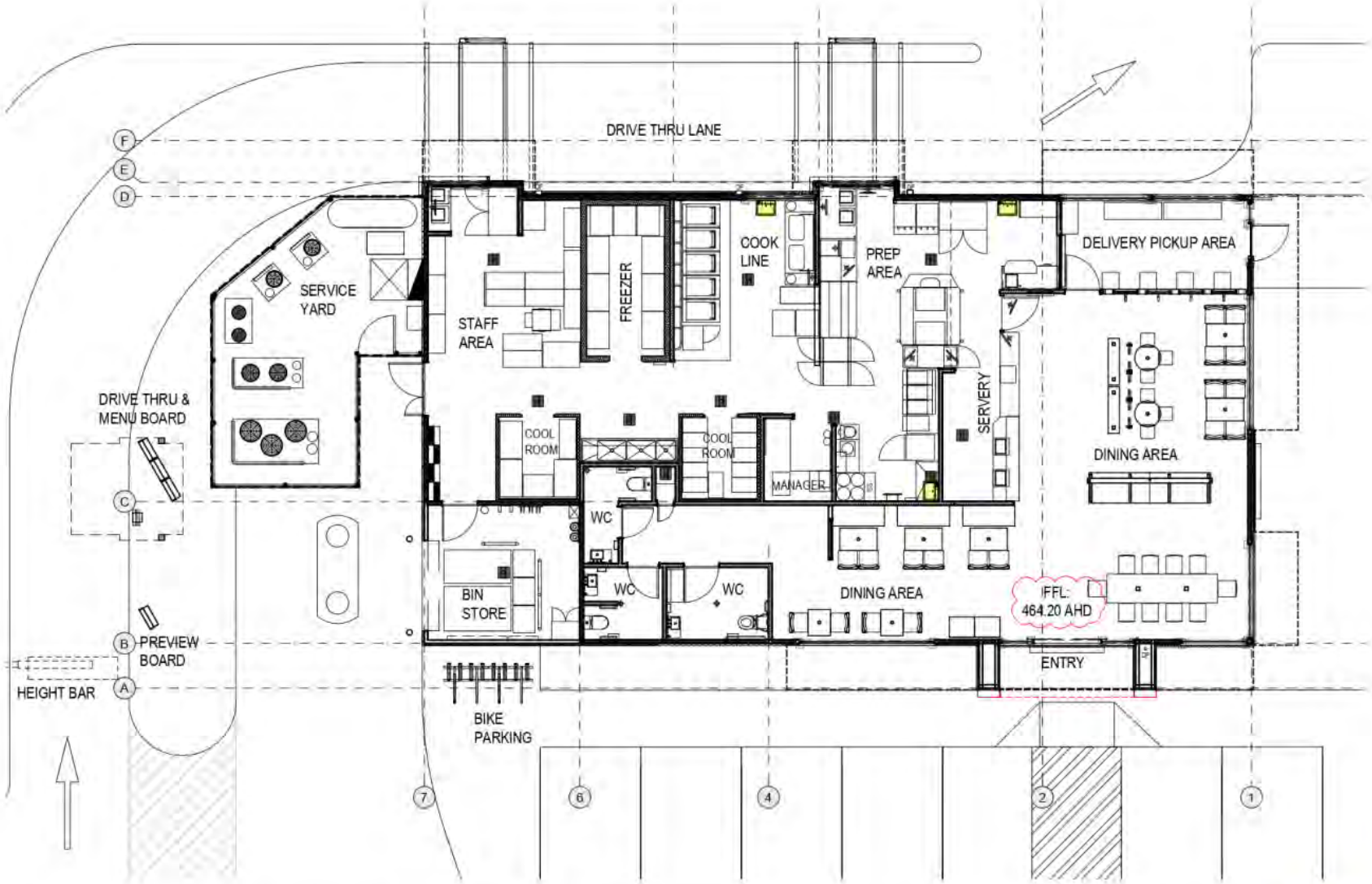
BROADVIEW AUST PTY LTD
KFC MUDGEE

33 HORATIO STREET, MUDGEE, NSW
COVER SHEET

RE
27/08/2021
TP000
P1


HORATIO STREET
PROPOSED EXIT CROSS OVER
PROPOSED ENTRY CROSS OVER
EXISTING LANDSCAPING
EXISTING LANDSCAPING
EXISTING LANDSCAPING
S11: 2x GARDEN BANNERS
ELECTRICAL SUBSTATION
S01: KFC PYLON SIGN
S06: DIRECTIONAL SIGN
EXISTING BUILDING APPROX. SETBACK
LANDSCAPE
LANDSCAPE
BIN
EXISTING SINGLE STOREY DWELLING
EXISTING SINGLE STOREY DWELLING
6200
6200
ENTRY
PROPOSED FAST FOOD STORE
273 m²
40 SEATS
FFL 464.20 AHD
2728
6400
2700
LANDSCAPE
LANDSCAPE
LANDSCAPE
BIN
BIKE PARKING
EXISTING DWELLING YARD
EXISTING DWELLING YARD
LOADING
SERVICE YARD
5000
7200
LANDSCAPE
S03 & S04: DRIVE THRU AWNING & MENU BOARD
S05: PREVIEW BOARD
S02: HEIGHT BAR
3200
5500
LANDSCAPE
LANDSCAPE
5400
AREA SCHEDULE
KFC STORE GFA: 273m²
TOTAL SITE AREA : 2233m²
PARKING SCHEDULE
DISABLED PARKING: 1 SPACE
BICYCLE PARKING: 4 SPACES
CAR PARKING REQUIRED: 14
@ 1 PER 3 SEATS
TOTAL PARKING PROVIDED: 23
TOWN PLANNING
NOT FOR CONSTRUCTION
BROADVIEW AUST. PTY LTD
KFC MUDGEE
33 HORATIO STREET, MUDGEE, NSW
PROPOSED SITE PLAN
07/06/2023
1 : 250
TP100
P2


NEW MATURE TREES TO MATCH EXISTING STREETSCAPE
HORATIO STREET
PROPOSED EXIT CROSS OVER
PROPOSED ENTRY CROSS OVER
EXISTING LANDSCAPING
EXISTING LANDSCAPING
EXISTING LANDSCAPING
PHP
Purple Flax
Height: 0.6-2.1m
GPR
LOT
GPR
SUBSTATION
GPR
Grevillea Poorinda 'Royal Mantle' - groundcover
Height: 0.2m
GPR
GPR
SDR
EXISTING SINGLE STOREY DWELLING
ENTRY
LOT
LOT
EXISTING SINGLE STOREY DWELLING
PROPOSED FAST FOOD STORE
273 m²
LOT
LOT
Lomandra 'Tanika' - as border planting
Height: 0.4m
PHP
SDR
Bird of Paradise - Accent plant
Height: 1.0-1.2m
EXISTING DWELLING YARD
MP
Murraya
Height: 2.0-3.0m
LOADING
SERVICE YARD
EXISTING DWELLING YARD
LIM
LIM
Liriope 'Just Right' - groundcover
Height: 0.4m
MP
MP
LEGEND
Existing trees to be removed
Existing trees
Proposed trees
Screen planting
Low shrubs / ornamental grasses
Groundcovers
Accent planting
TOWN PLANNING
NOT FOR CONSTRUCTION
BROADVIEW AUST. PTY LTD
KFC MUDGEE
33 HORATIO STREET, MUDGEE, NSW
PROPOSED LANDSCAPE PLAN
RT
ST
18/12/2021
1 :250
20200079
TP110
P2
BALBASSO CONTRACTING



TOWN PLANNING
NOT FOR CONSTRUCTION

BROADVIEW AUST. PTY LTD

KFC MUDGEE

33 HORATIO STREET, MUDGEE, NSW

PROPOSED FLOOR PLAN

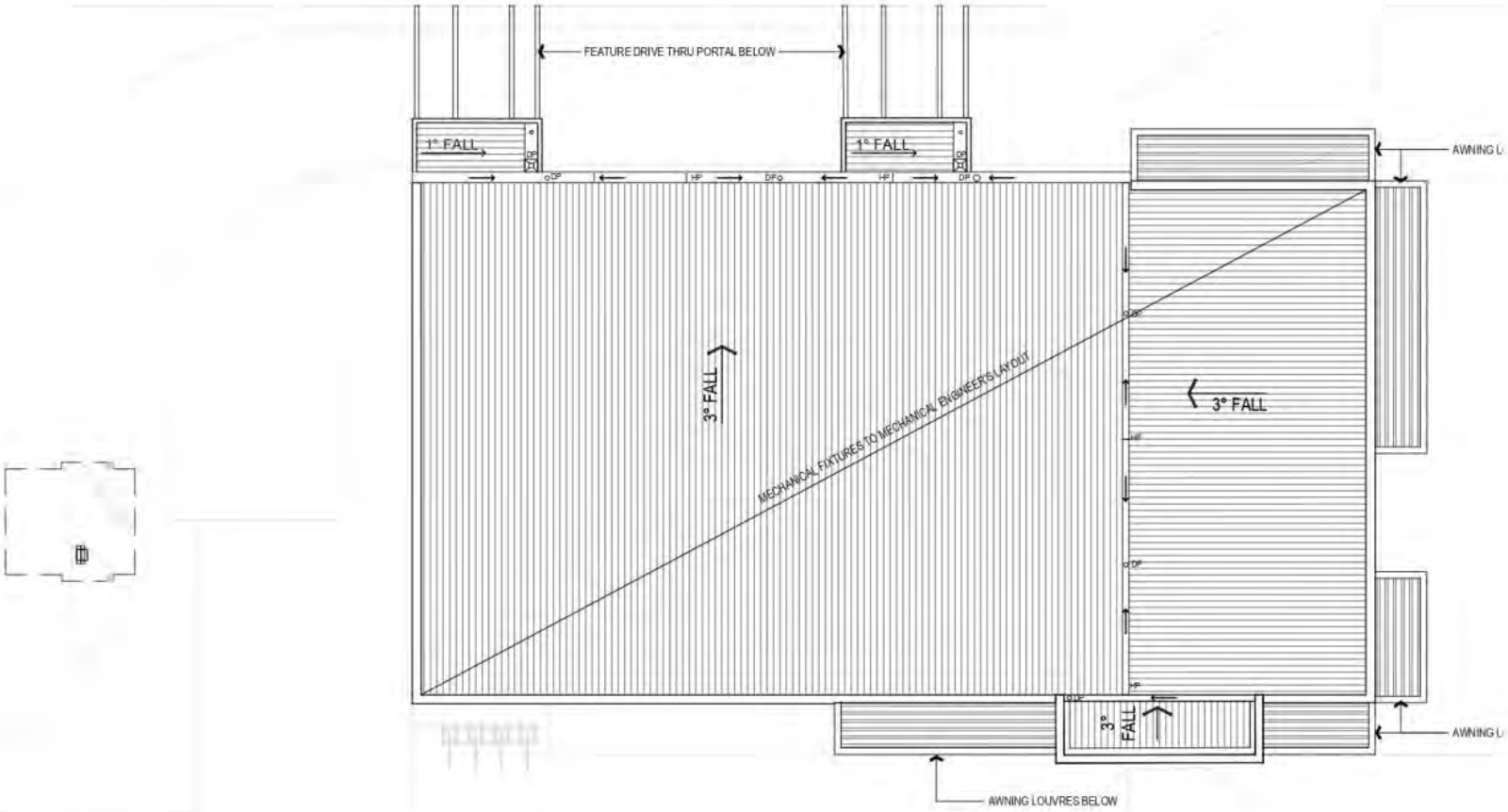
07/06/2023

1:100

20200916

TP200

P2



TOWN PLANNING
NOT FOR CONSTRUCTION

BROADVIEW AUST. PTY LTD

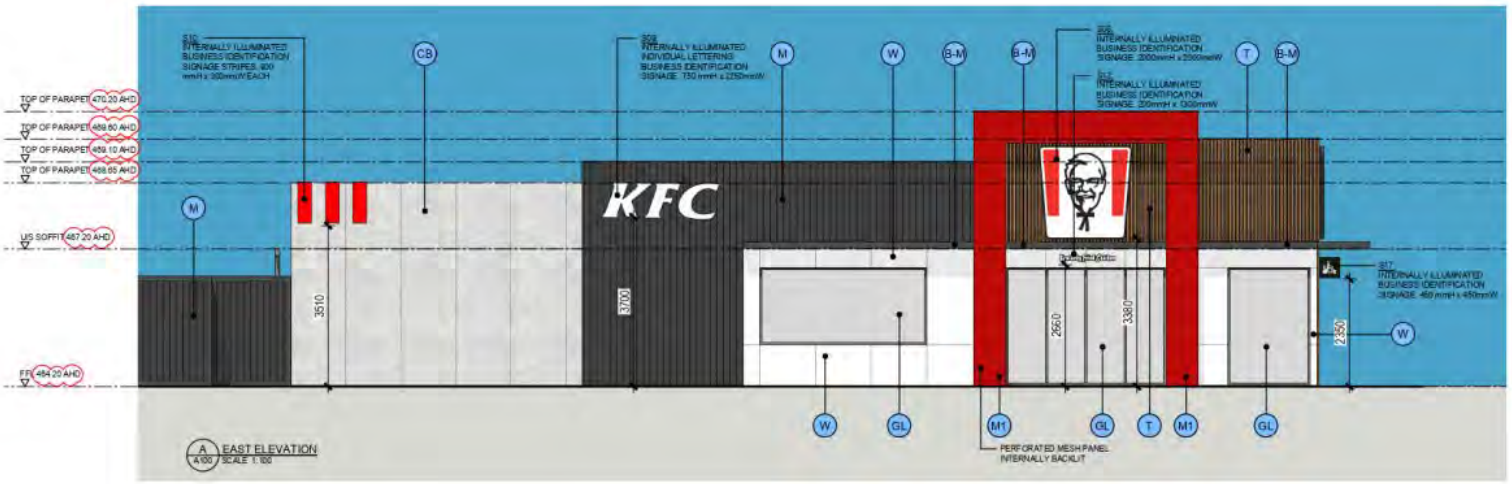
KFC MUDGEE

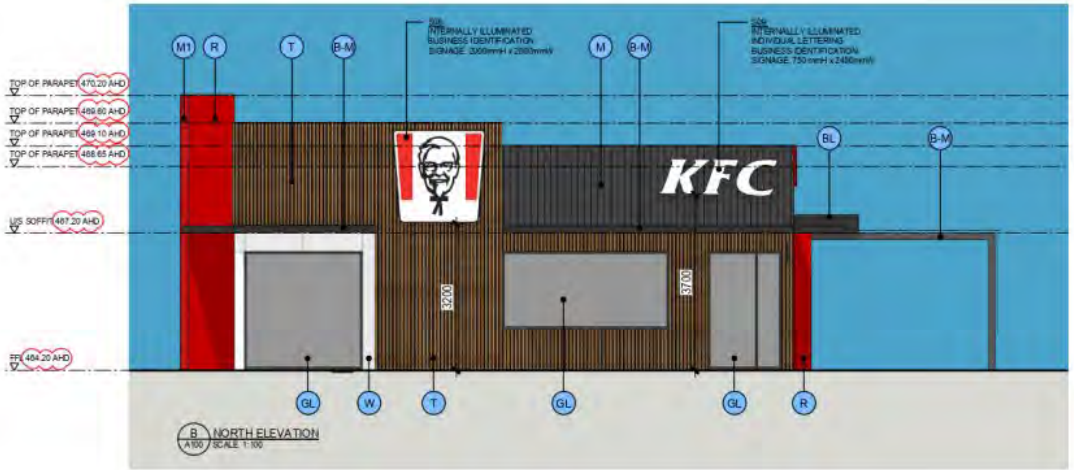
33 HORATIO STREET, MUDGEE, NSW

PROPOSED ROOF PLAN

RT | ST
27/08/2021 | 1 : 100
202000 79 | TP 201 | P1

BALDWINS-CORTEN

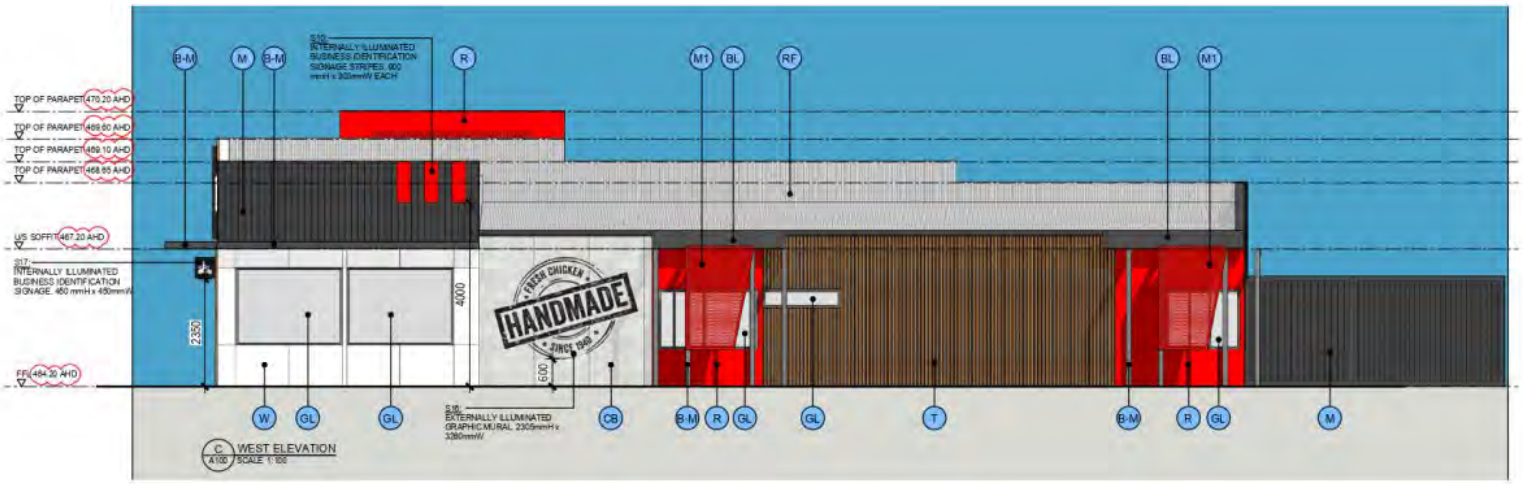


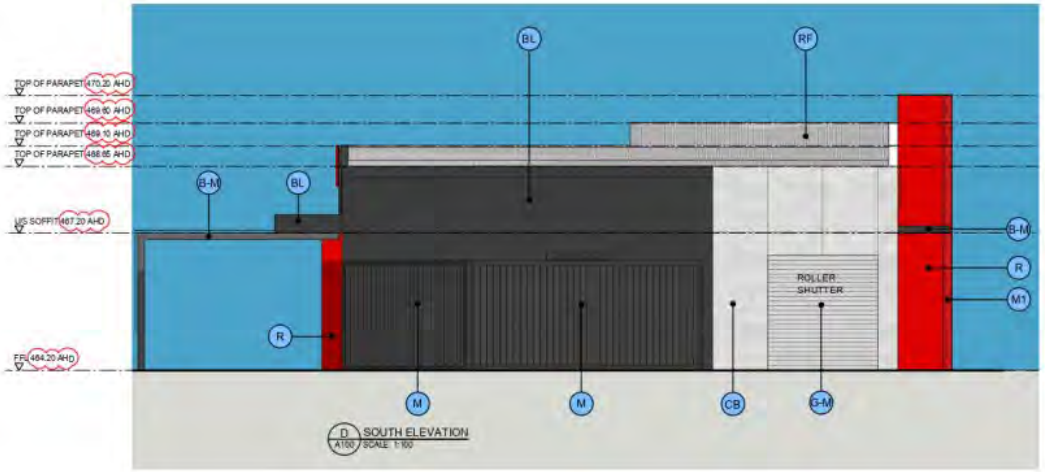


FINISHES SCHEDULE

	BL	PAINT FINISH: BLACK
	R	PAINT FINISH: RED
	W	PAINT FINISH: WHITE
	M	COLORBOND LONGLINE 305 WALL SHEETING
	CB	FC WALL SHEETING : CONCRETE LOOK
	T	CLIP-ON TIMBER-LOOK BATTENS
	B-M	POWDERCOAT FINISH: BLACK
	G-M	POWDERCOAT FINISH: GREY
	M1	METAL SCREEN: RED
	RF	STEEL ROOF SHEETING: GREY
	GL	CLEAR GLAZING FOR DOORS AND WINDOWS

			TOWN PLANNING NOT FOR CONSTRUCTION	BROADVIEW AUST. PTY LTD KFC MUDGEE	33 HORATIO STREET, MUDGEE, NSW PROPOSED ELEVATIONS SHEET 1	RT 07/08/2023 20200079	ST 1 : 100 TP300 P2





FINISHES SCHEDULE

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	CB	FC WALL SHEETING : CONCRETE LOOK
	T	CLIP-ON TIMBER-LOOK BATTENS
	B-M	POWDERCOAT FINISH: BLACK
	G-M	POWDERCOAT FINISH: GREY
	M1	METAL SCREEN: RED
	RF	STEEL ROOF SHEETING: GREY
	GL	CLEAR GLAZING FOR DOORS AND WINDOWS

			TOWN PLANNING NOT FOR CONSTRUCTION	BROADVIEW AUST. PTY LTD KFC MUDGEE	33 HORATIO STREET, MUDGEE, NSW PROPOSED ELEVATIONS SHEET 2	RT 07/08/2023 20200079	ST 1 : 100 TP301 P2

1 PROPOSED 3D PERSPECTIVE 1
SCALE NTS

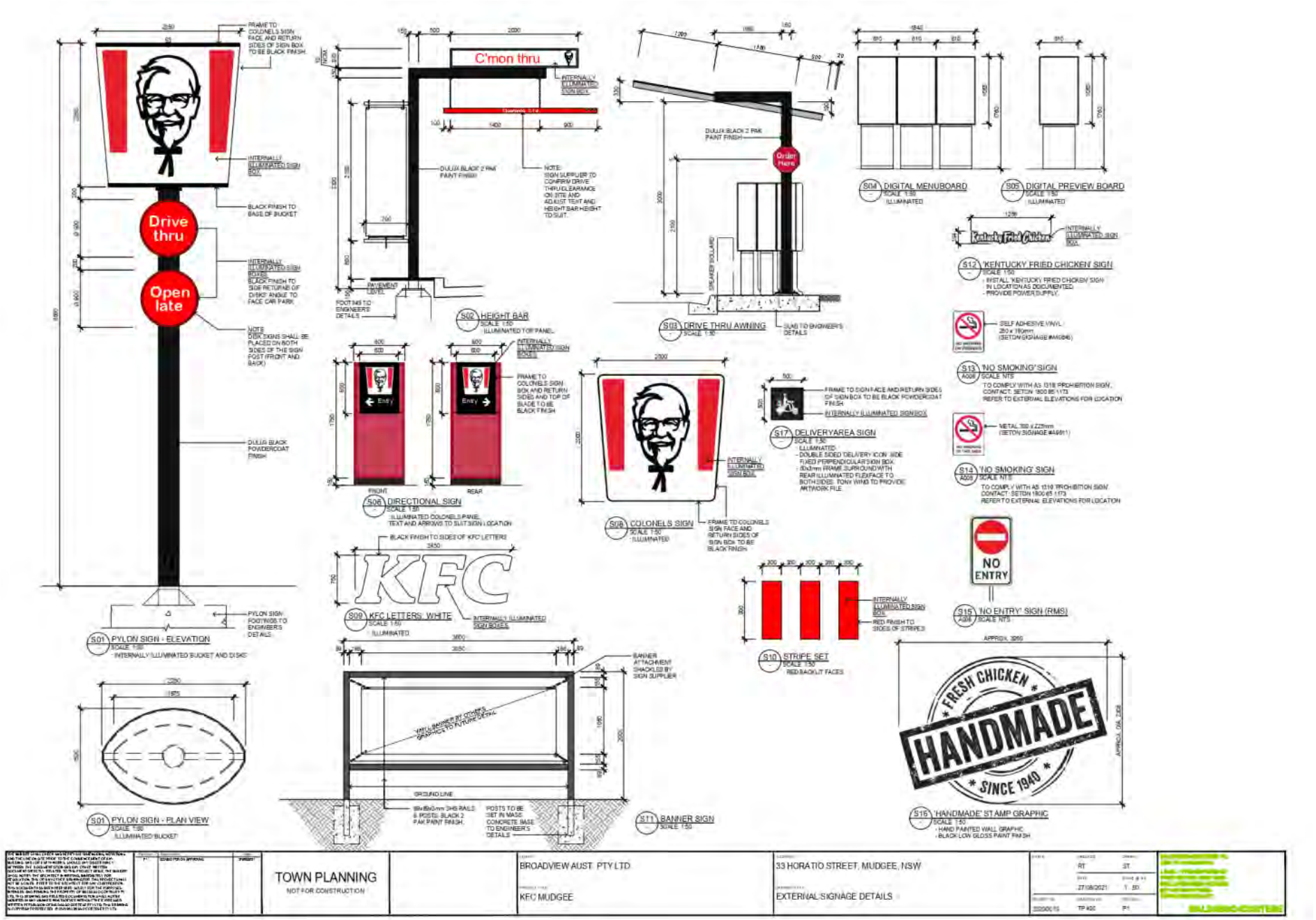
2 PROPOSED 3D PERSPECTIVE 2
SCALE NTS

3 PROPOSED 3D PERSPECTIVE 3
SCALE NTS

4 PROPOSED 3D PERSPECTIVE 4
SCALE NTS

	P1	ISSUED FOR DA APPROVAL		TOWN PLANNING NOT FOR CONSTRUCTION	BROADVIEW AUST. PTY LTD KFC MUDGEE	33 HORATIO STREET, MUDGEE, NSW PROPOSED 3D VIEWS	RT / ST 27/08/2021 / NTS 20200079 / TP302 / P1

BALDASSO-CORTESE


Drive thru
Open late
S01 PYLON SIGN - ELEVATION
S01 PYLON SIGN - PLAN VIEW
C'mon thru
S02 HEIGHT BAR
S03 DRIVE THRU AWNING
Order Here
S04 DIGITAL MENUBOARD
S05 DIGITAL PREVIEW BOARD
S06 DIRECTIONAL SIGN
Entry
S08 COLONELS SIGN
S09 KFC LETTERS: WHITE
KFC
S10 STRIPE SET
S11 BANNER SIGN
S12 'KENTUCKY FRIED CHICKEN' SIGN
S13 'NO SMOKING' SIGN
S14 'NO SMOKING' SIGN
S15 'NO ENTRY' SIGN (RMS)
NO ENTRY
S16 'HANDMADE' STAMP GRAPHIC
FRESH CHICKEN
HANDMADE
SINCE 1940
TOWN PLANNING
NOT FOR CONSTRUCTION
BROADVIEW AUST PTY LTD
KFC MUDGEE
33 HORATIO STREET, MUDGEE, NSW
EXTERNAL SIGNAGE DETAILS

KFC MUDGEE
33 HORATIO STREET
MUDGEE, NSW
CIVIL DRAWINGS

DRAWINGS LIST

LOCATION PLAN
SCALE 1:1000 AT A1

NOTE:
THIS IS A PLANNING DRAWING ONLY, FOR THE PURPOSE OF CONCEPTUAL DESIGN AND/OR PLANNING. FURTHER DETAILED ENGINEERING DESIGN INCLUDING SPECIFICATIONS, SIZING AND STORMWATER INVERTS TO BE PROVIDED PRIOR TO BUILDING RULES ASSESSMENT AND CONSTRUCTION.

10.0m 0.0 20.0 40.0 60.0 80.0 100.0m
SCALE 1:1000 AT A1 SHEET | 1:2000 AT A3 SHEET

ARCHITECT

ISSUED FOR APPROVAL	30.08.21	A	J.D.
AMENDMENTS	DATE	ISSUE	BY

NOT FOR CONSTRUCTION

CLIENT
CONSADINE

PROJECT
KFC MUDGEE
33 HORATIO STREET
MUDGEE, NSW

DESIGNED	DRAWN	DATE	SIZE	CAD REF
B.D.	JO.M.	MAY 21	A1	TX15361.00 - C01

TRIAXIAL CONSULTING
COMPLEX PROBLEMS RESOLVED SIMPLY

1300 874 294 | TRIAXIAL.COM.AU
46 MARKET STREET, MUDGEE NSW 2850
PO BOX 1075, MUDGEE NSW 2850

TO BE PRINTED IN COLOUR

DRAWING TITLE
COVER SHEET

PROJECT No. DRAWING No. ISSUE
TX15361.00 - C1.00 A

GENERAL

G01 THESE DRAWINGS SHALL BE READ BY CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS' DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ANY DISCREPANCY SHALL BE REFERRED TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.

G02 ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE RELEVANT AND CURRENT STANDARDS AUSTRALIA CODES AND WITH THE BY-LAWS AND ORDINANCES OF THE RELEVANT BUILDING AUTHORITIES EXCEPT WHERE VARIED BY THE PROJECT SPECIFICATION.

G03 ALL DIMENSIONS SHOWN SHALL BE VERIFIED BY THE RELEVANT CONTRACTOR ON SITE. ENGINEER'S DRAWINGS SHALL NOT BE SCALED FOR DIMENSIONS. ENGINEER'S DRAWINGS ISSUED IN ANY ELECTRONIC FORMAT MUST NOT BE USED FOR DIMENSIONAL SETOUT.

G04 UNLESS NOTED OTHERWISE ALL LEVELS ARE IN METRES AND ALL DIMENSIONS ARE IN MILLIMETRES.

G05 ALL WORKS SHALL BE UNDERTAKEN IN ACCORDANCE WITH ACCEPTABLE SAFETY STANDARDS & APPROPRIATE SAFETY SIGNS SHALL BE INSTALLED AT ALL TIMES DURING THE PROGRESS OF THE JOB.

SURVEY

S01 THE EXISTING SITE CONDITIONS SHOWN ON THE DRAWINGS HAVE BEEN INVESTIGATED BY OTHERS. THE INFORMATION IS SHOWN TO PROVIDE A BASIS FOR DESIGN.

S02 THE FOLLOWING ENGINEERING SURVEY SHALL NOT BE TAKEN AS A CADASTRAL OR BOUNDARY IDENTIFICATION SURVEY. BOUNDARY DATA SHALL BE TAKEN AS A GUIDE ONLY UNLESS NOTED OTHERWISE.

S03 SHOULD DISCREPANCIES BE FOUND BETWEEN THE SURVEY DATA AND ACTUAL FIELD DATA THE CONTRACTOR SHALL NOTIFY TRIAXIAL CONSULTING PRIOR TO COMMENCEMENT OF THE WORKS. THE CONTRACTOR SHALL ACCEPT ALL RESPONSIBILITY FOR ERRORS MADE DURING CONSTRUCTION WHERE SURVEY DISCREPANCIES WERE NOT REPORTED AND RESOLVED BY TRIAXIAL CONSULTING PRIOR TO COMMENCEMENT OF THE WORKS.

EXCAVATION

EX1 REFER TO REPORT ON GEOTECHNICAL STABILITY ASSESSMENT FOR INFORMATION PERTAINING TO EXISTING SITE STABILITY, EXCAVATION AND GEOTECHNICAL ISSUES.

EX2 ALL SITE EXCAVATION TO BE PERFORMED IN ACCORDANCE WITH ITEMS NOTED IN THE ABOVE LISTED REPORT.

EX3 THE EARTHWORKS CONTRACTOR IS TO CONTACT DR WEBB WITH THE GEOTECHNICAL ENGINEER PRIOR TO COMMENCEMENT OF ANY EXCAVATION TO DETERMINE APPROPRIATE TECHNIQUES AND HOLD POINTS.

EX4 TEMPORARY BATTER CUT TO ROCK TO BE FORMED AT NO STEEPER THAN 1 V : 1 H. PERMANENT BATTER TO BE CONFIRMED ON SITE IN CONSULTATION WITH THE GEOTECHNICAL ENGINEER.

EXISTING UNDERGROUND SERVICES

EU1 THE EXISTING UNDERGROUND SERVICES INDICATED ON THESE DRAWINGS HAVE BEEN OBTAINED FROM SURVEY AND SERVICE AUTHORITY INFORMATION. THE SERVICES INFORMATION SHOWN ARE THOSE OF KNOWN SERVICES ONLY. THE LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE ONLY AND MAY NOT BE AS CONSTRUCTED OR ACCURATE. THE PRESENCE OR ABSENCE OF SERVICES SHALL BE CONFIRMED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF CONSTRUCTION.

EU2 THE CONTRACTOR SHALL TAKE ALL DUE CARE WHEN EXCAVATING ON SITE INCLUDING HAND EXCAVATION WHERE NECESSARY.

EU3 THE CONTRACTOR SHALL CONTACT ALL RELEVANT SERVICE AUTHORITIES PRIOR TO THE COMMENCEMENT OF ANY EXCAVATION WORKS.

EU4 THE CONTRACTOR SHALL UNDERTAKE A THOROUGH SERVICES SEARCH PRIOR TO THE COMMENCEMENT OF ANY EXCAVATION WORKS. THE RESULTS OF SERVICES SEARCHES SHALL BE RECORDED AND KEPT ON SITE AT ALL TIMES.

EU5 THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING POTHOLING TO ESTABLISH AND CONFIRM LOCATIONS AND DEPTHS OF EXISTING UNDERGROUND SERVICES/UTILITIES PRIOR TO COMMENCEMENT OF WORKS ON SITE.

SITE PREPARATION

GENERAL

SP1 ALL EARTHWORKS, SITE PREPARATION AND MATERIALS TO BE IN ACCORDANCE WITH AS3798 AND THE GEOTECHNICAL ENGINEER'S REPORT (TBC).

SP2 SEDIMENT AND EROSION CONTROL MEASURES AS DOCUMENTED MUST BE IN PLACE PRIOR TO THE COMMENCEMENT OF WORKS.

SUBGRADE

SB1 STRIP EXISTING AREA AS REQUIRED TO CONSTRUCT NEW WORKS. REMOVE ANY TOP SOIL, ALL ORGANIC & DELETERIOUS MATERIAL FROM SITE WORKS AREA.

SB4 THE CUT AND FILL SURFACE SHALL BE PROOF ROLLED TO ENSURE THAT THE FILL AND NATURAL GROUND FORMING THE SUBGRADE TO BE UNIFORM AT A SUITABLE DENSITY AND MOISTURE CONTENT.

SB5 PRIOR TO THE COMMENCEMENT OF ANY CIVIL OR STRUCTURAL CONSTRUCTION THE RELEVANT SITE AREA IS TO BE COMPACTED AND TESTED IN ACCORDANCE WITH AS1289 5.1.1 OR 5.1.2 - 1993 TO PRODUCE THE FOLLOWING: - 98.0% STANDARD COMPACTION AT THE SURFACE AND AT 200mm BELOW SURFACE LEVEL. FREQUENCY OF FIELD DENSITY TESTS SHALL BE CARRIED OUT IN ACCORDANCE WITH AS3798 - 2007 TABLE 8.1. TESTING SHALL BE EVENLY SPACED OVER THE ENTIRE SITE, AND AT RANDOM LOCATIONS. TEST RESULTS SHALL BE FORWARDED TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCEMENT OF WORKS.

SB6 PROOF ROLLING SHALL BE CARRIED OUT UNDER THE DIRECTION OF THE CONTRACTOR, A MINIMUM 10 TONNE STATIC MASS SMOOTH DRUM RIDED ROLLER SHALL BE USED. WHERE THERE IS MOVEMENT UNDER THE ROLLER INDICATING SOFT WET OR DISTURBED SUBGRADE, THE AREA OF MOVEMENT SHALL BE EQUIPPED AND THE POOR SUBGRADE MATERIAL REMOVED. ANY REPLACEMENT MATERIAL SHALL BE BACKFILLED WITH APPROVED FILL PLACED IN LAYERS NOT EXCEEDING 200mm LOOSE MEASUREMENT AND IN ACCORDANCE WITH FILLING NOTE SP9 TO 99% OF SDD AND WITHIN 2% OF STANDARD OPTIMUM MOISTURE CONTENT.

SB7 WHERE THERE HAS BEEN AN EXTENDED DRY PERIOD THE SUBGRADE SURFACE MAY EXHIBIT DESICCATION CRACKS CONSISTENT WITH NEAR SURFACE DRYING OUT. IF SIGNIFICANT DRYNESS OUT HAS OCCURRED, MOISTURE CONDITION THE UPPER 200mm OF THE SUBGRADE. THE MATERIAL SHOULD THEN BE COMPACTED IN ACCORDANCE WITH THE ABOVE REQUIRED LEVELS FOR DENSITY AND MOISTURE CONTENT.

FILL/SUB-BASE

SP8 COMPACTION TESTING IS THE RESPONSIBILITY OF THE CONTRACTOR AND MUST BE ALLOWED FOR IN THE TENDER FOR THE PROJECT. THE CONTRACTOR SHALL ALLOW FOR SOIL COMPACTION TESTING TO ALL FILL FORMATIONS WHICH INCLUDE CONCRETE SLAB ON GROUND TYPE FLOORS AND EXTERNAL PAVEMENTS. TESTS SHALL BE CARRIED OUT BY AN INDEPENDENT NATA REGISTERED LABORATORY IN ACCORDANCE WITH THE REQUIREMENTS OF AS1289. SUBMIT TEST REPORTS TO THE ENGINEER FOR REVIEW.

SP9 IMPORTED FILL IS TO BE WELL GRADED CRUSHED SANDSTONE, WHITE SHALE OR APPROVED ALTERNATIVE, WITH A MINIMUM CBR OF 30%, 7-14% AND A MAX PARTICLE SIZE OF 75mm.

SP10 ALL FILL MATERIAL SHALL BE UNIFORMLY PLACED IN LAYERS NOT EXCEEDING 200mm LOOSE MEASUREMENT.

SP11 ALL FILL SHALL BE COMPACTED TO 98% STANDARD DRY DENSITY DETERMINED BY METHODS IN ACCORDANCE WITH AS1289. THE MOISTURE CONTENT OF THE FILL MATERIAL SHALL BE ADJUSTED TO WITHIN 3% OF THE OPTIMUM MOISTURE CONTENT DURING COMPACTION TO ENSURE THAT THE SPECIFIED COMPACTION IS ATTAINED.

STORMWATER DRAINAGE

SD1 PIPES UP TO 300mm DIAMETER SHALL BE SEWER GRADE UPVC WITH SOLVENT WELDED JOINTS.

SD2 ALL "INTERNAL WORKS" WITHIN PROPERTY BOUNDARIES SHALL COMPLY WITH THE REQUIREMENTS OF AS/NZS 3500 (CURRENT EDITION).

SD3 ALL STORMWATER PIPES SHALL BE PROVIDED WITH MINIMUM PIPE COVER TO COMPLY WITH THE REQUIREMENTS OF AS/NZS 3500.3 (CURRENT EDITION).

SD4 INSTALLATION OF ALL BURIED CONCRETE STORMWATER PIPES SHALL COMPLY WITH THE REQUIREMENTS OF AS/NZS 3725 (CURRENT EDITION) DESIGN FOR INSTALLATION OF BURIED CONCRETE PIPES.

SD5 ENGINEERS, CONTRACTORS AND JUNCTIONS SHALL BE PREFABRICATED FITTINGS WHERE PIPES ARE LESS THAN 300mm DIAMETER.

SD6 ALL STORMWATER DRAINAGE LINES SHALL HAVE A MINIMUM FALL OF 1% UNLESS NOTED OTHERWISE ON THE DRAWINGS. CARE SHALL BE TAKEN WITH SETTING LEVELS OF STORMWATER DRAINAGE LINES. GRADES SHOWN ON THE DRAWINGS SHALL NOT BE REDUCED WITHOUT THE WRITTEN CONSENT OF TRIAXIAL CONSULTING.

SD7 GRATES AND COVERS SHALL COMPLY WITH THE REQUIREMENTS OF AS 3996 (CURRENT EDITION).

SD8 AT ALL TIMES DURING THE CONSTRUCTION OF STORMWATER PITS, ADEQUATE SAFETY PROCEDURES SHALL BE DISCLAIMED AND EXECUTED TO MITIGATE THE RISK OF PERSONAL INJURY AS A RESULT OF FALLS INTO PITS.

SD9 ALL EXISTING STORMWATER LOCATIONS, INCLUDING INVERTS, TO BE CONFIRMED BY THE BUILDER/CONTRACTOR PRIOR TO THE COMMENCEMENT OF CIVIL WORKS ON SITE.

SD10 ALL EXISTING STORMWATER DRAINAGE LINES AND PITS THAT ARE TO REMAIN SHALL BE INSPECTED AND CLEANED. DURING THIS PROCESS, ANY PART OF THE STORMWATER DRAINAGE SYSTEM THAT WARRANTS REPAIR SHALL BE REPORTED TO THE SUPERINTENDANT/ENGINEER FOR FURTHER DIRECTIONS.

SITEWORKS

SW1 ALL CONNECTIONS WITH EXISTING WORKS SHALL BE MADE SMOOTH.

SW2 ALL TRENCH BACKFILL MATERIAL SHALL BE COMPACTED TO ACHIEVE A DENSITY EQUIVALENT TO THE ADJACENT MATERIAL.

SW3 ALL SERVICE TRENCHES SHALL BE BACKFILLED WITH SAND TO A LEVEL 300mm ABOVE THE PIPE. WHERE SERVICE TRENCHES ARE CONSTRUCTED UNDER VEHICULAR PAVEMENTS, BACKFILL THE REMAINDER OF THE TRENCH (TO UNDERSIDE OF PAVEMENT) WITH SAND OR APPROVED GRANULAR MATERIAL COMPACTED IN LAYERS NOT EXCEEDING 150mm DEPTH. BACKFILL MATERIAL SHALL BE COMPACTED TO A MINIMUM 98% MODIFIED MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS 1289 5.2.1 (CURRENT EDITION) OR A DENSITY INDEX OF NOT LESS THAN 75.

SW4 PROVIDE A 10mm WIDE EXPANSION JOINT BETWEEN ALL BUILDINGS AND CONCRETE OR UNIT PAVEMENTS.

SEDIMENT AND EROSION CONTROL

SE1 CONTROLS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUAL "MANAGING URBAN STORMWATER: SOILS AND CONSTRUCTION" (2004) (THE BLUE BOOK).

SE2 DISTURBANCE SHALL BE KEPT TO A MINIMUM AND WITHIN THE LIMITS OF THE CONSTRUCTION SITE.

SE3 ADDITIONAL CONTROLS SHALL BE INSTALLED AS REQUIRED AND IN ACCORDANCE WITH THE "BLUE BOOK".

SE4 ALL INSTALLED CONTROLS SHALL BE INSPECTED AT LEAST WEEKLY AND IMMEDIATELY FOLLOWING A RAIN EVENT. MAINTENANCE SHALL BE UNDERTAKEN AS REQUIRED.

SE5 DISTURBED AREAS SHALL BE PROGRESSIVELY VEGETATED.

SE6 CONTROL DEVICES, AS DETAILED, SHALL BE INSTALLED TO STORMWATER PITS IMMEDIATELY FOLLOWING THEIR CONSTRUCTION.

CONCRETE

C01 ALL WORKMANSHIP AND MATERIAL SHALL BE IN ACCORDANCE WITH AS3600 CURRENT EDITION WITH AMENDMENTS, EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.

C02 READY-MIX CONCRETE SUPPLY SHALL COMPLY WITH AS1379.

C03 CONCRETE QUALITY. ALL THE REQUIREMENTS OF THE ACI SPECIFICATION DOCUMENT 1 (EDITION 4) SHALL APPLY TO THE FORMWORK, REINFORCEMENT AND CONCRETE UNLESS NOTED OTHERWISE. CONCRETE QUALITY SPECIFICATION AS SHOWN ON PLANS.

C04 PROJECT CONTROL TESTING SHALL BE CARRIED OUT IN ACCORDANCE AS1379.

C05 NO ADMIXTURES SHALL BE USED IN CONCRETE UNLESS APPROVED IN WRITING.

C06 CLEAR CONCRETE COVER TO ALL REINFORCEMENT FOR DURABILITY SHALL BE AS PER CONCRETE COVER SCHEDULE UNLESS SHOWN OTHERWISE.

C07 DURABILITY REQUIREMENTS FOR CONCRETE:

EXPOSURE CLASS TO ASS600	MINIMUM CEMENT CONTENT	MAXIMUM W/C RATIO
A1 & A2		0.56
B1	320	0.55
B2	390	0.46
C	450	0.40

C08 ALL REINFORCEMENT SHALL BE FIRMLY SUPPORTED ON MILD STEEL PLASTIC TIPPED CHAIRS, PLASTIC CHAIRS OR CONCRETE CHAIRS AT 1mmMAX CENTRES BOTH WAYS UNTO BARS SHALL BE TIED AT ALTERNATE INTERSECTIONS. USE PLASTIC CHAIRS IN EXPOSURE CONDITION GREATER THAN B1. MINIMUM BAR CHAIR SPACING FOR HEAVY REINFORCEMENT SHALL BE:

SL92, SL102, SL81 (EFTB): 800 CTS
SL72, SL82, SL81E: 400 CTS

C09 NO HOLES, CHASES OR ELEMENTS OF PIPES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE MEMBERS WITHOUT THE PRIOR WRITTEN APPROVAL OF THE ENGINEER.

C10 CONSTRUCTION JOINTS WHERE NOT SHOWN SHALL BE LOCATED TO THE APPROVAL OF THE ENGINEER.

C11 ALL CONCRETE SHALL BE COMPACTED WITH MECHANICAL VIBRATORS.

C12 THE ENGINEER SHALL BE GIVEN 24 HOURS NOTICE FOR REINFORCEMENT INSPECTIONS AND CONCRETE SHALL NOT BE DELIVERED UNTIL ENGINEERS APPROVAL IS OBTAINED.

C13 WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED UNLESS SHOWN ON THE STRUCTURAL DRAWINGS OR APPROVED BY THE ENGINEER.

C14 REINFORCEMENT BARS AND LIGATURES:
N_ HOT ROLLED DEFORMED BAR, GRADE 500 NORMAL DUCTILITY AS4671-GR500N
R_ HOT ROLLED ROUND BAR, GRADE 250 NORMAL DUCTILITY AS4671-R250N
W_ COLD DRAWN ROUND WIRE, GRADE 500 LOW DUCTILITY AS4671-W500L
S_ POOL STEEL HOT ROLLED DEFORMED BAR, GRADE 250 NORMAL DUCTILITY AS4671-D250N

NOTE: THE UNDERSCORE REPRESENTS NOMINAL BAR DIAMETER IN ACCORDANCE WITH AS4671

REINFORCEMENT FABRIC
SL_ SQUARE MESH, COLD DRAWN RIBBED WIRE GRADE 500, LOW DUCTILITY AS4671-D500L
RL_ RECTANGULAR MESH, COLD DRAWN RIBBED WIRE GRADE 500, LOW DUCTILITY AS4671-D500L
JL_ TL_ FRENCH MESH, COLD DRAWN RIBBED WIRE GRADE 500, LOW DUCTILITY AS4671-D500L

NOTE: THE UNDERSCORE REPRESENTS VARYING SPECIFICATIONS IN ACCORDANCE WITH AS4671

C15 REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY AND NOT NECESSARILY IN TRUE PROJECTION.

C16 SPLICES IN REINFORCEMENT SHALL BE MADE ONLY IN POSITIONS SHOWN OR OTHERWISE APPROVED IN WRITING BY THE ENGINEER. LAPS SHALL BE IN ACCORDANCE WITH AS3600 AND NOT LESS THAN THE DEVELOPMENT LENGTH FOR EACH BAR.

C17 STANDARD LAP AND COG LENGTHS UNLESS NOTED OTHERWISE ON DRAWINGS:

BAR DIA.	MIN LAP LENGTH (mm)	MIN COG LENGTH (mm)
H12	500	180
H16	700	210
H20	1000	260
H24	1275	310
H28	1560	360
H32	1810	410

CONCRETE (CONTINUED)

C18 CONCRETE SIZES DO NOT INCLUDE THICKNESS OF APPLIED FINISHES.

C19 DEPTHS OF BEAMS ARE GIVEN FIRST AND INCLUDE 100 THICKNESS.

C20 REFER TO ARCHITECT'S DETAILS FOR CHAMFERS, DRIP GROOVES, REBATES, ETC... MAINTAIN COVER TO REINFORCEMENT AT THESE DETAILS.

C21 USE ALIPHATIC ALCOHOLS SPRAYED OVER THE SURFACE PRIOR TO AND AFTER FINISHING TO REDUCE RATE OF EVAPORATION FROM THE SURFACE AND HELP CONTROL PLASTIC SHRINKAGE CRACKING. NOTE THAT THE USE OF ALIPHATIC ALCOHOLS IS NOT A SUBSTITUTE FOR CURING.

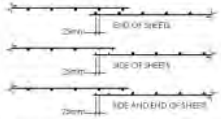
C22 CONVENIENCE CURING OPERATIONS PROPERLY AFTER SURFACE FINISHING IS COMPLETE. CURING COMPOUNDS ARE TO BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND ARE TO BE CHECKED FOR COMPATIBILITY WITH PROPOSED FLOOR FINISHES. SOME COMPOUNDS MAY REQUIRE REMOVAL FOR GLUED DOWN FLOOR COVERINGS OR WET CURING AS DESCRIBED BELOW.

CONCRETE IS TO BE CURED BY KEEPING THE SURFACES CONTINUOUSLY WET FOR A PERIOD OF 3 DAYS, AND THEREBY REDUCE THE LOSS OF MOISTURE FOR A FURTHER 7 DAYS FOLLOWED BY A GRADUAL DRYING OUT.

C23 PROPPING WHICH SUPPORTS CONSTRUCTION OVER IS TO BE LEFT IN PLACE AS REQUIRED TO AVOID OVER STRESSING THE STRUCTURE DUE TO CONSTRUCTION LOADING.

C24 CONDUITS, PIPES ETC... SHALL ONLY BE LOCATED IN THE MIDDLE ONE THIRD OF SLAB DEPTH AND SPACED AT NOT LESS THAN 3 DIAMETERS OF THE CONDUIT. PIPES ETC... PIPES OR CONDUITS SHALL NOT BE PLACED WITHIN THE COVER TO REINFORCEMENT.

C25 MESH (AS):



C26 A 0.2mm POLYETHYLENE MEMBRANE SHALL BE CONTINUOUS UNDER SLAB LAPPED 200mm MIN. WHERE REQUIRED AND TAPED AT ALL SERVICE PENETRATIONS, LAPS AND PERIMETERS. THE MEMBRANE IS TO EXTEND UNDER AND TO THE SIDES OF SLABS, BEAMS AND THICKENINGS.

NOTE:
THIS IS A PLANNING DRAWING ONLY, FOR THE PURPOSE OF CONCEPTUAL DESIGN AND/OR PLANNING. FURTHER DETAILED ENGINEERING DESIGN INCLUDING SPECIFICATIONS, SITING AND STORMWATER INVERTS TO BE PROVIDED PRIOR TO BUILDING WORK ASSESSMENT AND CONSTRUCTION.

0m 0 5 10 15 20m
SCALE 1:200 AT A1 SHEET | 1:400 AT A3 SHEET

ENGINEERING APPROVAL
NOT FOR CONSTRUCTION

CONSADINE

KFC MUDGEE
33 HORATIO STREET
MUDGEE, NSW

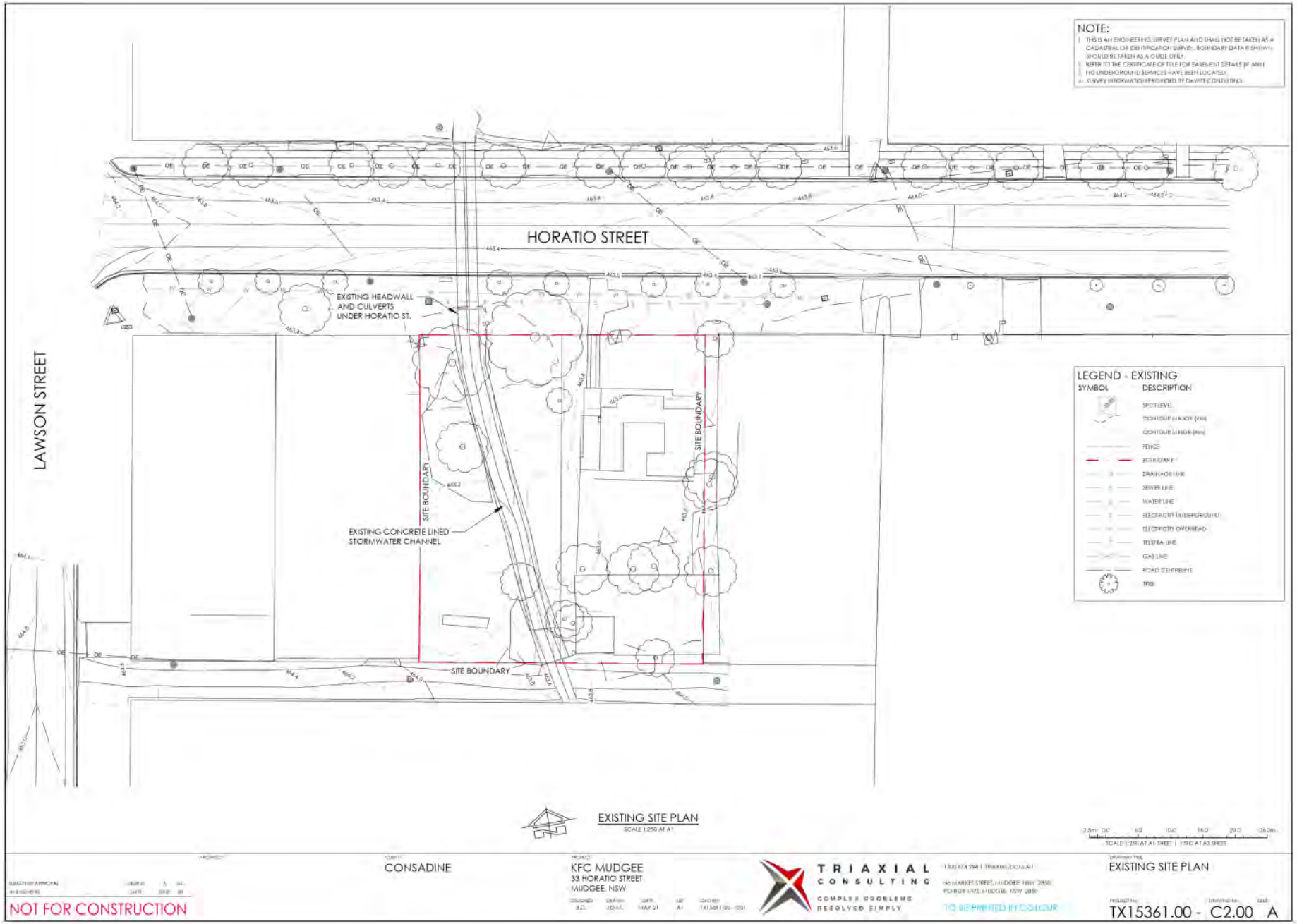
TRIAXIAL CONSULTING
COMPLEX PROBLEMS RESOLVED SIMPLY

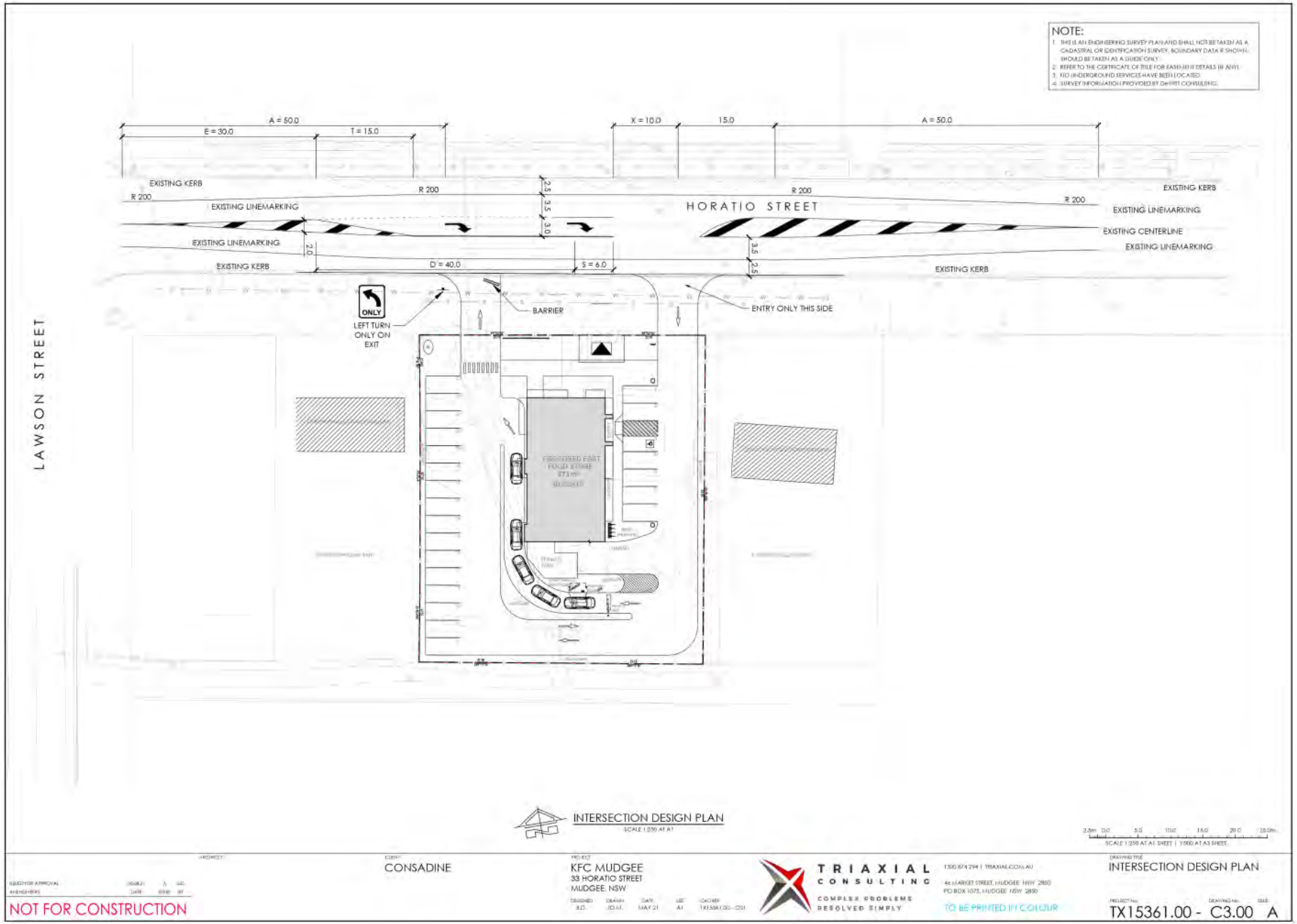
T 1300 874 294 | TRIAXIAL.COM.AU
46 MARKET STREET, MUDGEE NSW 2850
PO BOX 1072, MUDGEE NSW 2850

TO BE PRINTED IN COLOUR

GENERAL NOTES

PROJECT No. TX15361.00 - C1.01 A


NOTE:
HORATIO STREET
LAWSON STREET
EXISTING HEADWALL AND CULVERTS UNDER HORATIO ST.
EXISTING CONCRETE LINED STORMWATER CHANNEL
SITE BOUNDARY
SITE BOUNDARY
SITE BOUNDARY
LEGEND - EXISTING
SYMBOL
DESCRIPTION
EXISTING SITE PLAN
CONSADINE
KFC MUDGEE
33 HORATIO STREET
MUDGEE, NSW
TRIAXIAL CONSULTING
COMPLEX PROBLEMS RESOLVED SIMPLY
EXISTING SITE PLAN
NOT FOR CONSTRUCTION
TX15361.00 - C2.00 A


NOTE:
1. THIS IS AN ENGINEERING SURVEY PLAN AND SHALL NOT BE TAKEN AS A CADASTRAL OR IDENTIFICATION SURVEY. BOUNDARY DATA IF SHOWN, SHOULD BE TAKEN AS A GUIDE ONLY.
2. REFER TO THE CERTIFICATE OF TITLE FOR EASEMENT DETAILS (IF ANY).
3. NO UNDERGROUND SERVICES HAVE BEEN LOCATED.
4. SURVEY INFORMATION PROVIDED BY DeWITT CONSULTING.
A = 50.0
E = 30.0
T = 15.0
X = 10.0
15.0
A = 50.0
EXISTING KERB
R 200
EXISTING LINEMARKING
HORATIO STREET
EXISTING CENTERLINE
2.5
3.5
3.0
2.0
D = 40.0
S = 6.0
ONLY
LEFT TURN ONLY ON EXIT
BARRIER
ENTRY ONLY THIS SIDE
LAWSON STREET
INTERSECTION DESIGN PLAN
SCALE 1:250 AT A1
SCALE 1:250 AT A1 SHEET | 1:500 AT A3 SHEET
CONSADINE
KFC MUDGEE
33 HORATIO STREET
MUDGEE, NSW
TRIAXIAL CONSULTING
COMPLEX PROBLEMS RESOLVED SIMPLY
1300 874 294 | TRIAXIAL.COM.AU
46 MARKET STREET, MUDGEE NSW 2850
PO BOX 1075, MUDGEE NSW 2850
TO BE PRINTED IN COLOUR
INTERSECTION DESIGN PLAN
TX15361.00 - C3.00 A
NOT FOR CONSTRUCTION

Statement of Environmental Effects

for the Proposed Demolition of Dwelling and Proposed New Food and Drink Premises, 33 Horatio Street, MUDGEE

being Lots 3 & 2 in DP743615

prepared for

Broadview Aust. Pty Ltd

Sept 2021

ATLAS
ENVIRONMENT & PLANNING

Emma Yule t/a Atlas Environment and Planning (Atlas), responsible for the preparation and contents and information provided within this report declare that there is no current benefit nor expect to have a beneficial interest in the study area of this project and will not benefit from any of the recommendations outlined in this report.
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VERSION AND AMENDMENT CONTROL HISTORY

VERSION	DATE	DESCRIPTION	QA/QC
001	SEPT 2021	DRAFT FOR CLIENT REVIEW	CLIENT
002	SEPT 2021	FINAL	EY

TABLE OF CONTENTS

Supporting Documents (under separate cover):

- Architectural Plans of the Proposal prepared by Baldasso Cortese.
- Civil Plans of the Proposal prepared by Triaxial Consulting Pty Ltd.
- *Statement of Heritage Impact – Proposed Development at 33-35 Horatio Street Mudgee* (job No 9188) August 2021 prepared by Rapport Pty Ltd t/a Heritage 21 (Conservation Architects and Heritage Consultants).
- Statement of Heritage Impact – Proposed demolition of Existing Brick Residence 33 Horatio Street Mudgee, Lot 3 DP743615, dated 1st June 2021, prepared by Barbara Hickson Architect and Heritage Adviser.

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1 INTRODUCTION

1.1 OVERVIEW

Atlas Environment and Planning has been engaged by Broadview Aust. Pty Ltd to prepare a Statement of Environmental Effects to describe the proposed demolition and development of a new premises for the occupation by a KFC franchisee. This report will support the plans to further describe the proposal and assess the potential impacts of the development. The land is zoned SP3 Tourist pursuant to the Mid-Western Regional LEP 2012. The proposal involves various components seeking approval as part of this submission. Overall, the end use as a 'food and drink premises', occupied by KFC, is consistent with the zone objectives, especially located on the Highway route through Mudgee and in vicinity to other similar restaurants. (The existing KFC premises is not owner/occupied, the intention would to be a new site for the business and not be a second store).

Supporting Documents (under separate cover):

- Architectural Plans of the Proposal prepared by Baldasso Cortese.
  - TP000 – Cover Sheet,
  - TP100 – Proposed Site Plan,
  - TP110 - Proposed Landscape Plan,
  - TP200 - Proposed Floor Plan,
  - TP201 – Proposed Roof Plan,
  - TP300 - Proposed Elevations Sheet 1,
  - TP301 – Proposed Elevations Sheet 2,
  - TP302 – Proposed 3D Views,
  - TP400 – Signage Details.
- Civil Plans of the Proposal prepared by Triaxial Consulting Pty Ltd.
  - C1.00 – Cover Sheet,
  - C1.01 – General Notes,
  - C2.00 – Existing Site Plan,
  - C3.00 – Intersection design Plan,
  - C5.00 – Vehicle Simulation Plan,
  - C6.00 – Stormwater Management Plan.
- *Statement of Heritage Impact – Proposed Development at 33-35 Horatio Street Mudgee* (job No 9188) August 2021 prepared by Rapport Pty Ltd t/a Heritage 21 (Conservation Architects and Heritage Consultants).
- *Statement of Heritage Impact – Proposed demolition of Existing Brick Residence 33 Horatio Street Mudgee, Lot 3 DP743615,* dated 1st June 2021, prepared by Barbara Hickson Architect and Heritage Adviser.

2 BACKGROUND

2.1 SITE IDENTIFICATION

The site is located approximately 2.1km from the Mudgee Post Office in Market Street (4 min and is well accessed via Douro Street and Horatio Street – Castlereagh Highway/B55). The location of the subject land is shown below in **Figure 1**.

Figure 1: Site Location – 33 Horatio Street, MUDGEE

Source: (NSW Government Land and Property Information- six maps viewer).

Owners: Diamond 7 Pty Ltd.

Property Description: The subject land includes approximately 2260m^2 in two titles. The land is regular/rectangular shaped with frontage to Horatio Street – approx. 45m.

Site address: 33- 35 Horatio Street, MUDGEE.

Title description: Lots 2 and 3 in DP743615.

3 EXISTING SITE CONDITIONS

The area is characterised by the frontage to Horatio Street (Castlereagh Highway) forming a main transport route through Mudgee. The site also has a rear lane frontage to Lyons Lane). The existing site conditions are depicted in the plan prepared by Triaxial Consulting (TX15361.00- C2.00 Issue A). The site has an existing brick dwelling and separate shed. These structures will be demolished and have been considered in the context of the setting within the Mudgee Conservation Area in an assessment of heritage impact (refer to Statements of Heritage Impact Demolition of residence at 33-35 Horatio Street Mudgee, prepared by Barbara Hickson Architect and Heritage Adviser, Mudgee; as well reference report prepared by Rapport Pty Ltd t/a Heritage 21 (Conservation Architects and Heritage Consultants). Further context of the existing setting can be referenced in those supporting documents, with local heritage advisor engaged originally to provide advice more focussed on the demolition work, with the advice provided by Heritage 21 providing context to the proposed development and design aspects in the setting.

Land opposite in Horatio Street is currently vacant R3 Medium Density Residential zoned land, with an existing drainage channel traversing the subject land and under the road to this vacant land to form open drainage. The wider setting is characterised by the Highway frontage, with developed R3 Medium Density Residential zoned land (occurring to the north of the classified road) and SP3 Tourist zoned land (southern side of Horatio Street). Past infill development has caused a mixed land use setting to form. There is a variety of uses in vicinity, such as motel, tourist cabins, McDonalds Restaurant, single dwellings, residential unit development, and funeral home. It is expected the redevelopment of land and change of use of existing premises, particularly on the southern side of Horatio Street in line with the SP3 zoning will continue to reflect a change towards tourist-orientated development in line with the zoning from past residential land uses under previous LEP's.

Figure 2: Aerial – vicinity of subject land *Source: (Six Maps).*

Prior to progression of the proposed development concept, a site analysis was carried out to identify any site issues. In summary the following is noted:

- The land is zoned SP3 Tourist pursuant to the Mid-Western Regional Local Environmental Plan 2012. There is no applicable minimum lot size. Mixed land use to be considered and impact to neighbouring residential occupants.
- The development land is not subject to restrictive easements or covenants. The main easement will pertain to the drainage as depicted on plans. This is channel has been concrete lined and is currently open. The modified drain is not considered a natural water course in this location.
- No site contamination issues are noted for the land already utilised for residential purposes.
- Overhead power lines exist in Horatio Street. Located near electrical infrastructure, the development could be subject to requirements listed under ISEPP Clause 45.
- The site is accessed via a classified road and safety for vehicles accessing the site will involve consultation with the relevant road authorities.
- The site is not in vicinity to any known environmentally sensitive areas, that may be impacted by a food and drink premises.

- The site falls within the Mudgee Heritage Conservation Area. The demolition and redevelopment of the site should consider the context on the setting and on the setting of any nearby heritage listed items.

4 THE PROPOSAL

4.1 DESCRIPTION OF THE DEVELOPMENT

The proposed development has several key components. The description in this SEE report is in support of the architectural plans of the development prepared by Baldasso Cortese P/L and civil details prepared by Triaxial Consulting Pty Ltd.

4.1.1 Demolition of existing structures

To prepare the site for the proposed re-development, demolition of the existing brick residence, ancillary structures and steel shed is required. This work will be carried out in accordance with Council conditions. No known asbestos occurs at the premises, however as part of works if required, Council will be provided with a copy of any Hazardous Substances/Waste Management Plan. The works will be carried out by a licensed demolition contractor in accordance with current safe work practices.

Barbara Hickson Architect and Heritage Advisor was engaged to consider the potential impacts of the removal of the dwelling in the context of the heritage conservation area of Mudgee. It was concluded that the demolition of this item will have no impact on the significance of the Mudgee Conservation Area. Further that the location is considered a 'neutral area' and does not contribute to the conservation area. (Refer to the complete report for further details on the heritage impact assessment).

4.1.2 Consolidation of land

The land is currently in two titles. A consolidation of the lots is required prior to the construction of the new premises, to avoid construction over the existing dividing boundary.

In accordance with Section 6.2 of EP&A Act 1979, procuring a plan of consolidation, (a plan of identification or a miscellaneous plan within the meaning of section 195 of the Conveyancing Act 1919), is not considered 'subdivision'. The consolidation does not require the development approval of Mid-Western Regional Council. However, the timing is expected to be conditioned to ensure the consolidation is finalised prior to construction and any amendment to easements (i.e., particularly for any drainage provisions to be able to be registered in the same plan). It appears the title does not have an existing drainage easement registered. It is proposed that a condition of approval address any requirements for drainage and those be provided within a registered easement. This can be shown and registered with the new DP associated with a consolidated lot.

4.1.3 Development of a Food and Drink Premises

The site is proposed to be redeveloped to support a new restaurant (40 seat), with drive-through service and car parking. The restaurant has been designed to be set back from the front boundary to a distance meeting the existing dwelling. This serves to maintain consistency and mitigate impact on the streetscape. The site will be able to implement a

landscaping plan to soften the car parking area, with fencing to separate the premises from neighbours.

The development is referred to as a "food and drink premises" as defined in the Mid-Western Regional LEP 2012. Food and drink premises are permissible in the SP3 Tourist zone subject to consent:

> ***food and drink premises*** *means premises that are used for the preparation and retail sale of food or drink (or both) for immediate consumption on or off the premises, and includes any of the following—*
>
> *(a) a restaurant or cafe,*
>
> *(b) take away food and drink premises,*
>
> *(c) a pub,*
>
> *(d) a small bar.*
>
> ***Note—***
>
> *Food and drink premises are a type of* ***retail premises****—see the definition of that term in this Dictionary.*

Road works

The development will require new driveways onto Horatio Street. No access onto Lyons Lane is proposed. Where upgrade to the Horatio Street road corridor is required, to accommodate safe tuning into the site, this will be addressed in a s138 approval process pursuant to the Roads Act 1993.

The hours of operation and staff

It is proposed that the hours of operation be approved for trade between the 10.30am and 10pm. The site will require on average 8 staff members to be onsite between the peak trade period of 12-2pm and 4-7pm. The manager and cook arrive at 8am and night manager and cook will finish work at 11pm. The number of staff accumulate and decumulate before and after the busiest time periods.

Signage and Lighting

Standard security lighting would be proposed and installed to avoid any light nuisance for any residential occupied land. Associated business and traffic management signage is also proposed. Internally illuminated signage is proposed above the main entrance on the east elevation, with other internally illuminated lettering as depicted in the architectural details. The western elevation includes a graphic mural 'Handmade'. Digital preview menus will be installed as depicted on the plans for drive through operations. The proposed banner sign frame on the Horatio Street frontage will enable the installation of changeable vinyl banners. One Pylon sign is proposed of the type typical for fast food restaurants. Horatio Street has similar signage with McDonald's restaurant and Motel signage on the same side of the Highway.

Landscaping

A proposed landscaping plan is submitted. The landscaping focusses on softening the driveway areas and providing a buffer to neighbouring land. The plan notes the existing trees to be removed and trees to remain.

Deliveries

The design of the turning lanes and proposed new entry and exit of the development site has been in consultation with Council and Transport for NSW. A 12.5m truck is the largest vehicle that will be used for deliveries with deliveries twice a week (frozen products and packaging); other deliveries are serviced by 3 tonne 4.2m Pantech trucks. Deliveries will be expected to be in line with the existing restaurant in Mudgee. The current deliveries typically include:

- Tip Top (buns); Delivered 5 times a week at 8am (Mon, Tue, Thur, Fri, Sat).
- Baiada (chicken); Delivered 5 times a week at 9am (Tue-Sat).
- Americold (frozen products and packaging) at 8.30am (Wed & Sat).
- Cutfresh (salads) before 11am or after 3pm (Mon, Wed, Fri).

5 LEGISLATIVE CONTEXT

5.1 BIODIVERSITY CONSERVATION ACT 2016

The *Biodiversity Conservation Act 2016*, together with the *Biodiversity Conservation Regulation 2017*, outlines the framework for addressing impacts on biodiversity from development and clearing. The Biodiversity Offsets Scheme applies to local development (assessed under Part 4 of the Environmental Planning and Assessment Act 1979) that triggers the Biodiversity Offsets Scheme threshold or is likely to significantly affect threatened species based on the test of significance in section 7.3 of the *Biodiversity Conservation Act 2016*.

No remnant native vegetation occurs on the development land and the biodiversity offset scheme is not triggered.

5.2 ROADS ACT 1993

Horatio Street is a classified road (Castlereagh Highway). Where work in the road reserve is proposed separate approval is required pursuant to section 138 of the Roads Act. This development will require new driveways onto Horatio Street and s138 Approval is sought with this development application.

Triaxial Consulting on behalf of the developer has assessed the existing road conditions, traffic and proposed development. Pre-lodgement consultation was carried out with Transport for NSW (TfNSW) and Mid-Western Regional Council engineers. The following are noted as key aspects:

- Vehicular access from Horatio Street will need to be designed and constructed in accordance with *Austroads Guide to Road Design*. Should right turns be allowed into the site from Horatio Street, a channelized right (CHR) turn treatment would be required. This is likely to require removal of the kerb-side parking and pushing the eastbound travel lane in Horatio Street closer to the kerb. Provision will also need to be made for vehicles entering and exiting Horatio Street from nearby residential properties (some it would appear by reversing out onto Horatio St). Adequate separation will also be required between the CHR facility and the intersection of Horatio and Lawson Streets. In this regard, and to summarise, a concept plan showing proposed road works on Horatio Street to service the proposed development is recommended, early, to allow TfNSW, Council and the developer and opportunity to review the extent of the works required and determine whether such works are practical and/or feasible. (NOTING: Triaxial Consulting have prepared civil plans included with this application).
- Should right turn movements at the access not be proposed, or the CHR not able to be accommodated in Horatio St, the access will need to be restricted to left in/left out only movements. This would require a concrete median being constructed in Horatio

St to prevent right turn movements. (NOTING: The civil plan has been produced and included right hand turning which is adequate for a 12.5m vehicle).

- Vehicular access and egress will need to be designed for the largest vehicle required to access the site. This is most likely to be the delivery vehicle (12.5m, 19m or 26m vehicle). A dedicated loading/unloading zone will need to be provided on-site. (NOTING: The loading area is shown on the proposed site plan).
- All vehicular entry and exit movements from/to Horatio Street need to be in a forward direction. (NOTING: This is proposed and demonstrated on the site plan).

5.3 ENVIRONMENTAL PLANNING AND ASSESSMENT ACT

In determining a development application, a consent authority is to take into consideration such of the following matters as are of relevance to the development pursuant to Section 4.15 of the Environmental Planning and Assessment Act 1976.

This Statement of Environmental Effects aims to assist in this consideration. Further assessment of relevant LEP and SEPPs are addressed below.

5.3.1 Integrated Development

Part 4 Division 4.8 Section 4.46 of the *Environmental Planning and Assessment Act* 1979 (EP&A Act) outlines what is 'Integrated Development'. This development will require a s138 Approval pursuant to the Roads Act.

5.3.2 Evaluation- Part 4 Division 4.3 Section 4.15

The following sections refer to relevant matters:

Section 6 refers to Part 4 Division 4.3 Section 4.15:

Part 4 Division 4.3 Section 4.15 (1) (a) the provisions of:

(i) any environmental planning instrument, and

(ii) any proposed instrument that is or has been the subject of public consultation under this Act and that has been notified to the consent authority (unless the Secretary has notified the consent authority that the making of the proposed instrument has been deferred indefinitely or has not been approved), and

(iii) any development control plan, and

(iii) any planning agreement that has been entered into under section 93F, or any draft planning agreement that a developer has offered to enter into under section 93F, and

(iv) the regulations (to the extent that they prescribe matters for the purposes of this paragraph), and

(v) any coastal zone management plan (within the meaning of the Coastal Protection Act 1979),

that apply to the land to which the development application relates,

Section 7 refers to Section 4.15 (1)(b) to (e)

(b) the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality,

(c) the suitability of the site for the development,
(d) any submissions made in accordance with this Act or the regulations,
(e) the public interest.

6 EVALUATION - LEGISLATION

6.1 STATE ENVIRONMENTAL PLANNING POLICIES

6.1.1 State Environmental Planning Policy (Exempt and Complying Development Codes) 2008

Provisions of the SEPP (Exempt and Complying Development Codes) have been considered. The proposed demolition and development of a food and drink premises does not meet development specified for this code with services requiring extension (sewer main) and hence a development application is required.

6.1.2 State Environmental Planning Policy No 55—Remediation of Land

State Environmental Planning Policy 55 (SEPP 55) requires planning authorities to consider potential for contamination at a site prior to planning decisions being made. Clause 7 requires Council to consider prior to determination of a development application whether the site is contaminated and suitable for the proposal. No detail of history has been indicated by the previous residential occupation that would suggest previous incompatible land use. The land has been approved for a dwelling (and maintained occupation). Based on this, the development should not be hindered for reasons of potential for site contamination.

6.2 MID-WESTERN REGIONAL LOCAL ENVIRONMENTAL PLAN

The Mid-Western Regional LEP 2012 applies to the subject site. The subject land is zoned SP3 Tourist.

> ***Zone SP3 Tourist***
> ***1 Objectives of zone***
> • *To provide for a variety of tourist-oriented development and related uses.*
> ***2 Permitted without consent***
> *Home-based childcare; Home businesses; Home occupations; Roads; Water reticulation systems*
> ***3 Permitted with consent***
> *Amusement centres; Aquaculture; Attached dwellings; Boarding houses; Building identification signs; Business identification signs; Camping grounds; Caravan parks; Centre-based child care facilities; Dual occupancies; Dwelling houses; Eco-tourist facilities; Entertainment facilities; Environmental protection works; Flood mitigation works; Food and drink premises; Function centres; Health consulting rooms; Helipads; Hostels; Information and education facilities; Kiosks; Multi dwelling housing; Places of public worship; Recreation areas; Recreation facilities (indoor); Recreation facilities (outdoor); Registered clubs; Residential flat buildings; Secondary dwellings; Semi-detached dwellings; Timber yards; Tourist and visitor accommodation*
> ***4 Prohibited***
> *Any development not specified in item 2 or 3*

COMMENT – The demolition works will facilitate development for a purpose permitted with consent. The food and drink premises are in line with the objective of the zone, with a KFC

restaurant providing a fast food restaurant choice for locals and travelling tourists and visitors to Mudgee. The site is in vicinity to Motels and an existing fast-food outlet (McDonalds) and is expected for the strip of land fronting the Highway zoned SP3.

The relevant provisions of the MWRLEP 2012 are discussed below:

Clause 2.7 Demolition requires development consent

The demolition of a building or work may carried out only with development consent.

Note—

If the demolition of a building or work is identified in an applicable environmental planning instrument, such as this Plan or State Environmental Planning Policy (Exempt and Complying Development Codes) 2008, as exempt development, the Act enables it to be carried out without development consent.

COMMENT – This SEE supports the development application for which demolition of the existing structures (dwelling and shed) is proposed. The impact of the loss of the dwelling in the context of the setting of Mudgee's 'Heritage Conservation Area' has been addressed in separate heritage assessment reports.

Clause 4.3 Height of buildings

(1) The objectives of this clause are as follows—

(a) to establish a maximum height limit to which buildings can be designed in particular locations,

(b) to enable infill development that is of similar height to existing buildings and that is consistent with the heritage character of the towns of Mudgee, Gulgong, Kandos and Rylstone.

(2) The height of a building on any land is not to exceed the maximum height shown for the land on the Height of Buildings Map.

COMMENT – The subject land is not affected by the height of buildings provisions.

Figure 3: Excerpt from Mid - Western Regional Local Environmental Plan 2012 Height of Buildings Map - Sheet HOB_006H

5.10 Heritage conservation

Note—

Heritage items (if any) are listed and described in Schedule 5. Heritage conservation areas (if any) are shown on the Heritage Map as well as being described in Schedule 5.

(1) ***Objectives***

The objectives of this clause are as follows—

(a) to conserve the environmental heritage of Mid-Western Regional,

(b) to conserve the heritage significance of heritage items and heritage conservation areas, including associated fabric, settings and views,

(c) to conserve archaeological sites,

(d) to conserve Aboriginal objects and Aboriginal places of heritage significance.

(2) ***Requirement for consent***

Development consent is required for any of the following—

(a) demolishing or moving any of the following or altering the exterior of any of the following (including, in the case of a building, making changes to its detail, fabric, finish or appearance)—

(i) a heritage item,

(ii) an Aboriginal object,

(iii) a building, work, relic or tree within a heritage conservation area,

(b) altering a heritage item that is a building by making structural changes to its interior or by making changes to anything inside the item that is specified in Schedule 5 in relation to the item,

(c) disturbing or excavating an archaeological site while knowing, or having reasonable cause to suspect, that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed,

(d) disturbing or excavating an Aboriginal place of heritage significance,

(e) erecting a building on land—

(i) on which a heritage item is located or that is within a heritage conservation area, or

(ii) on which an Aboriginal object is located or that is within an Aboriginal place of heritage significance,

(f) subdividing land—

(i) on which a heritage item is located or that is within a heritage conservation area, or

(ii) on which an Aboriginal object is located or that is within an Aboriginal place of heritage significance.

(3) ***When consent not required*** *.....*

(4) ***Effect of proposed development on heritage significance***

The consent authority must, before granting consent under this clause in respect of a heritage item or heritage conservation area, consider the effect of the proposed development on the heritage significance of the item or area concerned. This subclause applies regardless of whether a heritage management document is prepared under subclause (5) or a heritage conservation management plan is submitted under subclause (6).

(5) ***Heritage assessment***

The consent authority may, before granting consent to any development—

(a) on land on which a heritage item is located, or

(b) on land that is within a heritage conservation area, or

(c) on land that is within the vicinity of land referred to in paragraph (a) or (b),

require a heritage management document to be prepared that assesses the extent to which the carrying out of the proposed development would affect the heritage significance of the heritage item or heritage conservation area concerned.

(6) ***Heritage conservation management plans***

The consent authority may require, after considering the heritage significance of a heritage item and the extent of change proposed to it, the submission of a heritage conservation management plan before granting consent under this clause.

(7) ***Archaeological sites*** *.....*

(8) ***Aboriginal places of heritage significance*** *.....*

(9) ***Demolition of nominated State heritage items***

The consent authority must, before granting consent under this clause for the demolition of a nominated State heritage item—

(a) notify the Heritage Council about the application, and

(b) take into consideration any response received from the Heritage Council within 28 days after the notice is sent.

(10) ***Conservation incentives*** *.....*

COMMENT – The subject site falls within the Mudgee Heritage Conservation Area and 2 heritage listed local items are located within a 500m radius, as such clause 5.10 is considered applicable. Development consent is sought for demolition works. Mid-Western Regional Council can make assessment in accordance with this clause. To assist Council, the developer has engaged the services of experienced heritage advisors. Demolition of the existing dwelling is more closely discussed in the heritage assessments prepared by Barbara Hickson, Architect and Heritage Adviser, being experienced in local conservation issues.

The requirement for consent for erecting a building on land within a conservation area is acknowledged and all construction works envisaged are depicted in the proposed development plans. The heritage assessments made by Heritage 21 in their report more closely addresses the impact of the proposed development and design features of the KFC restaurant.

Clause 5.21 Flood planning

COMMENT – The subject land is not mapped within the Flood Planning Area.

Part 6 Additional local provisions within the Mid-Western Regional LEP are considered.

Clause 6.1 Salinity – The Mid-Western Regional LGA is noted has having inherent salinity issues. The development will have negligible impact on the risk of salinity with implementation of adequate drainage provisions and reticulated services available. It is considered that the development is designed appropriately without need for additional site-specific measures.

Clause 6.3 Earthworks – Standalone earthworks are not proposed as part of this proposed development. No fill is proposed to be placed on the land. Drainage works are to be subject to further details design.

Clause 6.4 Groundwater vulnerability - This clause applies to land identified as "Groundwater vulnerable" on the Groundwater Vulnerability Map (Sheet GRV_006). The mapping applies to this development site. The development is not industrial in nature and will not require the onsite storage of significant liquid or solid waste. The restaurant will be connected to the town sewer service and will rely on town water supply. It is unlikely that groundwater dependent ecosystems occur in the vicinity to the site or will be affected as no interference to groundwater is proposed.

Clause 6.5 Terrestrial biodiversity - This clause is not applicable to the site.

Clause 6.7 Active Street Frontages - This clause is not applicable to the site.

Clause 6.9 Essential services – Pursuant to this clause the consent authority is required to be satisfied that any of the following services that are essential for the proposed development are available or that adequate arrangements have been made to make them available when required:

(a) the supply of water,
(b) the supply of electricity,
(c) the disposal and management of sewage,
(d) stormwater drainage or on-site conservation,
(e) suitable road access.

The land can be serviced to Council standards (subject to conditions of approval).

- Supply of Water
  - A water main exists currently along the frontage of the site. An existing house service and meter exists on the block. Should the development require a larger connection than the existing 20mm property service, a new larger water service and meter can be arranged through Mid-Western Regional Council works department.

- Supply of Electricity

- The development design has been reviewed by Level 3 Accredited electrical designer, David Bridle of Delta Star Designs. The potential for the largest infrastructure has been included in the site plans (substation being a 500kva 4way sub) and is screened as depicted in the proposed landscaping plan.

- Disposal and Management of Sewage
  - An existing sewer main exists at the front of the site along Horatio Street. An existing sewer junction exists on the block that currently services the residential dwelling. It is proposed to use this sewer connection for the new development (subject to requirements at detailed design stage).

- Stormwater drainage
  - The site sits within Catchment F in Mid-Western Regional Council Local Creeks Flood Study. An open concrete based drainage channel runs through the site where it connects to a box culvert under Horatio Street. The box culvert is nominated as having greater than 100yr capacity in the Catchment F report.
  - It is proposed to extend the existing box culvert through the site to the Southern boundary. A new inlet to the culvert will be constructed near the Southern Boundary of the property that will convey the water through to the Northern side of Horatio Street. The culvert size will match the existing.
  - On site stormwater will be detained in the carpark and released at the pre-developed rate. It is proposed to capture much of the detention required by overland storage in the carpark area. New pits in the carpark area will direct stormwater to be discharged into the new culvert before leaving site at a controlled rate.
  - Water Quality Urban Design stormwater treatment methods will include the use of Enviropod baskets in each of the carpark pits to capture debris and provide a treatment benefit to the stormwater leaving site.

  (refer to detail in the Civil plans prepared by Triaxial Consulting Pty Ltd).

- Road Access
  - The road access is addressed below in relation to the s138 Roads Act application. The driveways proposed to separate the entry and exit traffic with a one-way driveway through the site.
  - The service yard and loading area is at the rear of the building and screened from Street.

6.2.1 COMPLIANCE WITH MWRC DEVELOPMENT CONTROL PLAN

The Development Control Plan does not include specific controls for land in the SP3 Tourist zone. Compliance with Part 4.5 Commercial Development of the Mid-Western Regional DCP (2013) is discussed in this section as most relevant. This section of the DCP refers to commercial development without specific zones referenced.

Table 1: Compliance with the DCP Part 4.5 Commercial Development

DCP Provisions	Comments	Complies
Building Setbacks (a) No minimum front setbacks apply. (b) Side and rear must comply with Building Code of Australia (BCA)	Adoption of a front setback to be sympathetic with the neighbouring residential land use has been provided and existing setback of the dwelling to be demolished was adopted – 9700mm. Consolidation of the existing lots 2 & 3 DP743615 is required as the proposed restaurant will be constructed over the dividing lot boundary. Once consolidated, side and rear setbacks will comply with the BCA.	YES.
Signage Refer section 4.4 Signs	Refer to **Table 2** below.	
Design (a) The LEP includes provisions relating to active street frontages. All premises on the ground level of a building facing the street are used for the purposes of business premises or retail premises. (b) All premises on the ground level of a building facing the street shall be comprised of windows and doors to encourage the interaction between pedestrians and the retail space. (c) Building facades shall be articulated by use of colour, arrangement of elements or by varying materials. (d) Consider elements within established heritage buildings and how its application may be applied to new development	Clause 6.7 Active Street frontages of the MWRLEP 2012 does not apply. The development has been designed with windows on the front façade. The design has utilised varied materials, darker and muted 'red' shades. Timber look finishes and concrete look sheeting is proposed to break up the building and provide natural tones to contrast with the KFC franchise's required branding. The existing dwelling is not heritage listed. Separate supporting heritage studies have been completed to ensure the design has included heritage sympathetic design measures where possible.	No departures proposed. Design elements have considered all provisions.

DCP Provisions	Comments	Complies
(e) Consider the pattern of built form, scale, use of verandahs, fenestration, colour and materials. (f) Design of new development should seek to be sympathetic to heritage items not reproduce them. (g) Plans must include details of all external infrastructure (air conditioning ducts, plant rooms) and how it will be screen from view form a public road. (h) Development on a corner must include architectural features to address both frontages. (i) Where the development will adjoin the residential, village and mixed use zones, sufficient setbacks in the form of landscape buffers and access ways should be incorporated.	The architectural design has been negotiated with KFC corporate structure to ensure the modifications to provide a design that would be unique for the Mudgee setting has been achieved, but also meet the key requirements of a KFC restaurant. The stripes for business identification replace what otherwise could be signage. The service yard and waste / bin storage areas are to the rear and cause minimal visual intrusion. Air conditioner units will not be located on the roof - will be screened and located in the service yard. The development is not located on a corner. Also, it is noted that the use of the Lyons Lane is not relied upon for this development. The landscaping and setbacks have been applied sympathetic to the mixed-use setting. Setbacks are in line with the existing dwelling and landscaping has specifically been designed to screen and address opportunities for softening of the proposed premises and pavements required for car parking and driveways.	
Scale form and height (a) The LEP controls the height of buildings to a maximum of 8.5m (b) Consistent with the existing heritage character of the town centres of Gulgong, Mudgee and Rylstone. (c) Gulgong has a building height limit to a maximum of 5m	Maximum height of the proposed building is 6m. The roof line is stepped and elevations are broken up by use of colour, materials and parapet design features.	YES.
Mortimer & Church Street Mudgee N/A	N/A	N/A
Articulation and Façade Composition (a) To break visual bulk and create interest, use secondary vertical elements such as fenestration or detail such as changes in materials and colour.	The building proposes use of painted surfaces, textured/coloured wall sheeting, timber-look battens, powder-coated finishes in various colours, patterned screens (metal) and glazed areas.	YES.

DCP Provisions	Comments	Complies
(b) Excessive length of blank walls are not supported in the front facade. (c) Where blank walls are unavoidable (alongside or rear boundaries), break the visual impact through the provisions of landscaping, or by creating visual interest through patterning of the facade, signage or public art.	No elevation is left 'blank'. The signage is proposed in a way to integrate with the building design. Landscaping is proposed to soften the car parking and driveways.	
Post supported verandahs and balconies N/A	N/A	N/A
Residential Commercial Interface (a) Provision of landscaping buffers to provide visual screening along residential boundaries that adjoin development sites in the Mortimer Street precinct (in particular. (b) Ground and first floor development should not overlook residential properties (c) Maintain acoustic privacy through the use of acoustic fencing, where vehicular movement adjoins property boundaries to reduce visual bulk of the proposed development. (d) Reduce visual bulk by locating buildings and structures away from residential boundaries, or where buildings must be located along property boundaries ensure that sufficient landscaping is provided (e) A development should not reduce the sunlight received by the north-facing windows of living area, private open space areas, or clothes drying areas of adjoining properties to less than 3 hours between 9 am and 3pm at the winter solstice.	The side and rear boundaries to the development site will be fenced and landscaped. The development will not cause any overlooking into residential properties. Acoustic issues associated with the ordering system and drive through service are not expected to cause any undue impact, considering the hours of operation and technical ability of systems typical of such franchises available for installation. The proposed building is centrally located on the development land, and screens service areas.	
Utilities and services (a) Documentation to demonstrate that the development is able to be services with water, sewer and drainage and	Servicing of the development has been discussed in section 6.2 in this report in relation to the provisions of the LEP.	YES.

DCP Provisions	Comments	Complies
adequate provision has been made for handling and disposal of solid waste. (b) Trade Waste Application is required where liquid waste (other than water from wash basins, toilet or bathrooms) will be discharged into Council's sewerage system. (c) Building and structures are to be located clear of infrastructure. (d) For new sewer mains structures are to be located 1m plus the equivalent inverted depth, whichever is greater) of the centreline of the main.	Trade waste application may be required for the commercial kitchen (subject to Council requirements).	
Traffic and Access (a) All vehicles must be able to enter and exit the site in a forward direction. (b) All vehicle movement paths are to be sealed. (c) Driveways must comply with Australian Standard AS 2890.1 Parking Facilities. (d) For new commercial development all loading facilities are to be located within the site with no loading to occur from the public road system. (e) All loading facilities shall be designed to complying with Australian Standards. (f) Where the truck delivery paths extend through car parking areas due consideration should be given to the separation of truck, pedestrian and car traffic. Where separation cannot be achieved then the application it to address traffic flow and safety issues.	A separate entry and exit driveway is proposed for forward movement through the site. All vehicle driveways are to be sealed and have been designed to comply with Australian Standard AS 2890.1 Parking Facilities. The loading site is depicted in the site plans and related to the service yard. The maximum size of a delivery vehicle has been considered in the design and loading will not interfere with car parking or access to the drive through service lane.	YES.
Pedestrian Access (a) Maintain existing covered pedestrian access within the town centres. (b) Convenient and safe access through parking areas.	Pathways and pedestrian crossing is proposed internally to ensure designated walking areas are separated as best for pedestrians to walk from the main parking area on the western boundary to the main	YES.

DCP Provisions	Comments	Complies
(c) Convenient and safe disabled access through parking areas and where relevant focus on improving links with the existing retail areas.	entry door on the eastern side of the building. Disabled parking and access to the building complies with the Access to Premises Standard.	
Parking Refer Specific Provisions relating to parking section 1.3.	Assumed is a typographical error and reference to DCP part 5.1 Car parking is referenced. See **Table 3** below.	YES.
Landscaping (a) Landscaped areas within the car parks should be provided incorporating the use of canopy trees and buffer planting to residential boundaries. (b) Landscaping to comprise low maintenance, drought and frost tolerant species.	Hedging that reaches 2-3m height is proposed to southern, western and eastern boundaries. This will screen from neighbouring residential properties. Species choices are depicted on the Proposed Landscape Plan prepared by Baldasso Cortese.	YES.

Table 2: Compliance with the DCP Part 4.4 Signs

DCP Provisions	Comments	Complies
General Requirements Full details of sign type, size, lettering, location, colours etc. must be provided with a development application.	Architectural plans depict proposed signage/colours and locations. All signage relates to the proposed food and drink premises.	YES
Signs in Towns and Villages **HERITAGE CONSERVATION AREAS**	In accordance with the DCP particular attention has been paid to the preservation and enhancement of the character and appearance of the conservation area. A muted darker red colour more appropriate to the setting is proposed as alternative to the usual corporate KFC branding.	YES
Tourist Signage Tourist related development including restaurants. (No specific provisions apply for a fast-food restaurant).	The DCP permits 2 identification signs. However, the provisions are aimed toward tourist development in the rural area. Internal signage is proposed to be approved as part of the DA. Including directional and menu boards. No provisions are specifically applicable to the proposed pylon sign.	Merit based consideration required.

Table 3: Compliance with the DCP Part 5.1 Car Parking

Spaces shall be provided to the next highest whole number. Floor space areas refer to gross internal spaces, excluding stairs, amenities and corridors.

DCP Provisions	Comments	Complies
Restaurants or cafes or Take away food and drink premises 1 space per 7m^2 gfa or 1 space per 3 seats whichever is the greater (Restaurant). 1 space per 4m^2 for licensed floor including outdoor seating or dining **Drive thru food service** 10 spaces, either in queue or as normal parking	Relevant floor area = approx. 92m^2 - at 1 space per 7m^2- requires 13 spaces. 1 space per 3 seats utilised based on 40 seat restaurant – requires 14 spaces (adopted). Nil required – no licensed floor area. 6 spaces available in queue with additional spaces in car park. Total **23 spaces provided** (including 1 disabled space and additional spaces in queue). Bicycle parking is also provided as additional (4 spaces). For the design and layout including manoeuvring, provisions of accessible spaces and access reference is made to AS 2890.1 Parking Facilities.	YES.

7 EVALUATION - ENVIRONMENTAL IMPACTS

7.1 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

This section considers the likely impacts of the proposed development, including environmental impacts on both the natural and built environments.

7.2 SOIL AND SURFACE WATER

7.2.1 Potential Impacts – Soil and Surface Water

The proposed development does not trigger integrated development provisions due to works within 40m of a waterway. Under the Water Management Act 2000 (WM Act) an approval is required to undertake controlled activities on waterfront land. The map in **Figure 4** below shows mapped watercourses, however in this location the drainage has been concrete lined, relocated and culvert under the road, is not a natural watercourse for the purpose of the Act.

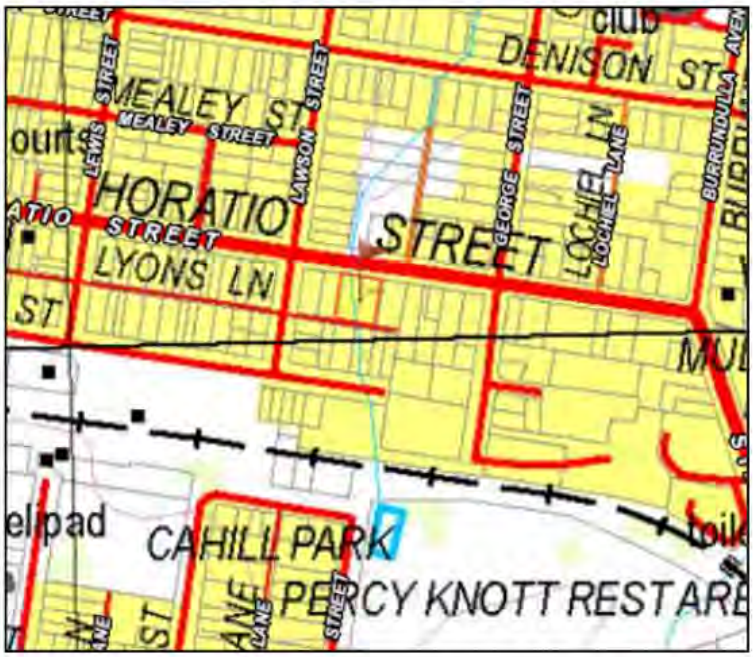

Figure 4: First order streams in vicinity to the site

Potential soil impacts due to the development of the additional lots may include exposure of soils to increased erosion and offsite sediment transport during the demolition works and land preparation (including tree removal). This limited disturbance is not expected to have any long-term impact and can be managed with standard practices for development sites.

7.2.2 Mitigation Measures – Soil and Surface Water

Overall, soil and water management issues are considered minor. With the appropriate stormwater design for the culvert treatment (ensuring the channel contains volume commensurate with the 1 in 100 yr event) and any required easement creation for long term legal drainage.

Mitigation measures should be adopted to minimise potential for impacts to soil and water.

- Erosion and sediment controls are to be established prior to any site disturbance.
- A Demolition Management Plan is expected to be prepared addressing waste management.
- Methods within the '*Managing Urban Stormwater: Soils and Construction Volume 1*' (Landcom 2004) are to be employed where relevant.
- The provisions of the DCP 5.4 Environmental Controls – Building in a saline environment can be implemented for any building proposals. No further investigation or action are considered necessary for this project.

7.3 VISUAL AMENITY

The proposed demolition and redevelopment of a KFC restaurant will lead to notable changes to the built aspects of the land. The changes were addressed with specific consideration to the location within the Mudgee Heritage Conservation Area in the assessment prepared by Heritage 21. The conclusions of that report are referenced. Aspects that respect or enhance the heritage significance were noted:

- The proposed setback of the development would be consistent with the setback of adjacent properties.
- It would not alter the historic subdivision pattern in the Mudgee locality.
- The proposal would not result in the demolition of heritage significant fabric.
- The proposed colour scheme identified would result in a neutral heritage impact on the Mudgee Heritage Conservation Area and heritage item in the vicinity.
- The design, bulk and form of the proposed commercial structure would not dominate the local streetscape and would be considered sympathetic within the context of the Mudgee Heritage Conservation Area, nearby heritage items as well as the Horatio Street streetscape.
- Landscaping – including tall plantings – at the rear boundary of the site would reduce the potential visual impact of the proposed development on view lines to and from the heritage item at the rear of the site as well as from within the Mudgee Heritage Conservation Area.

- The proposed would attract the community to the area and would therefore facilitate the ongoing community engagement with the Mudgee Heritage Conservation Area and nearby heritage items.

7.4 CUMULATIVE ISSUES

No significant potential cumulative issues have been identified because of the proposed demolition of the dwelling and redevelopment for a food and drink premises. The development will support the zone objectives and development of the land with Highway frontage for tourist related uses.

7.5 SOCIAL AND ECONOMIC IMPACTS

This section considers the likely social and economic impacts of the development in the locality. Socially the proposal will have a positive impact as identified un the heritage assessment "The proposed would attract the community to the area and would therefore facilitate the ongoing community engagement with the Mudgee Heritage Conservation Area and nearby heritage items".

The development facilitates commercial/tourist related development within Mid-Western Regional LGA that may have positive economic flow on effects.

7.6 SITE SUITABILITY

REVIEW OF SITE ISSUES - An overview of site issues was provided in **Section 3** of this report.

ZONING AND PERMISSIBILITY OF THE PROPOSED DEVELOPMENT – Redevelopment of the land for the purpose of a food and drink premises with Highway frontage in the SP3 Tourist is consistent with the zone objectives and is permissible with consent. Overall, the proposed KFC development will be consistent with the zone objectives, having environmental impacts that are able to appropriately mitigated and managed.

SIZE AND SHAPE OF THE LAND - The land titles will require consolidation for the development to proceed and formalise the drainage easement, as required. The shape of the land is regular and conducive to the development.

COMPATIBILITY WITH ADJOINING DEVELOPMENT - The proposed restaurant with 'drive through' service has included design aspects to reduce any detrimental impact on surrounding land residential in nature. Compatibility issues are addressed through minimising interaction with building design aspects, separation through landscaping and fencing.

Overall, no issue has been identified that would indicate that the land is not suitable for the development as proposed.

7.7 PUBLIC SUBMISSIONS

Any submissions made in accordance with the EP&A Act, or the regulations received during the notification period for the development application would be required to be considered by Council in the assessment of the application.

7.8 PUBLIC INTEREST

Section 4.15(1)(e) requires consideration of the public interest in assessing the proposed development. The proposal is not likely to have wider public implications. The s138 Roads Act application will require referral to Transport fort NSW.

8 CONCLUSION

This Statement of Environmental Effects assessed the impact of the proposed development and where relevant provides the supporting information and outlines proposed actions that demonstrate measures to be undertaken to ensure consistency with the objectives of the zone, and outline what plans are in place to ensure mitigation of any potential environmental impacts.

Key issues relate to the demolition and redevelopment proposal in the Mudgee Heritage Conservation Area, and consideration of impacts on the setting. Particular attention has been made to ensure the design is compatible with the location. Interactions with neighbouring residential development have been considered and mitigated through design and landscaping. Design of the new premises has been considerate to the location and no significant departures from the DCP are noted. Pre-lodgement advice from Mid-Western Regional Council staff and Transport for NSW has been included in the design with adequate access off the Horatio Street (classified road) frontage, and design of services able to be achieved.

Overall, the development will meet the development standards expected for franchise and inclusion of signage and restaurant areas that meet KFC standards are included in the design. The development will have a positive economic impact and support the SP3 Tourist zone objectives. All potential environmental impacts likely to result from the project can be mitigated by the implementation of the standard demolition/ construction management measures.

In accordance with the *Environmental Planning & Assessment Act 1979* an Environmental Impact Statement is not required and Mid-Western Regional Council is able to undertake assessment and subsequent determination of a development application for demolition work and redevelopment of the food and drink premises based on the Plans, this SEE and the referenced supporting documents.

END OF REPORT

Waste Management Plan

Introduction

This plan will address and identify the wastes generated by the development ongoing and describe the methods used to contain and dispose of the waste with minimal environmental impact.

Proposal

The site is proposed to be redeveloped to support a new restaurant (40 seat), with drive-through service and car parking. The site is located approximately 2.1km from the Mudgee Post Office in Market Street (4 min and is well accessed via Douro Street and Horatio Street – Castlereagh Highway/B55). The location of the subject land is shown below in **Figure 1**.

Figure 1: Site Location – 33 Horatio Street, MUDGEE

Source: (NSW Government Land and Property Information- six maps viewer).

Owners: Diamond 7 Pty Ltd.

Property Description: The subject land includes approximately 2260m^2 in two titles. The land is regular/rectangular shaped with frontage to Horatio Street – approx. 45m.

Site address: 33- 35 Horatio Street, MUDGEE.

Title description: Lots 2 and 3 in DP743615.

Waste Composition and generation

The table below indicates the likely waste generated at the new site.

Waste Stream	Comment
General Waste	General waste includes non-recyclable plastics, food waste, recyclable packaging which is contaminated with food waste and other non-recyclable materials, as well as recyclables which have not been placed in the correct bin. This will be generated at a rate to require a collection of a 3 cubic meter front bin 3 times a week.
Recyclables	KFC proposes to generate sufficient quantities of these materials to warrant the adoption of a comingled recycling system as part of their waste management strategy. KFC waste management policy is attached in the Appendix 2.
Food Waste	This is included in the General waste. Food control systems and training developed by KFC have significantly reduced the amount of food waste that is generated. Regular collections reduce the risk of pest activity and odour.
Cooking oil & Grease	Cooking oil will be recycled through specialist oil recycler. The recycler will provide a container for storing the oil on site before collection. A grease trap design will be implemented with a waste removal service provided at least every 12 weeks or as needed. The contractors will ensure that the grease trap cleaning and maintenance is carried out in accordance with regulatory authorities. Their environmentally safe vacuum collection vehicle will load and transport the grease trap waste to our facility for processing.
Cardboard and Bulk Packaging	This is included with recyclables policy. Carboard will be collected 2 times a week in 3 cubic meter front bin.

Waste Management System

Bin Storage Area

The Bin Storage area has been designed to allow for the following:

- Have adequate storage space for required bins (based on the building size and the applicable waste and recycled material generation rates.)
- Be designed with some flexibility in relation to size to ensure future uses for the

development are not limited.

- Permit easy, direct, and convenient access for tenants, cleaners, and other users of the facility, whilst restricting access to unauthorised persons.
- Permit easy transfer of bins to the presentation point if required, with doors and access wide and high enough to allow easy maneuvering of any stored bin.
- Permit easy, direct, and convenient access for collection service providers.
- Are integrated into the design of the overall development and do not affect visual amenity.

Please refer to the image below for location of the Bins Storage area and access.

Access

The location of the Bin Storage area has been designed to compensate the following:

- Waste presentation points are located as close as possible to the storage point.
- The route from storage to presentation point is short, flat and easy to navigate as possible.
- Access to the waste presentation points for collection vehicles are in low traffic areas (collected before opening) and are focused on a 'drive in, drive out' design.

Collection and Implementation

Refer to Appendix 1

Design Considerations

Noise

Noise issues associated with waste management typically occur when bins are emptied into collection vehicles. Additional noise impacts can be associated with the lifting mechanism and reversing alarms of collection vehicles.

The design and waste management plan strategies for noise include:

- The storage areas and collection points have been located a significant distance away from neighboring properties to reduce the impact of noise during bin use and collection. The building has been positioned at the center of the block.
- Eliminating the need for collection vehicles to reverse. The wide entry points mean the collection vehicles have large spaces to maneuver.
- Using road, driveway and pathway surfacing materials that minimise noise
- Proposed collection times will ensure the least amount of disturbance to neighbours.

Odour

The following considerations have been adopted in the waste management plan to reduce the impacts of odour:

- Greenwaste or food waste (organic waste) are the most likely part of the waste stream to cause odour. The waste management plan proposes to have more frequent collections which will help to reduce the problem. Alternatively, dedicated freezers can be used to store wrapped food waste until collection.
- In the enclosed storage and service areas, the air flowing from interim storage areas and central waste storage areas will not exit near public areas. Ventilation openings will be located as close to the ceiling and floor as possible and designed to protect against flies and vermin.
- The waste management plan ensures that the bins are regularly emptied and cleaned which will help to minimise potential odour problems. The waste storage areas will be regularly cleaned, have a drain to the sewer and are well-ventilated. Cleaning will be carried out as per KFC's cleaning and maintenance schedule.

Hygiene and Vermin

In designing bin storageareas, the following considerations have been adopted.

- The bin storage areas will be easy to clean and equipped with hot and cold running water and a connection to the sewer

  To maintain hygiene:

  - Cleaning schedule has been created by KFC' which assigns responsibility for keeping bin storage areas and collection points clean.
  - Bins will not be allowed to sit open for prolonged periods.
  - Waste collection and storage areas kept free of clutter and dumped rubbish
  - Regularly wash the bins, floors and walls of bin storage areas.

Acknowledgments

This Waste Management Plan has been written with the help of:

Emma Yule – (Atlas Environment and Planning)

Mark Day – (Regional sales manager JR Richards & Sons)

James Consadine - (Restaurant manager, Bachelor of Engineering Technology (Civil))

Appendix 1.

From: Mark Day <Mark.Day@jrrichards.com.au>
Sent: Tuesday, 12 October 2021 4:19 PM
To: fair@hwy.com.au
Subject: Waste Management Plan

G'day Peter ,

As requested, outlined below is our strategy to manage your waste services at your proposed new site in Horatio Street , Mudgee . J R Richards & Sons offer a sound entity with a history of amicable working relationships with multiple Councils and Commercial Customers, a strong financial structure and a proven management style .In essence ,we have the experience , the resources and the will to provide an environmentally compliant and cost – effective waste and recycling service to KFC Mudgee .

Commercial Grease Trap Service:
We will provide a grease trap waste removal service every 12 weeks and are available for unscheduled services when required. Our operators ensure your grease trap cleaning and maintenance is carried out in accordance with regulatory authorities. Our environmentally safe vacuum collection vehicle will load and transport your grease trap waste to our facility for processing.
Our comprehensive range of grease trap cleaning and monitoring services include:

- Complete evacuation of grease trap contents
- Washing & scraping of walls and baffles
- Transportation to a licensed, EPA compliant treatment facility
- Reporting of trap condition and abnormalities
- Trap audits to maintain service quality
- Inlet and outlet point inspections
- Deodorisation and replacement of lids
- Operational health and safety hazard alerts.

Commercial Recycling & General Waste Collection:

We will provide 3.0 cubic meter galvanised metal front lift bins. These bins, on wheels will be located in your waste compound. One will be for mixed waste and one for paper & cardboard for recycling. Our service vehicles shall remove the waste between 8:00 am and 10:00 am to negate any noise issues and operate on weekdays only.

Please don't hesitate to contact Mark Day of J R Richards for any further information or assistance

Kind Regards

Mark Day
Regional Sales Manager

J.R. Richards & Sons | Waste & Recycling Services
60 Fitzroy St • DUBBO • NSW • 2830
T: 02 6884 1200 | F: 02 6884 4961 | M: 0438 409 150
E: Mark.Day@jrrichards.com.au | www.jrrichards.com.au

Be nice to the world. Please don't print this e-mail unless you really need to.

CERTIFICATE OF APPROVAL

No. 005-98061-E

This is to certify that the Environmental Management System at

JR and EG Richards Administration Pty Ltd trading as JR Richards and Sons

of

Head Office - 92 Manning St, Tuncurry NSW 2428

Has been examined by assessors of QMS Certification Services and found to be conforming to the requirements of:

ISO 14001:2015
Environmental Management Systems

In respect of the following activities:

Administration, management, collection, treatment and processing of commercial, regulated, liquid and solid industrial wastes and domestic general, recycling and organic wastes. Services also include the supply of waste handling materials, operation of Material Recovery Facilities (MRF), Organic Recovery Facilities (ORF), Liquid Waste Treatment Facilities, Transfer Stations, Landfils and associated maintenance workshops, the sale of product generated from these facilities, total waste management services and specialised hivolume industrial vacuum and Closed Circuit Television (CCTV) Inspection and Condition Reporting of Pipes and Conduits.

This certificate is valid from: 01/11/2019 to 01/11/2022
Original certification date: 22/08/2006

Gerry Bonner, CPEng, BEng, FIE Aust, Chairman - QMSCS Pty ltd
To verify the validity of this certificate please visit www.jas-anz.org/register

JAS-ANZ

QMS Certification Services

CERTIFICATE OF APPROVAL

No. 005-98061-E

Schedule of Certified Locations

JR and EG Richards Administration Pty Ltd trading as JR Richards and Sons

Dubbo & Central West Operations
60 Fitzroy Street, Dubbo NSW 2830

Cooba Rd, Dubbo NSW 2830

Mudgee Operations
20B Sydney Road, Mudgee NSW 2850

Tamworth & New England Regional Operations
21 Showground Road, Tamworth NSW 2340

115 Mathias Rd, Gunnedah NSW 2380

Armidale Depot
14 Myrtle Road, Armidale NSW 2350

Central Coast
6 Grieve Road, West Gosford NSW 2250

Central West
Cnr. Neeld & Emu St, Wyalong NSW 2671

Appendix 2.

KFC Waste Policy

Waste Disposal

This CSL covers information about how to handle general waste including dealing with leftovers, oil spills, commingled recycling, cardboard, bottles and cans.

Introduction

Solid waste must not be washed down the sink or floor drain, as it creates serious problems.
It contaminates the water and sewerage lines of the whole community. Not only is this bad from an environmental point of view, but the Restaurant may be breaking pollution control laws and, as a result, be heavily fined.

It eventually clogs the Restaurant drainpipes. This results in high store maintenance costs, since a drain or sewer service must be hired to remove these wastes. It increases the amount of grease and solid waste, which accumulates in the restaurant's grease trap. Thus, the grease trap requires more frequent cleaning by a grease trap cleaning service. This too, increases maintenance costs. There are a lot of different types of waste employees have to dispose of in store and KFC has made the commitment to use the best environmental solution available for these different types of materials.

Deal with Leftover Food

- Scrape any remaining food into the rubbish bin and wipe out the container before putting it intothe sink or automatic washer to be washed.
- Before washing racks or trays used to hold raw or cooked chicken, scrape any excess breading, oil, or pieces of raw chicken/fat into the rubbish bin.
- Clean the breading table by first scraping excess flour onto a tray and empty into the rubbishbin.
- When breading flour has reached its discard point, always scrape the leftover into the rubbish bin.

If discarding large quantities of bulk or packed product use a double lined garbage bag in the rubbish bin to prevent spillage or the bin liner from splitting. Make sure you do not overload rubbish bin so that it is not too heavy to lift.

Deal with oil Spills

- Never wash oil down a drain. This causes environmental hazards, blocked pipes/drains, andodour issues.

General Waste

What is General Waste?

General Waste is anything that does not have a designated recycling bin. For example, food scraps, full mashed potato and gravy containers, towelette wrappers, cling wrap, plastic gloves, ingredient and sauce plastic bags, grease filter paper, Chux and plastic bags.

Get the Front-of-Store Bins Ready

Inside the bin cabinets in the front-of-store there will be either one or two inner bins. Put a clear bin liner in the inner bin for general waste.

Empty the Front-of-Store General Waste Bin

When the general waste bin is full, remove the full bin liner and replace the bin liner. Carry the full bin liner to the Bin Room and place it in the designated general waste bin. Do not fill the general waste above the rim of the bin. Be sure to place all general waste into the correct bin in the Bin Room. If packaging waste is left at a table, separate the recyclables from the general waste. Then place the general waste into the general waste side of the bin.

Empty the Kitchen General Waste Bins

When the general waste bin in the kitchen is full, remove the full bin liner and replace the bin liner. Carrythe full bin liner to the Bin Room and place it in the designated general waste bin. Do not fill the general waste above the rim of the bin. Be sure to place all general waste into the correct bin in the Bin Room.
Every kitchen has designated general waste bins. Only place general waste into the general waste bins.

Wait for the Next Scheduled Collection

Leave the general waste in the general waste bin. The waste company will collect it on the scheduled dayand deliver it to the correct facility. Where possible, the general waste will be delivered to an AlternateWaste

Technology facility where some of the waste is recovered for compost, energy and/or recycling.

Health and Safety in the Bin Room

- Wash internal bins and lids daily to prevent offensive odours.
- Always keep the Bin Room tidy, employees and waste drivers need a clean and safe
- environment. Clean up all spills and ensure the floor is not slippery.
- Do not leave excess waste in front of the bins in the Bin Room as this makes it difficult to accessthe bins for service and attracts pests.
- If you have excess waste, make the necessary arrangements for an
- additional collection. You should be able to place the waste into the designated bins in the Bin Room comfortably.
- Never enter a bin to compact waste. If this is a recurring issue, please contact Closed Loop toreview pickup schedules.
- Keep the bin lid shut otherwise pests be attracted to the bin.

Handle Rubbish

All restaurants must have a pair of rubbish claws for picking up rubbish in the car park and other external areas. These claws are an important component of our personal safety equipment and must be available, in good condition, and always used for picking up external rubbish.

- When emptying bins, never push down or crush the rubbish with your hands or legs. If the bin isfull, replace it. Do not try to squeeze more in.
- Always tie the bin liner off with a knot at the top, ensuring that it is not over-full and that yourhands and body are never pressed against the full body of the liner.
- Only carry the bin liner from the top. Carry the bin liner away from your body. If too heavy getassistance from another Team Member, making sure that you both carry the bin liner away from your bodies.

If you find any sharp objects like broken glass, syringes, etc., notify the Manager on Duty immediately and do not attempt to handle or dispose of the object.

Every Team Member must wear heavy, protective gloves when handling rubbish bins – both internal and external bins.

Handle Commingled Recyclables

There are a lot of different types of waste employees have to dispose of in store and KFC has made the commitment to use the best environmental solution available for these different types of materials.

What are Commingled Recyclables?

Paper, plastic, glass, steel and aluminum are recyclable and when combined in one bin, this is known ascommingled recycling.

Get the Front-of-Store Bins Ready

Inside each bin cabinet in the front-of-store there are two inner bins—one for general waste and one forcommingled recyclables. Ensure the commingled bin is clean and ready for use.

Handling Commingled Recycling in the Front-of-Store

If packaging waste is left it at a table, separate the recyclables from the

- general waste: Place the commingled recyclables into the recycling side of the bin.
- Do not put plastic bags into the recycling bin.
- The commingled recyclables from the front-of-stores are: empty paper chip and snack boxes, paper wraps, plastic drink bottles and cups, plastic spoons, cans, and clean mashed potato andgravy containers.
- Rubbish, food, plastic bags or other flimsy plastic cannot go into the
- commingled recycling bin. If you have any questions on what is recyclable please refer to the poster in your kitchen area.

Empty the Front-of-Store Commingled Recycling Bin

- When the commingled recycling bin is full, remove the bin liner and replace the bin liner. Carry the full bin liner to the Bin Room and empty the commingled recyclables into the designatedcommingled recycling bin.
- **Do not** put the bin liner in the commingled recycling bin. This belongs in the general waste bin.

Handling Commingled Recycling in the Kitchen

Every kitchen has a designated commingled recycling bin. Only place commingled recyclables into this commingled recycling bin. The commingled recyclables from a KFC kitchen are:

- Aluminum and
- steel cans.
- Plastic drink

bottles and cups.

Paper.

- Clean ingredients containers.
- Rubbish, food, plastic bags or other flimsy plastic cannot go into the commingled recycling bin.

Empty the Kitchen Commingled Recycling Bin

- When the commingled recycling bin in the kitchen is full take the recyclables to the designated bin in the Bin Room.
- Place the commingled recyclables into the bin without the bin liner.

Wait for the Next Scheduled Collection

- Leave the commingled recyclables in the commingled recycling bin.
- The waste company will come and collect it on the scheduled day and deliver it to the correct recycling facility.

Health and Safety in the Bin Room

- Always keep the Bin Room tidy, employees and waste drivers need a clean and safe
- environment. Clean up all spills and ensure the floor is not slippery.
- Do not leave excess waste in front of the bins in the Bin Room as this makes it difficult to accessthe bins for service.
- If you have excess waste, make the necessary arrangements for an
- additional collection. You should be able to place the waste into the designated bins in the Bin Room comfortably.
- Never enter a bin to compact waste. If this is a recurring issue, please contact Closed Loop toreview pickup schedules.

Handling Cardboard

There are a lot of different types of waste employees have to dispose of in store and KFC has made the commitment to use the best environmental solution available for these different types of materials. This section of CSL contains information about how to handle cardboard.

Choose the Right Cardboard

- There is a lot of cardboard in KFC—most of it is recyclable. However, if the cardboard box has a waxy coating (e.g. 15pc or 21pc buckets) then do not put it in the cardboard bin.

Breakdown Cardboard Boxes

- In order to fit as much cardboard into the cardboard bin, as possible, flatten all
- cardboard boxes. An un-flattened box takes up more space in your cardboard

bin than a flattened box. Un- flattened boxes will cause extra collections.

Place Cardboard in the Cardboard Bin

- Once you have broken down the cardboard box, place it in the designated cardboard bin in the Bin Room.
- Do not fill cardboard above the rim of the bin.

Wait for the Next Scheduled Collection

- Leave the cardboard in the cardboard bin.
- The waste company will come and collect it on the scheduled day and deliver it to the correct recycling facility.

Handling Bottles and Cans

There are a lot of different types of waste employees have to dispose of in store and KFC has made the commitment to use the best environmental solution available for these different types of materials. This section of CSL contains information about how to handle bottles and cans recycling.

What is Bottles & Cans Recycling?

- Bottles & Cans Recycling is the collection of bottles and cans that have been separated fromother recyclable materials.
- In some stores the only type of recycling service available is to have a bottles and
- cans collection.Get the Front of Store Bins Ready
- There is a designated bin in the front-of-store for bottles
- and cans.Ensure this bin is lined with a clear bin liner.

Handling Bottles and Cans in the Front-of-Store

- If packaging waste is left it at a table, separate the bottles and cans from the
- general waste. Place the bottles and cans in the bottles and cans bin.

Empty the Bottles and Cans Bin

- When the bottles and cans bin is full, take the full bin liner out and put a new
- bin liner in the bin.Carry the full bin liner to the Bin Room and empty the bottles and cans into the designated bottles and cans bin.
- Do not put the bin liner in the bottles and cans bin. This belongs in the general waste bin.

Wait for the Next Scheduled Collection

- Leave the bottles and cans in the bottles and cans bin.

- The waste company will come and collect it on the scheduled day and deliver it to the correct recycling

THE ODOUR UNIT

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Website: www.odourunit.com.au

Attn: James Consadine
Broadview Australia Pty Ltd
On behalf of Kentucky Fried Chicken
33-35 Horatio Street
MUDGEE, NSW

19 November 2021

by email: jamesconsadine@gmail.com

PROPOSED KFC DEVELOPMENT AT LOT 2 DP 743615 AND LOT 3 DP 743615 – 33-35 HORATIO STREET MUDGEE, NSW – ODOUR ASSESSMENT REPORT (R1)

Dear James,

As requested, The Odour Unit Pty Ltd (**TOU**) has undertaken an odour assessment (**the Assessment**) for the proposed Kentucky Fried Chicken development at Lot 2 DP 743615 and Lot 3 DP 743615, 33-35 Horatio Street, Mudgee, New South Wales (**the Proposed KFC Development**). TOU understands that the Assessment will form part of a development application (**DA**) that will be lodged to Mid-Western Regional Council (**MWRC**) for the Proposed KFC Development.

The following letter-style report is an odour assessment for the Proposed KFC Development as conducted by TOU.

1. Relevant Background

TOU understands that the requirement for the Assessment is part of the requirements outlined by MWRC in accordance with the provisions of Clause 54 of the Environmental Planning and Assessment Regulation 2000 in a letter dated 6 October 2021 (**the MWRC Letter**). The request has been made to provide MWRC with further information as specified below, to enable further assessment of the DA application for the Proposed KFC Development, namely:

1. The cooking-based odour from kitchen activities; and
2. Odour emissions associated with vehicle traffic flow through the drive-thru facility.

These two key areas are addressed as part of the Assessment.

2. The Assessment Objective

The objective of the Assessment is to identify all potentially significant odour emission sources through a detailed review of the activities that will be undertaken at the Proposed KFC Development. Based on the outcomes of the review process, the Assessment evaluates whether engineered and other management-based controls are required or instated to attenuate all significant odour emissions adequately.

3. Supplied Information

The Assessment is based on the review of the following information relating to the Proposed KFC Development, as supplied by Broadview Australia Pty Ltd (**Broadview**):

- Architectural drawings as completed by Broadview; and
- Mechanical drawings as completed by Ramakers Architects.

In undertaking the Assessment, TOU has reviewed the supplied information in the context of its extensive knowledge in odour science and engineering and past project experience for other KFC fast-food restaurant chains.

4. The Assessment Approach

The Assessment for the Proposed KFC Development follows a similar odour assessment approach used for other similar (and now existing) fast-food restaurant developments across several Council jurisdictions. Specifically, the Assessment approach is framed around the New South Wales Environment Protection Authority (**NSW EPA**) documentation, including:

- The *Local Government Air Quality Kit*, which consists of three key modules:
    1. *The science and management of air quality module;*
    2. *Legislative and policy framework for air quality management; and*
    3. *Guidelines for managing air pollution.*

With the above in mind, the Assessment approach for the Proposed Development entailed the following:

1. A review of the key activities that will be undertaken by the Proposed Development;
2. Identification of all key odour emission sources and their associated level of odour risk; and
3. Where an odour emission source is evaluated to pose an unacceptable level of odour risk, a review into whether the necessary controls or management practices have been implemented to reduce this odour related risk.

Given the scale and nature of activities associated with the Proposed Development, the approach for the undertaking of the Assessment is appropriate.

5. Site Context and Identification of Sensitive Receptors

A site plan highlighting the Proposed KFC Development in relation to its site location and general surroundings, site landscape plan and 3D view is shown in **Figure 1, Figure 2** and **Figure 3**, respectively. The complete architectural plans are **appended** to the Assessment report. The

general surrounding of the Proposed KFC Development can be described as a built environment that includes, but is not limited to, existing residential development adjacent to the Proposed KFC Development.

5.1 Sensitive receptors

A sensitive receptor, as defined in the NSW EPA document titled *Technical Framework: Assessment and Management of Odour from Stationary Sources in NSW* and dated November 2006, is a location where people are likely to work or reside; this may include a residential dwelling, school, hospital, office or public recreational area. Given this definition, the Proposed KFC Development is regarded to be in a locality that is within proximity to sensitive receptors. This circumstance is considered as part of the review analysis conducted in the Assessment.

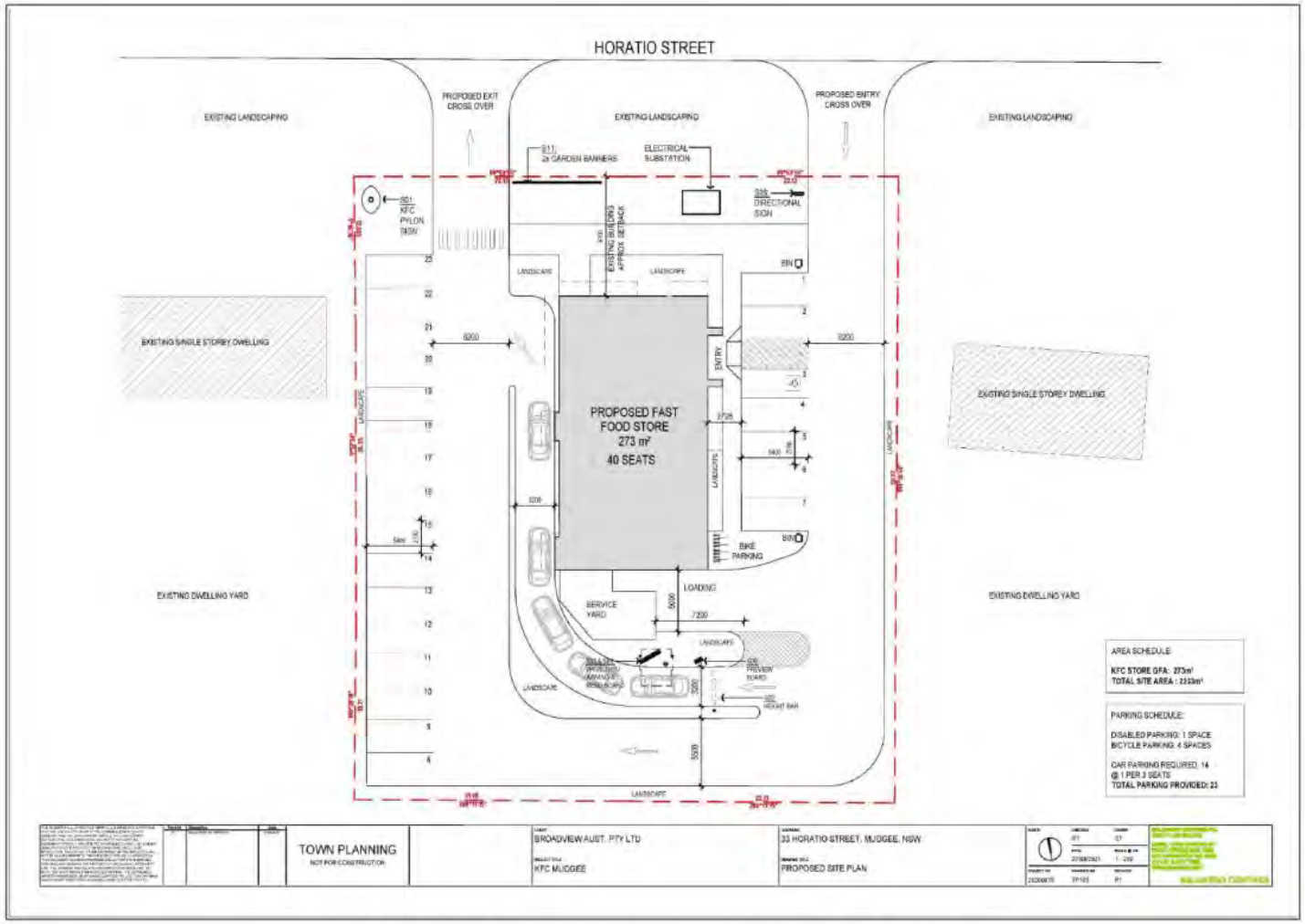

Figure 1 – Site plan of the Proposed KFC Development location and general surrounding

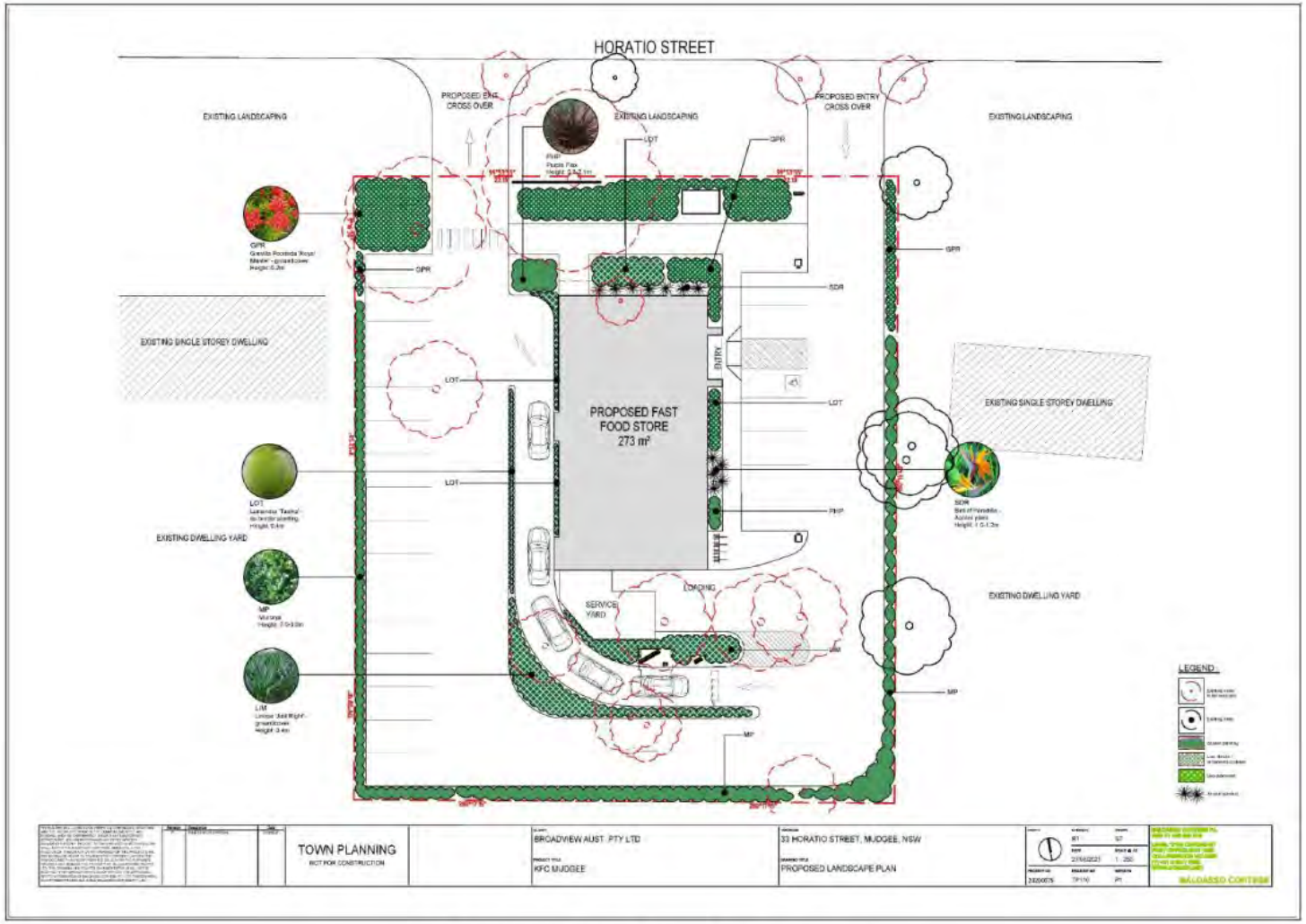

Figure 2 – Landscape plan of the Proposed KFC Development (1 of 2)

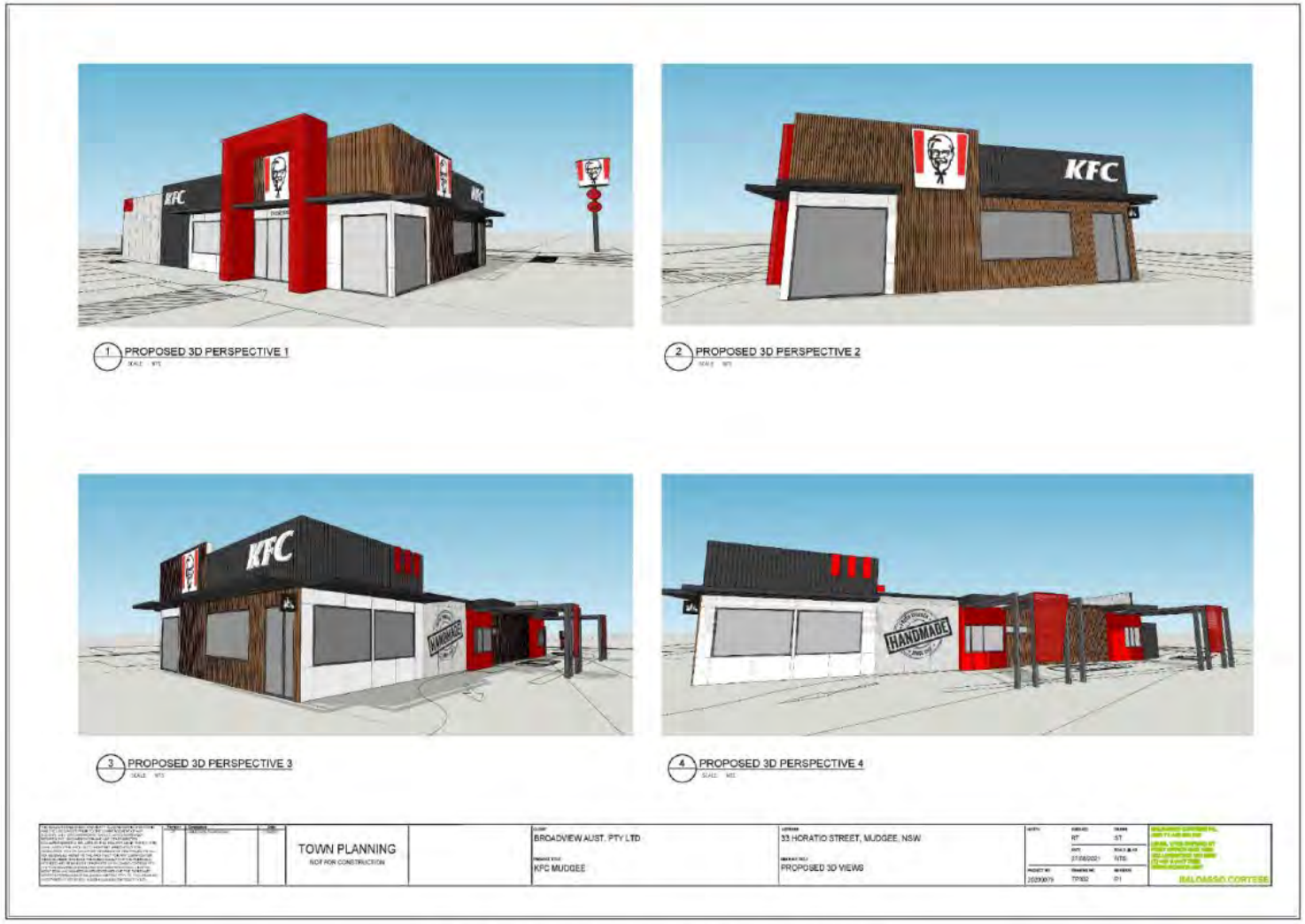

Figure 3 – 3D view of the Proposed KFC Development (2 of 2)

6. Proposed KFC Development Operations and Potential Odour Emissions

The Proposed KFC Development will be a chicken-based fast-food chain restaurant that will provide dine-in and drive-thru services. It is noted that the nature and characteristics of the fast-food service that will be provided by the Proposed KFC Development are well-known on both a national and international scale.

6.1 Odour Emissions Review Analysis

A detailed review analysis is intended to assist the Council to conduct an odour impact risk assessment for applications. As such, an Operational Odour Analysis (**OOA**) has been carried out to provide details on the operations and likely odour emission sources at the Proposed KFC Development, and the management of those odour emissions to reduce odour impact risk.

Given that KFC fast-food restaurant chain outlets are moderately consistent with minimal variation to the food product and process train, as evident from the architectural and mechanical drawings, the Assessment assumptions are considered reasonable and relevant to the Proposed KFC Development. As such, TOU has drawn on its past project experience from existing KFC fast-food restaurant chains for the Assessment. To that end, based on the planned activities at the Proposed KFC Development, the two key sources of odour include:

1. The cooking-based odour from kitchen activities; and
2. Odour emissions associated with vehicle traffic flow through the drive-thru facility proposed.

These are consistent with the sources outlined in the MWRC Letter. For the Assessment, these two activities have been addressed independently due to the discrete characteristics of the potential odour that can be generated.

6.2 Kitchen Cooking Activities

The activities to be undertaken at the Proposed KFC Development will require, amongst other things, the following components:

- A partitioned and semi-enclosed zone consisting of a preparation area, burger line, cool rooms, wash-up area, dry store area, delivery area, freezer, cook line, drive-thru pay/pick-up points. It is understood that the semi-enclosed zones will be under a positive pressure environment (between 5% - 10%) for the kitchen area relative to external ambient air, and negative pressure for the kitchen area relative to the dining area;
- External loading bay and plant areas;
- Drive-thru service lane; and
- Dining area, order point, pick-up zone and general amenities.

Similar to existing KFC fast-food chain outlets, the kitchen operations follow a conventional workflow for the preparation of predominately fried chicken-based food products. No solid fuels such as wood or charcoal will form part of the food and kitchen preparation activities at the Proposed KFC Development. Instead, to facilitate the food preparation workflow, the following equipment will be utilised:

- A series of batch cookers used for frying under pressure;
- A series of open-top fryers for potato chips and pre-cooked frozen chicken products;
- Refrigeration systems including a freezer and two cool rooms (one for drinks and one for raw chicken);
- Wash-up utilities; and
- An external refuse storage area for waste products.

A floor and elevation plan of the Proposed KFC Development is shown in **Figure 4** and **Figure 5**, respectively. A typical by-product of using open-top fryers and batch cookers include the generation of exhaust air emissions, which are typically ducted to atmospheric discharge at roof level. The characteristic of these exhaust air emissions can vary considerably throughout the normal business operation, given the range of fast-food items that will be prepared at the Proposed KFC Development. For the batch cookers, these exhaust emissions will be transient and only occur during the depressurisation phase of the fried chicken cooking cycle at the Proposed KFC Development.

Overall, the exhaust air emissions generated during normal operating conditions in the kitchen and food preparation areas at the Proposed KFC Development are expected to utilise two mechanical kitchen exhaust collection systems installed to manage the batch cookers, food preparation, and open-top fryer areas. This is further discussed below.

6.2.1 Mechanical Exhaust Air Emissions Discharge Details

A by-product of the kitchen operations is the generation of cooking-based exhaust emissions that require adequate management to maintain a good standard of air quality within the internal area as well as the general amenity of the surrounding area of the Proposed KFC Development. As such, all cooking exhaust emissions generated in the designated kitchen area at the Proposed KFC Development are expected to be extracted via a dedicated mechanical exhaust system, which will be responsible for the capture of all cooking-based exhaust emissions generated during normal business operations. All cooking equipment at the Proposed KFC Development will be electrically powered. There will be no utilisation of gas-powered cooking equipment or solid fuel (e.g. charcoal or wood) for any cooking activity at the Proposed KFC Development.

All mechanical exhaust air emissions generated from batch cooker/food preparation (**the Main Hood**) and open-top fryer (**the Chip Hood**) activities will be ducted and conveyed to roof level for atmospheric discharge via two dedicated vertical exhaust discharge points (H-01 and H-02, respectively). The layout plan for the Main Hood and Chip Hood is shown in **Figure 6** to **Figure 11** respectively. The complete mechanical drawings set are **appended** to this report.

For the purpose of the Assessment, the key mechanical exhaust system design details, including exhaust air collection points and discharge points H-01 and H-02 for the Proposed KFC Development is summarised in **Table 1**.

Table 1 – Mechanical exhaust system: Key design details

Location	Parameter	Value/Description
Emission collection points		
H-01 – Main Hood	Model	Halton KVF
	Design airflow	1,600 l/s (5,760 m^3/hr)
	Pre-filters Installed (Y/N)	Y
	Type of pre-filters	high-efficiency, stainless grease filters (KSA, Halton)
H-02 – Chip Hood	Model	Halton KVL-PS
	Design airflow	650 l/s (2,340 m^3/hr)
	Pre-filters Installed (Y/N)	Y
	Type of pre-filters	high-efficiency, stainless grease filters (KSA, Halton)
Exhaust discharge points		
H-01 – Main Hood	Fan model	Fantech, APO564/14/19
	Power	1.21 kW
	Static operating pressure	250 Pa
	Total exhaust air design flow	1,600 l/s (5,760 m^3/hr)
	Fan type	Axial flow, in-line, direct drive
	Variable speed drive (Y/N)	Y
	Discharge configuration	At roof level, rectangular
	Discharge orientation	Vertical
	Total discharge height	5-6 m (from base level)
H-02 – Chip Hood	Fan model	Fantech, CHD 456
	Power	0.37 kW
	Static operating pressure	75 Pa
	Total exhaust air design flow	650 l/s (2,340 m^3/hr)
	Fan type	Centrifugal
	Variable speed drive (Y/N)	N
	Discharge configuration	At roof level, rectangular
	Discharge orientation	Vertical
	Total discharge height	5-6 m (from base level)

As outlined in **Table 1**, the total design airflow for the mechanical exhaust system at the Proposed KFC Development for discharge points H-01 and H-02 are 1,600 l/s (or 5,760 m^3/hr) and 650 l/s (2,340 m^3/hr), respectively. The height of discharge points H-01 and H-02 will be approximately 5-6 metres from the base level. As per the mechanical design drawings provided to the

Assessment, it is understood that the mechanical exhaust system configuration and point of discharge to atmosphere will comply with Australian Standard 1668.2 and the Building Code of Australia. This is considered to reflect current industry best practice in the food-retail sector.

6.2.2 Kitchen Cooking Activities Odour Emission Characterisation Analysis

A conceptual site model representing all major and minor odour emissions expected at the Proposed KFC Development is shown in **Figure 12**.

Major Emission Sources

The major odour emission sources for the Proposed KFC Development are identified by the Assessment to be discharge points H-01 and H-02 (highlighted in red in **Figure 7** and **Figure 11**), given the nature of activities that will be conducted in the kitchen area and the surrounding sensitive environment (refer to **Section 5** for details). This detail is reflected in the conceptual site model as shown in **Figure 12**.

Minor Emission Sources

All other odour emission sources at the Proposed KFC Development are categorised to have a minor odour risk potential, including the grease trap arrestor, refuse area and ground level fugitive emission release from the fast-food activities, provided good housekeeping practices are maintained and the waste management plan is habitually implemented. This detail is reflected in the conceptual site model as shown in **Figure 12**.

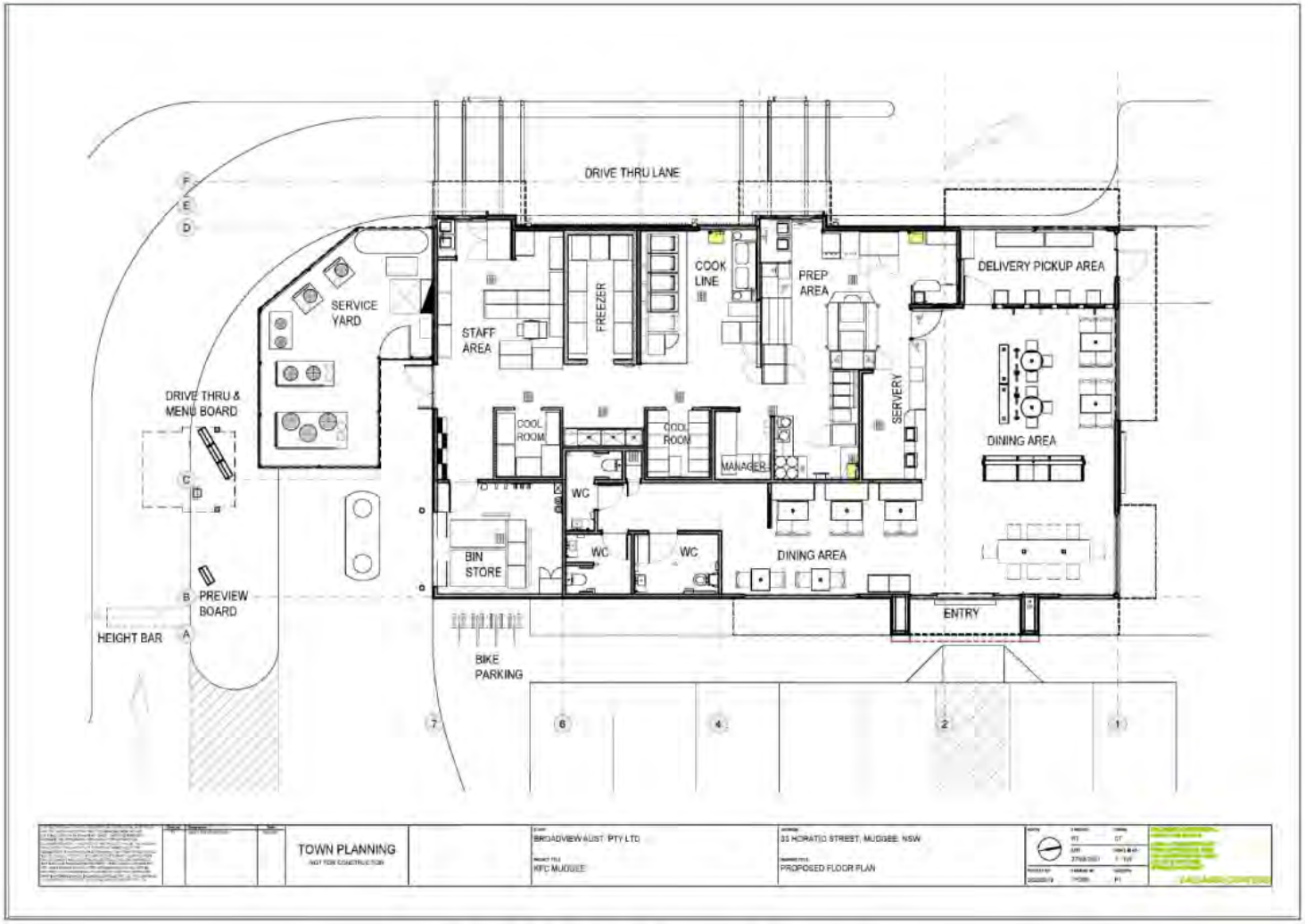

Figure 4 – A floor plan of the Proposed KFC Development

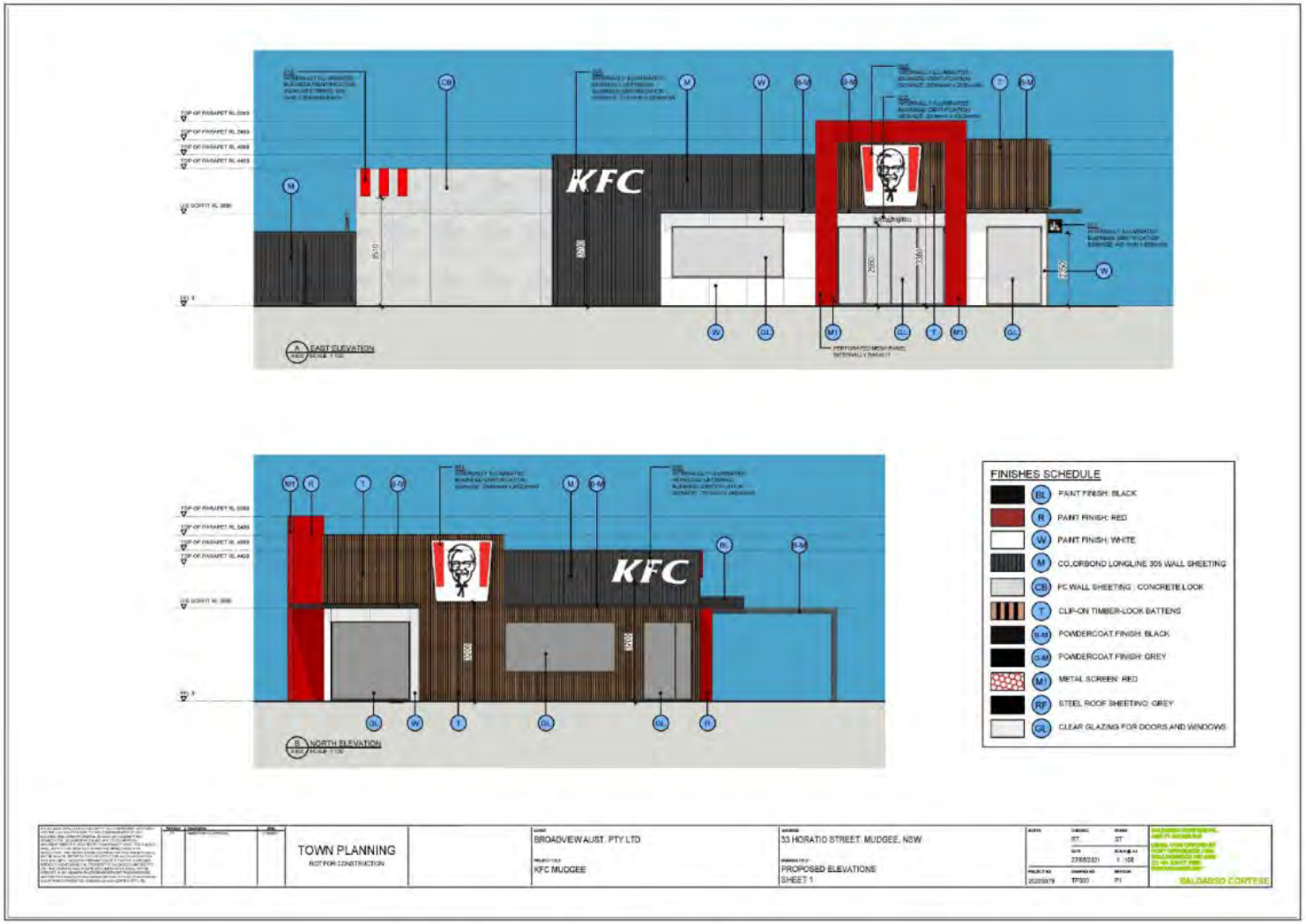

Figure 5 – An elevation plan of the Proposed KFC Development

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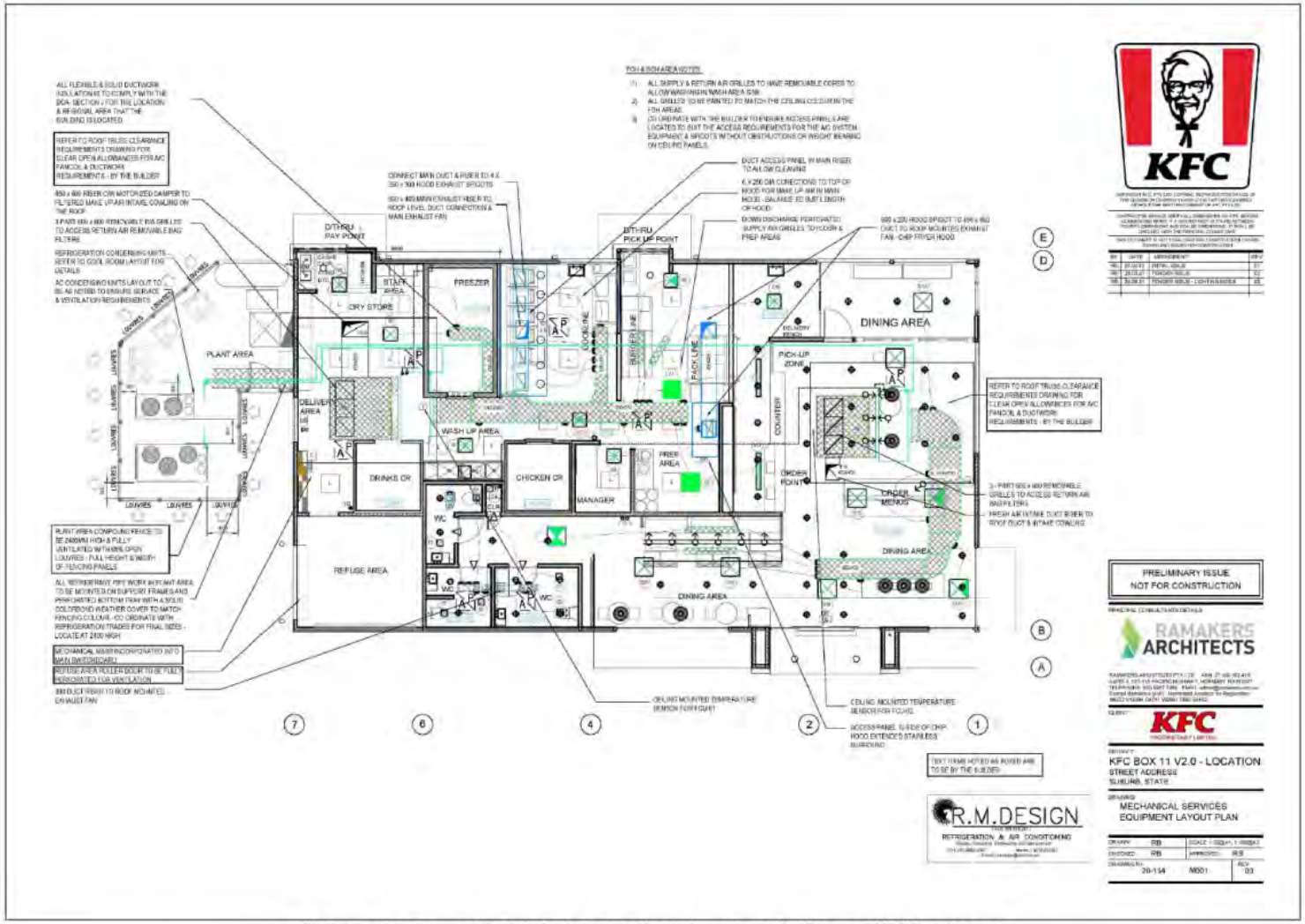

Figure 6 – An equipment layotut plan for the mechanical services at the Proposed KFC Development

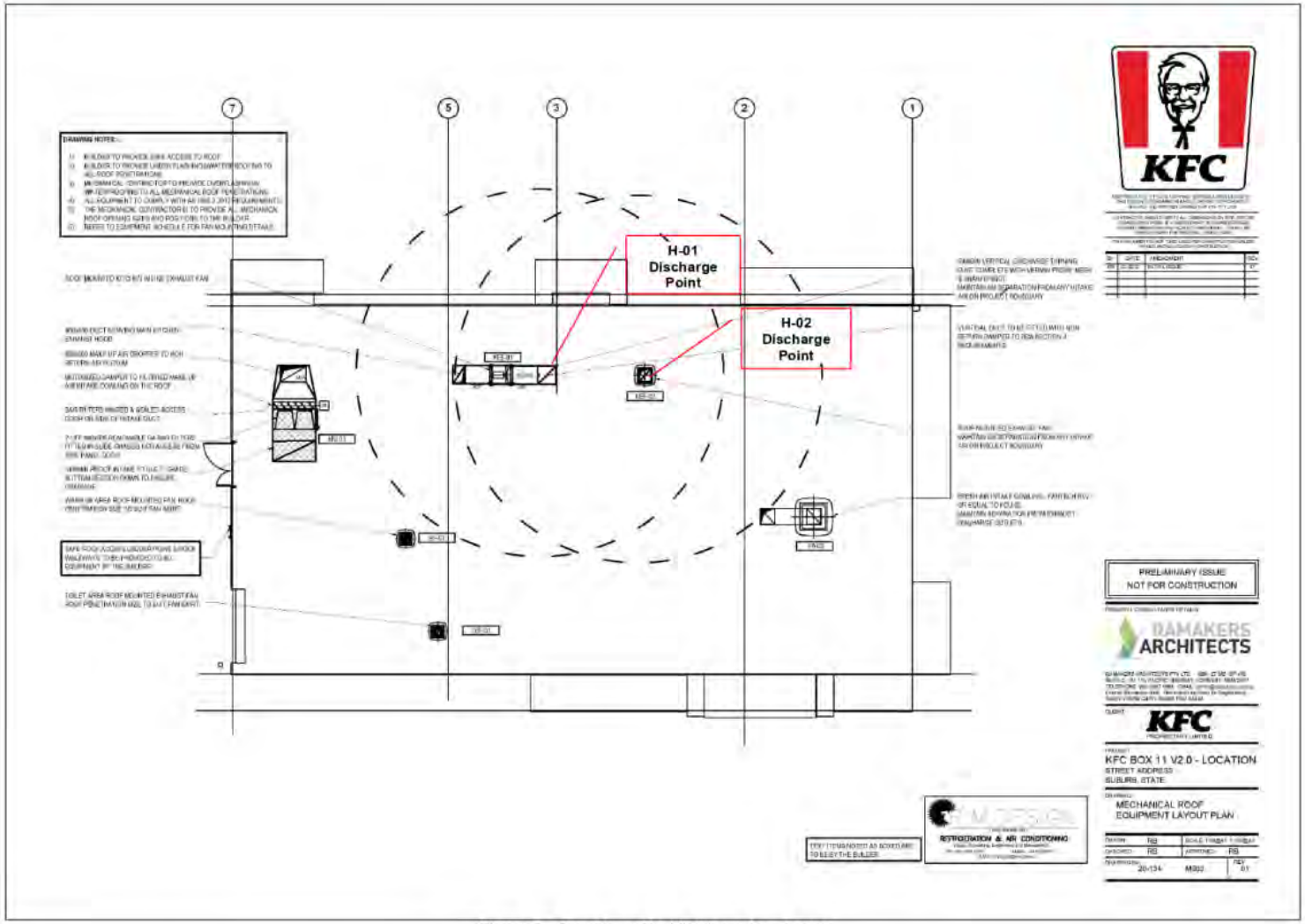

Figure 7 – A roof layout highlighting exhaust point

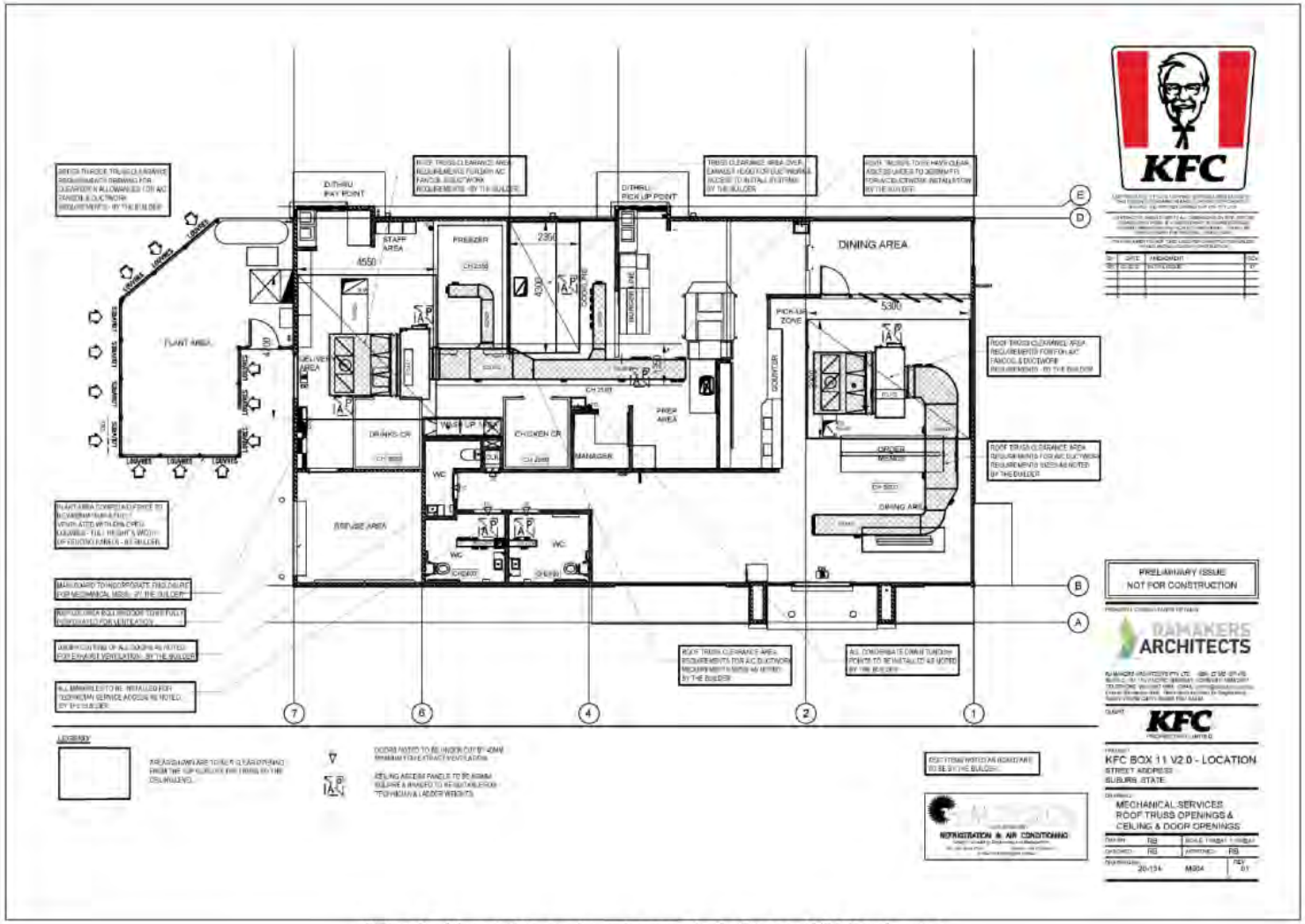

Figure 8 – A layout of the mechanical services for the Proposed KFC Development

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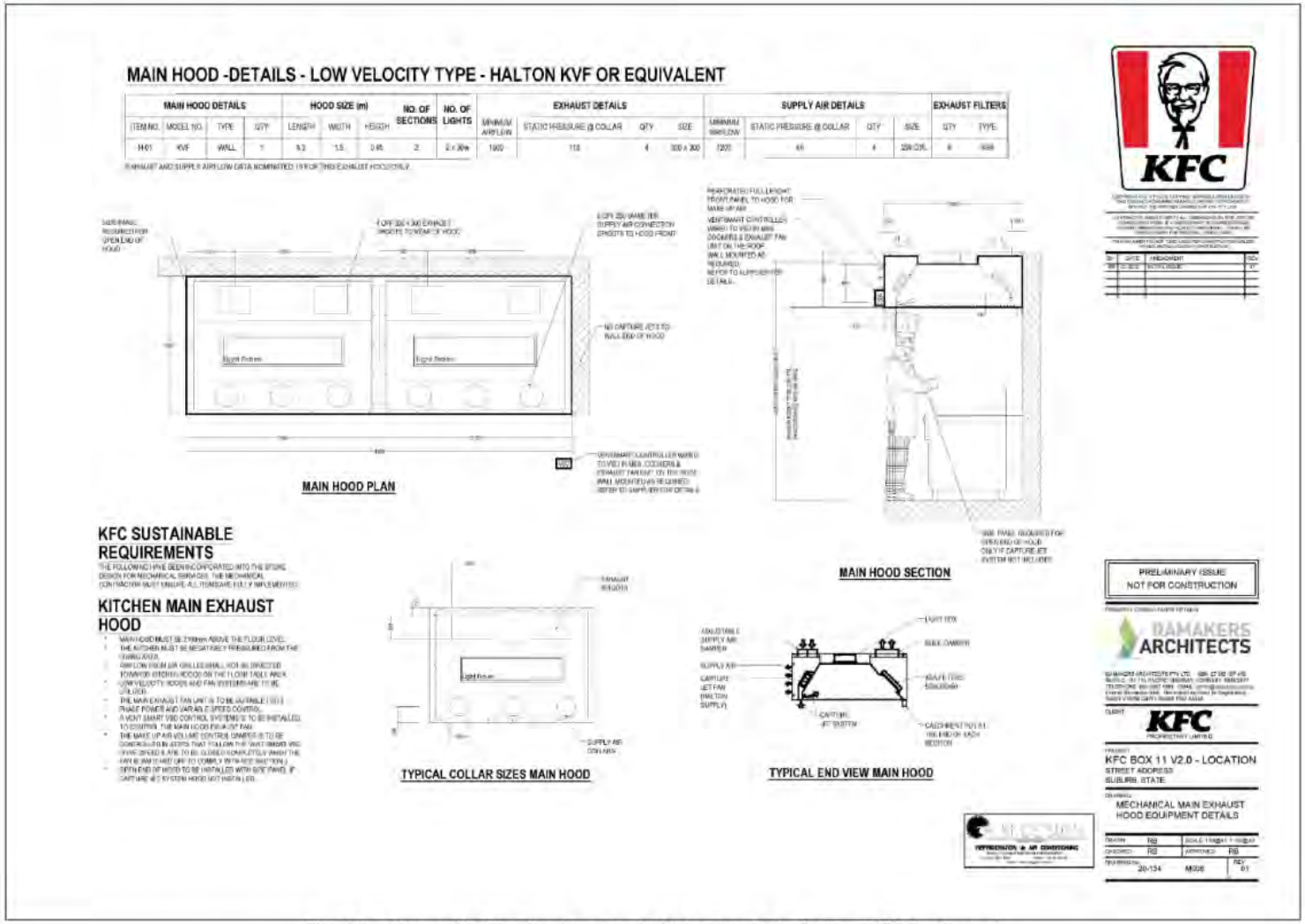

Figure 9 – A layout of the Main Hood servicing the kitchen area for the Proposed KFC Development

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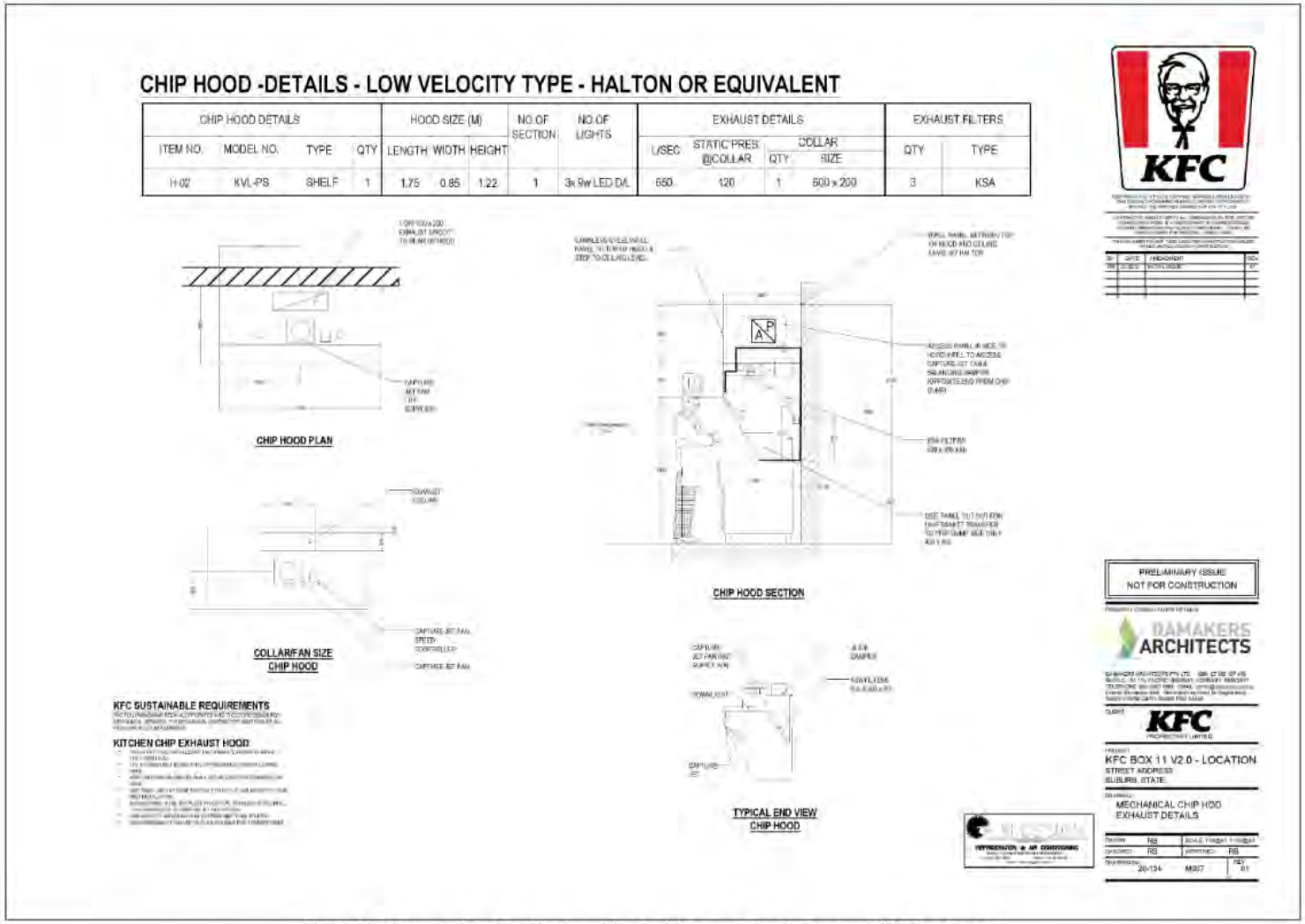

CHIP HOOD -DETAILS - LOW VELOCITY TYPE - HALTON OR EQUIVALENT

CHIP HOOD DETAILS				HOOD SIZE (M)			NO OF SECTION	NO OF LIGHTS	EXHAUST DETAILS				EXHAUST FILTERS	
ITEM NO.	MODEL NO.	TYPE	QTY	LENGTH	WIDTH	HEIGHT			L/SEC	STATIC PRES @COLLAR	COLLAR QTY	COLLAR SIZE	QTY	TYPE
H-02	KVL-PS	SHELF	1	1.75	0.85	1.22	1	3x 9w LED D/L	650	120	1	600 x 200	3	KSA

Figure 10 – A layout of the Chip Hood servicing the kitchen area for the Proposed KFC Development

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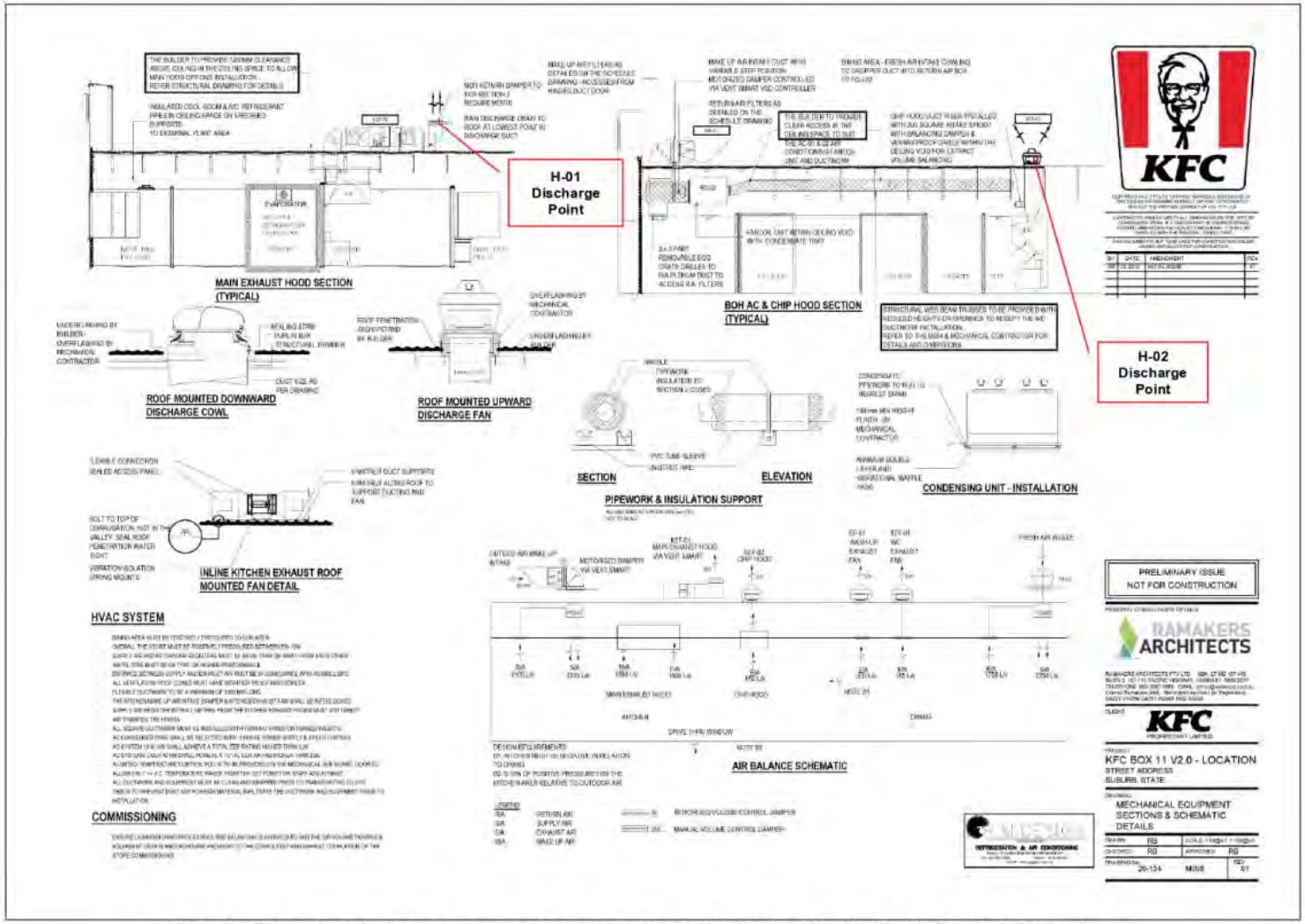

Figure 11 – The mechanical exhaust air management system (including the Main Hood and Chip Hood) at the Proposed KFC Development

	Air contaminant Source	Air contaminant release mechanism	Environmental transport	Exposure Pathways	Receptors
MAJOR	**Batch cookers (H-01 Discharge Point)** **Open-top fryers (H-02 Discharge Point)** **Cumulative effect of vehicle exhaust air emissions**	The undertaking of pressurised frying activities, particularly during the pressure relief vent phase of the cooking cycle The undertaking conventional frying activities The use of multiple motor vehicles within a confined space environment	Transport by air	Inhalation	Odour nuisance to: - Nearby residential development - Nearby commercial development
MINOR	**General kitchen activities** **Solid waste generation points, grease trap arrestor and refuse storage area**	Fugitive emission release at ground level, caused by either sub-optimal operation of the mechanical exhaust air extraction system and poor housekeeping. Prolonged storage and poor housekeeping	Transport by air	Inhalation	Odour nuisance to: - Nearby residential development - Nearby commercial development

Figure 12 – Specific conceptual site model representing all major and minor odour emissions at the Proposed KFC Development

6.2 Drive-thru Activities

As previously mentioned, a KFC fast-food restaurant chain outlet provides both dine-in and drive-thru services. For the Proposed KFC Development, both services will be available. As such, there will be vehicle emissions associated with both dine-in and drive-thru patrons, with the former being very unlikely to be of reasonable significance given that patrons would be parked and the vehicle stationary during a dine-in service. To that end, the focus of this OOA is on the drive-thru services and potential impacts relating to vehicle emissions.

Given that vehicle traffic will flow through a tunnel-like passageway (refer to **Figure 3** and **Figure 4**), it will be important to manage odour that may be associated with vehicle emissions, particularly during idle operation of a motor vehicle during waiting periods. Given the design of the drive-thru, it is modestly open to atmosphere and the tunnel-like passageway will facilitate good airflow movement that will promote mixing and dilution, minimising the potential for the cumulative build-up of vehicle emissions. The natural ventilation flow effects from the design of the drive-thru passway will have a positive effect on the management of odour from this activity. Therefore, vehicle emissions from the drive-thru activities are expected to be very unlikely to lead to odour impact at the nearest sensitive receptor. Furthermore, the proposed vegetative screen surrounding the perimeter of the Proposed KFC Development (as indicated in **Figure 2**) will further facilitate reducing off-site impacts risks, particularly during calm wind speeds and cool weather conditions.

7. Contingency Plan

No contingency action plan was provided for the Assessment or considered necessary given the nature of planned activities at the Proposed KFC Development. If odour complaints are found to arise and be problematical, the contingency action will be to review the odour control protocol and update or implement additional measures that will reduce the odour risks. However, for the Main Hood, provisions will need to be made for the installation of an advanced oxidation technology (such as ozone), for the treatment of emissions generated from the batch cookers prior to atmospheric discharge (refer to **Section 9**).

The drive-thru activity is not expected to pose a significant risk under the current design configuration for the Proposed KFC Development. Therefore, no contingency plan is considered necessary.

8. Assessment Findings

Based on the supplied information for the Assessment, the following findings are made pertaining to the Proposed KFC Development:

- The major odour emission source is identified to discharge points H-01 (Main Hood) and H-02 (Chip Hood);
- The dilution effect from the uptake of make-up ventilation air as part of the normal operation of the mechanical exhaust system is expected to have a positive impact on the initial plume dispersion properties from discharge points H-01 and H-02. This will minimise the likelihood of ground-level odour impacts;

- In addition to the above effect, the resultant plume from discharge points H-01 and H-02 is envisaged to shift away from the building structure during windy periods and rise vertically to the atmosphere during calmer wind conditions. Both scenarios are likely to result in sufficiently thermally-buoyant plumes which will shift away from nearby residential development and undergo significant dispersion before any detection by nearby sensitive receptors at ground level;

- The prevailing downwash wind effects likely to be generated by the building structure are not envisaged to be problematic as the odour plume from discharge points H-01, and H-02 would undergo sufficient dispersion in the elevated part of the atmosphere before any detection by nearby, ground level sensitive receptors;

- All minor odour emission sources, including the solid waste generation points, grease trap arrestor, refuse storage area and fugitive emission release at ground level is considered to be negligible, provided good housekeeping practices are implemented and maintained;

- Given the above analysis, it is envisaged that the Proposed KFC Development is unlikely to cause any significant level of odour emissions that would be deemed problematic to nearby, ground level sensitive receptors. This finding should be validated via the odour sampling and testing of all major odour emissions as identified in the Assessment; and

- The drive-thru activity is not expected to pose a significant risk given the current design of the passageway and the vegetative screen surrounding the perimeter.

Given the above analysis, it is envisaged that the Proposed KFC Development is unlikely to cause any significant level of odour emissions that would be deemed problematic to nearby sensitive receptors. However, given the close proximity to residential receptors, the Assessment recommends that the precautionary principle be adopted for H-01 (Main Hood) which will be responsible for the management of exhaust air emissions from the batch cooker (refer to **Section 9**). H-02 is not expected to require any additional odour management protocol given the low volumetric airflow, type of emissions extracted (chip frying only), and the favourable design of the mechanical exhaust air management system for this source. The odour impacts associated with the cumulative effect of vehicles will be validated as part of a follow-up visit through the undertaking of a field ambient odour assessment (**FAOA**) survey (refer to **Section 9**).

9. Assessment Recommendation

Based on the findings documented in **Section 8**, the following recommendation is made based on the Assessment findings:

- For H-01 (Main Hood), update the proposed exhaust air emission control system design to include provisions for ozone dosing. A suggested ozone dosing point is at the extraction canopy location to maximum contact time prior to atmospheric discharge. Ozone is a well-known powerful oxidant that is conventionally used in commercial kitchen applications to promote the rapid oxidation of complex gaseous compounds in kitchen exhaust streams to 'inert', non-odorous compounds. For ozone to be effective and promote an efficient level of oxidation of odorous compounds, the ozone should be dosed at a location that maximises contact time between the ozone and exhaust airstream (i.e. at least 2 seconds, if possible); and

- A certificate of compliance is to be provided for the proposed mechanical exhaust system to ensure that the installation complies with all relevant standards, building codes and guidelines.

If all recommendations in the Assessment are adopted, it is envisaged that the Proposed KFC Development is unlikely to cause any significant level of odour emission release that would lead to a nuisance on nearby sensitive receptors. Notwithstanding this, once constructed and normal business activities commence at the Proposed KFC Development, if there are any community concerns or odour complaints that arise, the following should be undertaken:

- A field-based investigation study completed by a suitably qualified odour control engineer that consists of the following components:

    1. Inspection of all major and minor emissions sources, as identified in the Assessment;

    2. Odour sampling and testing of all significant emission sources. This work should be completed according to Australian Standard/New Zealand Standard 4323.3, the relevant NSW EPA odour guideline documents, and at a NATA Accredited Odour Laboratory; and

    3. The undertaking of an FAOA to validate the expected outcomes as documented in the Assessment.

The findings from the above investigation can be used as a basis for evaluating the need for further odour mitigation at the Proposed KFC Development.

Kind Regards,

The Odour Unit Pty Ltd

Michael Assal MEngSc, B. Eng (Hon)/B.Sc, AMIChemE, MIEAust, CAQP
Operations Manager

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Attachments:

- Architectural Drawings; and
- Mechanical Drawings

KFC - BOX 11 - V2.0 - STANDARDS

MECHANICAL SERVICES

LEGEND OF SYMBOLS

- RECTANGULAR SHEET METAL DUCTWORK, UNINSULATED A - DUCT SIZE (WIDE SIDE FIRSTED) B - DUCT SIZE (WIDE SIDE SECOND AXIS)
- RECTANGULAR SHEET METAL DUCTWORK WITH INTERNAL INSULATION (25mm THICK MINIMUM)
- RECTANGULAR SHEET METAL DUCTWORK WITH INTERNAL INSULATION (50mm THICK MINIMUM)
- FIRE RATED SHEET METAL DUCTWORK
- DUCT SPIGOT WITH BUTTERFLY DAMPER ON RECTANGULAR DUCTWORK
- PANEL FILTER
- BAG FILTERS
- FLEXIBLE DUCTWORK
- HINGED ACCESS PANEL BY BUILDING TRADE
- CONDENSATE DRAIN LINE
- REFRIGERANT LINE
- MOTORISED VOLUME CONTROL DAMPER
- DUCT SPIGOT WITH BUTTERFLY DAMPER ON RECTANGULAR DUCTWORK
- VCD - VOLUME CONTROL DAMPER
- NRD - NON RETURN DAMPER, (PARALLEL BLADE)
- SUPPLY AIR DUCT RISER
- SUPPLY AIR DUCT DROPPER
- RETURN AIR DUCT RISER
- RETURN AIR DUCT DROPPER
- TOP HAT VANES
- FLEXIBLE ELECTRICAL CONNECTION
- AIR CONDITIONING CONDENSER UNITS
- FIXED & SEALED ACCESS PANEL IN SIDE OF DUCT OR HOOD
- AHU - FAN COIL UNIT WITH INTERFLOOR SECTION
- MECHANICAL SERVICES SWITCHBOARD SAFE BOXED CIRCUITS SUPPLIED AS PART OF THE MAIN ELECTRICAL SWITCH BOARD CABINET

LEGEND OF SYMBOLS CONT.

- CONDENSATE DRAIN LINE (DEDICATED TRAILS ON PLENUM BOX)
- 4-WAY BLOW CEILING DIFFUSER WITH INTERNALLY INSULATED CUSHION HEAD, 600x600 FACE
- 3-WAY BLOW SUPPLY AIR DIFFUSER WITH INTERNALLY INSULATED CUSHION HEAD, 600x600 FACE
- LINEAR SLOT DIFFUSER OVER INSULATED PLENUM BOX
- PERFORATED FACE CEILING DIFFUSER WITH INTERNALLY INSULATED CUSHION HEAD, 600x600 FACE
- 4-WAY BLOW ADJUSTABLE DIRECTION CEILING DIFFUSER WITH INTERNALLY INSULATED CUSHION HEAD, 600x600 FACE
- TD - THERMOSTATIC DEFROST (BY HYDRAULIC CONTRACTOR)
- REGISTER DESIGNATION - (AS REQUIRED)
- WIRE UNDERCUT TO DOOR, BY BUILDING TRADE
- TEMPERATURE SENSOR DUCT SENSOR / ROOM SENSOR
- ON/OFF CONTROL SWITCH MOUNTED ON FACE OF THE MECHANICAL SUB SWITCHBOARD - LOCATED BY THE MAIN SWITCHBOARD

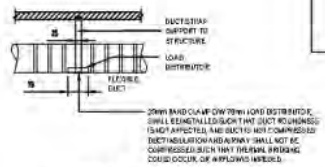
FCU	FAN COIL UNIT	CU	CONDENSING UNIT
TEF	TOILET EXHAUST FAN	RC	ROOF CURB
KEF	KITCHEN EXHAUST FAN	EF	EXHAUST FAN

GENERAL NOTES

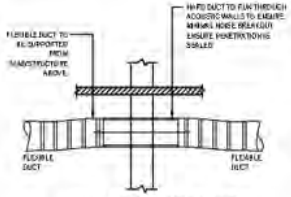
1. ALL DRAWINGS SHALL BE READ IN CONJUNCTION WITH MECHANICAL SPECIFICATION.
2. ALL DUCTWORK AND REFRIGERANT PIPING TO BE INSULATED TO COMPLY WITH NCC SECTION J.
3. ALL EQUIPMENT CLEARANCES AND DUCTWORK MINIMUM REQUIREMENTS ARE TO BE VERIFIED ON SITE PRIOR TO MANUFACTURE.
4. ALL DUCTWORK DIMENSIONS ARE CLEAR AIR WAY SIZES UNLESS NOTED OTHERWISE.
5. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
6. ALL AIR QUANTITIES ARE LITRES PER SECOND (L/S) UNLESS NOTED OTHERWISE.
7. THE WHOLE WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH ALL CODES AND REGULATIONS OF ALL RELEVANT GOVERNING AUTHORITIES.
8. BALANCING DAMPERS SHALL BE INCLUDED IN AIRWORK DUCTS AS REQUIRED FOR AIR BALANCING.
9. EACH FLEXIBLE DUCT CONNECTION SHALL BE COMPLETE WITH SPIGOT BUTTERFLY DAMPER.
10. MAX HIGH LENGTH OF FLEXIBLE DUCTS SHALL BE 1 METERS MAXIMUM. NO INTERMEDIATE JOINT PERMITTED.
11. FLEXIBLE DUCTWORK FOR AIR CONDITIONING SYSTEM SHALL BE PROVIDED WITH INTERNAL INSULATION IN COMPLIANCE WITH NCC SECTION J REQUIREMENT.
12. ALL FLEXIBLE DUCT SHALL BE SUPPORTED FROM THE UNDERSIDE OF STRUCTURE ABOVE AT NO GRADE OF THAN 1.5M FLEXIBLE DUCTING SHALL BE INSTALLED IN COMPLIANCE WITH AS4254. USING PLASTIC STRAPS, OR HANGING UNDER THE DUCT PRECAST TRAYS, OR SITTING ON CEILING FRAME ARE NOT ACCEPTABLE.
13. WHERE FLEXIBLE DUCTS PENETRATE FULL HEIGHT WALL IN CEILING SPACE, DUCT SHALL BE STRAIGHTENED AND RIGID CONNECTION SHALL BE INSTALLED.
14. ALL SENSORS AND CONTROL PANELS SHALL BE MOUNTED 1500MM ABOVE FLOOR.
15. SEAL AROUND DUCT AND PIPEWORK WHERE EXTERNAL WALLS ARE PASSED.
16. THE MECHANICAL TRADE SHALL CO-ORDINATE WITH ALL SERVICES & BUILDING STRUCTURES ON-SITE PRIOR TO MANUFACTURE AND SITE INSTALLATION.
17. WHERE THE DIAMETER OF THE FLEXIBLE DUCT EXCEEDS THE DEPTH OF THE RIGID DUCTIT ORIGINATES FROM, AN OVAL SPIGOT HAVING THE SAME CIRCUMFERENCE AS THE FLEXIBLE DUCT, MAY BE USED.
18. CONTRACTOR TO PROVIDE SHOP DRAWINGS OF DUCTWORK LAYOUT AND REFRIGERANT PIPE WORK LAYOUTS FOR APPROVAL.
19. CONFIRM WALL AND ROOF PENETRATION LOCATIONS WITH PROJECT MANAGER OR BUILDER PRIOR TO CUTTING.

ABBREVIATIONS

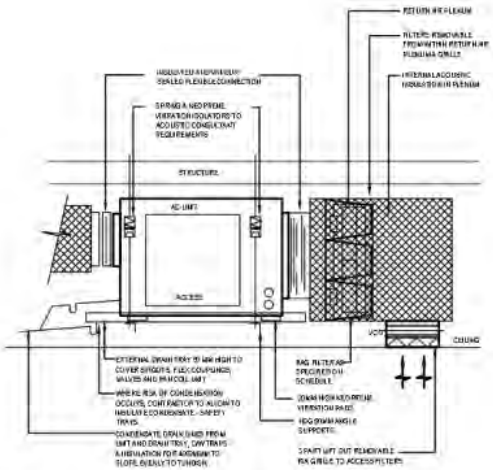
A/C	- DENOTES AIR CONDITIONING
ACU	- DENOTES AIR CONDITIONING UNIT
AP	- DENOTES ACCESS PANEL
CBW	- DENOTES COMPLETE WITH
CU	- DENOTES CONDENSER UNIT
EA	- DENOTES EXHAUST AIR
EAF	- DENOTES EXHAUST AIR FAN
RA	- DENOTES RETURN AIR
FA	- DENOTES FROM ABOVE
FB	- DENOTES FROM BELOW
FCU	- DENOTES FAN COIL UNIT
HL	- DENOTES HIGH LEVEL
LL	- DENOTES LOW LEVEL
L/s	- DENOTES LITRES PER SECOND
MCC	- DENOTES MECHANICAL CONTROL CENTRE
OA	- DENOTES OUTSIDE AIR
OAF	- DENOTES OUTSIDE AIR FAN
SAF	- DENOTES SUPPLY AIR FAN
TA	- DENOTES TO ABOVE
TB	- DENOTES TO BELOW
TD	- DENOTES THERMOSTAT
VCD	- DENOTES VOLUME CONTROL DAMPER
MRD	- DENOTES MOVABLE RETURN DAMPER
VSD	- DENOTES VARIABLE SPEED DRIVE
KEF	- DENOTES KITCHEN EXHAUST FAN
SA	- DENOTES SUPPLY AIR
MU	- DENOTES MAKE UP AIR



FLEXIBLE DUCTWORK TYPICAL SUPPORT SYSTEMS



WALL PENETRATION FOR FLEXIBLE DUCTWORK DETAIL



AC UNIT & FILTER PLENUM DETAIL

DRAWING LIST

BUILDER WORKS NOTED IN BOXED TEXT

R.M.DESIGN
REFRIGERATION & AIR CONDITIONING

KFC

CONTRACTOR SHOULD VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK. IF A DISCREPANCY IS FOUND BETWEEN DRAWINGS AND ACTUAL BUILDING, IT SHALL BE CHECKED WITH THE PRINCIPAL CONSULTANT.

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RB	13.02.23	INITIAL ISSUE	01

PRELIMINARY ISSUE
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PRINCIPAL CONSULTANTS DETAILS

RAMAKERS ARCHITECTS

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KFC PROPRIETARY LIMITED

PROJECT
KFC BOX 11 V2.0 - LOCATION
STREET ADDRESS
SUBURB, STATE

DRAWING
MECHANICAL SERVICES COVER SHEET & GENERAL DETAILS & LEGENDS

DRAWN	RB	SCALE 1:100@A1, 1:100@A3	
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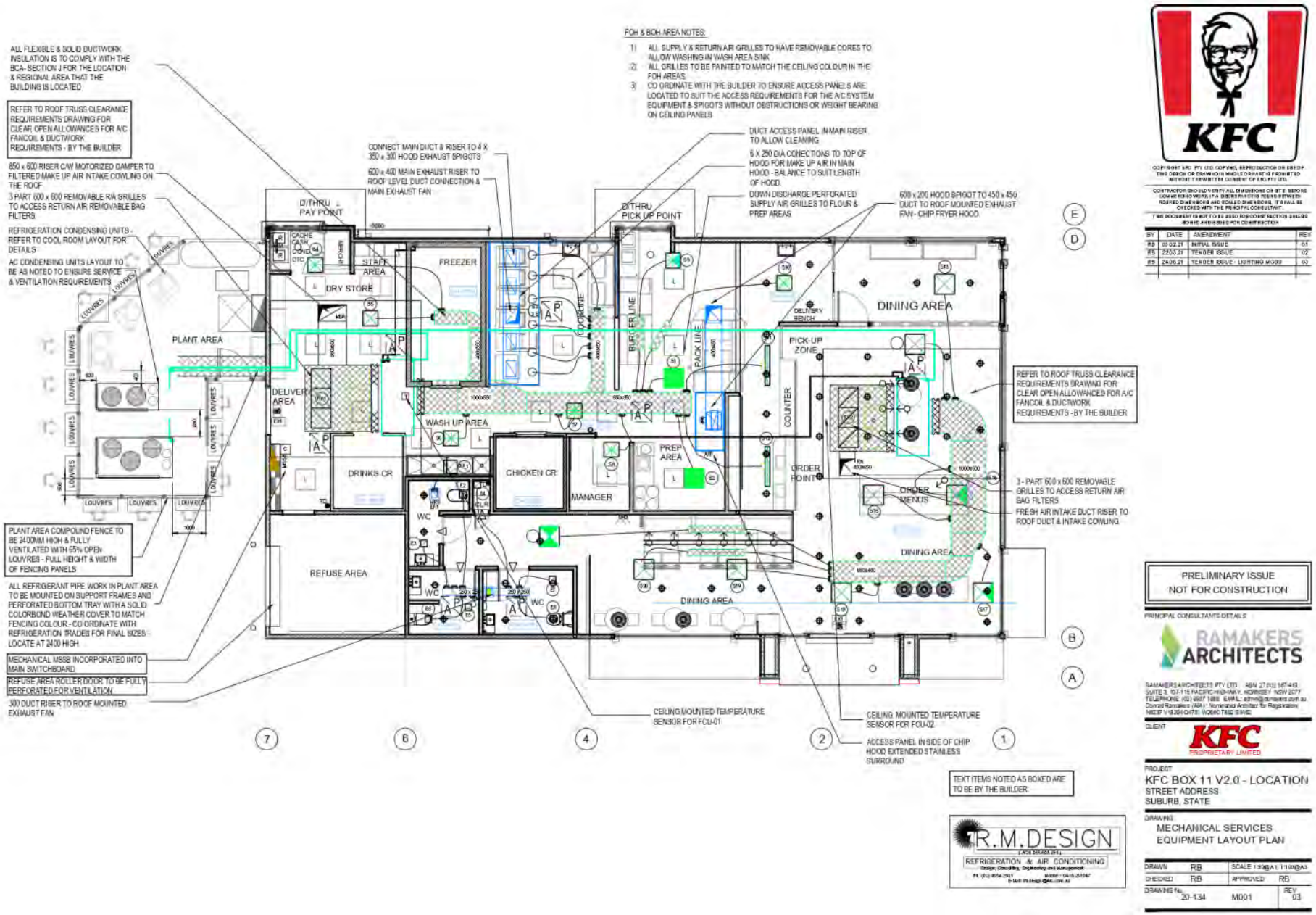
ALL FLEXIBLE & SOLID DUCTWORK INSULATION IS TO COMPLY WITH THE BCA- SECTION J FOR THE LOCATION & REGIONAL AREA THAT THE BUILDING IS LOCATED
REFER TO ROOF TRUSS CLEARANCE REQUIREMENTS DRAWING FOR CLEAR OPEN ALLOWANCES FOR A/C FANCOIL & DUCTWORK REQUIREMENTS - BY THE BUILDER
850 x 600 RISER C/W MOTORIZED DAMPER TO FILTERED MAKE UP AIR INTAKE COWLING ON THE ROOF
3 PART 600 x 600 REMOVABLE R/A GRILLES TO ACCESS RETURN AIR REMOVABLE BAG FILTERS
REFRIGERATION CONDENSING UNITS - REFER TO COOL ROOM LAYOUT FOR DETAILS
AC CONDENSING UNITS LAYOUT TO BE AS NOTED TO ENSURE SERVICE & VENTILATION REQUIREMENTS
PLANT AREA COMPOUND FENCE TO BE 2400MM HIGH & FULLY VENTILATED WITH 65% OPEN LOUVRES - FULL HEIGHT & WIDTH OF FENCING PANELS
ALL REFRIGERANT PIPE WORK IN PLANT AREA TO BE MOUNTED ON SUPPORT FRAMES AND PERFORATED BOTTOM TRAY WITH A SOLID COLORBOND WEATHER COVER TO MATCH FENCING COLOUR - CO ORDINATE WITH REFRIGERATION TRADES FOR FINAL SIZES - LOCATE AT 2400 HIGH
MECHANICAL MSSB INCORPORATED INTO MAIN SWITCHBOARD
REFUSE AREA ROLLER DOOR TO BE FULLY PERFORATED FOR VENTILATION
300 DUCT RISER TO ROOF MOUNTED EXHAUST FAN
FOH & BOH AREA NOTES:
1) ALL SUPPLY & RETURN AIR GRILLES TO HAVE REMOVABLE CORES TO ALLOW WASHING IN WASH AREA SINK
2) ALL GRILLES TO BE PAINTED TO MATCH THE CEILING COLOUR IN THE FOH AREAS.
3) CO ORDINATE WITH THE BUILDER TO ENSURE ACCESS PANELS ARE LOCATED TO SUIT THE ACCESS REQUIREMENTS FOR THE A/C SYSTEM EQUIPMENT & SPIGOTS WITHOUT OBSTRUCTIONS OR WEIGHT BEARING ON CEILING PANELS
CONNECT MAIN DUCT & RISER TO 4 X 350 x 300 HOOD EXHAUST SPIGOTS
600 x 400 MAIN EXHAUST RISER TO ROOF LEVEL DUCT CONNECTION & MAIN EXHAUST FAN
DUCT ACCESS PANEL IN MAIN RISER TO ALLOW CLEANING
6 X 250 DIA CONECTIONS TO TOP OF HOOD FOR MAKE UP AIR IN MAIN HOOD - BALANCE TO SUIT LENGTH OF HOOD
DOWN DISCHARGE PERFORATED SUPPLY AIR GRILLES TO FLOUR & PREP AREAS
600 x 200 HOOD SPIGOT TO 450 x 450 DUCT TO ROOF MOUNTED EXHAUST FAN - CHIP FRYER HOOD
D/THRU PAY POINT
D/THRU PICK UP POINT
STAFF AREA
FREEZER
DRY STORE
PLANT AREA
DELIVER AREA
WASH UP AREA
DRINKS CR
CHICKEN CR
MANAGER
PREP AREA
COOKER LINE
BURGER LINE
PACK LINE
DELIVERY BENCH
DINING AREA
PICK-UP ZONE
COUNTER
ORDER POINT
ORDER MENUS
REFUSE AREA
WC
LOUVRES
REFER TO ROOF TRUSS CLEARANCE REQUIREMENTS DRAWING FOR CLEAR OPEN ALLOWANCES FOR A/C FANCOIL & DUCTWORK REQUIREMENTS - BY THE BUILDER
3 - PART 600 x 600 REMOVABLE GRILLES TO ACCESS RETURN AIR BAG FILTERS
FRESH AIR INTAKE DUCT RISER TO ROOF DUCT & INTAKE COWLING
CEILING MOUNTED TEMPERATURE SENSOR FOR FCU-01
CEILING MOUNTED TEMPERATURE SENSOR FOR FCU-02
ACCESS PANEL IN SIDE OF CHIP HOOD EXTENDED STAINLESS SURROUND
TEXT ITEMS NOTED AS BOXED ARE TO BE BY THE BUILDER
R.M.DESIGN
REFRIGERATION & AIR CONDITIONING
KFC
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RB | 22.03.21 | TENDER ISSUE | 02
RB | 24.06.21 | TENDER ISSUE - LIGHTING MOD3 | 03
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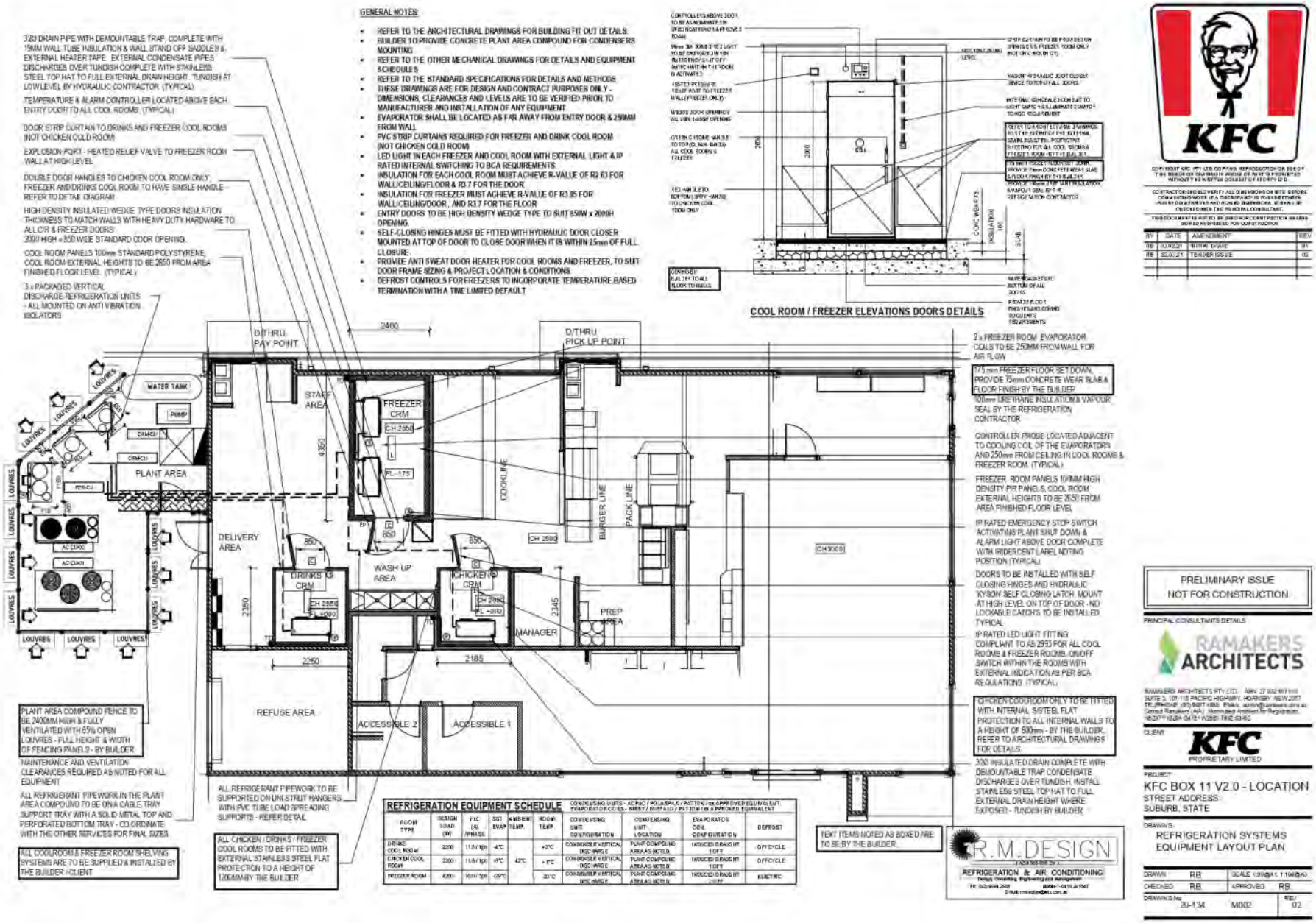
GENERAL NOTES
REFER TO THE ARCHITECTURAL DRAWINGS FOR BUILDING FIT OUT DETAILS
BUILDER TO PROVIDE CONCRETE PLANT AREA COMPOUND FOR CONDENSERS MOUNTING
REFER TO THE OTHER MECHANICAL DRAWINGS FOR DETAILS AND EQUIPMENT SCHEDULES
REFER TO THE STANDARD SPECIFICATIONS FOR DETAILS AND METHODS
THESE DRAWINGS ARE FOR DESIGN AND CONTRACT PURPOSES ONLY - DIMENSIONS, CLEARANCES AND LEVELS ARE TO BE VERIFIED PRIOR TO MANUFACTURER AND INSTALLATION OF ANY EQUIPMENT
EVAPORATOR SHALL BE LOCATED AS FAR AWAY FROM ENTRY DOOR & 250MM FROM WALL
PVC STRIP CURTAINS REQUIRED FOR FREEZER AND DRINK COOL ROOM (NOT CHICKEN COLD ROOM)
LED LIGHT IN EACH FREEZER AND COOL ROOM WITH EXTERNAL LIGHT & IP RATED INTERNAL SWITCHING TO BCA REQUIREMENTS
INSULATION FOR EACH COOL ROOM MUST ACHIEVE R-VALUE OF R2.63 FOR WALL/CEILING/FLOOR & R3.7 FOR THE DOOR
INSULATION FOR FREEZER MUST ACHIEVE R-VALUE OF R3.95 FOR WALL/CEILING/DOOR, AND R3.7 FOR THE FLOOR
ENTRY DOORS TO BE HIGH DENSITY WEDGE TYPE TO SUIT 850W x 2000H OPENING
SELF-CLOSING HINGES MUST BE FITTED WITH HYDRAULIC DOOR CLOSER MOUNTED AT TOP OF DOOR TO CLOSE DOOR WHEN IT IS WITHIN 25mm OF FULL CLOSURE
PROVIDE ANTI SWEAT DOOR HEATER FOR COOL ROOMS AND FREEZER, TO SUIT DOOR FRAME SIZING & PROJECT LOCATION & CONDITIONS
DEFROST CONTROLS FOR FREEZERS TO INCORPORATE TEMPERATURE BASED TERMINATION WITH A TIME LIMITED DEFAULT
COOL ROOM / FREEZER ELEVATIONS DOORS DETAILS
D/THRU PAY POINT
D/THRU PICK UP POINT
WATER TANK
PUMP
PLANT AREA
STAFF AREA
FREEZER CRM
DELIVERY AREA
DRINKS CRM
WASH UP AREA
CHICKEN CRM
COOKLINE
BURGER LINE
PACK LINE
PREP AREA
MANAGER
REFUSE AREA
ACCESSIBLE 2
ACCESSIBLE 1
LOUVRES
2400
2350
2185
2345
4350
CH 2500
CH 3000
PLANT AREA COMPOUND FENCE TO BE 2400MM HIGH & FULLY VENTILATED WITH 65% OPEN LOUVRES - FULL HEIGHT & WIDTH OF FENCING PANELS - BY BUILDER
MAINTENANCE AND VENTILATION CLEARANCES REQUIRED AS NOTED FOR ALL EQUIPMENT
ALL REFRIGERANT PIPEWORK IN THE PLANT AREA COMPOUND TO BE ON A CABLE TRAY SUPPORT TRAY WITH A SOLID METAL TOP AND PERFORATED BOTTOM TRAY - CO-ORDINATE WITH THE OTHER SERVICES FOR FINAL SIZES
ALL COOLROOM & FREEZER ROOM SHELVING SYSTEMS ARE TO BE SUPPLIED & INSTALLED BY THE BUILDER / CLIENT
ALL REFRIGERANT PIPEWORK TO BE SUPPORTED ON UNISTRUT HANGERS WITH PVC TUBE LOAD SPREADING SUPPORTS - REFER DETAIL
ALL CHICKEN / DRINKS / FREEZER COOL ROOMS TO BE FITTED WITH EXTERNAL STAINLESS STEEL FLAT PROTECTION TO A HEIGHT OF 1200MM BY THE BUILDER
2 x FREEZER ROOM EVAPORATOR COILS TO BE 250MM FROM WALL FOR AIR FLOW
175 mm FREEZER FLOOR SET DOWN, PROVIDE 75mm CONCRETE WEAR SLAB & FLOOR FINISH BY THE BUILDER
100mm URETHANE INSULATION & VAPOUR SEAL BY THE REFRIGERATION CONTRACTOR
CONTROLLER PROBE LOCATED ADJACENT TO COOLING COIL OF THE EVAPORATORS AND 250mm FROM CEILING IN COOL ROOMS & FREEZER ROOM. (TYPICAL)
FREEZER ROOM PANELS 100MM HIGH DENSITY PIR PANELS, COOL ROOM EXTERNAL HEIGHT TO BE 2650 FROM AREA FINISHED FLOOR LEVEL
IP RATED EMERGENCY STOP SWITCH ACTIVATING PLANT SHUT DOWN & ALARM LIGHT ABOVE DOOR COMPLETE WITH IRIDESCENT LABEL NOTING POSITION (TYPICAL)
DOORS TO BE INSTALLED WITH SELF CLOSING HINGES AND HYDRAULIC TYSON SELF CLOSING LATCH, MOUNT AT HIGH LEVEL ON TOP OF DOOR - NO LOCKABLE CATCHES TO BE INSTALLED TYPICAL
IP RATED LED LIGHT FITTING COMPLIANT TO AS 2993 FOR ALL COOL ROOMS & FREEZER ROOMS. ON/OFF SWITCH WITHIN THE ROOMS WITH EXTERNAL INDICATION AS PER BCA REGULATIONS (TYPICAL)
CHICKEN COOLROOM ONLY TO BE FITTED WITH INTERNAL S/STEEL FLAT PROTECTION TO ALL INTERNAL WALLS TO A HEIGHT OF 500mm - BY THE BUILDER, REFER TO ARCHITECTURAL DRAWINGS FOR DETAILS.
320 INSULATED DRAIN COMPLETE WITH DEMOUNTABLE TRAP CONDENSATE DISCHARGES OVER TUNDISH. INSTALL STAINLESS STEEL TOP HAT TO FULL EXTERNAL DRAIN HEIGHT WHERE EXPOSED - TUNDISH BY BUILDER
TEXT ITEMS NOTED AS BOXED ARE TO BE BY THE BUILDER
REFRIGERATION EQUIPMENT SCHEDULE
CONDENSING UNITS - AC PAC / POLAR/PLE / PATTON / or APPROVED EQUIVALENT
EVAPORATOR COILS - KIRBY / BUFFALO / PATTON / or APPROVED EQUIVALENT
ROOM TYPE | DESIGN LOAD (W) | F/C (S) /PHASE | SST EVAP | AMBIENT TEMP. | ROOM TEMP | CONDENSING UNIT CONFIGURATION | CONDENSING UNIT LOCATION | EVAPORATOR COIL CONFIGURATION | DEFROST
DRINKS COOL ROOM | 2200 | 11.8 / 1ph | -4°C | 42°C | +2°C | CONDENSER VERTICAL DISCHARGE | PLANT COMPOUND AREA AS NOTED | INDUCED DRAUGHT 1 OFF | OFF CYCLE
CHICKEN COOL ROOM | 2200 | 11.8 / 1ph | -4°C | | +1°C | CONDENSER VERTICAL DISCHARGE | PLANT COMPOUND AREA AS NOTED | INDUCED DRAUGHT 1 OFF | OFF CYCLE
FREEZER ROOM | 4200 | 10.6 / 1ph | -29°C | | -25°C | CONDENSER VERTICAL DISCHARGE | PLANT COMPOUND AREA AS NOTED | INDUCED DRAUGHT 2 OFF | ELECTRIC
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REFRIGERATION & AIR CONDITIONING
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PRINCIPAL CONSULTANTS DETAILS
RAMAKERS ARCHITECTS
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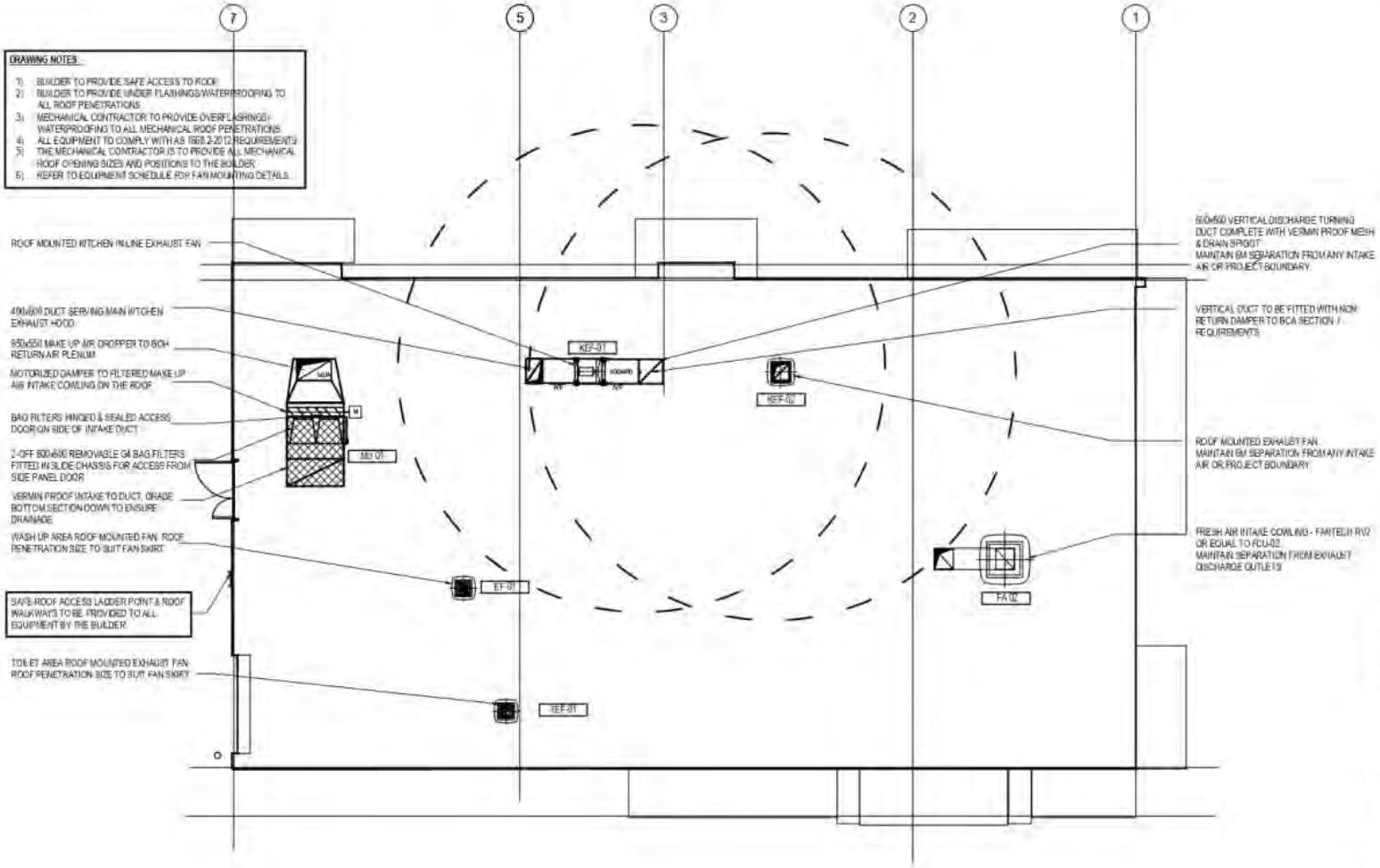
PROJECT
KFC BOX 11 V2.0 - LOCATION
STREET ADDRESS
SUBURB, STATE
DRAWING
REFRIGERATION SYSTEMS EQUIPMENT LAYOUT PLAN
DRAWN RB
CHECKED RB
APPROVED RB
DRAWING No. 20-134 M002
REV 02



DRAWING NOTES:

1) BUILDER TO PROVIDE SAFE ACCESS TO ROOF
2) BUILDER TO PROVIDE UNDER FLASHINGS/WATERPROOFING TO ALL ROOF PENETRATIONS
3) MECHANICAL CONTRACTOR TO PROVIDE OVERFLASHINGS/ WATERPROOFING TO ALL MECHANICAL ROOF PENETRATIONS
4) ALL EQUIPMENT TO COMPLY WITH AS 1668.2-2012 REQUIREMENTS
5) THE MECHANICAL CONTRACTOR IS TO PROVIDE ALL MECHANICAL ROOF OPENING SIZES AND POSITIONS TO THE BUILDER
6) REFER TO EQUIPMENT SCHEDULE FOR FAN MOUNTING DETAILS.

TEXT ITEMS NOTED AS BOXED ARE TO BE BY THE BUILDER.

R.M.DESIGN
REFRIGERATION & AIR CONDITIONING

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PRINCIPAL CONSULTANTS DETAILS

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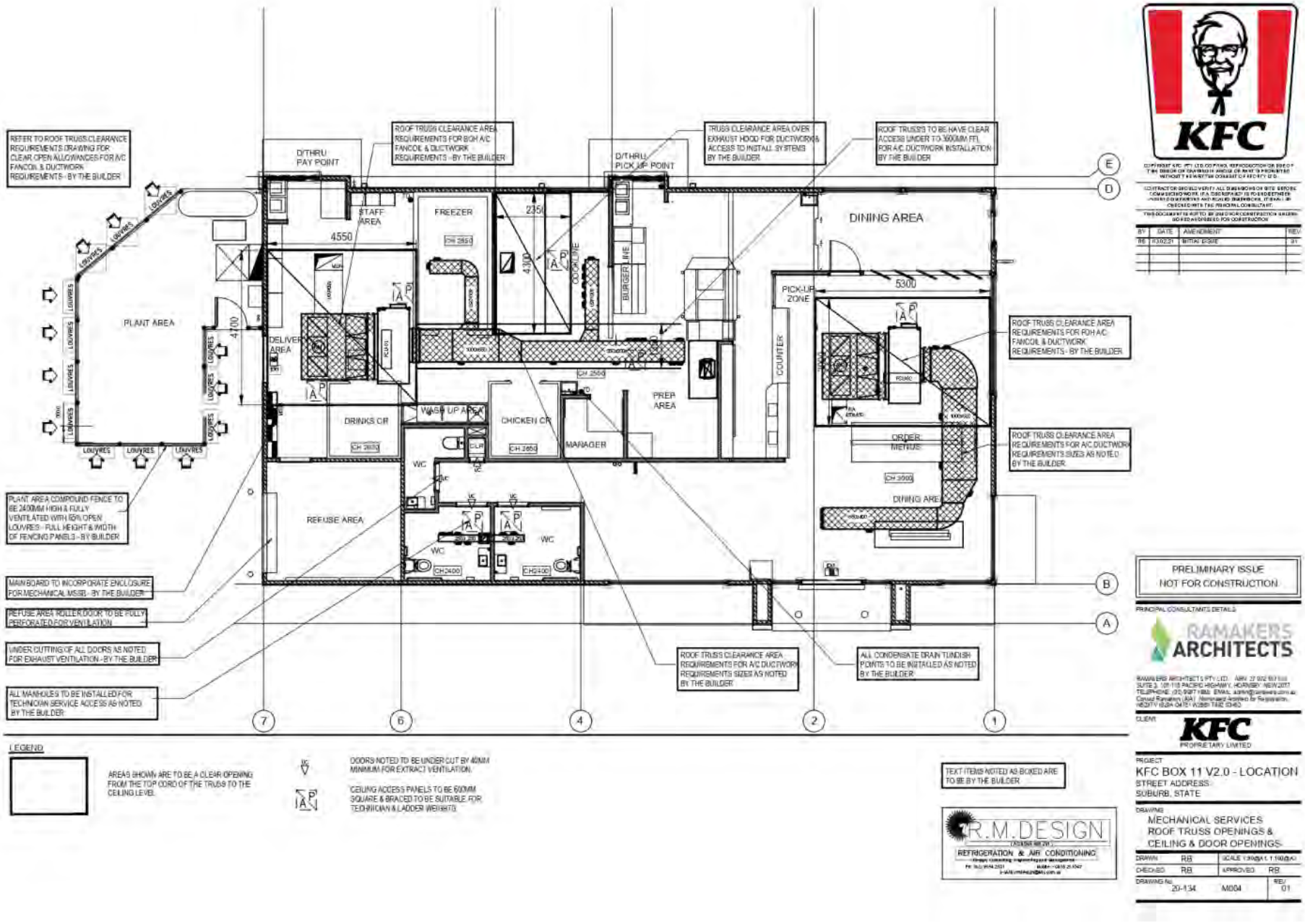
DRAWING
MECHANICAL ROOF EQUIPMENT LAYOUT PLAN

DRAWN	RB	SCALE 1:100@A1, 1:100@A3	
CHECKED	RB	APPROVED	RB
DRAWING No. 20-134 M003		REV 01	


REFER TO ROOF TRUSS CLEARANCE REQUIREMENTS DRAWING FOR CLEAR OPEN ALLOWANCES FOR A/C FANCOIL & DUCTWORK REQUIREMENTS - BY THE BUILDER
ROOF TRUSS CLEARANCE AREA REQUIREMENTS FOR RGH A/C FANCOIL & DUCTWORK REQUIREMENTS - BY THE BUILDER
TRUSS CLEARANCE AREA OVER EXHAUST HOOD FOR DUCTWORK & ACCESS TO INSTALL SYSTEMS BY THE BUILDER
ROOF TRUSS'S TO BE HAVE CLEAR ACCESS UNDER TO 3600MM FFL FOR A/C DUCTWORK INSTALLATION BY THE BUILDER
D/THRU PAY POINT
D/THRU PICK UP POINT
STAFF AREA
FREEZER
DINING AREA
PLANT AREA
DELIVERY AREA
COOKLINE
BURGER LINE
PICK-UP ZONE
COUNTER
DRINKS CR
WASH UP AREA
CHICKEN CR
PREP AREA
MANAGER
WC
REFUSE AREA
ORDER MENUS
DINING ARE
LOUVRES
ROOF TRUSS CLEARANCE AREA REQUIREMENTS FOR A/C DUCTWORK REQUIREMENTS SIZES AS NOTED BY THE BUILDER
PLANT AREA COMPOUND FENCE TO BE 2400MM HIGH & FULLY VENTILATED WITH 60% OPEN LOUVRES - FULL HEIGHT & WIDTH OF FENCING PANELS - BY BUILDER
MAIN BOARD TO INCORPORATE ENCLOSURE FOR MECHANICAL MSSB - BY THE BUILDER
REFUSE AREA ROLLER DOOR TO BE FULLY PERFORATED FOR VENTILATION
UNDER CUTTING OF ALL DOORS AS NOTED FOR EXHAUST VENTILATION - BY THE BUILDER
ALL MANHOLES TO BE INSTALLED FOR TECHNICIAN SERVICE ACCESS AS NOTED BY THE BUILDER
ALL CONDENSATE DRAIN TUNDISH POINTS TO BE INSTALLED AS NOTED BY THE BUILDER
LEGEND
AREAS SHOWN ARE TO BE A CLEAR OPENING FROM THE TOP CORD OF THE TRUSS TO THE CEILING LEVEL
DOORS NOTED TO BE UNDER CUT BY 40MM MINIMUM FOR EXTRACT VENTILATION.
CEILING ACCESS PANELS TO BE 600MM SQUARE & BRACED TO BE SUITABLE FOR TECHNICIAN & LADDER WEIGHTS
TEXT ITEMS NOTED AS BOXED ARE TO BE BY THE BUILDER
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MECHANICAL SERVICES
ROOF TRUSS OPENINGS &
CEILING & DOOR OPENINGS
DRAWN RB
CHECKED RB
APPROVED RB
20-134 M004 01

A/C SCHEDULE

REF No.	LOCATION	SUPPLY AIR FLOW L/s	OUTSIDE AIR FLOW L/s	EXTERNAL RESISTANCE Pa	COOLING TOTAL kW	HEATING COOLING kW	POWER FLA (FCU/CU)	No. OF PHASES (FCU/CU)	WEIGHTS KG (FCU/CU)	DESIGN SELECTION
FCU-01/CU-01	KITCHEN AREA	3990	1400/2000	250	39.3	31.5	4.6/ 30.0 A	3/ 3	270/ 342	ACTRON AIR MODEL: CAY540T1ELY540T
FCU-02/CU-02	DINING AREA	2250	700/2250	250	41.3	33.4	8.4 /26.2 A	1/ 3	120/ 302	ACTRON AIR MODEL: SCM60UC1/SCM60UE

NOTE : 1) CONDENSER UNIT LOCATION AND POSITIONING AS NOTED ON PLANT AREA DRAWINGS.
2) SPLIT A/C SYSTEMS TO BE PURCHASED IN ACCORDANCE WITH NOMINATED KFC DIRECT PURCHASING AND PRICING AGREEMENT WITH ACTRON AIR MANUFACTURERS.

FAN SCHEDULE

REF No.	LOCATION	AREA SERVING	MODEL	FAN TYPE	OPERATING FLOWRATE L/s	ESTIMATED PRESSURE Pa	OPERATING SPEED RPM	MAXIMUM MOTOR SIZE kW	MAX SOUND @ 3m dB	POWER SUPPLY	FULL LOAD A	FAN WEIGHT Kg	CONTROL METHOD
KEF-01	ROOF	KITCHEN	AF09840 H/19	Acoustic Line - Direct Drive	1600	250	1440	1.21	69	415V 3ph 50Hz	2.93	30.0	VENT SWITCH
KEF-02	ROOF	KITCHEN	CHB 450	Heritage Series - Vertical Discharge	800	100	960	0.37	47	415V 3ph 50Hz	1.15	45.0	MANUAL MSB
TEF-01	ROOF	TOILETS	CE0320	Gemina Series - Downblow Discharge	220	300	2700	0.2	35	240V 1ph 50Hz	1.2	4	DETECTOR
EF-01	ROOF	WASH AREA	CE0840	Gemina Series - Downblow Discharge	200	600	1050	0.33	46	240V 1ph 50Hz	1.8	14	MANUAL MSB

NOTE : ALL FANS TO BE COMPLIANT WITH SECTION J REQUIREMENTS , TO BE FANTECH OR APPROVED EQUAL.

AIR CONDITIONING MAKE UP & FRESH AIR INTAKE SCHEDULE

ITEM	LOCATION	AIR FLOW L/s	FACE SIZE	No. OFF	TYPE	A/C
MU-1	ROOF MOUNT	1100	1220x610x600	1	BY CONTRACTOR	BOH
FA-2	ROOF MOUNT	500	770 x 770	1	RV 2 FANTECH	FOH

SUPPLY AIR DIFFUSERS LOUVRED TYPE

TYPE	LOCATION	AIR FLOW L/s	No. OFF	FACE SIZE	CEILING TYPE	MODEL
SH-S S2	COOK AREA - KITCHEN	200	2	600mm x 600mm	PLASTERBOARD	PERFORATED FACE DIFFUSER - DOWN DRAFT
S9	MAIN HOOD FACE	200	6	TO HOOD SPECS	MAIN HOOD CONNECTION	MAKE UP AIR TO HALTON HOOD PERFORATED FRONT FACE
S8	DRIVE THRU GRILLE	250	1	450mm x 450mm	PLASTERBOARD	4 WAY ADJUSTABLE - MULTI DIRECTIONAL
S5 TO S6	KITCHEN AREAS	175	4	450mm x 450mm	PLASTERBOARD	4 WAY ADJUSTABLE - MULTI DIRECTIONAL
S3 TO S10	KITCHEN BURGER BAR	200	2	450mm x 450mm	PLASTERBOARD	4 WAY ADJUSTABLE - MULTI DIRECTIONAL
S11 TO S12	STAFF COUNTER AREA	200	2	1200mm x 200mm	PLASTERBOARD	CUSTOM REMOVABLE CORE LINEAR SLOT DIFFUSER, (3-SLOTS, 20mm)
S13	DELIVERY / PICK UP	300	1	600mm x 600mm	PLASTERBOARD	4 WAY BLOW - FLUSH EDGED TYPE
S14	DINING AREA	300	1	600mm x 600mm	PLASTERBOARD	4 WAY BLOW - FLUSH EDGED TYPE
S15 TO S21	DINING AREAS	250	7	600mm x 600mm	PLASTERBOARD	2, 3 & 4 WAY BLOW - FLUSHED EDGED TYPE

NOTE : 1- ALL GRILLES TO HAVE REMOVABLE CORES SIZED TO ALLOW REMOVAL AND CLEANING IN THE WASH SINK.
2- ALL DINING / COUNTER AREA GRILLES / PANELS / DIFFUSERS TO MATCH PAINT COLOUR OF CEILINGS, ALL KITCHEN GRILLES TO BE STANDARD WHITE.
3- GRILLE COLOR, TO BE CONFIRMED WITH BUILDER PRIOR TO ORDER.

RETURN / MAKE UP AIR EGGCRATE & INTAKE GRILLES

TYPE	LOCATION	AIR FLOW L/s	FACE SIZE	GRILL TYPE
RA1	KITCHEN	2200	3-OFF 600mm x 600mm	EGGCRATE GRILLE - REMOVABLE CORE FOR LIFT OUT REMOVAL WITHOUT TOOLS FOR CLEANING
RA2	DINING AREA	1350	3-OFF 600mm x 600mm	EGGCRATE GRILLE - REMOVABLE CORE FOR LIFT OUT REMOVAL WITHOUT TOOLS FOR CLEANING

NOTE : 1- ALL GRILLES TO HAVE REMOVABLE CORES SIZED TO ALLOW REMOVAL AND CLEANING IN THE WASH SINK.
2- ALL DINING / COUNTER AREA GRILLES / PANELS / DIFFUSERS TO MATCH PAINT COLOUR OF CEILINGS, ALL KITCHEN GRILLES TO BE STANDARD WHITE.
3- GRILLE COLOR TO BE CONFIRMED WITH BUILDER PRIOR TO ORDER.

AIR CONDITIONING & FILTRATION SCHEDULE

ITEM	LOCATION	AIR FLOW L/s	FACE SIZE	No. OFF	FILTER TYPE	RATING
FCU-1	PLENUM BOX	3000	610x610x600	3	DEEP BAG FILTER	G4
FCU-2	PLENUM BOX	2250	610x610x600	3	DEEP BAG FILTER	G4
MUA-1	MAKE UP PLENUM BOX	2100	610x610x600	2	DEEP BAG FILTER	G4

FLEX DUCTS

AIR FLOW L/S	FLEX SIZE
0-30	150 DIA INT
31-100	200 DIA INT
101-175	250 DIA INT
175-300	300 DIA INT
301-450	350 DIA INT
451-600	400 DIA INT

DOOR RELIEF

MALE WC	40MM CUT OFF
FEMALE WC	40MM CUT OFF
AIRLOCK	40MM CUT OFF

EXHAUST AIR EGGCRATE GRILLES

TYPE	LOCATION	AIR FLOW L/s	No OFF	FACE SIZE	GRILLE TYPE
E1	WASH AREA	200	1	400mm x 400mm	EGGCRATE GRILLE, REMOVABLE CORE FOR CLEANING
E2 - E3	UNISEX AMBULANT	30	2	200mm x 200mm	EGGCRATE GRILLE, REMOVABLE CORE FOR CLEANING
E4	CLEANER ROOM	30	1	200mm x 200mm	EGGCRATE GRILLE, REMOVABLE CORE FOR CLEANING
E5-E6	ACCESSIBLE WC 2	30	2	200mm x 200mm	EGGCRATE GRILLE, REMOVABLE CORE FOR CLEANING
E7-E8	ACCESSIBLE WC 1	30	2	200mm x 200mm	EGGCRATE GRILLE, REMOVABLE CORE FOR CLEANING

NOTE : 1- ALL GRILLES TO HAVE REMOVABLE CORES SIZED TO ALLOW REMOVAL AND CLEANING IN THE WASH SINK.
2- ALL DINING / COUNTER AREA GRILLES / PANELS / DIFFUSERS TO MATCH PAINT COLOUR OF CEILINGS, ALL KITCHEN GRILLES TO BE STANDARD WHITE
3- GRILLE COLOR TO BE CONFIRMED WITH BUILDER PRIOR TO ORDER.

CURVED BLADE - MULTI DIRECTIONAL

PERFORATED GRILLE

4 WAY BLOW GRILLE

CUSTOM REMOVABLE CORE LINEAR SLOT DIFFUSER

EGGCRATE GRILLE

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RB	18.09.23	INITIAL ISSUE	01

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PRINCIPAL CONSULTANTS DETAILS

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KFC BOX 11 V2.0 - LOCATION
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DRAWING

MECHANICAL EQUIPMENT SCHEDULE DETAILS

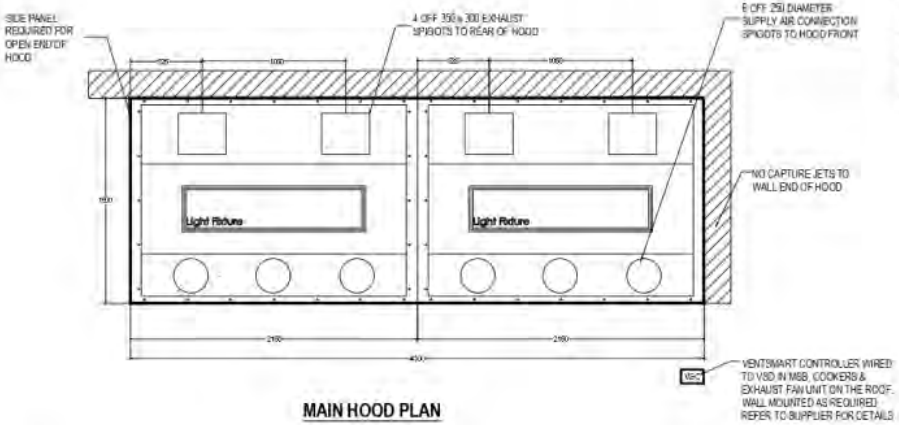
R.M.DESIGN
REFRIGERATION & AIR CONDITIONING

DRAWN	RB	SCALE 1:30@A1, 1:100@A3	
CHECKED	RB	APPROVED	RB
DRAWING No. 20-134 M005			REV 01

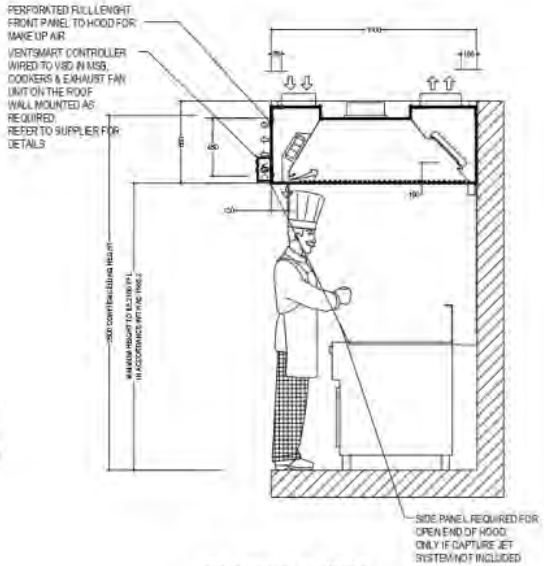
MAIN HOOD -DETAILS - LOW VELOCITY TYPE - HALTON KVF OR EQUIVALENT

MAIN HOOD DETAILS				HOOD SIZE (m)			NO. OF SECTIONS	NO. OF LIGHTS	EXHAUST DETAILS				SUPPLY AIR DETAILS				EXHAUST FILTERS	
ITEM NO	MODEL NO	TYPE	QTY	LENGTH	WIDTH	HEIGTH			MINIMUM AIRFLOW	STATIC PRESSURE @ COLLAR	QTY	SIZE	MINIMUM AIRFLOW	STATIC PRESSURE @ COLLAR	QTY	SIZE	QTY	TYPE
H-01	KVF	WALL	1	4.5	1.5	0.65	2	2 x 36w	1600	118	4	350 x 300	1200	50	4	250 DIA	8	KSA

'EXHAUST AND SUPPLY AIRFLOW DATA NOMINATED IS FOR THIS EXHAUST HOOD ONLY'



MAIN HOOD PLAN



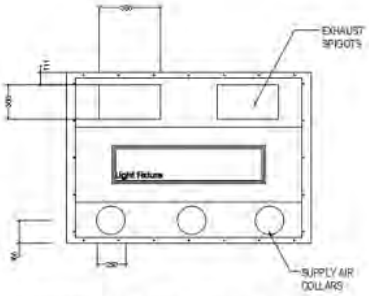
MAIN HOOD SECTION

KFC SUSTAINABLE REQUIREMENTS

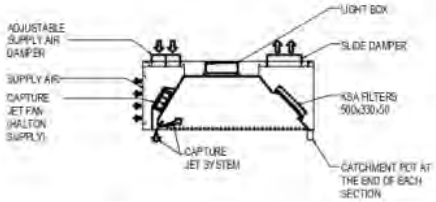
THE FOLLOWING HAVE BEEN INCORPORATED INTO THE STORE DESIGN FOR MECHANICAL SERVICES. THE MECHANICAL CONTRACTOR MUST ENSURE ALL ITEMS ARE FULLY IMPLEMENTED.

KITCHEN MAIN EXHAUST HOOD

- MAIN HOOD MUST BE 2100mm ABOVE THE FLOOR LEVEL.
- THE KITCHEN MUST BE NEGATIVELY PRESSURED FROM THE DINING AREA.
- AIRFLOW FROM S/A GRILLES SHALL NOT BE DIRECTED TOWARDS KITCHEN HOODS OR THE FLOUR TABLE AREA. LOW VELOCITY HOODS AND FAN SYSTEMS ARE TO BE UTILIZED.
- THE MAIN EXHAUST FAN UNIT IS TO BE SUITABLE FOR 3 PHASE POWER AND VARIABLE SPEED CONTROL.
- A VENT SMART VSD CONTROL SYSTEMS IS TO BE INSTALLED TO CONTROL THE MAIN HOOD EXHAUST FAN.
- THE MAKE UP AIR VOLUME CONTROL DAMPER IS TO BE CONTROLLED IN STEPS THAT FOLLOW THE VENT SMART VSD DRIVE SPEED & ARE TO BE CLOSED COMPLETELY WHEN THE FAN IS SWITCHED OFF TO COMPLY WITH NCC-SECTION J.
- OPEN END OF HOOD TO BE INSTALLED WITH SIDE PANEL IF CAPTURE JET SYSTEM HOOD NOT INSTALLED.



TYPICAL COLLAR SIZES MAIN HOOD



TYPICAL END VIEW MAIN HOOD

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PRINCIPAL CONSULTANTS DETAILS

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DRAWING
MECHANICAL MAIN EXHAUST HOOD EQUIPMENT DETAILS

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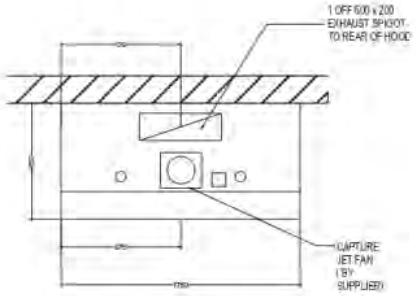
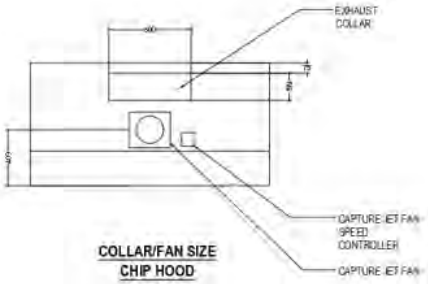
CHIP HOOD -DETAILS - LOW VELOCITY TYPE - HALTON OR EQUIVALENT

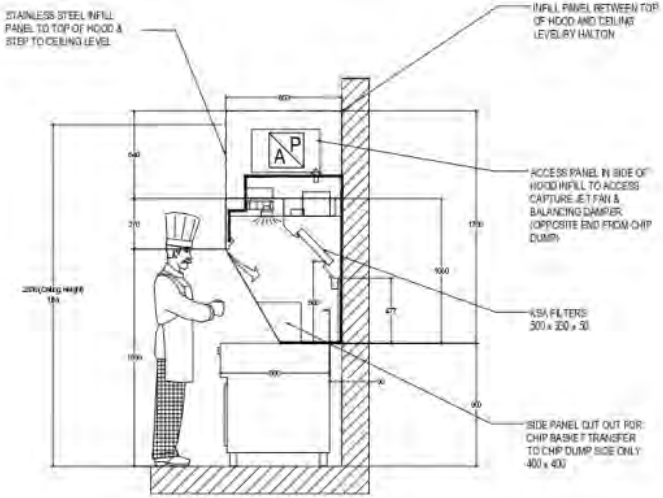
CHIP HOOD DETAILS				HOOD SIZE (M)			NO.OF SECTION	NO.OF LIGHTS	EXHAUST DETAILS				EXHAUST FILTERS	
ITEM NO.	MODEL NO.	TYPE	QTY	LENGTH	WIDTH	HEIGHT			L/SEC	STATIC PRES. @COLLAR	COLLAR QTY	COLLAR SIZE	QTY	TYPE
H 02	KVL-PS	SHELF	1	1.75	0.85	1.22	1	3x 9w LED D/L	650	120	1	600 x 200	3	KSA



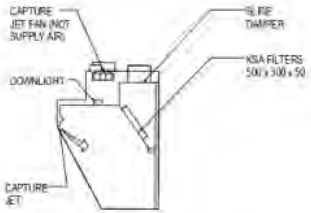
CHIP HOOD PLAN



COLLAR/FAN SIZE
CHIP HOOD



CHIP HOOD SECTION



TYPICAL END VIEW
CHIP HOOD

KFC SUSTAINABLE REQUIREMENTS

THE FOLLOWING HAVE BEEN INCORPORATED INTO THE STORE DESIGN FOR MECHANICAL SERVICES. THE MECHANICAL CONTRACTOR MUST ENSURE ALL ITEMS ARE FULLY IMPLEMENTED.

KITCHEN CHIP EXHAUST HOOD

- CHIP HOOD TO BE INSTALLED AT THE NOMINATED HEIGHTS ABOVE THE FLOOR LEVEL.
- THE KITCHEN MUST BE NEGATIVELY PRESSURISED FROM THE DINING AREA.
- AIR FLOW FROM SIX GRILLED SHELL NOT REDIRECTED TOWARDS CHIP HOOD.
- SIDE PANEL ON CHIP DUMP SIDE ONLY TO BE CUT OUT AS PART OF CHIP HOOD INSTALLATION.
- ACCESS PANEL TO BE INSTALLED IN VERTICAL STAINLESS STEEL INFILL TO ALLOW ACCESS TO CAPTURE JET FAN SYSTEM.
- LOW VELOCITY HOODS AND FAN SYSTEMS ARE TO BE UNIZED.
- THE CHIP EXHAUST FAN UNIT IS TO BE SUITABLE FOR 3 PHASE POWER.

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PRINCIPAL CONSULTANTS DETAILS

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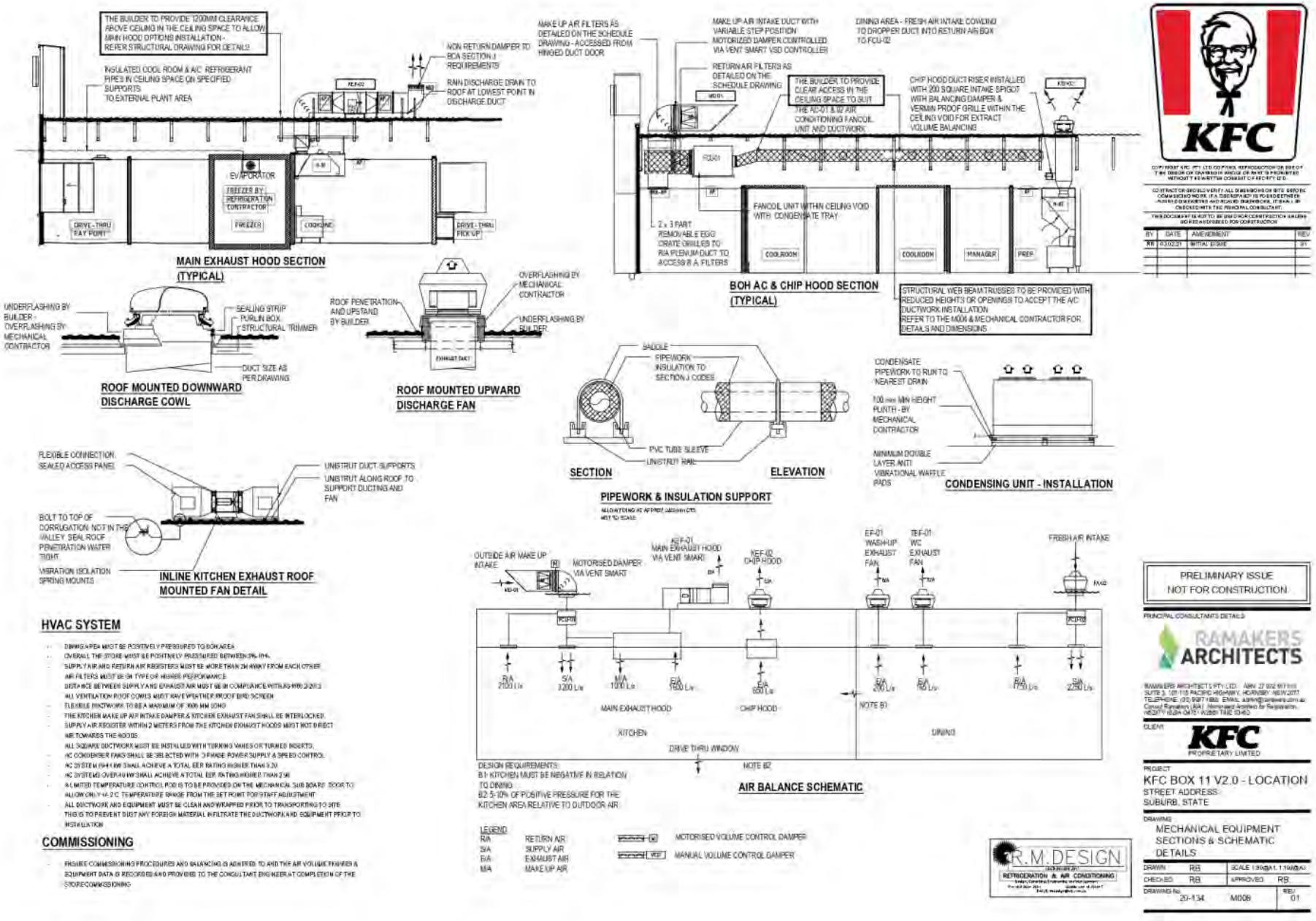
DRAWING
MECHANICAL CHIP HOD
EXHAUST DETAILS

R.M.DESIGN
REFRIGERATION & AIR CONDITIONING

DRAWN	RB	SCALE 1:20@A1, 1:100@A3	
CHECKED	RB	APPROVED	RB
DRAWING No. 20-134	M007		REV 01



HVAC SYSTEM

- DINING AREA MUST BE POSITIVELY PRESSURIZED TO BOH AREA
- OVERALL THE STORE MUST BE POSITIVELY PRESSURIZED BETWEEN 5% - 10%
- SUPPLY AIR AND RETURN AIR REGISTERS MUST BE MORE THAN 3M AWAY FROM EACH OTHER
- AIR FILTERS MUST BE 5M TYPE OR HIGHER PERFORMANCE
- DISTANCE BETWEEN SUPPLY AND EXHAUST AIR MUST BE IN COMPLIANCE WITH AS 1668.2:2012
- ALL VENTILATION ROOF COWLS MUST HAVE WEATHERPROOF BIRD SCREEN
- FLEXIBLE DUCTWORK TO BE A MAXIMUM OF 1000 MM LONG
- THE KITCHEN MAKE UP AIR INTAKE DAMPER & KITCHEN EXHAUST FAN SHALL BE INTERLOCKED
- SUPPLY AIR REGISTER WITHIN 2 METERS FROM THE KITCHEN EXHAUST HOODS MUST NOT DIRECT AIR TOWARDS THE HOODS
- ALL SQUARE DUCTWORK MUST BE INSTALLED WITH TURNING VANES OR TURNED INSERTS.
- AC CONDENSER FANS SHALL BE SELECTED WITH 3 PHASE POWER SUPPLY & SPEED CONTROL
- AC SYSTEM (SH1 000) SHALL ACHIEVE A TOTAL EER RATING HIGHER THAN 3.20
- AC SYSTEMS OVERALL WHICH SHALL ACHIEVE A TOTAL EER RATING HIGHER THAN 2.90
- A LIMITED TEMPERATURE CONTROL POD IS TO BE PROVIDED ON THE MECHANICAL SUB BOARD DOOR TO ALLOW ONLY +/- 2 C TEMPERATURE RANGE FROM THE SET POINT FOR STAFF ADJUSTMENT
- ALL DUCTWORK AND EQUIPMENT MUST BE CLEAN AND WRAPPED PRIOR TO TRANSPORTING TO SITE THIS IS TO PREVENT DUST ANY FOREIGN MATERIAL INFILTRATE THE DUCTWORK AND EQUIPMENT PRIOR TO INSTALLATION

COMMISSIONING

- FIGURE COMMISSIONING PROCEDURES AND BALANCING IS ADHERED TO AND THE AIR VOLUME FIGURES & EQUIPMENT DATA IS RECORDED AND PROVIDED TO THE CONSULTANT ENGINEER AT COMPLETION OF THE STORE COMMISSIONING

Design Certificate

Friday, 6th November 2021

C-LEVEL

4/852 Old Princes Hwy,
Sutherland NSW 2232
Telephone 0295452348
admin@c-level.com.au
www.c-level.com.au

ABN 17 627 581 837

To:

Client Name: Broadview Aust Pty Ltd
Address: 33-35 Horatio Street
Mudgee NSW 2850

Attn: James Consadine

Re: **Illuminated Signage General Assessment**
Proposed KFC Store
33-35 Horatio Street, Mudgee NSW 2850

1. Introduction & Site Location Details:

C-Level consulting engineers have been engaged to provide a general assessment of the illuminated signs for the proposed KFC store on Horatio St Mudgee. The assessment is to assess the illuminated signage & it's effect on the road & residential properties adjacent per requirements of AS4282-2019 & AS1158.3.1-2020
The subject site is located at 33-35 Horation Street, Mudgee, the site is within the Mid-Western Local Council (LGA) area. The site is located on the South side of Horatio Street and falls between the cross streets of Lawson & George Streets.

2. Documentation, References & Standards:

We provide the below professional advice & acknowledge that the documentation provided for the project as detailed on plans & documents is as per requirements of the Building Code of Australia & relevant Australian Standards. In particular, in accordance with:

- AS/NZS 4282-2019. Control of the obtrusive effects of outdoor lighting.
- AS/NZS 1158.3.1-2020. Lighting for roads & public spaces. Pedestrian area – performance & design requirements.
- Electrical Plan Drawings: Not Assessed, plans not available.
- Architectural Drawings: DA Package August 2021:
  - TP100 Proposed Site Plan
  - TP110 Proposed Landscape Plan
  - TP200 Proposed Floor Plan
  - TP201 Proposed Roof Plan
  - TP300 Proposed Elevations 1

- TP301 Proposed Elevations 2
- TP302 Proposed 3D Views
- TP400 Proposed Signage Details

- Signage Shop Drawings: Not assessed.
- Signage Plans: Refer architectural plan set.
- Signage Photo: Reference photo of LED Signage at the Engadine Store Signage.
- Signage LED Specifications & Output – Rishang M904TB, UTW938B, UTX701A.

Note = Reference image of recently refurbished signage at the KFC Engadine Store.

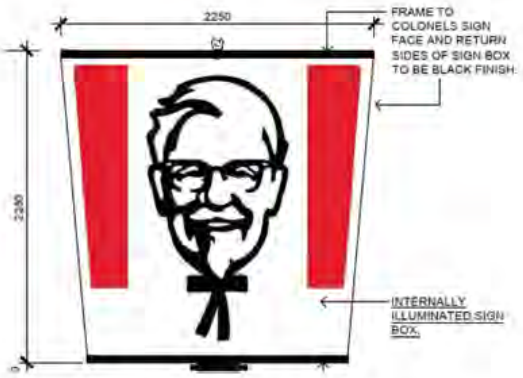
3. **Assessment:**

The largest & highest output 3x signs have been assessed. Remaining signs have not been included due to their location; output & size and as such are not expected to factor in as a main source.

a. S01 Pylon Sign – Modern Bucket:

The signs illuminated surface area is curved & provides an illuminated area of approximately 2250x 2250mm on each side (2).
The sign is proposed to be located on the North-West corner of the site; the centre of illumination will be approx. 7500mm AFL with the major illumination directions provided at an East & West direction predominantly to Horatio Street.
The signs illumination is provided by 200x 1.4W LED's & 3x 150W Power supplies.
The maximum candela is estimated per the below calculation:

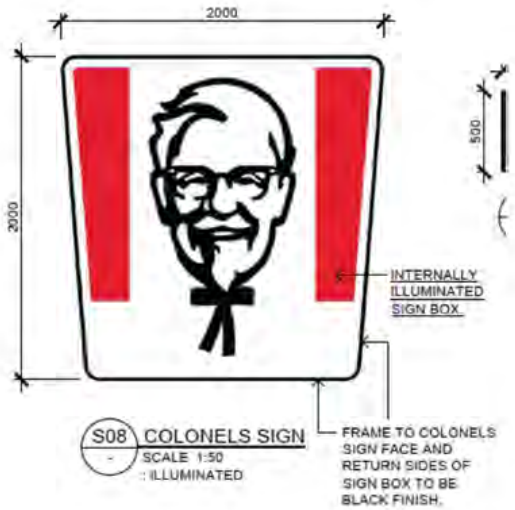
- 200x 26cd = 5200cd (Led Output)
- Double sided sign = 5200cd / 2 = 2600cd.
- Estimated Transmission loss per white acrylic 40% = 1560cd.
- Estimated Signage losses within the sign = 0.7 LLF = 1092cd.
- Estimated cd/m2 = 5.06m2 = 216cd/m2



b. S08 Colonels Sign:

The signs illumination is provided by 33x 3.6W LED's & 1x 150W Power supplies.
The signs surface area is flat & has an illuminated area of approximately 2000x 2000mm in area.
The maximum candela is estimated per the below calculation:

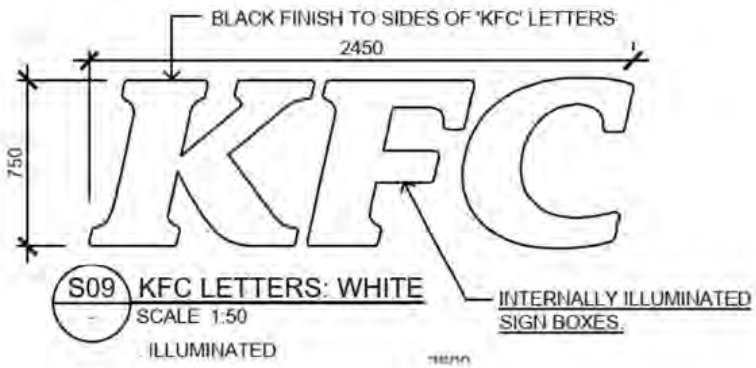
- 33x 55cd = 1815cd (Led Output)
- Estimated Transmission loss per white acrylic 40% = 1089cd.
- Estimated Signage losses within the sign = 0.8 LLF = 872cd.
- Estimated cd/m2 = 4.0m2 = 218cd/m2



c. S09 KFC Letters White:

The signs illumination is provided by 290x 0.3W LED's & 1x 150W Power supplies.
The signs surface area is flat & is made up of 3x independent letters that have an installed dimension of 2450x 750mm, the illuminated area is considerably less due to the illumination of the letters only & estimated approx. 40% of the noted installed dimensions.
The maximum candela is estimated per the below calculation:

- 290x 8.2cd = 2378cd (Led Output)
- Calculation for largest letter using 'K', estimated 40%. = 951.20
- Estimated Transmission loss per white acrylic 40% = 570cd.
- Estimated Signage losses within the sign = 0.8 LLF = 456cd.
- Estimated cd/m2 = 0.5m2 = 228cd/m2



Assessment Notes:

1. Any assessment references per AS4282-2019 have been included from Zones A3 Medium district brightness.
2. All signs are noted to be fixed output. (No flashing). Signs are controlled by a timeclock & limited to any curfew times as per DA conditions.
3. For additional information please review in conjunction with Arch plan TP400.
4. No general lighting (artificial lighting) or digital signage has been included in this assessment.
5. All documentation & reference items listed can be provided on request.
6. The assessment has been completed using only the losses from the white background acrylic sheets. Additional lettering, images & red sections for the sign is expected to incur additional losses resulting in a lower max Cd.
7. The assessment is based on a light box depth of a minimum of 100mm.
8. The assessment is based on the wall signs being installed vertically (90deg.)

4. Conclusion & Recommendations:

a. The maximum outputs of the signs are within tolerances noted in the standards and as noted in tables 3.3 & 3.5 of AS4282-2019.
b. As with the nature of site-specific conditions & site-specific electrical conditions, all signage locations shall be verified & the lighting outputs checked on site during commissioning.
c. As an additional measure we recommend that the 3x signs assessed be provided with dimmable drivers. The site conditions & customer viewing distances will be specific to the site & the dimmable drivers will add greater flexibility.

d. To reduce the effects of over-illumination we recommend that signs outputs be independently dimmed to a level that is customized to the site & provides the output level that is required of the sign per its intended operation.

The report has been provided by the below engineers, please use the contact details should any further details or information be required.

Cameron Foster
Principal – Electrical

C-LEVEL

E: cfoster@c-level.com.au
P: 02 9545 2348, 0402 604 889

Eric (Yongqi) Chen
Electrical Engineer

Yongqi CHEN

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SOCIAL IMPACT ASSESSMENT

Proposed KFC
33-35 Horatio Street, Mudgee NSW

Prepared for:

Broadview Aust. Pty Ltd
107-111 Church Street
Mudgee NSW 2850

SLR Ref: 660.30161.00000-R01
Version No: v1.1
December 2021

SLR

PREPARED BY

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BASIS OF REPORT

This report has been prepared by SLR Consulting Australia Pty Ltd (SLR) with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with Broadview Aust. Pty Ltd (the Client). Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of the Client. No warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR.

SLR disclaims any responsibility to the Client and others in respect of any matters outside the agreed scope of the work.

DOCUMENT CONTROL

Reference	Date	Prepared	Checked	Authorised
660.30161-R01-v1.1	14 December 2021	Chelsey Zuiderwyk	Kiera Plumridge	Dan Thompson

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DOCUMENT REFERENCES

TABLES

FIGURES

1 Introduction

1.1 Background

This Social Impact Assessment (SIA) has been prepared by SLR Consulting (SLR) on behalf of Broadview Aust. Pty Ltd in response to Mid-Western Regional Council's (Council) request for an SIA to be submitted in conjunction with the Development Application (DA) (DA0087/2022) for the demolition of a dwelling and construction of a food and drink premises for a KFC Australia franchisee at 33-35 Horatio Street, Mudgee (Lots 3 and 2 in DP 743615).

The DA documentation addresses all aspects of the development and is accompanied by plans and reports required to inform Council's comprehensive assessment of the proposed development.

The proposed development has been notified and advertised by Council, with comments invited from residents in the immediate vicinity of the proposal and also the wider community over a 14-day public exhibition in September and October 2021. An additional community consultation letter was sent by SLR on 24 November 2021 on behalf of Broadview Aust. Pty Ltd, to surrounding businesses and residents, requesting comments and questions.

1.2 Assessment Scope

This SIA has been completed to identify the likelihood of social impacts of the proposal and provides an appraisal of the possible social impacts, along with recommendations for the management and mitigation of potential impacts. There are no specific requirements for the preparation of SIA's in NSW however, Section 4.15 of the EP&A Act requires consent authorities, in this case Council, to take into consideration the "*likely impact of the development, including social impacts in the locality*" when determining a development application.

Council has requested an SIA in accordance with the provisions of clause 54 of the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation), with regard to Crime Prevention Through Environmental Design (CPTED) measures to be implemented as part of the development be completed.

The purpose of this SIA is to scope the social impacts likely to result from the proposal, assess the significance of each predicted impact, and provide recommendations/mitigation methods to both minimise any negative social impacts and to enhance the social benefits of the proposal.

As detailed within the *International Principles for Social Impact Assessment*. Impact Assessment & Project Appraisal (Vanclay et al., 2003) a social impact is a consequence experienced by people due to changes associated with any new development. As a guide, social impacts can involve changes to:

- **Way of life** – how people live, work, play and interact with one another on a day-to-day basis;
- **Community** - composition, cohesion, character, how it functions and sense of place;
- **Access to and use of infrastructure, services, and facilities** – state of physical, mental, social, and spiritual wellbeing;
- **Culture** - shared beliefs, customs, values and stories, and connections to land, places, and buildings;
- **Health and wellbeing** – physical and mental;
- **Surroundings** - ecosystem services, public safety and security, access to and use of the natural and built environment, and its aesthetic value and/or amenity;
- **Personal and property rights** – economic livelihoods, personal disadvantage, and civil liberties;

- **Decision-making systems** - access to complaint, remedy, and grievance mechanisms; and
- **Fears and aspirations** – concern for the future.

With due respect to the above considerations, this Report has been prepared with reference to the following:

- The most recent Australian Bureau of Statistics Census Data for the Mudgee Region and NSW for community profiling information to discern the likely impacts of the proposal;
- Council Plans including the Local Environmental Plan, Development Control Plan, Community Plan and Strategic Planning Statement, where relevant;
- The Statement of Environmental Effects (SEE) and supporting assessments;
- Stakeholder feedback.

It is noted there are no specific Social Impact Assessment Guidelines provided by Council for this form of development.

1.3 Project Overview

Th site, located at 33-35 Horatio Street, is currently occupied by a single storey brick residence and steel shed. The proposal is to demolish the existing structures, consolidate the lots, and redevelop on the consolidated lot.

The proposed development consists of the following:

- A new 40-seat restaurant;
- On-site parking towards the western boundary and the eastern side of the site;
- Drive-through facilities towards the southern and western boundaries of the restaurant;
- Landscaping, including along each boundary of the site and tall plantings towards the rear; and
- Signage on the north boundary and Horatio Street frontage.

The proposal consists of a new fast-food premises, being relocated from its existing location in Church Street Mudgee, with options for dine in, take away or delivery. The store is proposed to operate 7 days a week, 10:30am to 10:00pm.

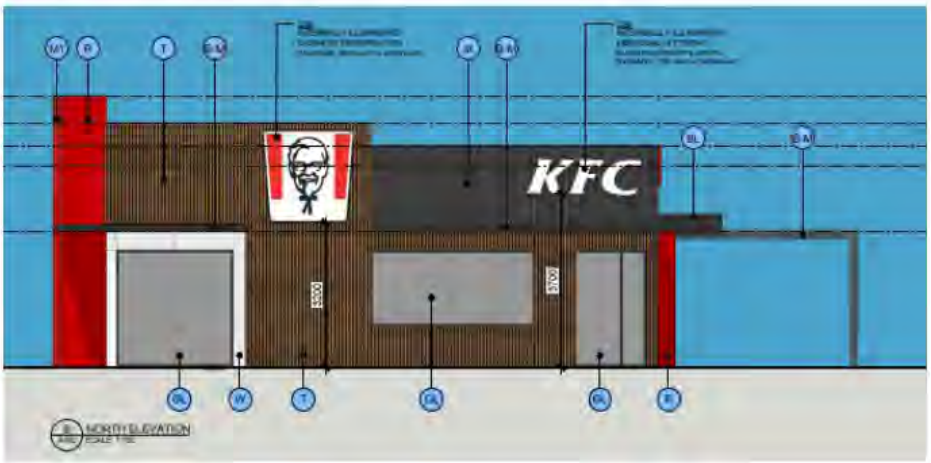

Figure 1 Proposed North Elevation fronting Horatio Street

Figure 2 Proposed 3D Perspective from a northeast perspective

2 Strategic Review

The below summarises the relevant strategic plans of Mid-Western Regional Council (Council), which will be referenced when considering the social impacts and benefits of the proposed development.

2.1 Mid-Western Regional Local Environmental Plan 2012

The *Mid-Western Regional Local Environmental Plan 2012* (LEP) zones the site 'SP3 – Tourist'. The objectives of the SP3 zone include:

- *To provide for a variety of tourist-oriented development and related uses.*

The proposed development is referred to as a "food and drink premises" as defined in the LEP, which is permissible in the SP3 zone subject to consent, and is defined below:

> *"food and drink premises means premises that are used for the preparation and retail sale of food or drink (or both) for immediate consumption on or off the premises, and includes any of the following—*
>
> *(a) a restaurant or café,*
>
> *(b) take away food and drink premises,*
>
> *(c) a pub,*
>
> *(d) a small bar.*
>
> *Note—*
>
> *Food and drink premises are a type of retail premises—see the definition of that term in this Dictionary."*

Therefore, as the proposed development is a take away food and drink premises, it is consistent with the LEPs objective to provide for a variety of tourist-oriented development and related uses.

2.2 Mid-Western Regional Development Control Plan 2013

The *Mid-Western Regional Development Control Plan* 2013 (DCP), provides more detailed guidelines to complement the provisions contained in the LEP. The aims of the DCP is to:

- Implement and support the objectives of the LEP;

- Define development standards that deliver the outcomes desired by the community and Council;
- Provide clear and concise development guidelines for various forms of development;
- Encourage innovation in design and development by not over-specifying development controls;
- Expedite development approvals by providing clear direction of Council's intent and criteria; and
- Provide certainty of development outcomes for developers and the community

The proposed development has been assessed against the DCP in the Statement of Heritage Impact (SoHI) (Heritage 21, 2021) and SEE (Atlas, 2021). Where the stakeholder engagement process has drawn attention to DCP related concerns, this will be addressed in **Section 6** of this report.

2.3 Mid-Western Regional Community Plan 2013

The *Mid-Western Regional Towards 2030 Community Plan 2013* (Community Plan), revised in 2017 is a future vision of the aspirations of the people who live and work within the Mid-Western Region and strategies for achieving these goals, and was developed collaboratively between the community and Council.

The Community Plan is planned and executed under 5 key themes:

Looking after our Community	*Activities and initiatives that produce vibrant towns and villages with a rich history, a safe and healthy community, and a strong sense of community pride.*
Protecting our Natural Environment	*Working towards conserving and promoting the natural beauty of our region.*
Building a Strong Local Economy	*Supporting the development of a prosperous and diversified economy delivering lifestyle benefits to the community through employment, income and sustainable economic growth.*
Connecting our Region	*Focussing on linking our towns and villages and connecting our regions to the rest of NSW.*
Good Government	*Ensuring a strong Council that is representative of our community and effective in meeting the needs of the community.*

This plan will be referenced where relevant to social impacts and benefits of the proposed development in **Section 6** of this report.

2.4 Local Strategic Planning Statement 2020

The purpose of the *Mid-Western Regional Local Strategic Planning Statement 2020* (LSPS) is to provide a 20-year land use vision for the Region, outline characteristics which make our area special, identify our shared values to be enhanced or maintained and identify where further detailed strategic planning may be needed.

The LSPS has been informed by the results of community engagement undertaken in developing the *Mid-Western Region Community Plan Towards 2030* and recent surveys completed by the community with a specific focus on Land Use in the Region. Council developed five surveys to capture community input on Land Use Vision, Growth, Town Centres, Design Considerations and Tourism. A total of 286 responses were received and helped inform the preparation of the LSPS.

The LSPS will be referenced where relevant to social impacts and benefits of the proposed development in **Section 6** of this report.

3 Site Analysis

The subject site is located at 33-35 Horatio Street, Mudgee, NSW. The site is legally identified as Lots 3 and 2 in DP743615 and is in the Mid-Western Regional Local Government Area (LGA). Refer to **Figure 3** which identifies the location of the site and surrounding context.

*The current location of KFC, proposed to be relocated to the Subject Site.

Figure 3 Locality Plan

It is proposed that the existing KFC restaurant be relocated from Church Street to Horatio Street, between Lawson and George Streets, which is approximately 1.5 kilometres from the town centre of Mudgee and situated within the boundaries of the Mudgee Heritage Conservation Area (HCA). The proposed new site on Horatio Street is part of the Castlereagh Highway (Route B55), the main tourist thoroughfare through the township of Mudgee, connecting Lithgow (and Sydney) to the Queensland Border through Western NSW.

The proposed site is in a strip of 'SP3 – Tourist' zoning on the southern side of Horatio Street, surrounded by predominately 'R3 Medium Density Residential' zoning, and also with B4 'Mixed Use' and 'R1 General Residential' zoning in close proximity.

The immediate neighbours of the site are predominantly single storey residential homes, with a streetscape that features green verges on both sides and is lined with mature trees, as Horatio Street has been zoned for residential land uses in previous LEPs. The site is also surrounded by vacant blocks of land and a diverse range of businesses including motels and accommodation, funeral home, a café, corner store, pub, and a McDonalds, which is also located on the southern side of Horatio Street in the SP3 zoning.

Other businesses in the locality include commercial businesses such as Tyre Power, Toyota, Western Dent Solutions, Floppas Automotive, Furney's industrial metal fabrication, and Russell's grain mill, with an industrial estate located approximately 800 metres to the east of the proposed site.

4 Demographics and Community Profile

The purpose of this section is to briefly analyse the demographic and social characteristics of the community likely to be affected by the proposal.

4.1 Demographic Analysis

For the purpose of developing a demographic profile for the area, this SIA considers selective statistics from the latest Census data from the Australian Bureau of Statistics (ABS) for the Mudgee LGA. This same data is compared against New South Wales (NSW) figures and percentages and rounded where appropriate.

4.1.1 Population

Mudgee Region population is estimated at 12,649 at the 2020 census, comprising a stable population over the five-year period from 2015, with a slight increase of 769 residents.

The population of the Mudgee Region is predominately young to middle aged, with a median age of 36.6 years compared to 37.9 across NSW. Children aged 0 – 14 years comprise the highest percentage of the population at 23.4%, compared to 18.5% across NSW. People aged 30 - 44 years comprise the second highest percentage of the Mudgee population at 20.2%, consistent with NSW (see **Table 1**).

Average household sizes are 2.5 people per household as of 2016, on par with the NSW average (2.6). From a total of 3,864 households, 2,672 were identified as family households. Of these, couple families without children were the predominant family type (1,080 families), followed by couple families with children under 15, and/or dependent students (958 families).

Aboriginal and Torres Strait Islander people represent 6.7% of the local population which is notably higher than NSW at 3.2%, whilst people born overseas represent 6.6% of the local population, notably lower than NSW (25.32%).

Table 1 Population age range in the Mudgee Region and NSW in 2020

Age group	0-14 years	15-29 years	30-44 years	45-59 years	60-74 years	75-85 and over
Mudgee Population	23.4%	16.8%	20.2%	17.7%	13.7%	8.2%
NSW Population	18.5%	19.7%	20.9%	18.5%	14.8%	7.4%

4.1.2 Employment Status

The level of unemployment in Mudgee was below the NSW level of 6.3%, at 5.6%. The percentage of the workforce that reported working more than 35 hours per week (full time) was on par with NSW's workforce, the percentages being 58% and 59%, respectively.

4.1.3 Income

The median total income (excluding government pensions and allowances) for Mudgee ($49,604) was higher than the average for the Mid-Western Regional LGA ($45,213) and lower than the New South Wales median ($50,153).

4.1.4 Education

In Mudgee, persons who have completed year 12 or equivalent (36.7%) was significantly lower than for NSW at 52.1%. This was similar for bachelor's degrees with the percentages being 9.9% and 16%, respectively.

4.1.5 Business

There are 1,155 businesses within the Mudgee Region, with 119 of these closing and 126 opening during 2020. Based on the available statistical data, which covers a period from 2015 to 2020, business numbers have been stable over the five-year period from 2015, with only a slight decrease of 13 businesses.

4.1.6 Industry of Employment (top responses)

Of the employed people in Mudgee, 18.8% worked in Engineering and related technologies, 13.9% in Management and commerce, 8.8% in Health, 8.3% in Education, 7.7% in Society and culture, and 6.3% in Food, hospitality and personal services. The percent of people in Food, hospitality and personal services are higher than NSW which is at 4.4%.

4.1.7 Number of Vehicles

In Mudgee, the number of registered passenger vehicles compared to number of households was 1.5, which is generally consistent with NSW rates of 1.7.

4.2 Crime

The NSW Bureau of Crime Statistics and Research (BOSCAR) provides crime figures of Recorded Incidents (RI) at a Local Government Area (LGA) level. Data relating to the Mid-Western LGA has been obtained and assessed to form a baseline understanding of crime as it relates to the locality of the subject site.

It is noted that data assessed relates to RI of crime and not all incidents of crime. Actual levels of crime are dependent on a variety of inputs, including levels of police activity and the focus of their operations, reporting levels and actual levels of criminal activity. This potential for variation between actual crime levels and RI is noted and acknowledged.

Table 2 below shows the RI of crimes of particular relevance to the proposed development over 3 years, and any trends perceptible in these occurrences of these crimes over the last 5 years.

Table 2 Recorded Crime Incidents Count – Mid-Western LGA 2019-2021

Offence	Year to June 2019	Year to June 2020	Year to June 2021	Trend over 5 years
Assault - domestic violence related	280	286	261	Stable
Assault - non-domestic violence related	127	108	117	Stable
Sexual assault	61	78	116	Stable
Indecent assault, act of indecency and other sexual offences	22	39	60	Stable
Murder	1	0	0	Not Calculated*
Robbery without a weapon	3	2	1	Not Calculated*
Robbery with a firearm	0	0	1	Not Calculated*

Offence	Year to June 2019	Year to June 2020	Year to June 2021	Trend over 5 years
Robbery with a weapon not a firearm	0	0	0	Not Calculated *
Motor vehicle theft	37	40	16	Not Calculated *
Steal from motor vehicle	71	64	46	Down 23.6% per year
Steal from retail store	45	35	39	Stable
Steal from dwelling	72	63	61	Down 11.2% per year
Steal from person	3	5	5	Not Calculated *
Other theft	76	55	58	Stable
Malicious damage to property	277	210	205	Down 4.6% per year

Table 2 indicates that reported incidents of the most relevant crimes to the proposed development have generally remained stable in the most recent five-year period (from 2017 to 2021). There has been a 23.6% decrease in "steal from motor vehicle", a 11.2% decrease in "steal from dwelling," and an 4.6% decrease in "malicious damage to property".

The pattern of incidence of crimes listed above is not considered significant or indicative of a locality-based crime problem. In addition to this, it is not considered that the proposed development will contribute negatively to the incidence of crime in the locality, given the nature of the proposed development and the design measures proposed to mitigate the incidence of crime associated with the development. Mitigating measures are outlined within **Section 6** of this report.

4.3 Socio-Economic Indexes for Areas

The Socio-Economic Indexes for Areas (SEIFA) is a tool used for measuring the social and economic conditions of Australian communities. The indexes are based on information from the five-yearly Census of Population and Housing. SEIFA uses a broad definition of relative socio-economic disadvantage in terms people's access to material and social resources, and their ability to participate in society.

A higher index value indicates an area has a high proportion of people with high incomes and a skilled workforce. Conversely a low index value indicates an area has a high proportion of people with low incomes and more employees in unskilled occupations.

SEIFA contains 4 indexes, each summarising a different aspect of the level of socio-economic wellbeing in an area. Mudgee's SEIFA decile rankings within Australia in 2016 are set out below in **Table 3**.

Table 3 Socio-economic indexes for areas (SEIFA) – Australia deciles - Census

SEIFA Indices 2016	Ranking in Australia (Decile)
Index of Relative Socio-economic Disadvantage	4
Index of Relative Socio-economic Advantage and Disadvantage	4
Index of Economic Resources	5
Index of Education and Occupation	3

Mudgee has low SEIFA indices, with deciles of 3,4, and 5 indicating that Mudgee ranks in the lowest 30-50% of the country across the 4 indexes in terms of socio-economic disadvantage. A low score in the Index of Education and Occupation indicates that an area has a high proportion of people without qualifications, without jobs, and/or with low skilled jobs

It is noted that the SEIFA index of socio-economic disadvantage should be used as a guide only, it is not intended to reflect individual people or households in an area but rather they indicate the collective socio-economic characteristics of the people living in an area.

4.4 Summary

The demographic characteristics of the Mudgee LGA generally demonstrate the following:

- Mudgee has an age structure not dissimilar to NSW, with a median age of 36.6 years compared to 37.9 years for NSW;
- Unemployment in Mudgee is below NSW unemployment rates, a similar percentage of the workforce work full time, and the median total income in Mudgee is similar to that of NSW despite lower levels of education;
- Business numbers have been stable over the five-year period from 2015 to 2020;
- Mudgee has a higher percent of people in Food, hospitality and personal services than NSW;
- The number of vehicles per household in Mudgee is generally consistent with other parts of NSW with most households having one or more vehicle(s) indicating a high level of mobility;
- Crime rates have remained stable or decreased in Mudgee between 2017 and 2021; and
- Mudgee has low SEIFA indices, with deciles of 3,4, and 5 indicating that Mudgee ranks in the lowest 30-50% of the country across the 4 indexes in terms of socio-economic disadvantage.

5 Stakeholder Engagement

5.1 Potentially Affected Stakeholders

The simple definition of a stakeholder is anyone who has an interest in or is affected by the proposed development. Affected stakeholders are groups or people that will be affected by the construction and operation of the development. Interested stakeholders are those who are not directly affected but have an interest in the project. Stakeholders can be individuals, communities, government agencies, non-government organisations, not for profit associations, private organisations, small and large businesses, boards, customers, shareholders, staff, and contractors.

Identified stakeholders include residents and businesses on Horatio Street and surrounding streets in close proximity to, and within line-of-sight of the proposed development, as well as residents and business owners who live and/or work in the Mudgee region and have an interest in the character, identity, liveability, community, and economy of Mudgee.

5.2 Method of Engagement

The proposed development has been subject to a 14-day public exhibition in September and October 2021 as part of standard Council process, and an additional community consultation letter was sent by SLR on 14 November 2021 on behalf of Broadview Aust. Pty Ltd to surrounding businesses and residents requesting comments and questions by 8 December 2021.

5.3 Engagement Outcomes

A total of sixty-five responses representing seventy-five individuals were received by Council during public exhibition, and an additional four responses were received from the consultation letter sent by SLR. All responses received were objections to the proposed development, with the exception of one supportive response received by phone call following receipt of the consultation letter. A summary of the key points of objection and the number of responses that mentioned each key objection are included in **Table 4** below.

No identifying information has been included to preserve the privacy of respondents.

Table 4 Stakeholder Engagement Outcomes

Key Objections	No. of responses	Further Details
Land Use	60	• The proposed development is surrounded by residential single-storey homes and long-term residents • Horatio Street is a wide tree-lined street and the entrance to Mudgee with a residential feel • Houses surrounding the proposed development will lose value and take longer to sell when on market • Resident's quality of life will be reduced • The proposed development is an inappropriate use of the SP3 zoning and not aligned with the existing residential and business properties along the street

Key Objections	No. of responses	Further Details
		• The proposed development is a relocation of an existing premises which mainly services residents of Mudgee and will not increase tourism to the Mudgee area • Mudgee is renowned for its unique food and wine tourism and a KFC and McDonalds upon first entering the town takes away from the Mudgee tourism brand • The necessary road works to accommodate the drive through access will change the characteristic wide street of the Heritage Conservation Area upon entering Mudgee.
Traffic and Parking	60	• Potential increased traffic congestion along the already busy Horatio Street and Church Street • Reduced access to residential properties due to traffic congestion and the additional traffic infrastructure proposed to be installed • Drive-through traffic likely to use surrounding side roads in the area, as this precedent has been set at the existing KFC location • Pedestrian safety is a concern as Horatio Street is already difficult to cross due to traffic • Increased accident risk as a result of increased traffic congestion • Customers parking over driveways, especially trucks and long towing vehicles which aren't accommodated for in the drive through or carpark • Drive through overflow onto Horatio Street, which already occurs at the McDonalds and existing KFC site.
Air Quality	53	• Cooking, garbage, and car fumes. Odour from the existing KFC site is referred to as being obtrusive.
Noise	50	• Additional braking along Horatio Street, additional vehicle noise due to drive-through, garbage pick-ups and delivery vehicles • Noise from speakers at drive-through and use of carpark • Long hours of operation.
Visual Amenity and Lighting	47	• Building not in keeping with Heritage Conservation Area and residential use of the area • Potential increase in litter on site and surrounding streets • Signage not in keeping with DCP and other signs used in the area • Lighting from premises, especially that of illuminated signs.
Waste	34	• Increase in pests, vermin, and garbage.
Antisocial Behaviour	10	• An increase in antisocial behaviour in the area, overflowing onto surrounding streets.
Council Plans	6	• Misaligned with DCP • Misaligned with LSPS • Lack of consultation from Council.
Other	15	• Loss of business income • Staff have no place to eat and smoke and are required to do this outside of KFC premises, potentially using Lyons Lane • Stormwater drainage

Key Objections	No. of responses	Further Details
		• Health impacts from the type of food.

The supportive response received from a local resident noted that the support was in relation to ease of access, as the site is within walking distance from their place of residence. The respondent has no other comments or concerns on the development.

6 Impact Assessment

Assessment and analysis of the potential social impacts of the proposed development (both negative and positive) is provided below, taking into consideration stakeholder feedback in **Section 5.3**, Council plans listed in **Section 2**, and any mitigation measures detailed in the SEE or other management plans provided as part of the DA documentation.

6.1 Land Use

Respondents were concerned over the residential character of the street being impacted, the change of land use from residential, the potential for existing dwellings to lose value and take longer to sell when on the market, resident quality of life being reduced, the proposed land use being an inappropriate use of the 'SP3 – Tourist' zoning and being out of character from the existing residential and business uses, and that there would be no increase of tourism as a result of the relocation of KFC.

Whilst the current character of Horatio Street reflects the primarily residential zoning of the wider area, it is understood that Council's intended future use of the site as per the SP3 zoning is anticipated to be for a variety of uses, including amusement centres, camping grounds, eco-tourist facilities, and entertainment facilities.

The KFC restaurant and drive-through is an appropriate use of the SP3 zoning, as a takeaway food and drink premises, as is indicated by the LEP and the precedent set by McDonalds, which is also located in this zone 500 metres along Horatio Street to the west. The relocation of the KFC to Horatio Street, which is also the primary tourist route through Mudgee, will allow for KFC to better cater to tourists, as well as to residents.

Sixty respondents out of a total of seventy-five raised concerns about land use, noting the proposed development is perceived to impact on the community's sense of place, connection to land and buildings, sense of wellbeing, and property rights. As a result, when considering this DA and the future land use of this site, it is recommended that Council do so with reference to the SP3 zoning of the site, which is identified to inform the future character of the area.

6.2 Traffic and Parking

Respondents were concerned about the potential increase in traffic congestion, reduced access to surrounding residential properties, pedestrian safety, increased risk of accidents, drive through overflow onto Horatio Street, and customers parking over driveways, especially trucks and long towing vehicles.

The *Traffic Assessment Report* prepared by Triaxial Consulting (2021) calculated the proposed development to generate between 85 to 120 peak hour vehicle trips along Horatio Street during normal operation. It concluded the following:

- To safely accommodate the anticipated increase in Horatio Street traffic, it is proposed to construct a new intersection to allow a right hand turn from the eastbound lane of Horatio Street. Site ingress and egress has been designed using the swept path of the largest design vehicle, a 12.5 metre medium rigid delivery truck. Traffic exiting the site will be directed westwards, which will limit potential conflicts arising from a right hand turn out of the site;
- Whilst there will be an increase in traffic along Horatio Street due to the development, there will also be a reduction in traffic along Church Street due to discontinued use of the existing KFC site; and
- Parking will be provided on site at a rate well above the minimum required by the Mid-Western Regional Council DCP and RTA *'Guide to Traffic Generating Developments'*.

- NSW *'Guide to Traffic Generating Developments'* also recommends a minimum of six queue spaces be provided for a KFC restaurant with a recommendation for up to eight spaces provided they will not impact on parking spaces. With additional space available at the end of the queue (not counted in the six queue spaces) it is estimated that between nine to 10 cars will be able to queue without any impact on parking or manoeuvring through the car park.

The Traffic Assessment Report identifies the traffic generation and site layout is appropriate from a traffic perspective.

6.3 Odour

Respondents raised concerns regarding odour impacts on surrounding residents and the broader community, primarily associated with cooking and waste odours from the site, as well as increased car fumes from increased traffic and idling vehicles in the drive-through. Odour from the existing KFC location is referred to as being obtrusive by respondents.

An Odour Assessment prepared by The Odour Unit (2021) identified potentially significant odour emission sources from the operation of the proposed development, evaluated whether engineered and other management-based controls would be required or to manage any significant odour emissions.

It was determined that the proposal is unlikely to cause any significant level of odour emissions that would be deemed problematic to nearby, ground level sensitive receptors, that should be validated via the odour sampling and testing of all major odour emissions. Design based mitigation measures detailed by the assessment include:

- Updating the proposed exhaust air emission control system design of the main hood to include provisions for ozone dosing; and
- Procuring a certificate of compliance for the proposed mechanical exhaust system to ensure that the installation complies with all relevant standards, building codes, and guidelines.

The assessment notes that a field-based investigation study should be completed if there are any community concerns or odour complaints that arise during operation, with details of the investigation contained in Section 9 of the Odour Assessment (The Odour Unit, 2021).

The above controls will be assessed by Council for their appropriateness and ability to deliver the expected mitigation outcomes.

6.4 Noise

Impacts relating to noise from the development were raised, primarily associated with vehicle braking on Horatio Street, vehicle and speaker noise from the drive-through, garbage pick-up and delivery vehicle noise, as well as use of the carpark, and long hours of operation.

The Noise Impact Assessment prepared by Spectrum Acoustics (2021) assessed the potential impacts of the operation of the drive-through, car parking, mechanical plant, kitchen vent fans, waste removal, and road traffic associated with the restaurant during hours of operation.

It was concluded that the proposed development will be able to operate without adversely impacting the acoustic amenity of any residential receiver, following the implementation of the following noise controls:

- Boundary fences acting as acoustic barriers to 2.0m high along the eastern, western, and southern boundaries,

- The plant area being fitted with acoustic louvres,
- Parapet walls acting as acoustic barriers on the facade of the building.

6.5 Visual Amenity and Lighting

6.5.1 Building

Respondents were concerned over the building not being in keeping with the Heritage Conservation Area. The Statement of Heritage Impact (SoHI) prepared by Heritage 21 (2021) concluded that the proposed development would result in minimal impact on the heritage significance of the site, the Mudgee Heritage Conservation Area and the heritage items in the vicinity.

The assessment recommended controls, which have been incorporated into the final proposal, including:

- The use of sympathetic colours and materials;
- The modification of the design, shape, and bulk of the proposed works so it would not be considered visually obtrusive within the Horatio Street streetscape and the Mudgee Heritage Conservation Area; and
- Landscaping to provide a buffer between the site and nearby heritage items to reduce potential visual impacts.

The above controls will be integrated into the design to provide an appropriate design outcome.

6.5.2 Signage

Respondents raised concerns with the proposed lighting from the premises, primarily from the illuminated signage.

The Illuminated Signage General Assessment prepared by C-Level Design & Engineering (2021) for the potential three largest signs concluded that the maximum outputs of the signs are within tolerances of the relevant NSW guidelines. Control measures for signage lighting controls include:

- All signage locations to be verified and the lighting outputs checked on site during commissioning;
- The three major signs be provided with dimmable drivers to add greater flexibility for site conditions and customer viewing distances specific to the site;
- The sign outputs be independently dimmed to a level this is customized to the site and provided the output level that is required of the sign per its intended operation, to reduce the effects of over-illumination; and

It is also noted that signs are controlled by a timer and are would not be lit during curfew times as per DA conditions.

Respondents were also concerned over the size and type of signage not being in keeping with DCP controls and other signs in the area. Whilst novelty signs are prohibited in the DCP, as they do not contribute to the character of the town, signage as proposed by this development is deemed acceptable in this mixed-use area, with a precedent set by McDonalds approximately 500 metres to the west of the proposed site.

To further mitigate this potential issue, it is suggested that the recommendations of the SoHI (Heritage 21, 2021) are implemented and that the proposed pylon sign at the front of the site be reduced in height to reduce the visual impact on the Mudgee Heritage Conservation Area and adjacent heritage items.

6.5.3 Amenity of Surrounds

Respondents also raised concerns over the potential increase in litter on the site and surrounding streets. It is recommended that the Plan of Management (PoM) prepared for the development contain multiple daily litter checks of the site, street frontage, and line of sight from the premises, as well as regular landscaping maintenance to ensure the visual amenity of the proposed site is maintained to a high standard.

6.6 Waste

Some respondents raised concerns over pests, vermin, and garbage, as a result of the proposed development.

A Waste Management Plan (Broadview, 2021) has been prepared to manage noise from waste collection, odour and vermin from waste storage locations, and general waste management procedures and agreements. These measures appear sufficient to address concerns and details should be incorporated into the Plan of Management for the ongoing operation of the premises.

6.7 Crime and Antisocial Behaviour

As explored in **Section 4.2**, crime over the past five years in Mudgee has remained relatively static with a slight decrease overall in major offences. Notwithstanding, neighbourhood safety is a primary concern for residents and Council for developments proposed with operating hours extending past 6pm and across 7 days a week.

The proposed development minimises criminal opportunities via appropriate consideration of the principles of CPTED, namely surveillance, natural access control, territorial reinforcement, and space management. These principles translate into design components such as clear sightlines (no opportunities for offenders to hide); clear delineation between public space and back of house areas; use of easy to maintain building elements (communicating an alert and active presence), effective lighting of external areas and designated walking paths across the site, appropriate signage, landscaping treatments and use of security devices such as CCTV cameras. Implementation of the above-mentioned measures into the design of the proposed development aims to create an environment that will dissuade crime and anti-social behaviour.

KFC maintains the most current standards of safety and training for staff in relation to safety procedures and protocols. Training materials that form part of all employee onboarding processes will also be outlined in the Plan of Management developed for the proposal, which every staff member will be required to be familiar with upon employment. Crime Prevention training material includes behavioural systems for employees such as the use of keys and locks on the premises, daily safe checks for financial fraud, and how to lodge security incidents for suspicious activity. Violent Crime and Robbery training material contains procedures for employees handling violent crime situations that may occur on the premises including within the carpark, and potential robbery scenarios. Specific Alarm System training material is also provided with details on how to arm and disarm the alarm, and respond to alarm emergencies.

The above-mentioned training materials can be made available for review by Council if requested.

In summary, the incorporation of CPTED principles into design components, and the existing standard procedures employed by KFC are anticipated to be sufficient for the operation of the development. The use of the site as a food and drinks premises is unlikely to have any appreciable impact on safety for staff and customers or surrounding residents given the implementation of the Plan of Management.

6.8 Community and Economic Contribution

KFC provides skilled and semi-skilled employment opportunities, particularly for young people seeking full-time, part-time, and casual work opportunities. The existing KFC store currently employs over 60 staff ranging between the ages of 14 to 60, all from the local area. The age range represents the majority of the population in Mudgee, and also provides employment and on-the-job training opportunities for the proportion of working age youth in the locality. In addition, the low SEIFA indices rating for Mudgee detailed in **Section 4.3** reiterates the benefit of this type of employment in the area, with the proposal providing additional hours of work and new employment opportunities.

Giving back to the community is a fundamental factor of the KFC business philosophy, and KFC are becoming increasingly focused on ensuring contributions to the communities within which they operate. The existing KFC store is a gold sponsor of the Mudgee Gulgong Wolves Football Club, Gulgong Lions Football Club, Mudgee Dragons Rugby League, and Mudgee Golf Club, equating to approximately $20,000 worth of local community sponsorship. The existing KFC store also supports the KFC Youth Foundation (as detailed at: https://www.kfc.com.au/kfc-youth-foundation) and has raised over $2,000 dollars in-store.

In summary, the new premises has the opportunity to continue to add value to the local community through employment opportunities and continued financial contribution to local sporting teams and other community groups and causes.

7 Management and Mitigation

The primary potential social impacts identified include land use change and implications to the community's sense of place and property rights, traffic and parking, odour, noise, visual amenity and lighting, waste, and anti-social behaviour.

To manage and mitigate the risk of these impacts occurring, the proponent should employ the mitigation measures summarised within each subsection of **Section 6** and referenced specialist investigations, as well as the below measures and any additional measures provided by Council upon determination of the DA.

7.1 Review of Relevant Strategic Plans

The majority of respondents raised concerns on the potential land use, noting the proposed development touches on the community's sense of place, connection to land and buildings, sense of wellbeing, and property rights future. When considering this DA and the future land use of this site, it is recommended that Council do so with reference to the DCP, Community Plan, and LSPS, which represent the future vision and aspirations for the wider community of the Mudgee region and use of SP3 zoned land within the LGA.

7.2 Plan of Management

In the instance of the DA being approved, a Plan of Management (PoM) should be prepared to govern operation of the premises. Adherence to the PoM would be achieved by conditions of consent within any development approval issued by Council.

The conditions of consent and PoM should address the following:

- Waste management as per the Waste Management Plan (Broadview, 2021);
- Regular maintenance checks of the noise mitigation measures in place as per the Noise Impact Assessment (Spectrum Acoustics, 2021);
- Regular checks of sign output levels as per the Illuminated Signage General Assessment (C-Level Design & Engineering, 2021);
- Daily litter checks of the site, street frontage, and line of sight from the premises as per staff training materials;
- Regular landscaping maintenance and programs to replace dying or deceased plants; and
- Details of, and continued implementation of, standard KFC training for staff in relation to safety procedures and protocols, site maintenance including waste management, and complaints handling.

The adoption of a PoM and strict adherence to its commitments, as well as the management of the premises as per existing standardised KFC training materials, would address much of the risk of negative social impact of the proposed development.

8 Conclusion

This Social Impact Assessment (SIA) has been prepared on behalf of Broadview Aust. Pty Ltd to inform Council's assessment of Development Application (DA) (DA0087/2022) for the demolition of a dwelling and construction of a food and drink premises for a KFC Australia franchisee at 33-35 Horatio Street, Mudgee (Lots 3 and 2 in DP 743615).

A review of available literature and statistical data relating to demographics and crime was utilised to form a picture of the neighbourhood and identify baseline characteristics of the area. Key stakeholders were identified as residents and businesses in the immediate area surrounding the site.

Submissions were received from interested stakeholders as a result of Council's public exhibition, and a consultation campaign was completed by SLR. This allowed interested stakeholders an opportunity to raise concerns on matters relating to the potential positive and negative social impacts of the proposed development and incorporated into this SIA.

There is some potential for any new development to adversely impact the social fabric of an area, the proposed development provides an opportunity for the positive socioeconomic use of the land given the zoning, whilst not impacting on the heritage values of the surrounds.

The SIA has considered the social impact of the proposed redevelopment of 33-35 Horatio Street, Mudgee and identified it as acceptable subject to implementation of the following recommendations:

- The proposed pylon sign at the front of the site be reduced in height (see **Section 6.5.2**);
- A Plan of Management (PoM) be prepared and adopted by way of condition(s) of consent, outlining the management procedures for the premises to ensure impacts of concern are appropriately managed (see **Section 7.2**);
- Council and Broadview proceed with proactive communication within the local community on the proposed development.

9 References

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Noise Impact Assessment
Proposed Fast Food Restaurant
33 – 35 Horatio Street, Mudgee, NSW

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November 2021_Addendum July 2023

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1.0 INTRODUCTION

It is proposed is to develop a KFC fast food restaurant with drive through service area at 33 - 35 Horatio Street, Mudgee, N.S.W. (**Figure 1**).

Figure 1 – Site Location

The proposal involves the construction of a new building which will occupy the central part of the site. This building will house the restaurant and the drive through will pass along the southern and western sides. The site will be accessed via two driveways from Horatio Street.

It is proposed that the restaurant will operate until 10 pm seven days per week.

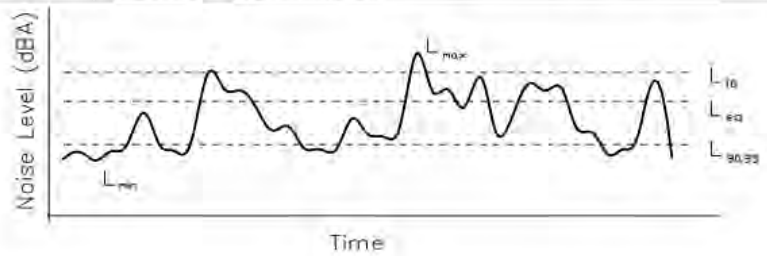
This Noise Impact Assessment (NIA) has been conducted in accordance with procedures as detailed in the *NSW Noise Policy for Industry* (NPfI).

2.0 DESCRIPTION OF TERMS

Table 1 contains the definitions of commonly used acoustical terms and is presented as an aid to understanding this report.

TABLE 1
DEFINITION OF ACOUSTICAL TERMS

Term	Definition
dB(A)	The quantitative measure of sound heard by the human ear, measured by the A-Scale Weighting Network of a sound level meter expressed in decibels (dB).
SPL	Sound Pressure Level. The incremental variation of sound pressure above and below atmospheric pressure and expressed in decibels. The human ear responds to pressure fluctuations, resulting in sound being heard.
STL	Sound Transmission Loss. The ability of a partition to attenuate sound, in dB.
Lw	Sound Power Level radiated by a noise source per unit time re 1pW.
Leq	Equivalent Continuous Noise Level - taking into account the fluctuations of noise over time. The time-varying level is computed to give an equivalent dB(A) level that is equal to the energy content and time period.
L1	Average Peak Noise Level - the level exceeded for 1% of the monitoring period.
L10	Average Maximum Noise Level - the level exceeded for 10% of the monitoring period.
L90	Average Minimum Noise Level - the level exceeded for 90% of the monitoring period and recognised as the Background Noise Level. In this instance, the L90 percentile level is representative of the noise level generated by the surrounds of the residential area.



3.0 THE EXISTING ENVIRONMENT

To quantify the existing acoustic environment of the area, an ambient noise survey was conducted on the site from 17 to 25 October, 2021.

An ARL EL316 environmental noise logger, was installed on the site at 33 Horatio Street near the centre of the block (as shown in **Appendix I** and shown, approximately, as a star on **Figure 2**)

Figure 2 – Noise Logger Location

The logger was programmed to continuously register environmental noise levels over 15 minute intervals with internal software calculating and storing L_n percentile noise levels for each sampling period. Calibration of the logger was performed as part of the instrument's initialisation procedures, with calibration results being within the allowable ± 0.5 dB(A) range.

All noise levels were monitored in accordance with relevant EPA guidelines and AS1055- "Acoustics - Description and measurement of environmental noise".

Table 2 presents a summary of the ambient noise levels (L90 Rating Background Levels (RBL) and existing Leq) recorded at the monitoring location. The RBL is the median of the daily L90 levels (Assessment Background Levels) in each assessment period (day/evening/night), over all valid days in the monitoring period.

The data are also shown graphically in Appendix I. A full set of logged data is not included in this report but is available on request.

TABLE 2
MEASURED AMBIENT NOISE LEVELS – 33 HORATIO STREET

	Noise Levels dB(A)		
Percentile	Day	Evening	Night
L_{90}	47	32	24
L_{eq}	59	54	54

NOTE: Day = 7am – 6pm, Evening = 6pm – 10pm, Night = 10pm – 7am Monday to Saturday and 8am Sunday and Public Holidays.

The graphical representation of these noise measurements is typical of a main road with high traffic flow during the early morning, day and

late afternoon and a drop off during the evening and the middle of the night. The acoustic environment of the area for the proposed hours of operation of the KFC is, therefore, characterised by noise from traffic on Horatio Street.

The logger was located near the centre of the block relative to Horatio Street. The measured noise levels would, therefore, be similar to the most potentially affected residential receivers, in relation to noise emissions from the site.

There is some commercial activity in the area but the noise emissions from this would be limited and restricted to day time only. There is no significant existing industrial noise in the area.

4.0 NOISE CRITERIA

4.1 Operational Noise Goals

In setting noise goals for an industrial development, the NPfI considers both Amenity and Intrusiveness criteria. The former is set to limit continuing increase in noise from industry, whilst the latter is set to minimise the intrusive impact of a particular noise source.

Amenity criteria are dependent upon the nature of the receiver area and the existing level of industrial noise. The most potentially affected receiver area near the site would be considered "suburban" as per the definitions in the NPfI.

The Project Amenity Noise Level for an industrial development is equal to the recommended amenity noise level (from Table 2.2 in the NPfI) minus 2 dB(A) (as detailed in notes to **Table 3**).

The intrusiveness criteria are based on the Rating Background Level (RBL) for the time period, plus 5 dB(A). The RBL (L90) is defined as the overall single figure background level representing each assessment period.

Table 3 specifies the Project Noise Trigger Levels (noise criteria) determined for the site based on procedures in the NPfI.

TABLE 3 NOISE CRITERIA				
Location	Criterion	Day (7am-6pm)	Evening (6pm-10pm)	Night (10pm-7am)
Horatio St.	Intrusiveness dB(A),Leq(15-min.)[1]	52	37	35[2]
	Amenity dB(A),Leq(15 min)[3]	53	43	38
	Project Noise Trigger Levels	**52 (15 min.)**	**37 (15 min)**	**35 (15 min)**

1 Rating Background Level (RBL) + 5dB. RBL is the median value of each ABL (Assessment Background Level) over the entire monitoring period. The ABL is a single figure representing the "L_{90} of the $L_{90's}$" for each separate day of the monitoring period.
2. NPfI minimum background level of adopted.
3. Project amenity noise level (ANL) is suburban ANL (NPI Table 2.1) minus 5 dB(A) plus 3 dB(A) to convert from a period level to a 15-minute level.

4.2 Sleep Disturbance

As the KFC will not operate between 10pm and 7am the potential for sleep disturbance impacts due to maximum noise level events during the night-time period needs not be considered.

4.3 Road Traffic

Noise generated by road traffic associated with a development is assessed separately to site noise as per procedures detailed in the OEH Road Noise Policy (RNP).

The RNP, as adopted by Transport for NSW, recommends traffic noise criteria for different road developments and uses.

Based on definitions in the RNP, Horatio Road (which is also known as the Castlereagh Highway) would be considered as an arterial/sub-arterial road. An extract of the relevant section of the RNP relating to land use developments with the potential to create traffic on arterial/sub-arterial road is shown in **Table 4**.

TABLE 4 ROAD TRAFFIC NOISE CRITERIA		
Situation	Recommended Criteria	
	Day - (7am - 10pm)	Night – (10pm – 7am)
3. Existing residences affected by **additional traffic** on existing freeways/arterial/sub-arterial roads generated by land use developments	60 Leq(15hr) (external)	55 Leq(9hr) (external)

5.0 NOISE IMPACT ASSESSMENT

The proposed layout of the site is shown in **Figure 3**. The figure shows that the site faces Horatio Street and there are existing

residences on either side. There are also residences at the rear and across the road.

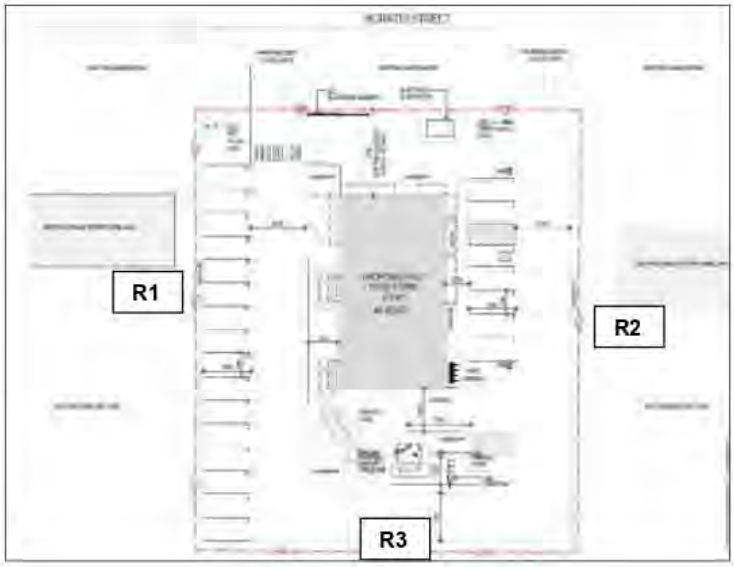


Figure 3 – Site Layout

The nearest potentially affected residential receivers are shown as R1, R2 and R3 on Figure 3.

- R1 is a single storey residence at 37 Horatio Street,
- R2 is a single storey residence at 31 Horatio Street, and
- R3 is a single storey residence at 8 Inglis Street (across Lyons Lane).

From an acoustic point of view activities with the potential to create adverse impacts may include;

- Operation of the restaurant (movement of vehicles and people about the site),
- Drive through service,
- Waste removal, and
- Mechanical plant associated with the restaurant.

5.1 Noise Source Levels

Sound power levels of the major noise sources at the KFC, as calculated from noise measurements made previously by Spectrum Acoustics, are shown in **Table 5**.

The database contains noise measurements made of vehicles moving in a drive through and also at 1m from the front, side and rear of the speaker bollard while the drive-through operator spoke through the speaker. The database also contains measurements made at the pick-up window while the operator spoke to a hypothetical customer.

The assessment of operational noise utilises the Leq noise emissions for each source with potential noise impacts assessed against a 15 minute Leq criterion.

The Leq (15 min) noise level for the use of the drive through was calculated by estimating that, during very busy times, there could be as many as 30 vehicles using the drive through in an hour. This equates to seven or eight vehicles in a 15 minute assessment period.

Note that this usage rate is not based on any traffic study for the site. It is based on observations at a suburban fast food drive through in the Newcastle area and discussions with management. The adopted rate of eight vehicles in 15 minutes is considered to represent heavy usage of the drive through and is, therefore, considered a worst case for noise generation.

In addition to the cars moving through the site, it was estimated that each car would receive up to five x 3-second bursts of speech at the speaker and four x four-second exchanges of words at both the order and pick-up windows. By way of example, each speaker would emit speech for;

3 seconds/event x 5 events/customer x 8 customers/15min = 120sec/15min

The correction from Leq (120 sec) to L (15 min) for the external speaker is;

$$Leq\ (15\ min) = Leq\ (120\ sec) + 10\log_{10}(120/900) = Leq\ (120sec) - 8.7\ dB$$

The noise level for a line of vehicles moving at low speeds, and at idle, and being served in a drive through has been taken from the Spectrum Acoustics technical database.

Vehicles traversing the site will enter via the eastern driveway and exit via the western driveway. In relation to individual receivers, then, each vehicle will pass along the relative boundaries for approximately

45m. The noise source will, therefore, be at varying distances from the receiver as it travels through the site an in the pick up lane.

A vehicle travelling at 5k.p.h. will travel 45m in approximately 30 seconds. For eight such vehicles in a 15 minute period, this equates to a combined time of four minutes. Similar calculations to those detailed above were undertaken to determine the Leq (15 min) noise level for cars using the driveway.

Vehicles in the drive through may be present for longer than 30 seconds, depending on wait time for orders. During any extended waiting periods, however, it is likely that the vehicles will be at idle or have engines off and will, therefore be emitting lower noise levels. To consider a worst case, however, the sound power level for the moving vehicle has been used in the calculation of potential impacts.

The calculated sound power levels, determined as Leq (15 min) levels, for the assessment of the drive through component of the site are summarised in **Table 5**.

TABLE 5
SOUND POWER LEVELS OF MAJOR NOISE SOURCES (as Leq (15 min))

Source		dB(A)	Octave band centre frequency, Hz						
			63	125	250	500	1k	2k	4k
Vehicles in drive-through	Leq	68	38	58	58	62	62	61	58
Drive Through Speaker	L_{max}	86	39	49	59	80	83	77	58
	$L_{eq(15min)}$	64	15	26	39	58	61	56	40
Operator[1] at pick-up window	L_{max}	80	38	49	57	71	75	77	69
Refuse Removal	$L_{eq(15min)}$	96	77	82	80	89	90	91	86

1. Unamplified raised speech at the order and pick-up windows.

5.2 Calculation Methodology

The site shares boundaries with residential receivers and preliminary calculations have shown that noise control will be required to reduce noise emissions. The most appropriate form of noise control in this instance was considered to be a fence on the boundary, acting as an acoustic barrier.

Sections were drawn between the noise source and receiver and scaled off the site plan to determine all source-barrier-receiver distances and heights to enable barrier insertion loss calculations to be performed. The sound transmission loss for the barrier was based on material with a minimum surface density of 15kg/m^2 (for example a fence constructed of lapped and capped timber (12.5mm paling thickness, 25% overlap each side) or masonry (single 110mm brick).

Noise levels through the barrier must be more than 10 dB(A) lower than the noise over the barrier.

5.3 Calculation of Impacts

Table 6 shows a calculation of theoretical noise impacts at Receiver R1 to the west at 31 Horatio Street, due to noise from vehicles traversing the drive through on the western side of the site.

The calculation assumes a noise source, as described above, located near the centre of the drive through lane at an average distance of 13m from the residential boundary.

The noise criteria in the NPfI relate to external noise levels and, therefore, the theoretical noise levels have been predicted to a standard 1.5m high receiver located 3m inside the boundary of the residence. Distance loss has been calculated to the boundary only, however, as per procedures in the NPfI. Insertion loss for a 2.0m high barrier has been included in the calculation.

The noise has been assessed against the most stringent evening time criteria. Compliance with these automatically implies compliance during the day time.

As detailed above, the calculation assumes a busy time, during the early evening, when the noise source is as detailed in the Section 5.1.

TABLE 6
CALCULATED SPL AT RECEIVER R1 – 31 HORATIO STREET
DRIVE THROUGH VEHICLE NOISE

		Octave Band Centre Frequency, Hz						
Item	dB(A)	63	125	250	500	1k	2k	4k
Vehicle Noise as Leq (15 min)	68	38	58	58	62	62	61	58
Distance Loss to receiver (13m)		30	30	30	30	30	30	30
Barrier Loss (2.0m)		6	6	7	9	11	14	16
SPL @ receiver Leq (15 min)	28	2	22	21	23	21	17	11
Criterion Leq (15 min) (Evening)	37							
Impact	**0**							

The results in Table 6 show that, under the assessed conditions, there will be no adverse noise impacts at receiver R1 due to the noise from vehicles using the drive through.

Table 7 shows a calculation of theoretical noise impacts at Receiver R2 to the east at 37 Horatio Street, due to noise from vehicles

traversing the driveway to the drive through on the eastern side of the site.

The calculation assumes a noise source as described above, located near the centre of the access lane at an average distance along the traverse of 5m from the residential boundary. Insertion loss for a 2.0m high barrier has been included in the calculation with other assumptions as above.

TABLE 7
CALCULATED SPL AT RECEIVER R2 – 37 HORATIO STREET
DRIVE THROUGH VEHICLE NOISE

	Octave Band Centre Frequency, Hz							
Item	dB(A)	63	125	250	500	1k	2k	4k
Vehicle Noise as Leq (15 min)	68	38	58	58	62	62	61	58
Distance Loss to receiver (5m)		22	22	22	22	22	22	22
Barrier Loss (2.0m)		6	7	9	11	14	17	22
SPL @ receiver Leq (15 min)	34	10	29	27	29	26	22	16
Criterion Leq (15 min) (Evening)	37							
Impact	**0**							

The results in Table 7 show that, under the assessed conditions, there will be no adverse noise impacts at receiver R2 due to noise from vehicles using the drive through.

Table 8 shows a calculation of theoretical noise impacts at Receiver R3 to the south at 8 Inglis Street, due to noise from vehicles traversing the drive through on the southern side of the site.

The calculation assumes a noise source as described above, located near the centre of the drive through access lane at an average distance of 5m from the residential boundary.

Insertion loss for a 2.0m high barrier has been included in the calculation with other assumptions as above. The boundary for this receiver is across the easement for Lyons Lane (approximately 6m wide). Distance loss has been calculated to the boundary.

TABLE 8 CALCULATED SPL AT RECEIVER R3 – 8 INGLIS STREET DRIVE THROUGH VEHICLE NOISE								
	Octave Band Centre Frequency, Hz							
Item	dB(A)	63	125	250	500	1k	2k	4k
Vehicle Noise as Leq (15 min)	68	38	58	58	62	62	61	58
Distance Loss to receiver (11m)		29	29	29	29	29	29	29
Barrier Loss (2.0m)		6	8	9	11	13	15	19
SPL @ receiver Leq (15 min)	28	3	22	20	23	20	17	10
Criterion Leq (15 min) (Evening)	37							
Impact	**0**							

The results in Table 8 show that, under the assessed conditions, there will be no adverse noise impacts at receiver R3 due to noise from vehicles using the drive through.

Table 9 shows a calculation of noise from the operation of the drive through (speakers and driver etc.) impacting on Receiver R1 to the west at 31 Horatio Street. Barrier insertion loss details are as described for Table 6.

TABLE 9 CALCULATED SPL AT RECEIVER R1 – 31 HORATIO STREET DRIVE THROUGH NOISE								
	Octave Band Centre Frequency, Hz							
Item	dB(A)	63	125	250	500	1k	2k	4k
Drive Through Noise as Leq (15 min)	64	15	26	39	58	61	56	40
Distance Loss to receiver (16m)		32	32	32	32	32	32	32
Barrier Loss (2.0m)		5	6	6	8	9	12	15
SPL @ receiver Leq (15 min)	24	<0	<0	2	20	21	14	<0
Criterion Leq (15 min) (Evening)	37							
Impact	**0**							

The results in Table 9 show that, under the assessed conditions, there will be no adverse noise impacts at receiver R1 due to noise from the speakers and voices in the drive through.

Other receivers are shielded from this noise by the barrier effects of the restaurant building and, therefore, no further assessment of the is noise is considered warranted.

5.4 Car Parking

The plans for the development show a total of 23 car parking spaces at the restaurant. Seven of these will be on the eastern side of the building with the remainder being along the western boundary.

Noise in car parks typically comes from people walking to and from cars, doors opening and closing etc., as well as vehicles moving at slow speeds. Each noise event is characterised by a brief peak which when averaged out over a 15 minute period has a relatively low Leq. The impact of each noise event on any single receiver is also variable depending upon the location of individual cars within a car park and as they move in and out.

Noise measurements made in the car parks were taken from the Spectrum Acoustics technical database. The noise from a series of vehicles arriving and departing the car park and people moving to and from a building was measured over a representative period to ascertain a typical noise level from these activities. The measurements were made at varying distances from each car to approximate the situation in relation to an adjacent residence over a 15 minute interval. That is, at any time throughout each 15 minute interval various parking spaces in the driveway, at different distances from the nearest residences, will be in use.

The layout of the site is such that the majority of the use of the car park will be those parking spaces on the eastern side of the building (these being closest to the entrance to the restaurant). The parking spaces at the western boundary would be used, as needed, at peak times.

To determine potential impacts the car park noise was considered to be from four "banks" of up to six car parks as shown in Figure 4.

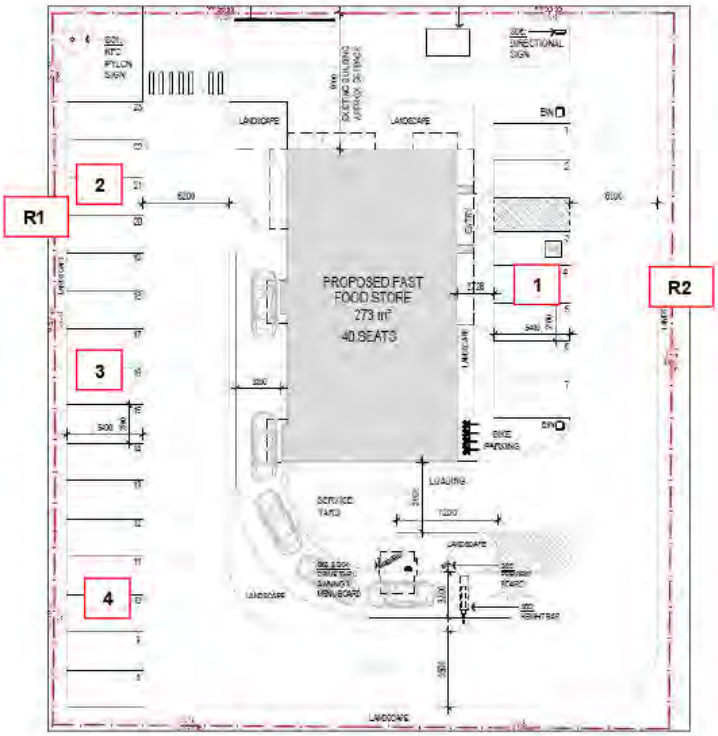


Figure 4 – Car Park Noise Sources

Table 10 shows a calculation of the noise from the use of the car park bank numbered 2 on Figure 4, impacting on Receiver R1.

The calculation has been done to a single reception point on the boundary of the receiver as shown in Figure 4. The Leq (15 min) sound level for each bank was based on the parking spaces being in use for a total of five minutes out of a 15 minute assessment period with the sound power level adjusted accordingly.

TABLE 10
CALCULATED SPL AT RECEIVER R1 – 31 HORATIO STREET
CAR PARK NOISE – BANK 2

		Octave Band Centre Frequency, Hz						
Item	dB(A)	63	125	250	500	1k	2k	4k
Car Park Noise as Leq (15 min)	68	48	55	56	56	61	64	61
Distance Loss to receiver (3m)		18	18	18	18	18	18	18
Barrier Loss (2.0m)		7	8	10	13	16	19	22
SPL @ receiver Leq (15 min)	35	24	29	28	26	28	28	22
Criterion Leq (15 min) (Evening)	37							
Impact	**0**							

The results in Table 10 show that, under the assessed conditions, the received noise from car park bank 2 when calculated to the theoretical

reception point for R1 will comply with the day and evening time noise criteria for the site.

Similar calculations to those shown in Table 10 were undertaken to determine the received noise for each of car park number 3 and 4, with resultant received noise being 25 dB(A) Leq (15 min) and 19 dB(A) Leq (15 min), respectively.

The total received car park noise at R1, under the assessed conditions, is **35 dB (A) Leq (15 min)**, which is in compliance with the most stringent evening time criterion.

Table 11 shows a calculation of the noise from the use of the car park bank numbered 1 on Figure 4, impacting on Receiver R2.

The calculation has been done to a single reception point on the boundary of the receiver, at an average distance from the centre of the car park noise source of 10m as shown in Figure 4. The Leq (15 min) sound level for the car park bank was based on the parking spaces being in full use for a 15 minute assessment period.

TABLE 11
CALCULATED SPL AT RECEIVER R2 – 37 HORATIO STREET
CAR PARK NOISE – BANK 1

	Octave Band Centre Frequency, Hz							
Item	dB(A)	63	125	250	500	1k	2k	4k
Car Park Noise as Leq (15 min)	73	53	60	61	61	66	69	66
Distance Loss to receiver (10m)		28	28	28	28	28	28	28
Barrier Loss (2.0m)		6	6	7	9	12	14	17
SPL @ receiver Leq (15 min)	33	19	25	25	24	26	26	20
Criterion Leq (15 min) (Evening)	37							
Impact	**0**							

The results in Table 11 show that, under the assessed conditions, the received noise from car park bank 1 when calculated to the theoretical reception point for R2 will comply with the day and evening time noise criteria for the site. The other parking spaces will be effectively acoustically shielded from the reception point at R2 by the elements of the restaurant building.

At the time of the current assessment the residential lot across the road from the development site was vacant.

Table 12 shows the results of the calculation of the noise from the car parks, as described above, impacting at a theoretical reception point across Horatio Street (at the boundary of number 30A).

TABLE 12 CALCULATED SPL AT RECEIVER R2 – 30A HORATIO STREET CAR PARK NOISE				
Item	dB(A)			
Car Park Bank	1	2	3	4
Source Lw dB(A) Leq (15 min)	73	68	68	68
Distance Loss to receiver (m)	42 (48m)	41 (47m)	43 (57m)	45 (68m)
SPL @ receiver Leq (15 min)	31	27	25	23
Combined Noise Leq (15 min)	34			
Criterion Leq (15 min) Evening	37			
Impact	0			

The results in Table 12 show that, under the assessed conditions, there would be no adverse impacts at receivers across Horatio Street, due to the noise from the car parks.

5.5 Refuse Removal

Refuse removal will likely be undertaken by a commercial contractor from a refuse service area located at the south eastern side corner of the building.

Refuse removal would involve a truck entering the site, picking up and emptying a skip and departing. The entire process would usually take between approximately two and three minutes to complete.

Table 13 shows a theoretical calculation of noise from the refuse removal impacting on the most potentially affected receiver location at R2, approximately 15m from the refuse area. Due to the height of the noise source (truck) the acoustic barrier will have very little effect.

TABLE 13 CALCULATED SPL AT RECEIVER R2 – 37 HORATIO STREET REFUSE REMOVAL NOISE								
	Octave Band Centre Frequency, Hz							
Item	dB(A)	63	125	250	500	1k	2k	4k
Refuse Removal as Leq (15 min)	96	77	82	80	89	90	91	86
Distance Loss to receiver (15m)		32	32	32	32	32	32	32
SPL @ receiver Leq (15 min)	64	45	50	48	57	58	59	54
Criterion Leq (15 min) Day	52							
Impact	**12**							

The results in Table 13 show that the noise from refuse removal has the potential to exceed the day time noise criterion at the most potentially affected receiver. Due to the height of the exhaust, tray and tipping point on the truck the noise would also exceed the criterion at R1 and R3.

Also due to the height of the noise source, to be effective, any noise barrier(s) would have to be several metres high (greater than 3m) and enclose the location of the refuse bin and the truck, on three sides.

As noted above, however, it is anticipated that the removal of refuse will take place for approximately two to three minutes per event. The number of times the bin is emptied per week would be dependent on demand but it is not likely to be more than once per day.

As shown in Table 2, and graphically in Appendix I, the received noise would be at similar levels to the existing day time Leq noise level at the site and, therefore, would be of similar character to the existing acoustic environment of the area.

The waste management plan for the site dictates that waste removal is to be done between 8am and 10am on weekdays and this is considered to be acoustically adequate in minimising potential noise impacts.

5.6 Mechanical Plant

The plans show a plant area at the rear of the building. This will house all of the air conditioning and refrigeration plant for the restaurant.

Air conditioning plant will operate whilst the restaurant is open (i.e., during that day and evening), however, refrigeration equipment may operate at any time during 24 hours.

The data provided by the proponent has shown that the combined sound power level of the air conditioning plant in the plant area will be 84 dB(A).

The combined sound power level of the refrigeration equipment is 80 dB(A).

This indicates that the worst case day time noise level of the plant area will be 85 dB(A) Leq (15 min). **Table 14** shows the theoretical calculation of potential impacts at receiver R2 based on the combined noise from the plant area. Barrier insertion loss calculations include the 2.0m fence on the boundary with distance loss as above.

Preliminary calculations showed that noise control would be required to reduce the noise out from the plant area by several dB(A). The calculation in Table 14, therefore, includes the attenuation for acoustic

louvres in the facade of the plant area. The insertion loss data is based on a Fantech SBL1 type acoustic louvre.

TABLE 14
CALCULATED SPL AT RECEIVER R2 – 37 HORATIO STREET
PLANT NOISE

	Octave Band Centre Frequency, Hz							
Item	dB(A)	63	125	250	500	1k	2k	4k
Plant Noise as Leq (15 min)	85	64	67	75	80	80	77	75
Distance Loss to receiver (24m)		36	36	36	36	36	36	36
Barrier Loss (2.0m)		5	6	6	7	9	11	14
Acoustic Louvre[1]		4	7	9	13	14	12	12
SPL @ receiver Leq (15 min)	30	19	19	24	24	22	18	14
Criterion Leq (15 min) (Evening)	37							
Impact	**0**							

1. See text re acoustic louvres

The results in Table 14 show that, under the assessed conditions, and with suitable acoustic louvres in place, the received worst case noise from the plant area would comply with the evening time criterion. The results also show that the received noise will also comply with the more stringent night time criterion. This also shows then, that the noise from the refrigeration equipment will comply with the night time criterion.

Similar calculations to those in Table 14 were undertaken to the boundaries of receivers R1 and R3 and these also showed compliance with the night time criterion.

As indicated, the calculation includes the insertion loss for a specific acoustic louvre. Adequate noise control to reduce noise emissions from the plant area may also be achieved through the use of other types of acoustic louvres or proprietary attenuators for the condenser units. It is recommended that the installation of any acoustic louvres and/or attenuators be approved by an acoustic consultant prior to use.

The kitchen vent fans will be mounted on the roof of the building. These fans will be in use during the hours of operation of the restaurant (i.e., during the day and evening only).

The data provided shows that the vent fans have a sound power level of 81 dB(A).

Table 15 shows a theoretical calculation of noise from the kitchen vent fan (KEF1 on the supplied plans) impacting on receiver R1. The calculation is based on the noise source being on the roof of the

building and the barrier effects of the parapet wall on the building façade (being to 4.5m high above ground level at that location).

As per the previous discussion, the receiver was considered to be at 1.5m high and in the yard of the receiver.

TABLE 15
CALCULATED SPL AT RECEIVER R1 – 31 HORATIO STREET
KITCHEN VENT NOISE

		Octave Band Centre Frequency, Hz						
Item	dB(A)	63	125	250	500	1k	2k	4k
Vent Noise KEF1 as Leq (15 min)	79	58	61	69	74	74	69	63
Distance Loss to receiver (18m)		33	3	33	33	33	33	33
Barrier Loss		7	9	11	14	17	20	23
SPL @ receiver Leq (15 min)	31	17	19	25	27	24	18	13
Criterion Leq (15 min) (Evening)	37							
Impact	**0**							

Similar calculations were undertaken for the noise emission from fan MU01 and the other roof mounted vents. The results show that, under the assessed conditions, the total noise from the roof mounted vents would be 34 dB(A) Leq (15 min) which is in compliance with the evening time criterion.

Similar calculations were also undertaken for the combined noise from the roof mounted fans impacting on receivers R2 and R3 with the received noise being 29 dB(A) Leq (15 min) and 27 dB(A) Leq (15 min) respectively. These received noise levels are in compliance with the evening criterion.

5.7 Road Traffic Noise

All vehicles would arrive and depart the site via the driveways from Horatio Street. For assessing the potential for traffic noise impacts, a conservative (worst case) scenario has been considered where there are 100 vehicle movements in an hour (that is, 50 vehicles in and out of the site).

For acoustic purposes the traffic, and therefore the noise emissions, would be considered to be intermittent. Equation 1, below, outlines the mathematical formula used in calculating the Leq,T noise level for intermittent traffic noise.

$$L_{eq},T = L_b + 10\log\left[1 + \frac{ND}{T}\left(\frac{10^{(L_{max}-L_b)/10}-1}{2.3} - \frac{(L_{max}-L_b)}{10}\right)\right]$$

Equation 1

Where

L_b is background noise level, dB(A)
L_{MAX} is vehicle noise, dB(A)
T is the time for each group of vehicles (min)
N is number of vehicle trips
D is duration of noise of each vehicle (min)

Using Equation 1 the noise from the vehicles has been assessed to a point 1m from the facade of a theoretical receiver on Horatio Street at a nominal 10m from the centre of traffic. For the calculation of a worst case, all of the vehicles exiting the site were assumed to be travelling in the same direction from the site, on Horatio Street at 60 k.p.h. Results are shown in **Table 16**.

TABLE 16
CALCULATED SPL – HORATIO STREET
ROAD TRAFFIC NOISE as dB(A) Leq (15 hr)

Item	dB(A)
No. of Vehicle movements (per hour)	100
Lw per vehicle @ 60 kph	94
Received Noise (from eqn. 1)	**53**
Criterion – Day	**60**

The results in Table 16 show that, under the assessed worst case conditions, noise from traffic generated by the proposal will not exceed the RMS criterion at any residences along Horatio Street.

5.8 Cumulative Noise

This assessment has taken a standard approach which looked at each potential noise source operating as a worst case scenario and compare the received noise from each to the adopted criteria. That is, for a noise source operating at worst case (maximum) levels for a full 15 minute assessment period, to compare to a 15 minute criterion.

For a development such as the proposed fast food restaurant emissions will be variable throughout each 15 minute period during the day, evening and night. It is, therefore, very unlikely that each source would be producing noise at the assessed levels, simultaneously, and for a full 15 minutes.

For example, the maximum use of the drive through is not likely to occur when there is also maximum use of the car parks. Similarly, refuse removal is an occasional event and unlikely to contribute to the general cumulative noise from the site.

Table 17 shows the calculation of cumulative noise levels based on the addition of all worst case noise generation scenarios from the assessment and detailed in the various tables of results. Additional calculations have been made, where required, to ensure all appropriate noise contributions have been considered. The calculated noise levels for day/night are shown for the general concourse noise.

TABLE 17
CALCULATED SPL
CUMULATIVE NOISE as Leq (15 min)

Noise Source	R1	R2	R3
Drive Through Vehicles	28	34	20
Drive Through Speech	21	n/a	n/a
Car Park	35	33	n/a
Mechanical Plant	28	30	30
Roof Top Vents	34	29	27
Cumulative Noise	**38.6**	**38.0**	**33.0**
Criterion (Evening)	**37**	**37**	**37**

The results in Table 17 show that, under the assessed conditions, the cumulative noise from all sources emitting worst case noise levels may exceed the evening time noise criterion by 1.6 dB(A) at receiver R1 and 1.0 dB(A) at receiver R2. The combined noise will not exceed the evening time criterion at receiver R3.

The cumulative noise would not exceed the day time criterion at any receivers.

In relation to the possible noise impacts, Table 4.1 of the NPfI details the "*Significance of residual noise impacts*" and this indicates that *"if the predicted noise level minus the project noise trigger level is ≤ 2 dB(A)"* then *"the significance of residual noise level is Negligible."*

Table 4.2 of the NPfI states that for a "negligible" residual noise, "*The exceedances would not be discemible by the average listener and therefore would not warrant receiver-based treatments or controls.*"

6.0 CONCLUSION

An assessment has been conducted to determine the noise impact of a proposal to develop a KFC fast food restaurant with drive through service area at 33 - 35 Horatio Street, Mudgee, N.S.W.

The assessment considered the potential for adverse noise impacts as a result of;

- Operation of the drive through (movement of vehicles and the drive through service),
- Car parking,
- Mechanical plant,
- Kitchen vent fans,
- Waste removal, and
- Road traffic associated with the restaurant.

The assessment was based on the following recommendations being in place at the site;

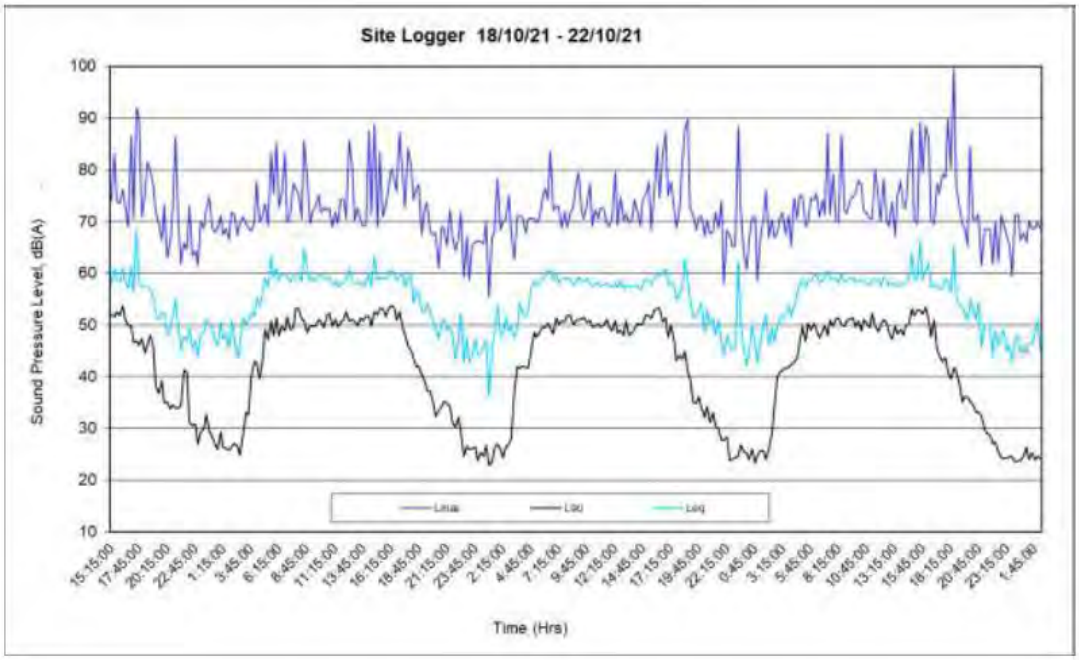
- Boundary fences acting as acoustic barriers to 2.0m high along the eastern, western and southern boundaries,
- The plant area being fitted with acoustic louvres (to achieve the minimum insertion loss as detailed in Table 14),
- Parapet walls acting as acoustic barriers on the facade of the building (to the heights detailed in Section 5.6).

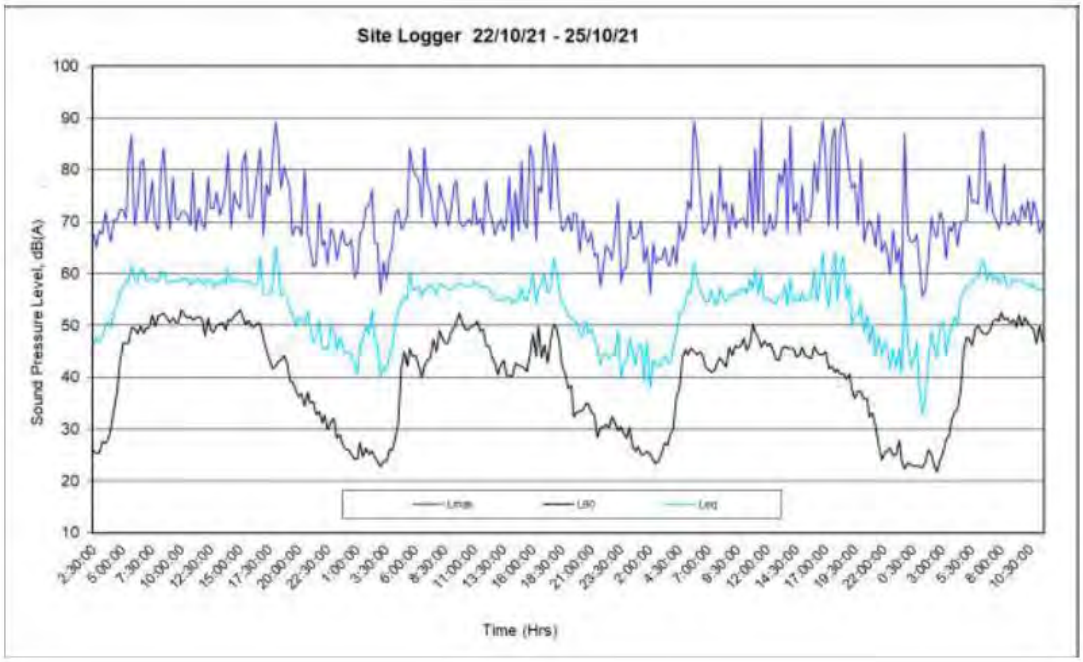
With these recommendations in place the theoretical noise from each assessed noise source will not exceed the adopted criteria at any receiver.

It has been predicted that there may be an exceedance of the project noise trigger levels for the site, due to the cumulative noise from all noise sources operating at worst case levels. The predicted exceedance would be less than 2dB(A) Leq (15 min) at receivers R1 and R2. Such an exceedance which is considered negligible as per the discussion in the NPfI.

Based on the results of this assessment it can be concluded that the proposal can operate without adversely impacting upon the acoustical amenity of any residential receiver, after implementation of noise control recommendations given in this report.

APPENDIX I
NOISE LOGGER CHARTS





Addendum

This addendum to the original acoustic assessment report has been written to address proposed changes to the design of the acoustic barrier on the southern boundary of the site.

For engineering purposes, the barrier must have a 200 to 300mm gap at the base for a section of the southern boundary, as shown in **Figure A1**.

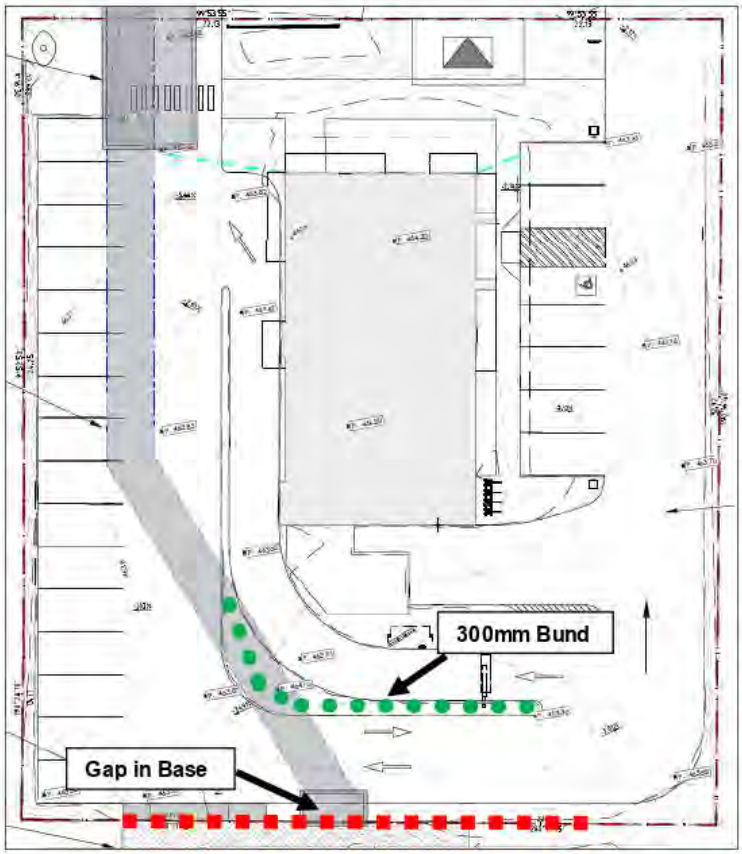


Figure A1 – Acoustic Barrier Revision

It is proposed that the bunding at the drive through be raised to 300mm height to counter the effects of the gap in the southern acoustic barrier, and reduce noise from the exhaust system on the majority of passenger vehicles. The location of the 300mm high bund is as shown in Figure A1.

Published research on roadside acoustic barriers (based on site measurements) indicates that the effects of, approximately 200mm

high drainage gaps at the base of a barrier (up to 4m high) will reduce the barrier insertion loss by approximately 1 dB(A).

Table A1 is a revision of Table 8 from the main body of the report which details the calculation of impacts from drive through noise at the most potentially affected receiver, R3 taking into account the effects of the revised barrier. For conservatism a -2dB(A) insertion loss, in all octave bands, was included in the calculation.

TABLE A1
CALCULATED SPL AT RECEIVER R3 – 8 INGLIS STREET
DRIVE THROUGH VEHICLE NOISE

		Octave Band Centre Frequency, Hz						
Item	dB(A)	63	125	250	500	1k	2k	4k
Vehicle Noise as Leq (15 min)	68	38	58	58	62	62	61	58
Distance Loss to receiver (11m)		29	29	29	29	29	29	29
Barrier Loss (2.0m)		4	10	7	9	11	13	17
SPL @ receiver Leq (15 min)	30	5	24	22	25	22	19	12
Criterion Leq (15 min) (Evening)	37							
Impact	**0**							

The results in Table A1 show that there will be no adverse noise impacts due to the proposed changes o eth acoustic barrier on the southern boundary of the site.

M^C^LAREN TRAFFIC ENGINEERING

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Postal: P.O Box 66 Sutherland NSW 1499

Telephone: (02) 9521 7199
Web: www.mclarentraffic.com.au
Email: admin@mclarentraffic.com.au

Division of RAMTRANS Australia ABN: 45067491678 RPEQ: 19457

Transport Planning, Traffic Impact Assessments, Road Safety Audits, Expert Witness

15 July 2022 Reference: 220486.01FA

Broadview Aust. Pty. Ltd.
sent via email
Attention: James Consadine

PEER REVIEW AND SUPPLEMENTARY TRAFFIC ADVICE FOR THE PROPOSED KFC AT 33 HORATIO STREET, MUDGEE

Dear James,

Reference is made to your request to provide a peer review and supplementary traffic advice for the proposed KFC at 33 Horatio Street, Mudgee, with proposed plans depicted in **Annexure A**. McLaren Traffic Engineering (**MTE**) has undertaken a review of the traffic advice provided by Triaxial Consulting and the responses provided by Transport for NSW. This letter is provided in three parts, **Section 1** provides a brief peer review of the application, **Section 2** provides a response to TfNSW's comments, and **Section 3** provides a revised SIDRA analysis of the subject KFC driveway proposal.

1 Peer Review of Application

Section 1 of this report provides a brief review of the development application, including the location of the site, site access opportunities, parking requirements, traffic generation of the proposal, proposed road intersection treatment and SIDRA modelling. Each of these items have been assessed independently and compared to the approach of Triaxial Consulting to the project and their conclusions.

- The subject development is for a proposed KFC located on Horatio Street, Mudgee, with proposed operating hours between 10:30am and 10pm daily.
- **Location**
  - The subject development has a primary road frontage to Horatio Street (which is a part of the Castlereagh Highway) and a secondary road frontage to Lyons Lane. Horatio Street has a signposted 50km/h speed limit.
  - Lyons Lane is an undeveloped dirt/gravel laneway with a width of approximately 6m between property boundary fences, serving a small number of residential properties. There is no signposted speed for Lyons Lane, so a default 50km/h speed limit applies.

- **Site Access**
  - Horatio Street (Castlereagh Highway) is a TfNSW Classified State Road (No. 18), and hence the development is required to address *Clause 2.119* of the *State Environment Planning Policy (SEPP) (Transport and Infrastructure) 2021*. While the site has alternative access it is agreed with Triaxial Consulting that it is not practicable or safe to provide vehicular access to Lyons Lane, primarily due to the width of the lanes road corridor. MTE agrees with Triaxial Consulting that the best outcome for this site is to have all access directly obtained from Horatio Street.
  - The proposal is to provide separated entry and exit driveways, with right turn entry achieved through a proposed CHR treatment and a "left turn only" exit restriction. MTE is of the opinion that these arrangements satisfy *Clause 2.119* of the SEPP) *(Transport and Infrastructure) 2021*, in that the safety, efficiency and ongoing operation of the classified road will not be adversely impacted by this access arrangement. MTE agrees with Triaxial Consulting's assessment in this regard. It is noted that there are clear slight lines in both directions at the entry and exit driveways.
  - Separated entry and exit driveways are not uncommon for fast-food restaurants located on classified roads and when designed appropriately, such as in this instance, do not compromise the safety or efficiency of the classified road. MTE agrees with Triaxial Consulting's conclusion on this matter. It is MTE's opinion that the provision of a combined entry/exit driveway, in conjunction with a CHR turn treatment, is likely to result in undesirable right-turn movements out of the driveway, due to difficulty in physically prohibiting such movements within the design of a single driveway. This outcome would be undesirable and contrary to the SEPP requirements.
- **Parking Requirements**
  - Consider a scale of 92m^2 of relevant floor area or 40 seats, as provided in the Triaxial Consulting Traffic Report, the site requires between 13-14 parking spaces, in accordance with the Mid-Western Council DCP 2013. The site requires a further 10 spaces provided for the drive thru, provided either in the queue or elsewhere, in accordance with Councils DCP. MTE agrees with Triaxial Consulting in this conclusion.
  - Considering the parking rates outlined in the *RTA Guide to Traffic Generating Developments 2002* (RTA Guide), being 1 space per 2 seats, a total of 20 parking spaces should be provided, in addition to an area for drive through queuing for at least 6 vehicles and the ability to extend to 8 vehicles without unreasonably disrupting the car parking operations.
  - The proposed development proposes 23 car parking spaces, including one (1) accessible parking space, in addition to a drive-thru facility with a capacity to extend to eight (8) vehicles without disruption to the carpark's operation. MTE is of the opinion that sufficient carparking and drive through capacity is provided on-site to accommodate the sites parking and drive through demand.

- **Traffic Generation**
  - Reference is made to the RTA Guide, which outlines evening network peak hour traffic generation of 100 vehicle trips per hr (average) and 120 vehicle trips per hr (maximum) used for sensitivity testing. It is noted that this traffic generation is two-way (inbound & outbound), whereby a 50/50 split can be assumed due to the nature of the land use. Therefore, the PM peak traffic generation of the subject development is on average 100 (50 in/50 out) vehicle trips, with a sensitivity test of 120 (60 in/60 out) vehicle trips.
    - The Triaxial Consulting assessment also adopts 120 veh/h, but it does not appear that any inbound/outbound split of this traffic generation has been adopted.
  - Given the site is located on a regional highway (Castlereagh Highway), it is expected that a significant proportion of the trade will be associated with vehicles travelling regionally along the Castlereagh Highway, such that it can be assumed that 50% of traffic will approach from the east, and 50% from the west.
    - The Triaxial Consulting report and analysis appears to assume that the majority of traffic will enter and depart the site from the west (via the CHR), due to the location of the Mudgee Township with respect to the site. MTE disagrees with this assessment, as the traffic generation is likely to be split evenly between the east and west, but the approach taken by Triaxial would result in a more conservative assessment, with a higher traffic generation applied through critical turn movement (right-turn into the site).
  - In accordance with the RTA Guide, it can be estimated that 50% of the traffic generation will be passing trade (traffic that was already passing the site along Horatio Street). The Triaxial Consulting assessment has not included any reference to passing trade and it does not appear to have been adopted, resulting in a more conservative assessment.
- **Access Design**
  - Review of the proposed CHR along Horatio Street, indicates that the design is consistent with the relevant AUSTROADS design Guidelines, *AUSTROADS Guide to Road Design Part 4A: Unsignalised and Signalised Intersections*. MTE supports the CHR design proposed.
- **Traffic Modelling (SIDRA Modelling)**
  - On review of the SIDRA modelling provided there are a number of issues identified:
    - There is no clear existing and future (post-development) traffic models, such that comparisons can not be drawn as to the impact of the subject proposal.
    - The source or method of derivation of the existing traffic flow volumes along Horatio Street is unclear. While traffic counts undertaken by Triaxial Consulting have been provided for two-way traffic flow, these values are combined and do not provide separate eastbound and westbound traffic flows. It is unclear if the volumes adopted within the SIDRA are existing (2021) volumes or volumes consider a further growth scenario.

- Some lane disciplines are set incorrectly. The short right turn lane within the model also includes through movements, such that through vehicles are using the short turn lane to undertake the through movement, which is not proposed. This will increase the recorded delay on for the right-turn lane.
- The right-turn lane has been modelled with a 60m length, where a 31m length is proposed with the provided plans.
- The site traffic generation applied within the model is more than double the expected generation of the site, with a total 290 trips associated with the site, whereby the site is only expected to generate a total of 120 trips.
    - The turning movements applied within the model include 120 vehicles turning right into the site, 50 vehicles turning left into the site, and 120 vehicles exiting the site.
- Vehicle speeds have been maintained at the SIDRA default 60km/h, and not reduced to the 50km/h operational speed of the intersection.
- No heavy vehicles have been included within the traffic model, which is a critical consideration given the high level of heavy vehicle traffic flows along the Horatio Street (Castlereagh Highway).
- While a wide median treatment is one approach for modelling the separated entry and exit driveways of the KFC, it is thought that a simple network model would be more appropriate in order to capture the fact that both the entry and exit driveways operate independently of one another.

- While the SIDRA modelling has been incorrectly undertaken, the Triaxial Consulting SIDRA Model is considerably more conservative that what would be considered an appropriate model. This conservative model still indicates that the site is operating effectively in the future. This same conclusion is also achieved as a result of the revised MTE SIDRA analysis undertaken and discussed further within **Section 3** of this letter.

2 Response to TfNSW

Section 2 of this letter is in response to the comments provided by Transport for NSW within an email dated 21 June 2022 with respect to DA Number DA0087/2022 / PAN-141138, with a copy of this email attached in **Annexure B** for reference. It is understood that these are the only active issues that TfNSW has expressed with regards to the application. The comments made by TfNSW relevant to traffic and parking are shown below (italicised) with *M^C^Laren Traffic Engineering*'s (MTE) response thereafter.

2.1 Clarification of Peak Modelled

> *The SIDRA file provided does not indicate whether this is a model for the AM/PM peak, base or future scenario. The traffic report sent to TfNSW on 16/5/22 with reference 'TX15361.00-04.ltr.JD' provides a table with summary results for two scenarios (current PM and future PM). There is only one scenario tested in the SIDRA provided. TfNSW requests the SIDRA files for both these scenarios, clearly labelled.*

On review of the SIDRA files provided, MTE agrees that the naming of the file does not clearly indicate what scenario has been modelled. As further discussed in **Section 3**, revised MTE SIDRA modelling has been undertaken with the files clearly labelled.

2.2 AM Peak Model

It is also standard to perform a model for the accompanying AM peak.

It is noted that KFC does not operate during the AM peak hour. This DA does not propose that the site will operation during the AM peak hour, with operating hours starting from 10:30am and hence there is no need to provide an AM peak hour model. as the site will not be generating any traffic during the AM peak hour.

Notwithstanding this and to provide a means to progress the application, a SIDRA model of the AM peak has been undertaken, using the PM peak site traffic generation volumes (120 veh/hr) to demonstrate a worst case scenario. The results of this model are discussed in **Section 3**.

2.3 Traffic Volume Assumptions

The traffic report sent to TfNSW on 16/5/22 with reference 'TX15361.00-04.ltr.JD' provides assumptions on the traffic volumes turning into the KFC, as well as assumed volumes going north and south during the PM peak hour. References are made to a 'Triaxial traffic study'. TfNSW requests the document to be provided to understand what these assumptions (trip distributions) are based off, or the applicant to provide justification of the assumptions.

It is understood that the "Triaxial traffic study" referred to above, was referring to the original DA Traffic Assessment Report by Triaxial Consulting for the proposed KFC development dated 8 November 2021. It is understood that this report and multiple subsequent letter responses to TfNSW have been submitted to TfNSW for the subject development application (DA0087/2022 / PAN-141138) and thus should already be available to TfNSW for their review. An extract of the relevant pages from the 'Triaxial traffic study' as requested by TfNSW are provided in **Annexure C**, for reference.

2.4 Clarification of Traffic Count Volumes

TfNSW has been provided a traffic count data summary 'TX15361.00', which shows traffic counts taken in November 2021 from 4pm – 7pm. There are no turning movements provided in this traffic count data summary. The traffic count data does not seem to align with the assumptions made in the traffic report regarding input volumes. TfNSW requests the applicant to confirm whether these traffic counts were used.

It is MTE's understanding that these traffic counts were undertaken of mid-block two-way traffic flows along Horatio Street and hence turning volumes were not recorded.

As further discussed in **Section 3** and to provide a means to progress the application, MTE has provided two sets of relevant traffic surveys undertaken along Castlereagh Highway (Horatio Street) from 2021, within close proximity to the site. These surveys have been used for the revised MTE SIDRA analysis discussed in **Section 3.**

2.5 Growth Rate Assumptions

TfNSW notes the traffic report references a 'Mudgee Traffic Study' by Gennaoui Consulting (2014) to calculate the future traffic volume. TfNSW request that this document is provided to review the growth rate assumptions, or the applicant to summarise the growth rate assumptions used in an updated traffic report.

This report can be provided to TfNSW. The 2014 report based future traffic flow predictions for Mudgee upon planned future residential growth within Mudgee, with the traffic generation associated with this future growth distributed to the local Mudgee road network, including Horatio Street.

On review of the provided SIDRA's, it is unclear what values from within this report have been adopted and no justification is provided as to why those future values were chosen or consider appropriate.

A conservative 2%p.a. growth rate, across a 10-year future growth period has been applied to the revised MTE SIDRA modelling provided in **Section 3** of this letter. The resulting future 10-year growth adopted by MTE, is higher than the future growth values that appear to have been adopted by Triaxial Consulting in their report and letters.

2.6 Consultation of Nearby Property Owners / Residents

> *Also, as discussed, provision of a CHR at this location will change access arrangements for residents on opposite side of Horatio Street. Specifically, vehicles will need to cross the CHR lane and the through lane to turn right into their properties (and vice versa). TfNSW seeks confirmation that affected residents/property owners have been consulted regarding this change.*

As outlined in the *Social Impact Assessment, Proposed KFC, 33-35 Horatio Street, Mudgee NSW*, dated December 2021 and prepared by SLR, the proposed development was notified and advertised to surrounding residents over a 14-day public exhibition period during September and October 2021. Further an additional community consultation letter was sent by SLR on the 24 November 2021, to surrounding businesses and residents, inviting questions and comments.

MTE has not been provided with a copy of the notification or the SLR consultation letter that was sent, and it is unknown if the notified plans included the CHR and if the notification informed residents of affected residences specifically about the CHR. If this has not been undertaken, direct consultation regarding the CHR should be considered.

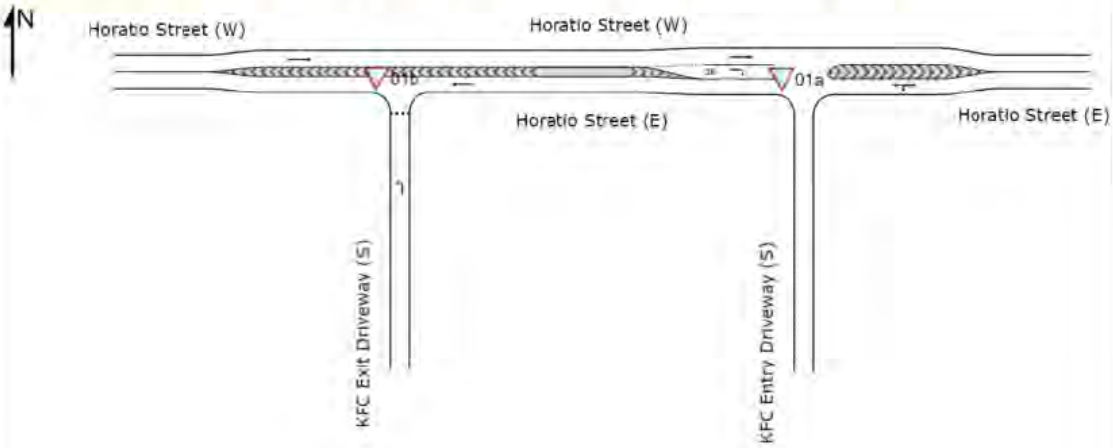
3 Revised SIDRA Intersection Analysis

McLaren Traffic Engineering (**MTE**) has completed independent SIDRA analysis of the proposed access arrangements for Mudgee KFC site, based upon the Intersection Design Plans prepared by Triaxial Consulting (Tx15361.00-C3.00, Issue A), dated May 2021, which are attached in **Annexure A** for reference. This SIDRA analysis is herein referred to as the MTE SIDRA, and has been undertaken using SIDRA INTERSECTION 9.0, adopting a basic network model to appropriately incorporate and connect the entry and exit driveway arrangements.

Figure 1 below provides a copy of the graphical network configuration of the SIDRA model, which is also provided in **Annexure D**. It is noted that the short-right turn lane into the site, does not overlap the exit driveway within the network model, this does not have an impact on the assessment of the site exit driveway.

Horatio Street / KFC Mudgee
33 Horatio Street, Mudgee NSW
EXISTING PM
Network Category. (None)

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings



SITES IN NETWORK

Site ID	CCG ID	Site Name
▽01a	NA	01a-EXPM-Horatio Street / KFC - Pt 1 (Entry)
▽01b	NA	01b-EXPM-Horatio Street / KFC - Pt 2 (Exit)

FIGURE 1: GRAPHICAL NETWORK SIDRA CONFIGURATION

Two sets of traffic data from the Castlereagh Highway have been reviewed in order to determine appropriate two-way traffic flows along the Castlereagh Highway (Horatio Street) between George Street and Lawson Street.

The first set of data being turning movement count surveys undertaken at the intersection of Castlereagh Highway (Horatio Street) / George Street from 7:00am to 9:30am and 2:30pm to 6:00pm on Monday the 21 June 2021 representing a typical operating weekday. The second set of traffic data being seven-day automatic traffic count surveys undertaken outside No. 10 Sydney Road (Castlereagh Highway), between 1-7 March 2021, inclusive. The automatic traffic surveys were completed approximately 550m along the Castlereagh Highway to the south-west of the site. Given the minimal number of intersections between the survey location and the site, it is considered a reasonable indicator of two-way traffic flows past the site.

A summary of the AM and PM peak weekday traffic flows are provided in **Table 1**, with **Figure 2** providing a diagram of the locations of these surveys with respect to the subject site. The full survey results are shown in **Annexure E** for reference.

TABLE 1: SURVEY PEAK TRAFFIC FLOWS (VEH/HOUR)

	AM Peak		PM Peak	
	Eastbound	Westbound	Eastbound	Westbound
Turning Movement Counts (21 June 2021)	494	453	522	675
Automatic Traffic Counts (1)(2) (1-7 March 2021)	547	554	535	673

Notes:

(1) The Weekday Average Peak has been adopted doe the purpose of this analysis.

(2) Eastbound volumes reported in the table are southbound volumes recorded in the ATC data, and the westbound volumes are the northbound volumes recorded in the ATC data.

FIGURE 2: LOCATION TRAFFIC SURVEYS AND TWO-WAY TRAFFIC FLOWS

As can be seen above, the automatic traffic counts, presented higher traffic volumes and hence these traffic flow values have been adopted for the MTE SIDRA analysis, as a conservative approach in both the AM and PM peak hour.

Based upon the results presented within the automatic traffic counts, a heavy vehicle percentage of 10.5% and 9.1% has been adopted in the eastbound and westbound direction, respectively.

As adopted in the earlier Triaxial Consulting Traffic Reports for the project (TX1536.00-01.rpt.JK-Rev0), a traffic generation rate of 120 vehicle trips per hour has also been adopted for the MTE SIDRA's in accordance with the *RTA Guide to Traffic Generating Developments 2002* (RTA Guide). It is noted that this is two-way traffic generation resulting in 60 inbound trips and 60 outbound trips, during the PM network peak. Given the nature of the site, it is assumed that 50% of traffic will arrive/depart from the east and another 50% will arrive/depart from the west. Vehicles departing to the east, will be able to complete a U-turn at the Horatio Street / Church Street roundabout, to the west of the site, in order to continue their journey to the east. No reduction has been applied for passing trade, which typically at least 50%, based upon the RTA Guide, further resulting in a conservative assessment.

For the purposes of MTE SIDRA analysis, multiple scenarios have been assessed, as outlined below:

- **Scenario 1:** 2021 Existing (Before Development)
- **Scenario 2:** 2021 Future (Post-Development)
- **Scenario 3:** 2031 Growth + Future (Post-Development).
  - Application of a 2%p.a. growth rate for a total of 10 years, to eastbound and westbound through volumes.
- **Scenario 4:** 2031 Sensitivity,
  - Adoption of Scenario 3 but with double the traffic generation, i.e., 240 (120 in/ 120 out) vehicle trips per hour.

The existing peak traffic volumes (as identified in **Table 1**) and the proposed site traffic generation outlined above have been added and assessed using SIDRA INTERSECTION 9. The purpose of this assessment is to compare the existing operations to the future scenario under the increased traffic load, and further assess how the driveway performs in the year 2031. **Table 2** summarises the resultant intersection performance data, with full SIDRA results reproduced in **Annexure F**.

It is noted that as the proposed development does not operate during the AM peak hour. Whilst our position is that an AM peak hour model is unnecessary, we have provided the AM models in order to progress the application. The AM models have adopted the PM peak traffic generation, as a highly conservative approach.

TABLE 2: AM DRIVEWAY PERFORMANCE (SIDRA INTERSECTION 9.0)

Scenario	Degree of Saturation(1)	Turn Movement	Average Delay(2) (sec/vehicle)	Level of Service(3)(4)	95th Percentile Queue veh (m)
Scenario 1: 2021 Existing(5)	0.314	RHT-IN	5.5	A	0 (0m)
		LHT-IN	4.7	A	-
		LHT-OUT	5.8	A	0 (0m)
		EB	0.0	A	-
		WB	0.1	A	-
Scenario 2: 2021 Future (Post-Development)	0.330	RHT-IN	5.9	A	0.1 (1m)
		LHT-IN	4.7	A	-
		LHT-OUT	6.1	A	0.3 (1.9m)
		EB	-	A	-
		WB	0.1	A	-
Scenario 3: 2031 Growth + Future (Post-Development)	0.396	RHT-IN	6.9	A	0.2 (1.1m)
		LHT-IN	4.7	A	-
		LHT-OUT	7.1	A	0.3 (2.2m)
		EB	-	A	-
		WB	0.2	A	-
Scenario 4: Sensitivity Testing	0.415	RHT-IN	7.4	A	0.3 (2.4m)
		LHT-IN	4.7	A	-
		LHT-OUT	7.3	A	0.6 (4.5m)
		EB	-	A	-
		WB	0.2	A	-

Notes:

(1) The Degree of Saturation is the ratio of demand to capacity for the most disadvantaged movement.
(2) The average delay is the delay experienced on average by all vehicles. The value in brackets represents the delay to the most disadvantaged movement.
(3) The Level of Service is a qualitative measure of performance describing operational conditions. There are six levels of service, designated from A to F, with A representing the best operational condition and level of service F the worst.
(4) The Level of Service of the worst approach is an indicator of the operation of the intersection, with a worse Level of Service corresponding to long delays and reduced safety outcomes for that approach.
(5) The minimum input for any SIDRA movement is 1 vehicle, such that in Scenario 1, the RHT-IN, LHT-IN and LHT-OUT, are the results based upon a single movement.

TABLE 3: PM DRIVEWAY PERFORMANCE (SIDRA INTERSECTION 9.0)

Scenario	Degree of Saturation(1)	Turn Movement	Average Delay(2) (sec/vehicle)	Level of Service(3)(4)	95th Percentile Queue veh (m)
Scenario 1: 2021 Existing(5)	0.381	RHT-IN	6.5	A	0 (0m)
		LHT-IN	4.7	A	-
		LHT-OUT	6.7	A	0 (0m)
		EB	-	A	-
		WB	0.2	A	-
Scenario 2: 2021 Future (Post-Development)	0.398	RHT-IN	7.0	A	0.2 (1.1m)
		LHT-IN	4.7	A	-
		LHT-OUT	7.2	A	0.3 (2.2m)
		EB	-	A	-
		WB	0.2	A	-
Scenario 3: 2031 Growth + Future (Post-Development)	0.474	RHT-IN	8.8	A	0.2 (1.4m)
		LHT-IN	4.8	A	-
		LHT-OUT	8.9	A	0.4 (2.7m)
		EB	-	A	-
		WB	0.2	A	-
Scenario 4: Sensitivity Testing	0.491	RHT-IN	9.5	A	0.4 (3.1m)
		LHT-IN	4.8	A	-
		LHT-OUT	9.4	A	0.8 (5.9m)
		EB	-	A	-
		WB	0.2	A	-

Notes: Refer to **Table 2** Notes.

As shown above, all movements into and out of the proposed development operate at a high level of efficiency with a level of service "A", which is the highest level of service that can be obtained for any movement. The level of service "A" performance is characterised by low approach delays and spare capacity. This high level of service is retained in both the 2031 10-year growth scenario and the sensitivity testing.

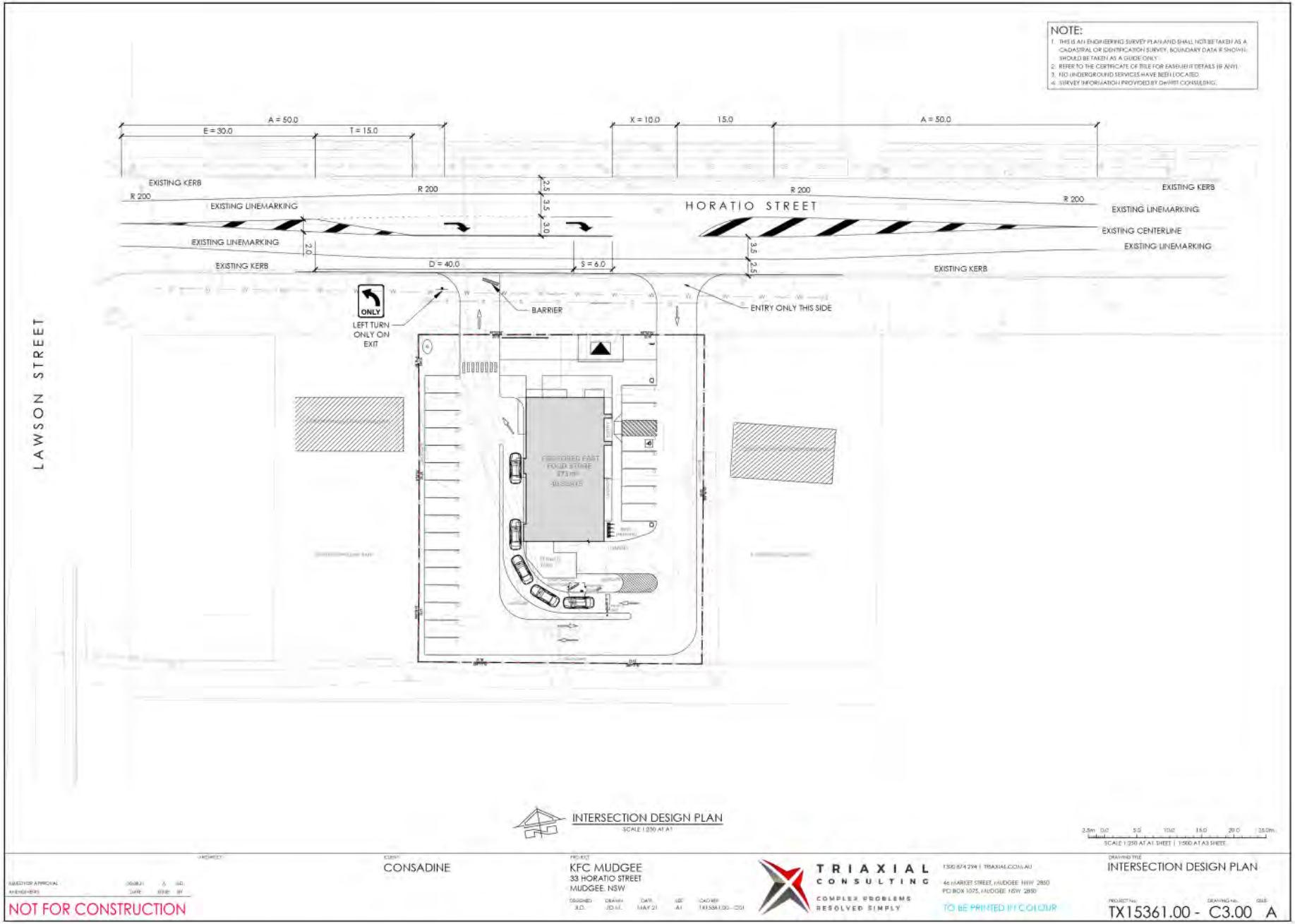
Please contact Mr Aaron Tomlins or the undersigned on 9521 7199 should you require further information or assistance.

Yours faithfully,
McLaren Traffic Engineering

Tom Steal
Senior Traffic Engineer
BE Civil AMAITPM MIEAust
RMS Accredited Level 3 Road Safety Auditor

McLaren
Traffic Engineering &
Road Safety Consultants

ANNEXURE A: PLANS
(1 SHEET)


NOTE:
1. THIS IS AN ENGINEERING SURVEY PLAN AND SHALL NOT BE TAKEN AS A CADASTRAL OR IDENTIFICATION SURVEY. BOUNDARY DATA IF SHOWN, SHOULD BE TAKEN AS A GUIDE ONLY.
2. REFER TO THE CERTIFICATE OF TITLE FOR EASEMENT DETAILS (IF ANY).
3. NO UNDERGROUND SERVICES HAVE BEEN LOCATED.
4. SURVEY INFORMATION PROVIDED BY DeWITT CONSULTING.
A = 50.0
E = 30.0
T = 15.0
X = 10.0
15.0
A = 50.0
EXISTING KERB
R 200
EXISTING LINEMARKING
HORATIO STREET
EXISTING CENTERLINE
D = 40.0
S = 6.0
ONLY
LEFT TURN ONLY ON EXIT
BARRIER
ENTRY ONLY THIS SIDE
LAWSON STREET
INTERSECTION DESIGN PLAN
SCALE 1:250 AT A1
SCALE 1:250 AT A1 SHEET | 1:500 AT A3 SHEET
CONSADINE
KFC MUDGEE
33 HORATIO STREET
MUDGEE, NSW
TRIAXIAL CONSULTING
COMPLEX PROBLEMS RESOLVED SIMPLY
TO BE PRINTED IN COLOUR
INTERSECTION DESIGN PLAN
NOT FOR CONSTRUCTION
TX15361.00 - C3.00 A

McLaren
Traffic Engineering &
Road Safety Consultants

ANNEXURE B: TFNSW COMMENTS
(3 SHEETS)

Gmail

Cameron McLaren <cameron@mclarentraffic.com.au>

FW: PAN-141138: Additional information requested

1 message

Peter Consadine <fair@hwy.com.au> Tue, Jun 21, 2022 at 4:37 PM
To: cameron@mclarentraffic.com.au

Hi Cameron

The letter from TfNSW

Kind Regards

Peter Consadine

From: NSW Planning <planning.apps@planning.nsw.gov.au>
Sent: Tuesday, 21 June 2022 8:12 AM
To: fair@hwy.com.au
Cc: kayla.robson@midwestern.nsw.gov.au; e.planning@midwestern.nsw.gov.au
Subject: PAN-141138: Additional information requested

Online Development Application Service

planningportal.nsw.gov.au

NSW GOVERNMENT | Planning, Industry & Environment

Dear Peter,

MID-WESTERN REGIONAL COUNCIL has asked for additional information as part of your application for development PAN-141138 at 33 HORATIO STREET MUDGEE 2850.

The request is: Further to previous correspondence and telephone discussions held with Jim Disher and Peter, the following advice from TFNSW has been received today in respect of the gaps identified in the assessment and modelling provided to date:

After reviewing all the relevant documents and SIDRA files provided, please see the list below for items that are required from the applicant to complete a proper review. Please note, the proposed treatment being modelled is a CHR in Horatio Street.

• The SIDRA file provided does not indicate whether this is a model for the AM/PM peak, base or future scenario. The traffic report sent to TfNSW on 16/5/22 with reference 'TX15361.00-04.ltr.JD' provides a table with summary results for two scenarios (current PM and future PM). There is only one scenario tested in the SIDRA file provided. TfNSW requests the SIDRA files for both these scenarios, clearly labelled.
o It is also standard to perform a model for the accompanying AM peak.
• The traffic report sent to TfNSW on 16/5/22 with reference 'TX15361.00-04.ltr.JD' provides assumptions on the traffic volumes turning into the KFC, as well as assumed volumes going north and south during the PM peak hour. References are made to a 'Triaxial traffic study'. TfNSW requests the document to be provided to understand what these assumptions (trip distributions) are based off, or the applicant to provide justification of the assumptions.
• TfNSW has been provided a traffic count data summary 'TX15361.00', which shows traffic counts taken in November 2021 from 4pm-7pm. There are no turning movements provided in this traffic count data summary. The traffic count data does not seem to align with the assumptions made in the traffic report regarding input volumes. TfNSW requests the applicant to confirm whether these traffic counts were used.
• TfNSW notes the traffic report references a 'Mudgee Traffic Study' by Gennaoui Consulting (2014) to calculate the future traffic volume. TfNSW request that this document is provided to review the growth rate assumptions, or the applicant to summarise the growth rate assumptions used in an updated traffic report.

Also, as discussed, provision of a CHR at this location will change access arrangements for residents on opposite side of Horatio Street. Specifically, vehicles will need to cross the CHR lane and the through lane to turn right into their properties (and vice versa). TfNSW seeks confirmation that affected residents/property owners have been consulted regarding this change.

Council is willing to provide a further 14 days to address the above issues and respond to TFNSW concerns.

Please log into the NSW Planning Portal to review the request and submit the necessary information and/or documents for your application. To reply to the request, click on "Respond" within the "Additional information summary" tab of the application. Note: If a document is issued with this request for information, it can be located under the documents tab. We recommend looking for the most recently uploaded documents.

Log in

Please contact Council if you have any questions regarding this request or your application.

Once submitted, MID-WESTERN REGIONAL COUNCIL will review the revised or additional documentation/information. Until this has been provided, the application is unable to be progressed.

This email has been automatically sent through the NSW Planning Portal. Please do not reply to this message.

For more information or assistance, please visit the NSW Planning Portal and view our Frequently Asked Questions or Quick Reference Guides. Alternatively, you can call our help line on 1300 305 695.

McLaren
Traffic Engineering &
Road Safety Consultants

ANNEXURE C: RELEVANT EXTRACTS FROM THE 'TRIAXIAL TRAFFIC STUDY' (4 SHEETS)

TRIAXIAL
CONSULTING

COMPLEX PROBLEMS
RESOLVED SIMPLY

Suite 12, Level 14, 327 Pitt St
Sydney NSW 2000

triaxial.com.au
1300 874 294

PROVISION OF CONSULTING ENGINEERING SERVICES

PROPOSED KFC DEVELOPMENT
DA 0087/2022
33-35 HORATIO STREET
MUDGEE NSW 2850

TRAFFIC ASSESSMENT REPORT

08 NOVEMBER 2021
REFERENCE: TX15361.00-01.RPT.JK-REV0

Document Control:

Client	KFC Mudgee		
Prepared By:	Triaxial Consulting Ltd		
Report Author	Jeff Knox		
File Reference:	TX15361.00-01.rpt		
Report Date:	8 November 2021		
Current Revision:	0		
Revision History:	**Report Author**	**Reviewed By**	**Report Date**
0	J.K	J.D	08/11/21

INDEX

New ID	Locality	Asset Search Description	Path Type	Path Location	Material	Cardinal Direction	Width m	Length m	Condition Rating	Vertical Clearance	Horizontal Clearance	Insufficient Width	Crossfall	Gradient	Outlet Height	Gaps	Debris	Small trips	Large trips	Cracked / Broken / Sunk	Surface Issues / Holes	Grates / Pits Problems	Requires Paint/ Serve Xing	Poorly Placed Fixtures	Poor / missing Ramps	Poor/ missing refuge or xing
FP00658	Mudgee	GW Netball Road east - Pitts Lane to End	Shared path	Road reserve	Concrete	East	2.60	16.9	1	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil		Nil	Nil	Nil
FP00657	Mudgee	GW Netball Road west - Pitts Lane to End	Footpath	Road reserve	Concrete	West	1.20	107.8	1	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil		Nil	Nil	Nil
FP00655	Mudgee	GW Netball Road west - Pitts Lane to Netball Courts	Footpath	Reserve	Concrete	West	1.30	45.6	1	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil		Nil	Nil	Nil
FP00659	Mudgee	GW River to west - Pathway to End	Shared path	Reserve	Concrete	Nil	2.60	250.0	1	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil		Nil	Nil	Nil
FP00660	Mudgee	GW Stadium Road east - Pitts Lane to End	Footpath	Road reserve	Concrete	East	1.20	58.1	1	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil		Nil	Nil	Nil
FP00661	Mudgee	Harry Bayly Drive west - Bastenville Dr to Bellevue Rd	Footpath	Road reserve	Concrete	West	1.20	73.0	1	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil		Nil	Nil	Nil
FP00189	Mudgee	Harry Lawson Drive west - Ulan Rd to Putta Bucca Road	Footpath	Road reserve	Concrete	West	2.00	235.0	2	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil		Nil	Nil	Nil
FP00213	Mudgee	Horatio Street north - Douro St to Perry St	Footpath	Road reserve	Concrete	North	1.20	205.0	2	x						x		x	x	x					xx	xx
FP00215	Mudgee	Horatio Street north - Perry St to Church St	Footpath	Road reserve	Concrete	North	1.20	210.0	3	x	x					x	x	x	x							
FP00692	Mudgee	Horatio Street north - Church St to Lewis St	Footpath	Road reserve	Concrete	North	1.20	213.0	3																	x
FP00217	Mudgee	Horatio Street north - Lewis St to Lawson St	Footpath	Road reserve	Concrete	North	1.20	209.0	4	x	x							x	x	x		x				
FP00220	Mudgee	Horatio Street north - Lawson St to George St	Footpath	Road reserve	Concrete	North	1.20	207.0	2																	
FP00223	Mudgee	Horatio Street north - George St to Lochiel Ln	Footpath	Road reserve	Concrete	North	1.20	101.0	2																	
FP00212	Mudgee	Horatio Street north - Lochiel Ln to Sydney Rd	Footpath	Road reserve	Concrete	North	1.20	101.0	4																	
FP00222	Mudgee	Horatio Street south - Lawson St to Lewis St	Footpath	Road reserve	Concrete	South	1.20	215.0	2	x	x							x								
FP00663	Mudgee	Horatio Street south - Lewis St to Church St	Footpath	Road reserve	Concrete	South	1.20	205.0	3	x	x					x		x	xx	x						
FP00216	Mudgee	Horatio Street south - Church St to Perry St	Footpath	Road reserve	Concrete	South	1.20	205.0	3	x								x	x	x					x	

Figure 2: Mudgee Pedestrian Access and Mobility Plan (2016) audit of Northern side Horatio Street footpath.

3.3 EXISTING TRAFFIC VOLUMES

Existing traffic volumes along Horatio Street are shown in table 1 below.

	AADT	PEAK (PM) EAST	PEAK (PM) WEST
	8535	336	680
% Heavy Vehicles		5%	3.2%

Table 1: Peak hour vehicle trips observed for Horatio Street.

As no recent traffic data was available for Horatio Street near the site from either TfNSW or Mid Western Regional Council, traffic counts were conducted on Horatio Street during the PM peak hour. Figures obtained during the traffic count are listed in the table above and are representative of the largest number of vehicles observed during three separate weekday traffic counts. We note that efforts were taken to ensure the traffic counts were conducted as close to typical conditions as possible and were done after the NSW Covid-19 lockdown travel restrictions had been lifted.

PM peak traffic figures were used as the premises will not be operational until after the morning peak hour, with hours of operation starting at 10:30am.

Mc Laren
Traffic Engineering &
Road Safety Consultants

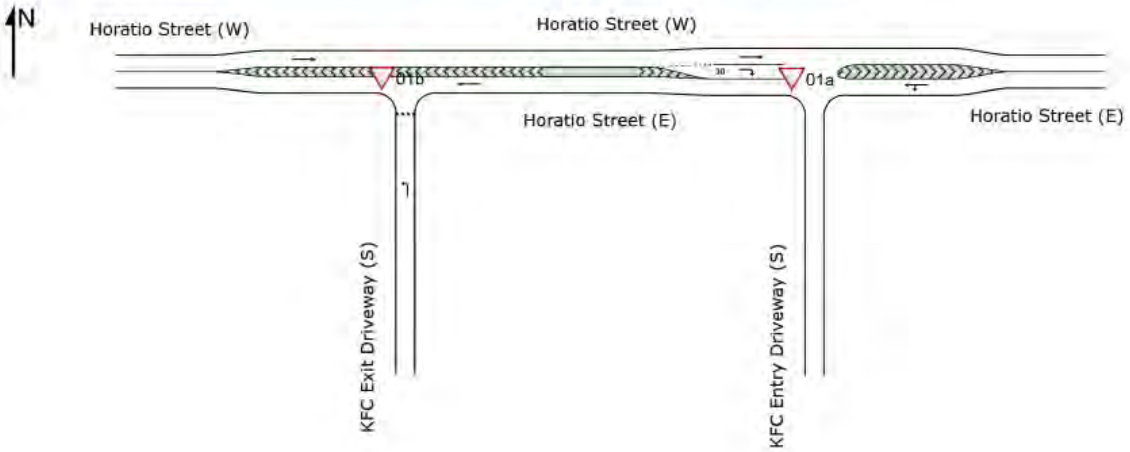
ANNEXURE D: SIDRA NETWORK LAYOUTS
(8 SHEETS)

NETWORK LAYOUT

Network: 01 [01EXAM - Horatio Street / KFC Mudgee - Existing (Before Development) (Network Folder: MTE Revised SIDRA - 22 07 14)]

Horatio Street / KFC Mudgee
33 Horatio Street, Mudgee NSW
2021 EXISTING AM
Network Category: (None)

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



SITES IN NETWORK		
Site ID	**CCG ID**	**Site Name**
▽01a	NA	01a-EXAM-Horatio Street / KFC - Pt 1 (Entry)
▽01b	NA	01b-EXAM-Horatio Street / KFC - Pt 2 (Exit)

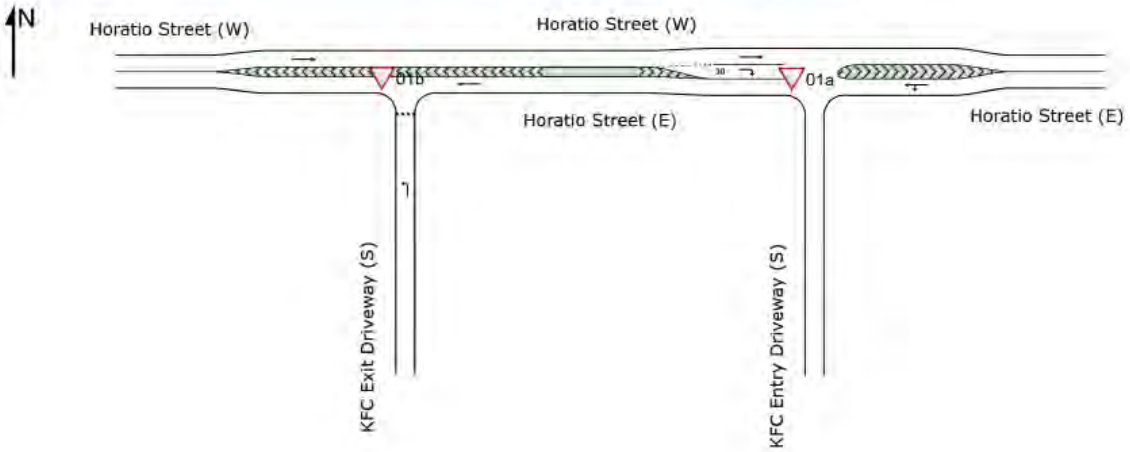
Organisation: MCLAREN TRAFFIC ENGINEERING | Licence: PLUS / 1PC | Created: Thursday, 14 July 2022 4:10:57 PM
Project: \\MTE_NAS1\MTE Storage\Jobs\2022\220486\MTE SIDRA\KFC Mudgee - MTE SIDRAs - 22 07 14.sip9

NETWORK LAYOUT

Network: 01 [02FUAM - Horatio Street / KFC Mudgee - Future (Post-Development) (Network Folder: MTE Revised SIDRA - 22 07 14)]

Horatio Street / KFC Mudgee
33 Horatio Street, Mudgee NSW
2021 FUTURE (Post-Development) AM
Network Category: (None)

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



SITES IN NETWORK		
Site ID	**CCG ID**	**Site Name**
01a	NA	01a-FUAM-Horatio Street / KFC - Pt 1 (Entry) - Post-Development
01b	NA	01b-FUAM-Horatio Street / KFC - Pt 2 (Exit) - Post-Development

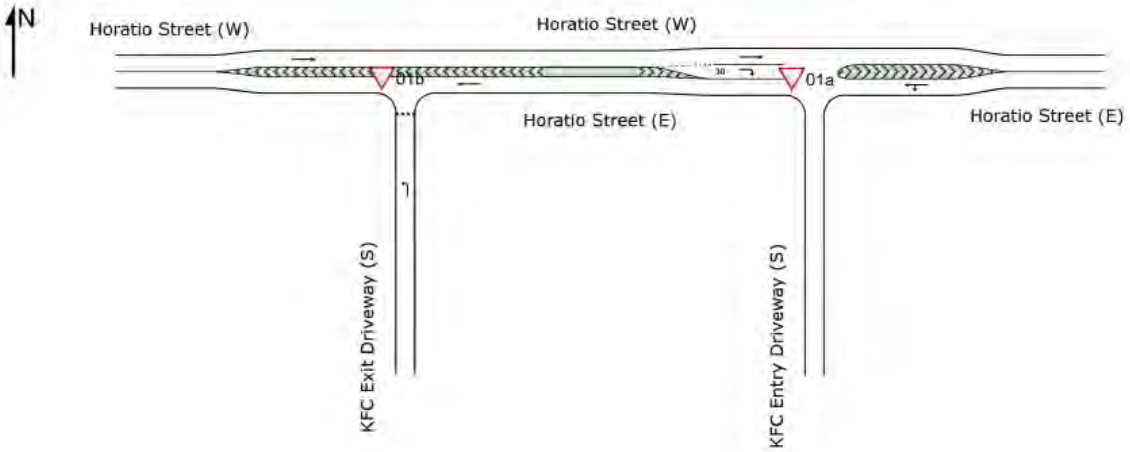
Organisation: MCLAREN TRAFFIC ENGINEERING | Licence: PLUS / 1PC | Created: Thursday, 14 July 2022 4:10:57 PM
Project: \\MTE_NAS1\MTE Storage\Jobs\2022\220486\MTE SIDRA\KFC Mudgee - MTE SIDRAs - 22 07 14.sip9

NETWORK LAYOUT

Network: 01 [03FUAM+10YrGro - Horatio Street / KFC Mudgee - Future (Post-Development) + 10Yr Growth (Network Folder: MTE Revised SIDRA - 22 07 14)]

Horatio Street / KFC Mudgee
33 Horatio Street, Mudgee NSW
2031 FUTURE (Post-Development) 10-Yr Growth AM
Network Category: (None)

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



SITES IN NETWORK		
Site ID	**CCG ID**	**Site Name**
01a	NA	01a-FUAM+10YrGro - Horatio Street / KFC - Pt 1 (Entry) - Post-Development - 10Yr Growth
01b	NA	01b-FUAM+10YrGro - Horatio Street / KFC - Pt 2 (Exit) - Post-Development - 10-Yr Growth

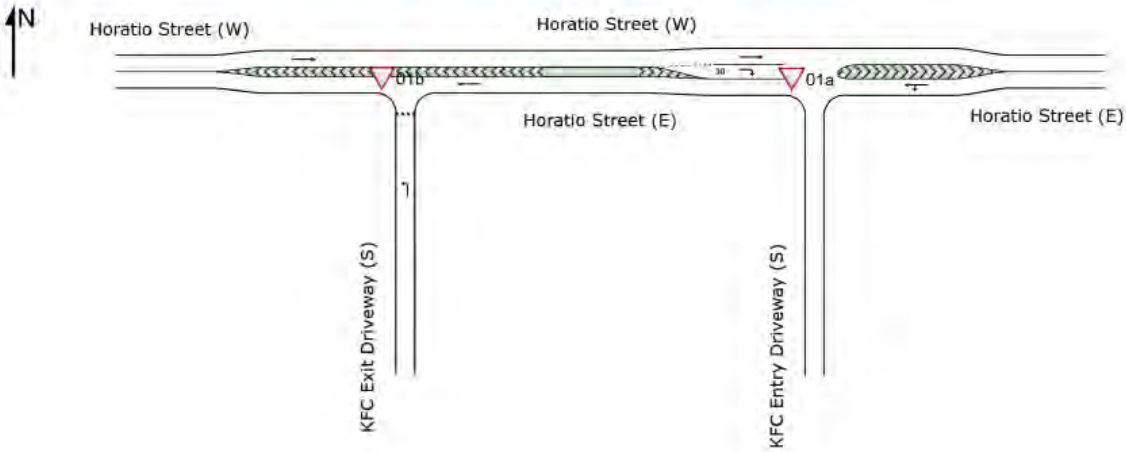
Organisation: MCLAREN TRAFFIC ENGINEERING | Licence: PLUS / 1PC | Created: Thursday, 14 July 2022 4:10:57 PM
Project: \\MTE_NAS1\MTE Storage\Jobs\2022\220486\MTE SIDRA\KFC Mudgee - MTE SIDRAs - 22 07 14.sip9

NETWORK LAYOUT

Network: 01 [04FUAM-Sensitivity - Horatio Street / KFC Mudgee - Future (Post-Development) + 10Yr Growth - Sensiti (Network Folder: MTE Revised SIDRA - 22 07 14)]

Horatio Street / KFC Mudgee
33 Horatio Street, Mudgee NSW
2031FUTURE (Post-Development) 10-Yr Growth AM + Sensitivity
Network Category: (None)

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



SITES IN NETWORK		
Site ID	**CCG ID**	**Site Name**
01a	NA	01a-FUAM-Sensitivity - Horatio Street / KFC - Pt 1 (Entry) - Post-Development - 10Yr Growth - Sens
01b	NA	01b-FUAM-Sensitivity - Horatio Street / KFC - Pt 2 (Exit) - Post-Development - 10-Yr Growth - Sens

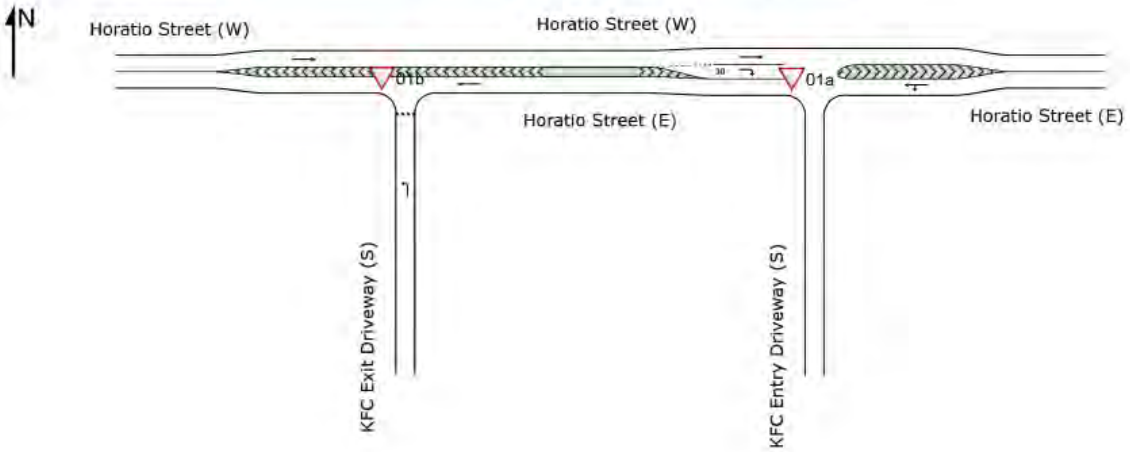
Organisation: MCLAREN TRAFFIC ENGINEERING | Licence: PLUS / 1PC | Created: Thursday, 14 July 2022 4:10:57 PM
Project: \\MTE_NAS1\MTE Storage\Jobs\2022\220486\MTE SIDRA\KFC Mudgee - MTE SIDRAs - 22 07 14.sip9

NETWORK LAYOUT

Network: 01 [01EXPM - Horatio Street / KFC Mudgee - Existing (Before Development) (Network Folder: MTE Revised SIDRA - 22 07 14)]

Horatio Street / KFC Mudgee
33 Horatio Street, Mudgee NSW
2021 EXISTING PM
Network Category: (None)

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



SITES IN NETWORK		
Site ID	**CCG ID**	**Site Name**
01a	NA	01a-EXPM-Horatio Street / KFC - Pt 1 (Entry)
01b	NA	01b-EXPM-Horatio Street / KFC - Pt 2 (Exit)

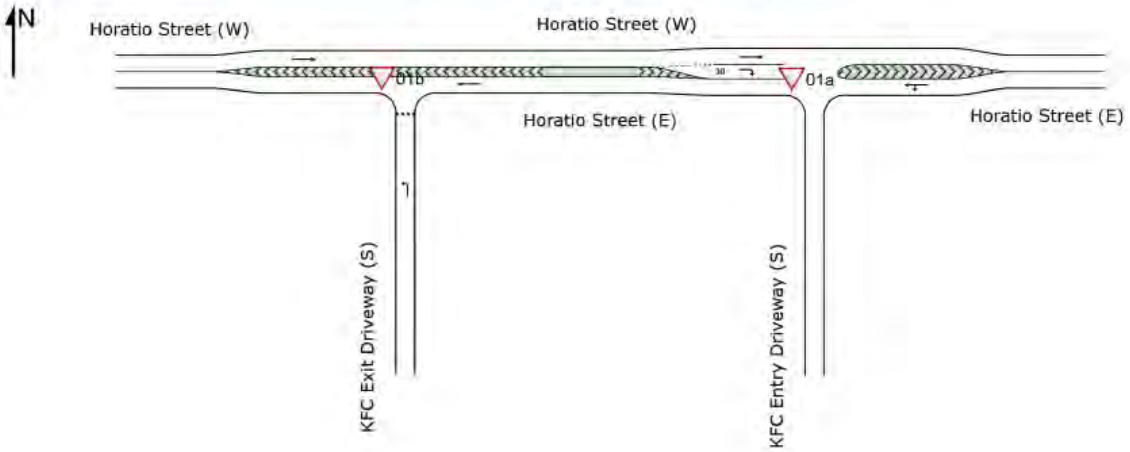
Organisation: MCLAREN TRAFFIC ENGINEERING | Licence: PLUS / 1PC | Created: Thursday, 14 July 2022 4:10:58 PM
Project: \\MTE_NAS1\MTE Storage\Jobs\2022\220486\MTE SIDRA\KFC Mudgee - MTE SIDRAs - 22 07 14.sip9

NETWORK LAYOUT

Network: 01 [02FUPM - Horatio Street / KFC Mudgee - Future (Post-Development) (Network Folder: MTE Revised SIDRA - 22 07 14)]

Horatio Street / KFC Mudgee
33 Horatio Street, Mudgee NSW
2021 FUTURE (Post-Development) PM
Network Category: (None)

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



SITES IN NETWORK		
Site ID	**CCG ID**	**Site Name**
01a	NA	01a-FUPM-Horatio Street / KFC - Pt 1 (Entry) - Post-Development
01b	NA	01b-FUPM-Horatio Street / KFC - Pt 2 (Exit) - Post-Development

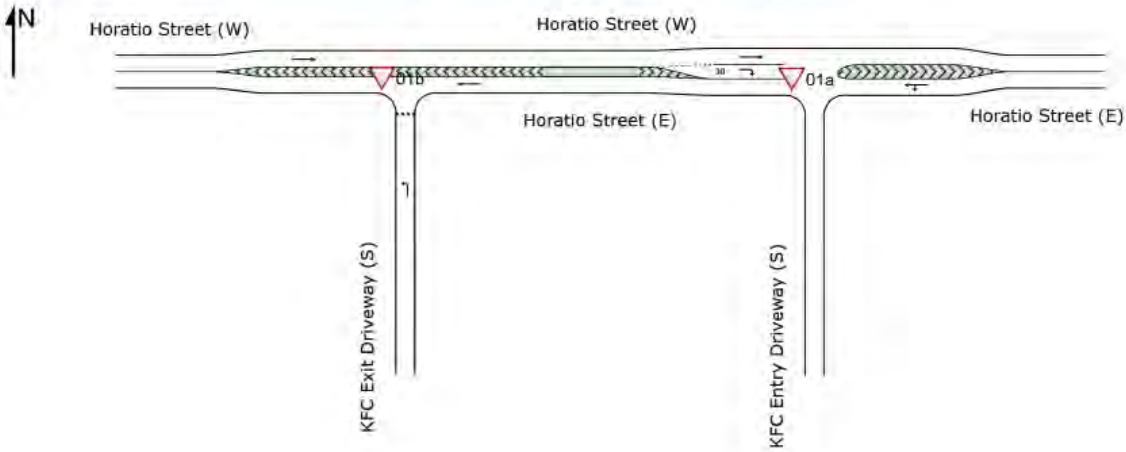
Organisation: MCLAREN TRAFFIC ENGINEERING | Licence: PLUS / 1PC | Created: Thursday, 14 July 2022 4:10:58 PM
Project: \\MTE_NAS1\MTE Storage\Jobs\2022\220486\MTE SIDRA\KFC Mudgee - MTE SIDRAs - 22 07 14.sip9

NETWORK LAYOUT

Network: 01 [03FUPM+10YrGro - Horatio Street / KFC Mudgee - Future (Post-Development) + 10Yr Growth (Network Folder: MTE Revised SIDRA - 22 07 14)]

Horatio Street / KFC Mudgee
33 Horatio Street, Mudgee NSW
2031 FUTURE (Post-Development) 10-Yr Growth PM
Network Category: (None)

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



SITES IN NETWORK		
Site ID	**CCG ID**	**Site Name**
01a	NA	01a-FUPM+10YrGro - Horatio Street / KFC - Pt 1 (Entry) - Post-Development - 10Yr Growth
01b	NA	01b-FUPM+10YrGro - Horatio Street / KFC - Pt 2 (Exit) - Post-Development - 10-Yr Growth

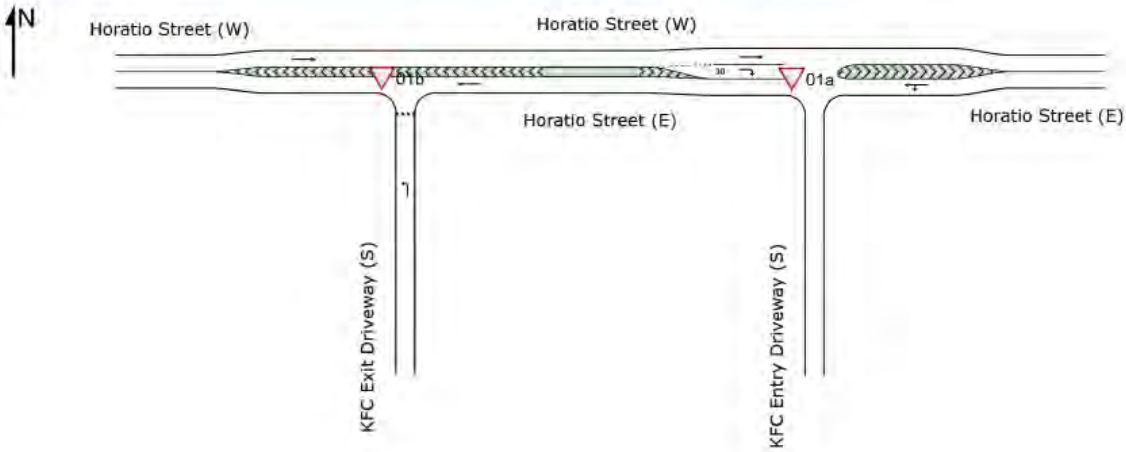
Organisation: MCLAREN TRAFFIC ENGINEERING | Licence: PLUS / 1PC | Created: Thursday, 14 July 2022 4:10:58 PM
Project: \\MTE_NAS1\MTE Storage\Jobs\2022\220486\MTE SIDRA\KFC Mudgee - MTE SIDRAs - 22 07 14.sip9

NETWORK LAYOUT

Network: 01 [04FUPM-Sensitivity - Horatio Street / KFC Mudgee - Future (Post-Development) + 10Yr Growth - Sensiti (Network Folder: MTE Revised SIDRA - 22 07 14)]

Horatio Street / KFC Mudgee
33 Horatio Street, Mudgee NSW
2031 FUTURE (Post-Development) 10-Yr Growth PM + Sensitivity
Network Category: (None)

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



SITES IN NETWORK		
Site ID	**CCG ID**	**Site Name**
01a	NA	01a-FUPM-Sensitivity - Horatio Street / KFC - Pt 1 (Entry) - Post-Development - 10Yr Growth - Sens
01b	NA	01b-FUPM-Sensitivity - Horatio Street / KFC - Pt 2 (Exit) - Post-Development - 10-Yr Growth - Sens

Organisation: MCLAREN TRAFFIC ENGINEERING | Licence: PLUS / 1PC | Created: Thursday, 14 July 2022 4:10:58 PM
Project: \\MTE_NAS1\MTE Storage\Jobs\2022\220486\MTE SIDRA\KFC Mudgee - MTE SIDRAs - 22 07 14.sip9

McLaren
Traffic Engineering &
Road Safety Consultants

ANNEXURE E: TRAFFIC SURVEY DATA
(2 SHEETS)

TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY

Intersection of Castlereagh Hwy and George St, Mudgee

GPS	-32.60011, 149.59401
Date:	Mon 21/08/23
Weather:	Fine
Suburban:	Mudgee
Customer:	McLean

North:	George St
East:	Castlereagh Hwy
South:	George St
West:	Castlereagh Hwy

Survey	AM	7:00 AM-9:30 AM
Period	PM	2:30 PM-6:00 PM
Traffic	AM	8:15 AM-9:15 AM
Peak	PM	3:15 PM-4:15 PM

All Vehicles

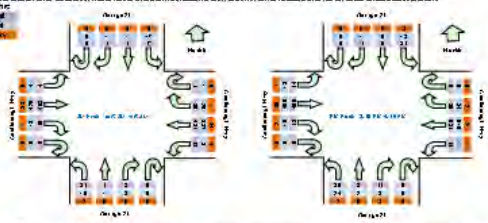
Time		North Approach George St				East Approach Castlereagh Hwy				South Approach George St				West Approach Castlereagh Hwy				Hourly Total	
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	Hour	Peak
7:00	7:15	0	0	0	1	0	3	58	3	0	0	0	4	0	3	50	0	841	
7:15	7:30	0	0	0	1	0	1	82	3	0	0	0	4	0	9	73	1	895	
7:30	7:45	0	0	0	5	0	1	49	0	0	4	0	4	0	8	86	2	783	
7:45	8:00	0	0	0	4	0	3	84	1	0	1	0	0	0	4	119	2	824	
8:00	8:15	0	1	1	1	0	5	92	2	0	4	0	5	0	1	83	1	923	
8:15	8:30	0	0	0	0	1	8	107	1	0	2	0	8	0	8	102	1	1003	Peak
8:30	8:45	0	0	1	5	0	11	109	2	0	2	0	4	0	3	88	0	1003	
8:45	9:00	0	1	0	2	0	5	107	8	0	2	0	4	0	5	155	0		
9:00	9:15	0	0	0	10	0	3	103	3	0	2	1	7	0	5	120	3		
9:15	9:30	0	0	0	1	0	8	97	4	0	2	0	6	0	4	112	1		
14:30	14:45	0	1	0	3	0	7	128	3	0	3	0	2	0	2	109	0	1024	
14:45	15:00	0	3	0	4	0	11	118	5	0	1	0	7	0	2	122	0	1092	
15:00	15:15	0	1	0	2	0	9	117	4	0	1	0	9	0	1	82	3	1123	
15:15	15:30	0	0	0	3	0	9	128	3	0	3	0	10	0	3	108	3	1282	Peak
15:30	15:45	0	1	0	8	0	9	151	2	0	2	1	3	0	4	132	5	1250	
15:45	16:00	0	0	0	8	0	2	153	4	0	4	0	5	0	7	128	0	1228	
16:00	16:15	0	0	0	8	0	16	131	3	0	2	1	3	0	4	128	0	1241	
16:15	16:30	0	0	0	1	0	2	151	3	0	1	1	8	0	2	95	2	1153	
16:30	16:45	0	0	1	2	0	16	142	8	0	3	0	7	0	4	102	2	1174	
16:45	17:00	0	0	0	2	0	3	188	1	0	2	0	4	0	2	123	4	1071	
17:00	17:15	0	2	0	1	0	9	177	1	0	3	0	9	0	3	94	1	922	
17:15	17:30	0	0	1	2	1	12	150	1	0	1	0	0	0	0	93	4		
17:30	17:45	0	1	0	1	0	5	103	0	0	1	1	2	0	2	88	2		
17:45	18:00	0	0	0	1	0	7	94	1	0	1	0	3	0	4	71	1		

Castlereagh West bound			Castlereagh East bound		
15 Min	Hour	Peak	15 Min	Hour	Peak
82	245		53	385	
88	281		83	377	
53	323		94	333	
84	283		125	352	
93	438		70	433	
113	453	Peak	109	438	
113	441		89	434	Peak
112			100		
115			123		
101			117		
131	330		111	433	
128	356		124	483	
127	388		88	472	
148	358		112	522	Peak
155	389		141	509	
153	383		133	433	
159	375	Peak	136	439	
157	384		99	441	
142	357		115	444	
170	319		139	359	
128	328		93	336	
150			102		
111			70		
87			78		

Peak Time		North Approach George St				East Approach Castlereagh Hwy				South Approach George St				West Approach Castlereagh Hwy				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	Total
8:15	9:15	0	1	1	17	1	30	431	12	0	8	1	21	0	19	463	4	1003
15:15	18:15	0	1	0	21	0	38	531	12	0	11	2	28	0	13	498	14	1282

Note: This sketch is for illustration traffic flows. Direction arrows indicate walk, drive-in and to locate and not an exact streets construction.

Graphic
Total
Light
Heavy



Light Vehicles

Time		North Approach George St				East Approach Castlereagh Hwy				South Approach George St				West Approach Castlereagh Hwy			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
7:00	7:15	0	0	0	1	0	3	61	1	0	0	0	4	0	7	44	0
7:15	7:30	0	0	0	1	0	1	48	2	0	0	0	3	0	9	73	1
7:30	7:45	0	0	0	5	0	1	43	0	0	2	0	3	0	5	83	1
7:45	8:00	0	0	0	4	0	3	55	0	0	0	0	0	0	4	114	2
8:00	8:15	0	1	0	1	0	3	82	1	0	2	0	5	0	1	84	1
8:15	8:30	0	0	0	0	1	8	93	0	0	2	0	5	0	5	96	1
8:30	8:45	0	0	1	5	0	10	100	1	0	2	0	4	0	3	72	0
8:45	9:00	0	1	0	2	0	5	98	5	0	2	0	4	0	5	133	0
9:00	9:15	0	0	0	10	0	3	93	2	0	2	1	6	0	5	114	3
9:15	9:30	0	0	0	1	0	5	90	3	0	2	0	3	0	4	101	1
14:30	14:45	0	1	0	3	0	7	113	3	0	3	0	2	0	2	93	0
14:45	15:00	0	3	0	4	0	10	101	4	0	1	0	7	0	2	112	0
15:00	15:15	0	0	0	2	0	8	107	3	0	1	0	9	0	1	78	3
15:15	15:30	0	0	0	3	0	9	123	2	0	2	0	10	0	3	94	3
15:30	15:45	0	1	0	8	0	7	143	2	0	1	1	3	0	4	124	4
15:45	16:00	0	0	0	3	0	2	143	4	0	4	0	5	0	8	121	0
16:00	16:15	0	0	0	8	0	16	128	3	0	1	1	8	0	3	110	8
16:15	16:30	0	0	0	1	0	1	142	3	0	1	1	8	0	1	89	2
16:30	16:45	0	0	1	2	0	15	139	5	0	3	0	5	0	3	102	2
16:45	17:00	0	0	0	2	0	3	158	1	0	2	0	1	0	2	122	4
17:00	17:15	0	2	0	1	0	9	174	1	0	3	0	9	0	3	73	1
17:15	17:30	0	0	1	2	1	12	148	1	0	1	0	0	0	0	89	4
17:30	17:45	0	1	0	1	0	5	101	0	0	1	1	2	0	2	82	2
17:45	18:00	0	0	0	1	0	7	93	1	0	1	0	3	0	4	67	1

Peak Time		North Approach George St				East Approach Castlereagh Hwy				South Approach George St				West Approach Castlereagh Hwy				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	Total
8:15	9:15	0	1	1	17	1	29	387	8	0	8	1	19	0	18	425	4	919
15:15	18:15	0	1	0	19	0	34	510	11	0	8	2	24	0	18	455	12	1092

Heavy Vehicles

Time		North Approach George St				East Approach Castlereagh Hwy				South Approach George St				West Approach Castlereagh Hwy			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
7:00	7:15	0	0	0	0	0	0	17	2	0	0	0	0	0	1	8	0
7:15	7:30	0	0	0	0	0	0	14	1	0	0	0	1	0	0	5	0
7:30	7:45	0	0	0	0	0	0	8	0	0	2	0	1	0	1	3	1
7:45	8:00	0	0	0	0	0	0	9	1	0	1	0	0	0	0	5	0
8:00	8:15	0	0	1	0	0	2	10	1	0	2	0	0	0	0	4	0
8:15	8:30	0	0	0	0	0	0	9	1	0	0	0	1	0	1	3	0
8:30	8:45	0	0	0	0	0	1	9	1	0	0	0	0	0	0	7	0
8:45	9:00	0	0	0	0	0	0	11	1	0	0	0	0	0	0	17	0
9:00	9:15	0	0	0	0	0	0	15	1	0	0	0	1	0	0	8	0
9:15	9:30	0	0	0	0	0	1	7	1	0	0	0	1	0	0	11	0
14:30	14:45	0	0	0	0	0	0	10	0	0	0	0	0	0	0	11	0
14:45	15:00	0	0	0	0	0	1	15	1	0	0	0	0	0	0	10	0
15:00	15:15	0	1	0	0	0	1	10	1	0	0	0	0	0	0	8	0
15:15	15:30	0	0	0	0	0	0	8	1	0	1	0	0	0	0	12	0
15:30	15:45	0	0	0	0	0	2	3	0	0	1	0	0	0	0	3	1
15:45	16:00	0	0	0	0	0	0	5	0	0	0	0	0	0	1	5	0
16:00	16:15	0	0	0	0	0	0	5	0	0	1	0	2	0	1	10	0
16:15	16:30	0	0	0	0	0	1	9	0	0	0	0	0	0	1	8	0
16:30	16:45	0	0	0	0	0	1	3	1	0	0	0	2	0	1	7	0
16:45	17:00	0	0	0	0	0	0	3	0	0	0	0	3	0	0	11	0
17:00	17:15	0	0	0	0	0	0	3	0	0	0	0	0	0	0	8	0
17:15	17:30	0	0	0	0	0	0	4	0	0	0	0	0	0	0	9	0
17:30	17:45	0	0	0	0	0	0	7	0	0	0	0	0	0	0	4	0
17:45	18:00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	4	0

Peak Time		North Approach George St				East Approach Castlereagh Hwy				South Approach George St				West Approach Castlereagh Hwy				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	Total
8:15	9:15	0	0	0	0	0	1	44	4	0	0	0	2	0	1	38	0	90
15:15	18:15	0	0	0	2	0	2	21	1	0	3	0	2	0	2	28	1	70

AUTOMATIC COUNTER SUMMARY AND DATA SHEET

TRANS TRAFFIC SURVEY

trafficsurvey.com.au

T. 1300 82 88 82 - F. 1300 83 88 83 - E. traffic@trafficsurvey.com.au - W. www.trafficsurvey.com.au

AUTOMATIC COUNT SUMMARY

Street Name :	Castlereagh Hwy	**Location :**	Between the Industrial Driveway and RoW
Suburb :	Mudgee	**Start Date :**	00:00 Mon 01/March/2021
Tubecounter ID	EE41F10V	**Finish Date :**	00:00 Mon 08/March/2021
Site ID Number :	1536	**Speed Zone :**	50 km/h
Prepared By :	Vo Son Binh	**Email:**	binh@trafficsurvey.com.au

GPS information	Lat 32° 36' 7.29 South Long 149° 35' 50.37 East		**Direction of Travel**		
			Both directions	**Northbound**	**Southbound**
Traffic Volume :		Weekdays Average	13,596	6,789	6,807
(Vehicles/Day)		7 Day Average	12,178	6,057	6,121
Weekday	**AM**	10:00	1100	554	547
Peak hour starts	**PM**	16:00	1208	673	535
Speeds :		85th Percentile	54.3	54.5	54.0
(Km/Hr)		Average	49.4	49.8	49.0
Classification % :		Light Vehicles up to 5.5m	90.2%	90.9%	89.5%

Location

GPS Information Load Google Map (internet required)

(Latitude, Longitude) -32.602026, 149.597326

Speed Data	Speed Graph	Speed Bin
Volume Data	Volume Graph	Classification

QUALITY SYSTEM CERTIFICATION DNV·GL ISO 9001

SAFETY SYSTEM CERTIFICATION DNV·GL AS/NZS 4801

ENVIRONMENTAL SYSTEM CERTIFICATION DNV·GL ISO 14001

QUALITY ASSURED COMPANY BY ISO 9001:2015
OH&S SYSTEM CERTIFIED TO ISO 4801:2001
ENVIRONMENT MANAGEMENT SYSTEM CERTIFIED TO ISO14001:2015

ANNEXURE F: SIDRA MOVEMENT SUMMARY RESULTS
(16 SHEETS)

MOVEMENT SUMMARY

Site: 01a [01a-EXAM-Horatio Street / KFC - Pt 1 (Entry) (Site Folder: General)]

Network: 01 [01EXAM - Horatio Street / KFC Mudgee - Existing (Before Development) (Network Folder: MTE Revised SIDRA - 22 07 14)]

Horatio Street / KFC - Part 1 (Entry)
33 Horatio Street, Mudgee, NSW
2021 EXISTING AM
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Horatio Street (E)														
4	L2	1	0.0	1	0.0	0.314	4.7	LOS A	0.0	0.0	0.00	0.00	0.00	47.7
5	T1	583	9.1	583	9.1	0.314	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
Approach		584	9.1	584	9.1	0.314	0.1	NA	0.0	0.0	0.00	0.00	0.00	49.8
West: Horatio Street (W)														
11	T1	576	10.5	576	10.5	0.312	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
12	R2	1	0.0	1	0.0	0.001	5.5	LOS A	0.0	0.0	0.54	0.55	0.54	24.4
Approach		577	10.5	577	10.5	0.312	0.0	NA	0.0	0.0	0.00	0.00	0.00	49.8
All Vehicles		1161	9.8	1161	9.8	0.314	0.1	NA	0.0	0.0	0.00	0.00	0.00	49.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Organisation: MCLAREN TRAFFIC ENGINEERING | Licence: PLUS / 1PC | Processed: Thursday, 14 July 2022 3:39:24 PM
Project: \\MTE_NAS1\MTE Storage\Jobs\2022\220486\MTE SIDRA\KFC Mudgee - MTE SIDRAs - 22 07 14.sip9

MOVEMENT SUMMARY

Site: 01b [01b-EXAM-Horatio Street / KFC - Pt 2 (Exit) (Site Folder: General)]

Network: 01 [01EXAM - Horatio Street / KFC Mudgee - Existing (Before Development) (Network Folder: MTE Revised SIDRA - 22 07 14)]

Horatio Street / KFC - Part 2 (Exit)
33 Horatio Street, Mudgee, NSW
2021 EXISTING AM
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: KFC Exit Driveway (S)														
1	L2	1	0.0	1	0.0	0.001	5.8	LOS A	0.0	0.0	0.51	0.52	0.51	42.1
Approach		1	0.0	1	0.0	0.001	5.8	LOS A	0.0	0.0	0.51	0.52	0.51	42.1
East: Horatio Street (E)														
5	T1	583	9.1	583	9.1	0.313	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
Approach		583	9.1	583	9.1	0.313	0.0	NA	0.0	0.0	0.00	0.00	0.00	49.8
West: Horatio Street (W)														
11	T1	576	10.5	576	10.5	0.312	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
Approach		576	10.5	576	10.5	0.312	0.1	NA	0.0	0.0	0.00	0.00	0.00	49.8
All Vehicles		1160	9.8	1160	9.8	0.313	0.1	NA	0.0	0.0	0.00	0.00	0.00	49.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Organisation: MCLAREN TRAFFIC ENGINEERING | Licence: PLUS / 1PC | Processed: Thursday, 14 July 2022 3:39:24 PM
Project: \\MTE_NAS1\MTE Storage\Jobs\2022\220486\MTE SIDRA\KFC Mudgee - MTE SIDRAs - 22 07 14.sip9

MOVEMENT SUMMARY

Site: 01a [01a-FUAM-Horatio Street / KFC - Pt 1 (Entry) - Post-Development (Site Folder: General)]

Network: 01 [02FUAM - Horatio Street / KFC Mudgee - Future (Post-Development) (Network Folder: MTE Revised SIDRA - 22 07 14)]

Horatio Street / KFC - Part 1 (Entry)
33 Horatio Street, Mudgee, NSW
2021 FUTURE (Post-Development) AM
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg Satn v/c	Aver Delay sec	Level of Service	95% BACK OF QUEUE [Veh veh	Dist] m	Prop Que	Effective Stop Rate	Aver No Cycles	Aver Speed km/h
East: Horatio Street (E)														
4	L2	32	0.0	32	0.0	0.330	4.7	LOS A	0.0	0.0	0.00	0.03	0.00	47.4
5	T1	583	9.0	583	9.0	0.330	0.1	LOS A	0.0	0.0	0.00	0.03	0.00	49.5
Approach		615	8.6	615	8.6	0.330	0.4	NA	0.0	0.0	0.00	0.03	0.00	49.4
West: Horatio Street (W)														
11	T1	607	9.9	607	9.9	0.330	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
12	R2	32	0.0	32	0.0	0.035	5.9	LOS A	0.1	1.0	0.56	0.69	0.56	23.7
Approach		639	9.4	639	9.4	0.330	0.3	NA	0.1	1.0	0.03	0.03	0.03	49.4
All Vehicles		1254	9.0	1254	9.0	0.330	0.3	NA	0.1	1.0	0.01	0.03	0.01	49.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Organisation: MCLAREN TRAFFIC ENGINEERING | Licence: PLUS / 1PC | Processed: Thursday, 14 July 2022 3:39:27 PM
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MOVEMENT SUMMARY

Site: 01b [01b-FUAM-Horatio Street / KFC - Pt 2 (Exit) - Post-Development (Site Folder: General)]

Network: 01 [02FUAM - Horatio Street / KFC Mudgee - Future (Post-Development) (Network Folder: MTE Revised SIDRA - 22 07 14)]

Horatio Street / KFC - Part 2 (Exit)
33 Horatio Street, Mudgee, NSW
2021 FUTURE (POST-Development) AM
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg Satn v/c	Aver Delay sec	Level of Service	95% BACK OF QUEUE [Veh veh	Dist] m	Prop Que	Effective Stop Rate	Aver No Cycles	Aver Speed km/h
South: KFC Exit Driveway (S)														
1	L2	63	0.0	63	0.0	0.073	6.1	LOS A	0.3	1.9	0.53	0.68	0.53	41.8
Approach		63	0.0	63	0.0	0.073	6.1	LOS A	0.3	1.9	0.53	0.68	0.53	41.8
East: Horatio Street (E)														
5	T1	583	9.0	583	9.0	0.313	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
Approach		583	9.0	583	9.0	0.313	0.0	NA	0.0	0.0	0.00	0.00	0.00	49.8
West: Horatio Street (W)														
11	T1	607	9.9	607	9.9	0.328	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
Approach		607	9.9	607	9.9	0.328	0.1	NA	0.0	0.0	0.00	0.00	0.00	49.8
All Vehicles		1254	9.0	1254	9.0	0.328	0.4	NA	0.3	1.9	0.03	0.03	0.03	49.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Organisation: MCLAREN TRAFFIC ENGINEERING | Licence: PLUS / 1PC | Processed: Thursday, 14 July 2022 3:39:27 PM
Project: \\MTE_NAS1\MTE Storage\Jobs\2022\220486\MTE SIDRA\KFC Mudgee - MTE SIDRAs - 22 07 14.sip9

MOVEMENT SUMMARY

Site: 01a [01a-FUAM+10YrGro - Horatio Street / KFC - Pt 1 (Entry) - Post-Development - 10Yr Growth (Site Folder: General)]

Network: 01 [03FUAM +10YrGro - Horatio Street / KFC Mudgee - Future (Post-Development) + 10Yr Growth (Network Folder: MTE Revised SIDRA - 22 07 14)]

Horatio Street / KFC - Part 1 (Entry)
33 Horatio Street, Mudgee, NSW
2031 FUTURE (Post-Development) + 10-Year 2%p.a Growth AM
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Horatio Street (E)														
4	L2	32	0.0	32	0.0	0.393	4.7	LOS A	0.0	0.0	0.00	0.02	0.00	47.4
5	T1	700	9.0	700	9.0	0.393	0.2	LOS A	0.0	0.0	0.00	0.02	0.00	49.5
Approach		731	8.6	731	8.6	0.393	0.4	NA	0.0	0.0	0.00	0.02	0.00	49.4
West: Horatio Street (W)														
11	T1	729	9.9	729	9.9	0.396	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
12	R2	32	0.0	32	0.0	0.043	6.9	LOS A	0.2	1.1	0.61	0.75	0.61	22.1
Approach		760	9.5	760	9.5	0.396	0.3	NA	0.2	1.1	0.03	0.03	0.03	49.3
All Vehicles		1492	9.1	1492	9.1	0.396	0.3	NA	0.2	1.1	0.01	0.03	0.01	49.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Organisation: MCLAREN TRAFFIC ENGINEERING | Licence: PLUS / 1PC | Processed: Thursday, 14 July 2022 3:39:43 PM
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MOVEMENT SUMMARY

Site: 01b [01b-FUAM+10YrGro - Horatio Street / KFC - Pt 2 (Exit) - Post-Development - 10-Yr Growth (Site Folder: General)]

Network: 01 [03FUAM +10YrGro - Horatio Street / KFC Mudgee - Future (Post-Development) + 10Yr Growth (Network Folder: MTE Revised SIDRA - 22 07 14)]

Horatio Street / KFC - Part 2 (Exit)
33 Horatio Street, Mudgee, NSW
2031 FUTURE (POST-Development) + 10-Year 2%p.a Growth AM
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: KFC Exit Driveway (S)														
1	L2	63	0.0	63	0.0	0.087	7.1	LOS A	0.3	2.2	0.58	0.75	0.58	41.0
Approach		63	0.0	63	0.0	0.087	7.1	LOS A	0.3	2.2	0.58	0.75	0.58	41.0
East: Horatio Street (E)														
5	T1	700	9.0	700	9.0	0.376	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
Approach		700	9.0	700	9.0	0.376	0.0	NA	0.0	0.0	0.00	0.00	0.00	49.8
West: Horatio Street (W)														
11	T1	729	9.9	729	9.9	0.394	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
Approach		729	9.9	729	9.9	0.394	0.2	NA	0.0	0.0	0.00	0.00	0.00	49.8
All Vehicles		1492	9.1	1492	9.1	0.394	0.4	NA	0.3	2.2	0.02	0.03	0.02	49.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Organisation: MCLAREN TRAFFIC ENGINEERING | Licence: PLUS / 1PC | Processed: Thursday, 14 July 2022 3:39:43 PM
Project: \\MTE_NAS1\MTE Storage\Jobs\2022\220486\MTE SIDRA\KFC Mudgee - MTE SIDRAs - 22 07 14.sip9

MOVEMENT SUMMARY

Site: 01a [01a-FUAM-Sensitivity - Horatio Street / KFC - Pt 1 (Entry) - Post-Development - 10Yr Growth - Sens (Site Folder: General)]

Network: 01 [04FUAM-Sensitivity - Horatio Street / KFC Mudgee - Future (Post-Development) + 10Yr Growth - Sensiti (Network Folder: MTE Revised SIDRA - 22 07 14)]

Horatio Street / KFC - Part 1 (Entry)
33 Horatio Street, Mudgee, NSW
2031 FUTURE (Post-Development) + 10-Year 2%p.a Growth AM - Sensitivity
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Horatio Street (E)														
4	L2	63	0.0	63	0.0	0.410	4.7	LOS A	0.0	0.0	0.00	0.05	0.00	47.2
5	T1	700	9.0	700	9.0	0.410	0.2	LOS A	0.0	0.0	0.00	0.05	0.00	49.2
Approach		763	8.3	763	8.3	0.410	0.6	NA	0.0	0.0	0.00	0.05	0.00	49.0
West: Horatio Street (W)														
11	T1	767	9.4	767	9.4	0.415	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
12	R2	63	0.0	63	0.0	0.090	7.4	LOS A	0.3	2.4	0.63	0.82	0.63	21.5
Approach		830	8.7	830	8.7	0.415	0.6	NA	0.3	2.4	0.05	0.06	0.05	48.9
All Vehicles		1593	8.5	1593	8.5	0.415	0.6	NA	0.3	2.4	0.03	0.05	0.03	48.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Organisation: MCLAREN TRAFFIC ENGINEERING | Licence: PLUS / 1PC | Processed: Thursday, 14 July 2022 3:39:59 PM
Project: \\MTE_NAS1\MTE Storage\Jobs\2022\220486\MTE SIDRA\KFC Mudgee - MTE SIDRAs - 22 07 14.sip9

MOVEMENT SUMMARY

Site: 01b [01b-FUAM-Sensitivity - Horatio Street / KFC - Pt 2 (Exit) - Post-Development - 10-Yr Growth - Sens (Site Folder: General)]

Network: 01 [04FUAM-Sensitivity - Horatio Street / KFC Mudgee - Future (Post-Development) + 10Yr Growth - Sensiti (Network Folder: MTE Revised SIDRA - 22 07 14)]

Horatio Street / KFC - Part 2 (Exit)
33 Horatio Street, Mudgee, NSW
2031 FUTURE (POST-Development) + 10-Year 2%p.a Growth AM - Sensitivity
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: KFC Exit Driveway (S)														
1	L2	126	0.0	126	0.0	0.174	7.3	LOS A	0.6	4.5	0.60	0.78	0.60	40.8
Approach		126	0.0	126	0.0	0.174	7.3	LOS A	0.6	4.5	0.60	0.78	0.60	40.8
East: Horatio Street (E)														
5	T1	700	9.0	700	9.0	0.376	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
Approach		700	9.0	700	9.0	0.376	0.0	NA	0.0	0.0	0.00	0.00	0.00	49.8
West: Horatio Street (W)														
11	T1	767	9.4	767	9.4	0.413	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
Approach		767	9.4	767	9.4	0.413	0.2	NA	0.0	0.0	0.00	0.00	0.00	49.8
All Vehicles		1593	8.5	1593	8.5	0.413	0.7	NA	0.6	4.5	0.05	0.06	0.05	48.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Organisation: MCLAREN TRAFFIC ENGINEERING | Licence: PLUS / 1PC | Processed: Thursday, 14 July 2022 3:39:59 PM
Project: \\MTE_NAS1\MTE Storage\Jobs\2022\220486\MTE SIDRA\KFC Mudgee - MTE SIDRAs - 22 07 14.sip9

MOVEMENT SUMMARY

Site: 01a [01a-EXPM-Horatio Street / KFC - Pt 1 (Entry) (Site Folder: General)]

Network: 01 [01EXPM - Horatio Street / KFC Mudgee - Existing (Before Development) (Network Folder: MTE Revised SIDRA - 22 07 14)]

Horatio Street / KFC - Part 1 (Entry)
33 Horatio Street, Mudgee, NSW
2021 EXISTING PM
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Horatio Street (E)														
4	L2	1	0.0	1	0.0	0.381	4.7	LOS A	0.0	0.0	0.00	0.00	0.00	47.7
5	T1	708	9.1	708	9.1	0.381	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
Approach		709	9.1	709	9.1	0.381	0.2	NA	0.0	0.0	0.00	0.00	0.00	49.8
West: Horatio Street (W)														
11	T1	563	10.5	563	10.5	0.305	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
12	R2	1	0.0	1	0.0	0.001	6.5	LOS A	0.0	0.0	0.59	0.59	0.59	22.8
Approach		564	10.5	564	10.5	0.305	0.0	NA	0.0	0.0	0.00	0.00	0.00	49.8
All Vehicles		1274	9.7	1274	9.7	0.381	0.1	NA	0.0	0.0	0.00	0.00	0.00	49.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Organisation: MCLAREN TRAFFIC ENGINEERING | Licence: PLUS / 1PC | Processed: Thursday, 14 July 2022 3:40:02 PM
Project: \\MTE_NAS1\MTE Storage\Jobs\2022\220486\MTE SIDRA\KFC Mudgee - MTE SIDRAs - 22 07 14.sip9

MOVEMENT SUMMARY

Site: 01b [01b-EXPM-Horatio Street / KFC - Pt 2 (Exit) (Site Folder: General)]

Network: 01 [01EXPM - Horatio Street / KFC Mudgee - Existing (Before Development) (Network Folder: MTE Revised SIDRA - 22 07 14)]

Horatio Street / KFC - Part 2 (Exit)
33 Horatio Street, Mudgee, NSW
2021 EXISTING PM
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg Satn v/c	Aver Delay sec	Level of Service	95% BACK OF QUEUE [Veh veh	Dist] m	Prop Que	Effective Stop Rate	Aver No Cycles	Aver Speed km/h
South: KFC Exit Driveway (S)														
1	L2	1	0.0	1	0.0	0.001	6.7	LOS A	0.0	0.0	0.56	0.56	0.56	41.2
Approach		1	0.0	1	0.0	0.001	6.7	LOS A	0.0	0.0	0.56	0.56	0.56	41.2
East: Horatio Street (E)														
5	T1	708	9.1	708	9.1	0.381	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
Approach		708	9.1	708	9.1	0.381	0.0	NA	0.0	0.0	0.00	0.00	0.00	49.8
West: Horatio Street (W)														
11	T1	563	10.5	563	10.5	0.305	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
Approach		563	10.5	563	10.5	0.305	0.1	NA	0.0	0.0	0.00	0.00	0.00	49.8
All Vehicles		1273	9.7	1273	9.7	0.381	0.1	NA	0.0	0.0	0.00	0.00	0.00	49.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Organisation: MCLAREN TRAFFIC ENGINEERING | Licence: PLUS / 1PC | Processed: Thursday, 14 July 2022 3:40:02 PM
Project: \\MTE_NAS1\MTE Storage\Jobs\2022\220486\MTE SIDRA\KFC Mudgee - MTE SIDRAs - 22 07 14.sip9

MOVEMENT SUMMARY

Site: 01a [01a-FUPM-Horatio Street / KFC - Pt 1 (Entry) - Post-Development (Site Folder: General)]

Network: 01 [02FUPM - Horatio Street / KFC Mudgee - Future (Post-Development) (Network Folder: MTE Revised SIDRA - 22 07 14)]

Horatio Street / KFC - Part 1 (Entry)
33 Horatio Street, Mudgee, NSW
2021 FUTURE (Post-Development) PM
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg Satn v/c	Aver Delay sec	Level of Service	95% BACK OF QUEUE [Veh veh	Dist] m	Prop Que	Effective Stop Rate	Aver No Cycles	Aver Speed km/h
East: Horatio Street (E)														
4	L2	32	0.0	32	0.0	0.398	4.7	LOS A	0.0	0.0	0.00	0.02	0.00	47.4
5	T1	708	9.1	708	9.1	0.398	0.2	LOS A	0.0	0.0	0.00	0.02	0.00	49.5
Approach		740	8.7	740	8.7	0.398	0.4	NA	0.0	0.0	0.00	0.02	0.00	49.4
West: Horatio Street (W)														
11	T1	595	9.9	595	9.9	0.324	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
12	R2	32	0.0	32	0.0	0.043	7.0	LOS A	0.2	1.1	0.61	0.76	0.61	22.0
Approach		626	9.4	626	9.4	0.324	0.4	NA	0.2	1.1	0.03	0.04	0.03	49.3
All Vehicles		1366	9.0	1366	9.0	0.398	0.4	NA	0.2	1.1	0.01	0.03	0.01	49.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Organisation: MCLAREN TRAFFIC ENGINEERING | Licence: PLUS / 1PC | Processed: Thursday, 14 July 2022 3:40:04 PM
Project: \\MTE_NAS1\MTE Storage\Jobs\2022\220486\MTE SIDRA\KFC Mudgee - MTE SIDRAs - 22 07 14.sip9

MOVEMENT SUMMARY

Site: 01b [01b-FUPM-Horatio Street / KFC - Pt 2 (Exit) - Post-Development (Site Folder: General)]

Network: 01 [02FUPM - Horatio Street / KFC Mudgee - Future (Post-Development) (Network Folder: MTE Revised SIDRA - 22 07 14)]

Horatio Street / KFC - Part 2 (Exit)
33 Horatio Street, Mudgee, NSW
2021 FUTURE (POST-Development) PM
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg Satn v/c	Aver Delay sec	Level of Service	95% BACK OF QUEUE [Veh veh	Dist] m	Prop Que	Effective Stop Rate	Aver No Cycles	Aver Speed km/h
South: KFC Exit Driveway (S)														
1	L2	63	0.0	63	0.0	0.088	7.2	LOS A	0.3	2.2	0.59	0.76	0.59	40.9
Approach		63	0.0	63	0.0	0.088	7.2	LOS A	0.3	2.2	0.59	0.76	0.59	40.9
East: Horatio Street (E)														
5	T1	708	9.1	708	9.1	0.381	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
Approach		708	9.1	708	9.1	0.381	0.0	NA	0.0	0.0	0.00	0.00	0.00	49.8
West: Horatio Street (W)														
11	T1	595	9.9	595	9.9	0.321	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
Approach		595	9.9	595	9.9	0.321	0.1	NA	0.0	0.0	0.00	0.00	0.00	49.8
All Vehicles		1366	9.0	1366	9.0	0.381	0.4	NA	0.3	2.2	0.03	0.03	0.03	49.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Organisation: MCLAREN TRAFFIC ENGINEERING | Licence: PLUS / 1PC | Processed: Thursday, 14 July 2022 3:40:04 PM
Project: \\MTE_NAS1\MTE Storage\Jobs\2022\220486\MTE SIDRA\KFC Mudgee - MTE SIDRAs - 22 07 14.sip9

MOVEMENT SUMMARY

Site: 01a [01a-FUPM+10YrGro - Horatio Street / KFC - Pt 1 (Entry) - Post-Development - 10Yr Growth (Site Folder: General)]

Network: 01 [03FUPM +10YrGro - Horatio Street / KFC Mudgee - Future (Post-Development) + 10Yr Growth (Network Folder: MTE Revised SIDRA - 22 07 14)]

Horatio Street / KFC - Part 1 (Entry)
33 Horatio Street, Mudgee, NSW
2031 FUTURE (Post-Development) + 10-Year 2%p.a Growth PM
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Horatio Street (E)														
4	L2	32	0.0	32	0.0	0.474	4.8	LOS A	0.0	0.0	0.00	0.02	0.00	47.4
5	T1	850	9.1	850	9.1	0.474	0.2	LOS A	0.0	0.0	0.00	0.02	0.00	49.5
Approach		882	8.8	882	8.8	0.474	0.4	NA	0.0	0.0	0.00	0.02	0.00	49.4
West: Horatio Street (W)														
11	T1	714	9.9	714	9.9	0.389	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
12	R2	32	0.0	32	0.0	0.056	8.8	LOS A	0.2	1.4	0.70	0.86	0.70	19.7
Approach		745	9.5	745	9.5	0.389	0.4	NA	0.2	1.4	0.03	0.04	0.03	49.2
All Vehicles		1627	9.1	1627	9.1	0.474	0.4	NA	0.2	1.4	0.01	0.03	0.01	49.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Organisation: MCLAREN TRAFFIC ENGINEERING | Licence: PLUS / 1PC | Processed: Thursday, 14 July 2022 3:40:21 PM
Project: \\MTE_NAS1\MTE Storage\Jobs\2022\220486\MTE SIDRA\KFC Mudgee - MTE SIDRAs - 22 07 14.sip9

MOVEMENT SUMMARY

Site: 01b [01b-FUPM+10YrGro - Horatio Street / KFC - Pt 2 (Exit) - Post-Development - 10-Yr Growth (Site Folder: General)]

Network: 01 [03FUPM +10YrGro - Horatio Street / KFC Mudgee - Future (Post-Development) + 10Yr Growth (Network Folder: MTE Revised SIDRA - 22 07 14)]

Horatio Street / KFC - Part 2 (Exit)
33 Horatio Street, Mudgee, NSW
2031 FUTURE (POST-Development) + 10-Year 2%p.a Growth PM
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: KFC Exit Driveway (S)														
1	L2	63	0.0	63	0.0	0.114	8.9	LOS A	0.4	2.7	0.69	0.83	0.69	39.5
Approach		63	0.0	63	0.0	0.114	8.9	LOS A	0.4	2.7	0.69	0.83	0.69	39.5
East: Horatio Street (E)														
5	T1	850	9.1	850	9.1	0.457	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.7
Approach		850	9.1	850	9.1	0.457	0.0	NA	0.0	0.0	0.00	0.00	0.00	49.7
West: Horatio Street (W)														
11	T1	714	9.9	714	9.9	0.386	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
Approach		714	9.9	714	9.9	0.386	0.2	NA	0.0	0.0	0.00	0.00	0.00	49.8
All Vehicles		1627	9.1	1627	9.1	0.457	0.4	NA	0.4	2.7	0.03	0.03	0.03	49.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Organisation: MCLAREN TRAFFIC ENGINEERING | Licence: PLUS / 1PC | Processed: Thursday, 14 July 2022 3:40:21 PM
Project: \\MTE_NAS1\MTE Storage\Jobs\2022\220486\MTE SIDRA\KFC Mudgee - MTE SIDRAs - 22 07 14.sip9

MOVEMENT SUMMARY

Site: 01a [01a-FUPM-Sensitivity - Horatio Street / KFC - Pt 1 (Entry) - Post-Development - 10Yr Growth - Sens (Site Folder: General)]

Network: 01 [04FUPM-Sensitivity - Horatio Street / KFC Mudgee - Future (Post-Development) + 10Yr Growth - Sensiti (Network Folder: MTE Revised SIDRA - 22 07 14)]

Horatio Street / KFC - Part 1 (Entry)
33 Horatio Street, Mudgee, NSW
2031 FUTURE (Post-Development) + 10-Year 2%p.a Growth PM - Sensitivity
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Horatio Street (E)														
4	L2	63	0.0	63	0.0	0.491	4.8	LOS A	0.0	0.0	0.00	0.04	0.00	47.2
5	T1	850	9.1	850	9.1	0.491	0.2	LOS A	0.0	0.0	0.00	0.04	0.00	49.2
Approach		913	8.5	913	8.5	0.491	0.6	NA	0.0	0.0	0.00	0.04	0.00	49.1
West: Horatio Street (W)														
11	T1	752	9.4	752	9.4	0.408	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
12	R2	63	0.0	63	0.0	0.120	9.5	LOS A	0.4	3.1	0.73	0.88	0.73	18.9
Approach		815	8.7	815	8.7	0.408	0.8	NA	0.4	3.1	0.06	0.07	0.06	48.6
All Vehicles		1728	8.6	1728	8.6	0.491	0.6	NA	0.4	3.1	0.03	0.05	0.03	48.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Organisation: MCLAREN TRAFFIC ENGINEERING | Licence: PLUS / 1PC | Processed: Thursday, 14 July 2022 3:40:37 PM
Project: \\MTE_NAS1\MTE Storage\Jobs\2022\220486\MTE SIDRA\KFC Mudgee - MTE SIDRAs - 22 07 14.sip9

MOVEMENT SUMMARY

Site: 01b [01b-FUPM-Sensitivity - Horatio Street / KFC - Pt 2 (Exit) - Post-Development - 10-Yr Growth - Sens (Site Folder: General)]

Network: 01 [04FUPM-Sensitivity - Horatio Street / KFC Mudgee - Future (Post-Development) + 10Yr Growth - Sensiti (Network Folder: MTE Revised SIDRA - 22 07 14)]

Horatio Street / KFC - Part 2 (Exit)
33 Horatio Street, Mudgee, NSW
2031 FUTURE (POST-Development) + 10-Year 2%p.a Growth PM - Sensitivity
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: KFC Exit Driveway (S)														
1	L2	126	0.0	126	0.0	0.227	9.4	LOS A	0.8	5.9	0.72	0.87	0.77	39.1
Approach		126	0.0	126	0.0	0.227	9.4	LOS A	0.8	5.9	0.72	0.87	0.77	39.1
East: Horatio Street (E)														
5	T1	850	9.1	850	9.1	0.457	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.7
Approach		850	9.1	850	9.1	0.457	0.0	NA	0.0	0.0	0.00	0.00	0.00	49.7
West: Horatio Street (W)														
11	T1	752	9.4	752	9.4	0.405	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
Approach		752	9.4	752	9.4	0.405	0.2	NA	0.0	0.0	0.00	0.00	0.00	49.8
All Vehicles		1728	8.6	1728	8.6	0.457	0.8	NA	0.8	5.9	0.05	0.06	0.06	48.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Organisation: MCLAREN TRAFFIC ENGINEERING | Licence: PLUS / 1PC | Processed: Thursday, 14 July 2022 3:40:37 PM
Project: \\MTE_NAS1\MTE Storage\Jobs\2022\220486\MTE SIDRA\KFC Mudgee - MTE SIDRAs - 22 07 14.sip9

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Division of RAMTRANS Australia ABN: 45067491678 RPEQ: 19457

Transport Planning, Traffic Impact Assessments, Road Safety Audits, Expert Witness

31 January 2023 Reference: 220486.03FA

The General Manager
Mid-Western Regional Council
86 Market Street, Mudgee
NSW 2850
Attention: Kayla Robson

FURTHER SUPPLEMENTARY TRAFFIC AND PARKING ADVICE, INCLUDING SUPPLEMENTARY KFC SURVEY DATA AND ANALYSIS FOR THE PROPOSED FAST FOOD RESTAURANT (KFC) AT 33 HORATIO STREET, MUDGEE

Dear Kayla,

McLaren Traffic Engineering has been engaged to provide supplementary traffic and parking advice with regard to the proposed fast food restaurant (DA0087/2022) at 33 Horatio Street, Mudgee, with the proposed plans depicted in **Annexure A** for reference. This advice is provided in response to the comments issued by Transport for NSW (TfNSW) within their letter addressed to Mid-Western Regional Council dated 25 November 2022, reproduced in **Annexure B**, with respect to DA0087/2022. The 25 November 2022 TfNSW letter was provided in response to supplementary information provided by McLaren Traffic Engineering in a letter dated 2 November 2022, (MTE Reference 220486.02FA). A copy of this letter is provided in **Annexure C** for reference.

The comments made by TfNSW relevant to traffic and parking in their November letter are shown below reproduced (*italicised*) and responded to in the following sections.

1 Analytic Queue Analysis

> *TfNSW has reviewed the additional information and is not satisfied that the information and supporting SIDRA modelling adequately addresses the potential queuing from KFC operations. Instead, it is requested that an amended TIA providing an analytic queue analysis be provided in accordance with the detail described in Attachment 1.*

As requested by TfNSW an analytic queue analysis has been undertaken with the results of this analysis provided in detail within this letter.

Attachment 1

Additional Required Information:

TfNSW recommends that an amended TIA be provided including a queueing analysis based on the following:

Attachment 1 of the November TfNSW letter requested seven (7) items of data collection and analysis. The conclusions provided in **Section 9** summarise the results of the data analysis and **Section 10** outlines the resulting implications for the proposed KFC Restaurant at 33 Horatio Street, Mudgee. The raw data is provided in **Annexure D** for reference.

2 Detailed Traffic Surveys

1. *Three (3) days traffic counts for entry and exit driveways, being Thursday, Friday and Saturday, during the midday and evening peaks at existing comparable KFC restaurants (e.g. existing Mudgee restaurant and another regional KFC (e.g. Singleton, Cowra).*

Three (3) days of detailed traffic, parking, drive-through and length-of-stay surveys of two (2) comparable regional KFC restaurants, being KFC Mudgee (107-111 Church Street, Mudgee, NSW) and KFC Lithgow (1030/1040 Great Western Highway, Bowenfels, NSW) have been undertaken. **Figure 1** and **Figure 2** on the following page provide snapshots of the extent of the data collection for each of the sites.

The KFC Lithgow site was selected as a comparable site for the purposes of this analysis due to its similar position on a NSW regional highway (Great Western Highway), similarities in sales figures and relative proximity to the proposed KFC Mudgee restaurant. It is noted that KFC Lithgow is situated approximately 9 kilometres south of the southern termination of the Castlereagh Highway. The applicant does not have a working commercial relationship with the owners of KFC Singleton or KFC Cowra and as a result, surveys of these sites were not possible. Regardless, KFC Lithgow is considered the most appropriate comparable site, as it is situated on the same regional travel routes serving the western NSW region and has similar sales figures to the KFC Mudgee store.

The surveys were undertaken between 11:00 AM – 2:00 PM (Lunch/Midday Peak) and 4:00 PM – 8:00 PM (Dinner/Evening Peak) at both stores on the following dates:

- Thursday 8th December 2022;
- Friday 9th December 2022;
- Saturday 10th December 2022.

A full copy of all the raw survey data collected is provided in **Annexure D** for reference.

As discussed in **Section 2.1**, Thursday 8th December has been identified as the 99th percentile trading day in terms of transactions during 2022, and Friday the 9th December identified as the 94th percentile trading day, and therefore the survey data collected from the KFC Mudgee store on the Thursday represent a maximum peak trading day during 2022.

Site Snapshot and Survey Locations:

FIGURE 1: KFC MUDGEE SURVEYS

Site | Driveway Surveys | Drive-Through (Approx Queue) | On-Street Parking Areas

FIGURE 1: KFC MUDGEE SURVEY OVERVIEW

Site Snapshot and Survey Locations:

FIGURE 2: KFC LITHGOW SURVEYS

Site | Driveway Surveys | Drive-Through (Approx Queue) | On-Street Parking Areas | Adjacent Vacant Lot

FIGURE 2: KFC LITHGOW SURVEY OVERVIEW

2.1 12-Month Sales Data Comparison

As part of this analysis and study, sales data from the KFC Mudgee store was made available in order to establish a comparison of the stores sales results on the surveyed days to other peak trading periods during the year. The hourly sales data from every Thursday, Friday and Saturday from the 1 January 2022 until 14 January 2023 was obtained, resulting in 163 days of sales data. The daily and hourly sales of KFC Mudgee over the last 12-months were compared to the sales figures from the survey period, with the following facts identified:

- Thursday 8 December 2022 was a 99th percentile day in terms of daily sales, with 766 total transactions recorded during the day;
- Friday 9 December 2022 was a 94th percentile day in terms of daily sales, with 737 total transactions recorded;
- Saturday 10 December 2022 was a 37th percentile day in terms of daily sales, with 608 transactions recorded, noting that:
  - This was the 11th busiest Saturday in 2022; the busiest Saturday in 2022, was a 62nd percentile day, recording 653 transactions.
  - 62 other Thursday's and Friday's during 2022 recorded more transactions than the peak Saturday trading day (653 transactions), indicating that Saturday is not a peak trading day for the subject KFC store.
- Thursday 8 December 2022 recorded the 99th percentile peak lunch-time trading hour between recording 111 transactions within a one-hour period (12pm – 1pm). It is noted the busiest dinner trading hour in 2022 only recorded 108 transactions.
- Friday 9 December 2022 recorded the 92nd percentile peak dinner time trading hour, recording 89 transactions within a one-hour period.

As can be seen from the above summary of the 12-month sales data from the KFC Mudgee store, the surveys were undertaken during the peak trading period of the KFC store. It is noted that it is the standard traffic engineering approach to design in order to accommodate the 85th percentile demand of a subject site in the vast majority of circumstances. As such, the results of the surveys presented in the following sections represent a very conservative approach, going beyond the standard 85th percentile design approach.

Sales figures for the KFC Lithgow restaurant are unavailable, as the store is owned and operated by a separate entity to the owners of the KFC Mudgee restaurant, and the required data was unable to be shared for comparison.

3 Flow Rate / Servicing Rate of drive-through traffic

2. *Flow rate / servicing rate of drive-thru traffic.*

Detailed surveys were undertaken of the drive-through operation of both the KFC Mudgee and KFC Lithgow stores, collecting independent survey data of the servicing times and throughput (total number of vehicles served) across the entire survey period.

Table 1 below summarises the peak drive-through, throughput during the survey period.

TABLE 1: DRIVE-THROUGH PEAK THROUGHPUT OBSERVED

KFC Store	Throughput	Thursday (8th Dec 22)	Friday (9th Dec 22)	Saturday (10th Dec 22)
KFC Mudgee	Peak Throughput	79 veh	71 veh	60 veh
	Peak Hour	12-1pm (**Lunch**)	6-7pm (**Dinner**)	12-1pm (**Lunch**)
KFC Lithgow	Peak Throughput	68 veh	55 veh	49 veh
	Peak Hour	12-1pm (**Lunch**)	6-7pm (**Dinner**)	6-7pm (**Dinner**)

As can be seen above, the peak drive-through throughput (i.e. number of vehicles served) observed in any hour, was **79** vehicles on Thursday the 8 December 2022 at Mudgee KFC between 12-1pm. The peak throughput of the KFC Lithgow store was observed to be **68** vehicles on Thursday the 8 December 2022 between 12-1pm.

It is noted that the peak queue length of 10 vehicles at KFC Mudgee occurred at 12:10pm on Thursday 8 December and that this Thursday represented the 99th percentile trading day during 2022 for the subject store.

4 Peak hour volume provided in 15-min intervals

3. *Peak hour volume provided in 15-min intervals.*

Table 2 on the following page, provides a summary of the peak 15-minute traffic generation observed for both sites and **Table 3** provides a summary of the peak-hour (60-minute) traffic generation. These traffic generation rates have been calculated based on surveys recording the entry and exit movements from each driveway associated with the subject sites, with the full results (separated by driveway) provided in **Annexure D**.

The breakdown of turning movements from the surveys in 15-minute intervals is provided within the turning movement survey data in **Annexure D**.

TABLE 2: SITE PEAK 15-MIN TRAFFIC GENERATION

KFC Store	Peak	Thursday (8th Dec 22)	Friday (9th Dec 22)	Saturday (10th Dec 22)
KFC Mudgee	Site Peak Traffic Gen	**60** (34 in, 26 out)	**50** (23 in, 27 out)	**46** (23 in, 23 out)
	Site Peak Hour	12:00 – 12:15pm	1:00 – 1:15pm & 1:15 – 2:00pm	12:15 – 12:30pm
KFC Lithgow	Site Peak Traffic Gen	**71** (35 in, 36 out)	**69** (33 in, 36 out)	**48** (26 in, 22 out)
	Site Peak Hour	12:00 – 12:15pm	6:00 – 6:15pm	12:15 – 12:30pm

As shown above the peak 15-minute traffic generation for KFC Mudgee, is **60** (34 in, 26 out) vehicle trips, which occurs during the Thursday lunch period, from 12:00 – 12:15pm. The peak 15-minute traffic generation for KFC Lithgow is also during the Thursday lunch period, generating **71** trips (35 in, 36 out).

TABLE 3: SITE PEAK HOUR (60-MIN) TRAFFIC GENERATION

KFC Store	Peak	Thursday (8th Dec 22)	Friday (9th Dec 22)	Saturday (10th Dec 22)
KFC Mudgee	Site Peak Traffic Gen	**211** (107 in, 104 out)	**183** (92 in, 91 out)	**149** (76 in, 73 out)
	Site Peak Hour	11:45am – 12:45pm	12:30 – 1:30pm	12:00 – 1:00pm
KFC Lithgow	Site Peak Traffic Gen	**236** (118 in, 118 out)	**211** (105 in, 106 out)	**175** (87 in, 88 out)
	Site Peak Hour	12:00 – 1:00pm	5:30 – 6:30pm	12:00 – 1:00pm

As shown above, the site peak traffic generation for KFC Mudgee, was **211** (107 in, 104 out) vehicle trips during the Thursday lunch period, from 11:45am – 12:45pm. The peak site traffic generation for KFC Lithgow was also during the Thursday lunch period, generating **236** trips (118 in, 118 out).

Considering the above analysis, it can be identified that KFC Lithgow is slightly busier than the KFC Mudgee store in terms of traffic generation. Both stores achieve their peak traffic generation during the Thursday lunch period with Friday being slightly lower in terms of traffic generation and Saturday being lower still in terms of its traffic generation. It is noted that typically the peak traffic generation for the sites was observed to occur during the lunch time peak (12-1pm), though on occasion the daily peak traffic generation aligned with the dinner peak period.

It should be noted that the SIDRA analysis undertaken as part of the 2 November letter assessed a traffic generation greater than what has been identified in the above surveys, in addition to the application of a 10-year growth (20% increase) in through traffic along Horatio Street. With the above traffic generation considered, it can be concluded that the site driveways to Horatio Street, will operate satisfactorily, as per the results outlined in the 2 November 2022 letter.

5 Volumes of dine-in and drive-through vehicles

4. Volumes of dine-in and drive-thru vehicles.

The traffic surveys also recorded the behaviour of every vehicle that entered the subject site, including whether the vehicle utilised the drive-through or parked and dined within the store (dine-in). **Table 4** provides a summary of the number of vehicles recorded that utilised either the "dine-in" option or the "drive-through" and provides the percentage split between the two.

TABLE 4: DRIVE-THROUGH V DINE-IN VOLUMES (ENTIRE SURVEY PERIOD)

KFC Store	Peak	Thursday (8th Dec 22)	Friday (9th Dec 22)	Saturday (10th Dec 22)
KFC Mudgee	Drive-Through	**428** (79%)	**410** (84%)	**333** (77%)
	Dine-In	**111** (21%)	**73** (16%)	**100** (23%)
KFC Lithgow	Drive-Through	**273** (78%)	**323** (84%)	**270** (84%)
	Dine-In	**75** (22%)	**60** (16%)	**61** (16%)

As can be seen above, both stores have a similar split between drive-through and dine-in customers. It was observed that between **77% - 84%** of customers utilise the drive-through, and between **16% - 23%** of customers choose to dine-in. This indicates that the drive-through option is utilised by at least 3-in-4 vehicles that visit the site.

The distribution of sales between the drive-through and dine-in, as identified above, is generally consistent with the 12-month distribution of sales figures between the possible transaction options, as indicated in **Table 5**.

TABLE 5: KFC MUDGEE 2022 SALES METHOD DISTRIBUTION

Transaction Type	Delivery (1)	Drive-Through	Front Counter (Dine-in)
% of Total Transactions	1.3%	72.9%	25.9%

Note: (1) During portions of 2022, "Delivery" was a service option at the store, though this was discontinued towards to end of 2022, and is no longer offered as a service at KFC Mudgee.

As can be seen from the above, the KFC Mudgee store has a 12-month sales split of **72.9%** drive-through and **25.9%** dine-in transactions, which is generally consistent with the three-day traffic surveys undertaken at both sites. It should be noted that the drive-through had a greater proportion of traffic during the survey period than the long-term average, with between 76% - 79% of surveyed customers using the drive-through during the survey period.

6 Maximum drive-through queue length

5. *Maximum drive-thru queue length during the peak (including beyond property boundary, if applicable).*

The traffic surveys recorded the maximum queue length of the drive-through at 2-minute intervals during the entire survey period, including any instance where the queue extended beyond the property boundary and onto the road. The maximum queue lengths recorded during the survey periods for each site, are summarised below in **Table 6**.

TABLE 6: DRIVE-THROUGH MAXIMUM QUEUE LENGTH

KFC Store	Period	Thursday (8th Dec 22)	Friday (9th Dec 22)	Saturday (10th Dec 22)
KFC Mudgee	Lunch (11am-2pm)	10 (12:10pm)	9	7
	Dinner (4pm-8pm)	7	5	9
KFC Lithgow	Lunch (11am-2pm)	8	9	7
	Dinner (4pm-8pm)	10 (5:54pm)	10 (6:08pm, 7:26pm)	8
Maximum Queue		10 Vehicles		

As can be seen above, the maximum queue observed at any time during the three survey days, across the two sites was **10** vehicles. This occurred during four periods, once at KFC Mudgee at 12:10pm on 8 December, and three times at KFC Lithgow being on 8 December 2022 at 5:54pm and 9 December 2022 at 6:08pm and 7:26pm.

As identified earlier, the Thursday 8 December was representative of the 99th percentile trading day during 2022 and the lunch-time peak hour between 12pm-1pm was also the 99th percentile lunch time peak trading hour during 2022. Therefore, the resultant 10 vehicle queue length can be considered the absolute worst case maximum queue for the KFC Mudgee site.

Figure 3 and **Figure 4** on the following page, shows the queue length records of both stores at 2-minute intervals across the three survey days.

It is noted that as part of the surveys, the number of vehicles that were re-directed to a "waiting-bay" was recorded and it is noted that this function was not heavily relied upon at both stores, with the results summarised in **Table 7.** With a greater utilisation of waiting bays, the queue lengths are likely to be able to further reduced at the existing stores0..

TABLE 7: WAITING BAY USAGE RATES (NO OCCURANCES PER DAY)

Period	Thursday (8th Dec 22)	Friday (9th Dec 22)	Saturday (10th Dec 22)
KFC Mudgee	1 (0.2%)	9 (2.3%)	1 (0.3%)
KFC Lithgow	1 (0.4%)	0 (0%)	2 (0.8%)

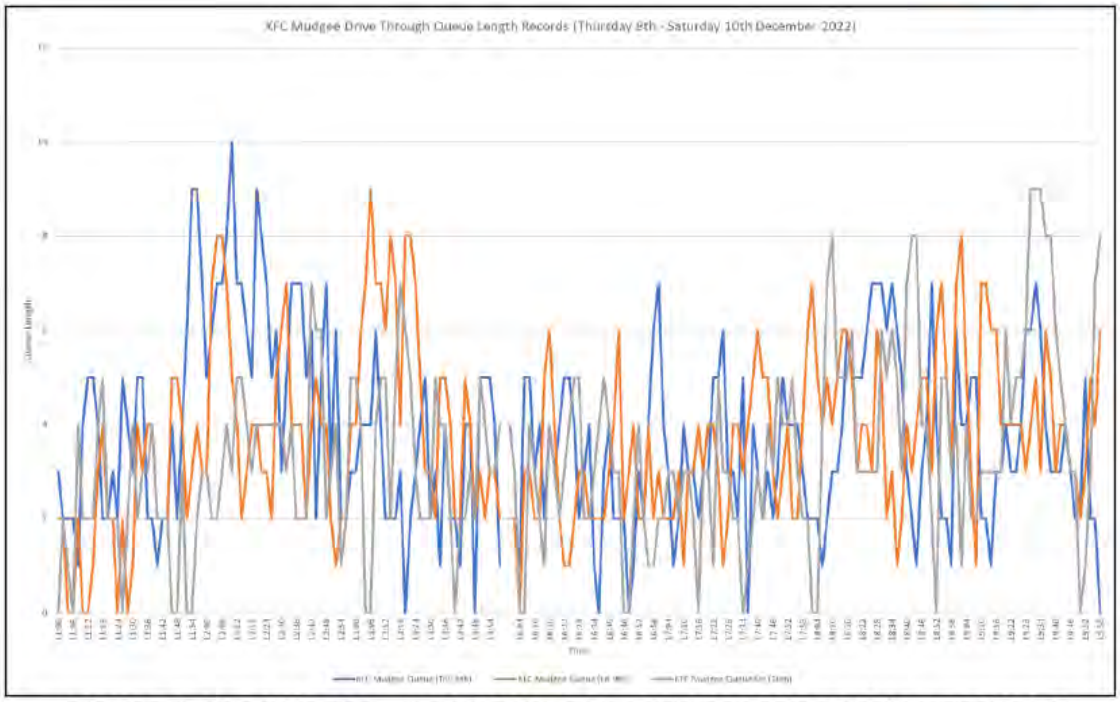


FIGURE 3: KFC MUDGEE – 3-DAY QUEUE LENGTH RECORDS (2MIN INTERVALS)

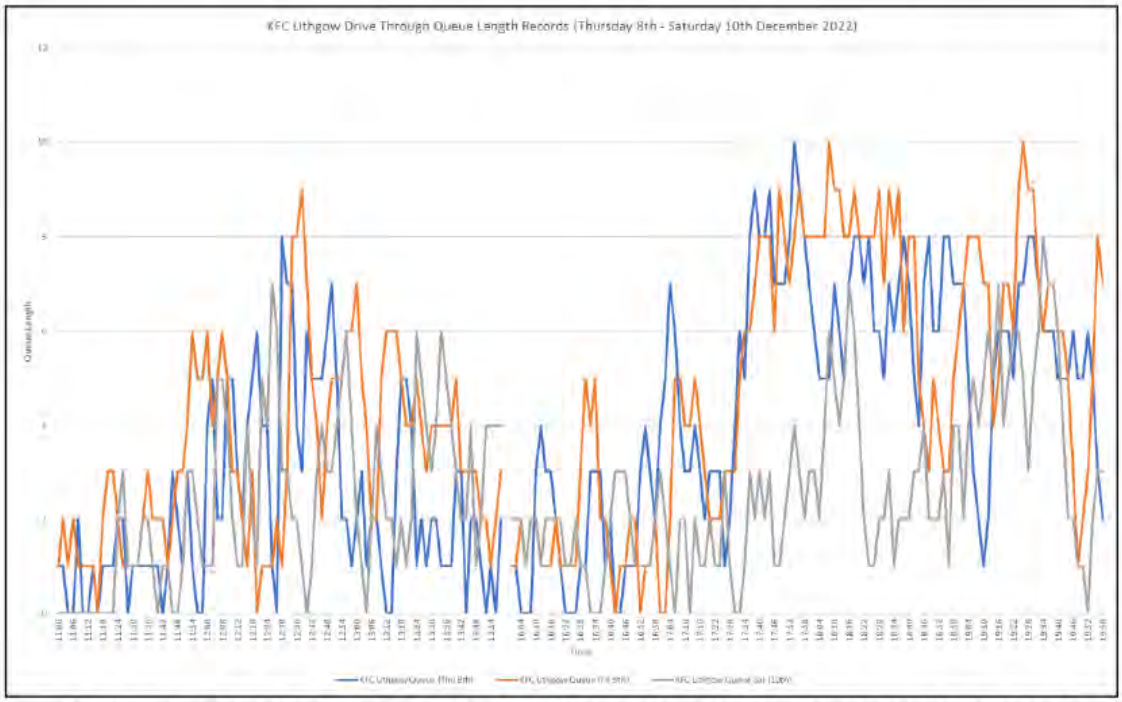


FIGURE 4: KFC LITHGOW – 3-DAY QUEUE LENGTH RECORDS (2MIN INTERVALS)

As can be seen above, the queue lengths of both stores varies across a typical peak trading day, with a median queue length of three (**3**) vehicles recorded across all survey results (both sites combined), and an 85th percentile queue length result of six (**6**) vehicles across all survey results (both sites combined).

7 Maximum and average order length

6. *Maximum and average order length (mins) – even if redirected to a parking bay.*

As requested, a detailed independent analysis has been undertaken of the drive-through operations, including the maximum and average order time, herein referred to as the service time. The surveys identified the arrival and departure times from three points within the drive-through, which included:

- Arrival at the end of the queue (Point 1);
- Arrival and departure times from the Order Point (Point 2);
- Arrival and departure times from the Collection Point (Point 3);
- It was also noted if a vehicle was moved to a waiting bay or if that vehicle parked within the carpark after receiving their food items. The additional time required for these vehicles has been included within the service time results.

The results of drive-through service time (the time taken from arriving at the end of the queue until the time the food items are collected) are summarised in **Table 8** and **Table 9**.

TABLE 8: DRIVE-THROUGH SERVICE TIME – LUNCH TIME (11AM-2PM)

KFC Store	(MM:SS)	Thursday (8th Dec 22)	Friday (9th Dec 22)	Saturday (10th Dec 22)
KFC Mudgee	Average	2:21	2:17	2:51
	85th Percentile	3:22	3:12	3:51
	Maximum	5:43	8:03	9:03
KFC Lithgow	Average	2:25	3:58	3:52
	85th Percentile	3:09	5:31	5:09
	Maximum	4:39	8:52	6:44

TABLE 9: DRIVE-THROUGH SERVICE TIME – DINNER TIME (4PM-8PM)

KFC Store	(MM:SS)	Thursday (8th Dec 22)	Friday (9th Dec 22)	Saturday (10th Dec 22)
KFC Mudgee	Average	2:13	2:23	3:00
	85th Percentile	3:23	3:17	4:33
	Maximum	6:18	7:22	8:56
KFC Lithgow	Average	7:12	5:32	3:51
	85th Percentile	10:54	8:23	5:58
	Maximum	14:23	10:08	12:19

As can be seen above, the KFC Mudgee store has an average service time of between **2 minutes 17 seconds** and **2 minutes 51 seconds** during the lunchtime period and between **2 minutes 13 seconds** and **3 minutes** during the dinner time period. The absolute maximum service time recorded for any vehicle at the KFC Mudgee drive-through was 9 minutes and 3 seconds, during lunchtime on the Saturday. It is noted that this is an outlier, as the 85th percentile service time recorded on that day was substantially less at 3 minutes 51 seconds.

The KFC Lithgow store has a slightly higher average servicing time of between **2 minutes 25 seconds** and **3 minutes 52 seconds** during the lunch period and between **3 minutes 51 seconds** and **7 minutes 12 seconds** during the dinner period. The absolute maximum service time recorded for any vehicle at the KFC Lithgow drive-through was 14 minutes 23 seconds. It is noted that the higher service times recorded on Thursday 8 December 2022 at the KFC Lithgow store are higher than expected, and it is anticipated that other issues such as staff shortages or equipment malfunctions may have partly been responsible for the extensive drive-through delays during this day.

It is noted that even with the long service times recorded on Thursday 8 December at the KFC Lithgow store, the drive-through queue did not extend beyond 10-vehicle lengths. Indicating that even with long service times, this does not always result in extensive drive-through queues.

8 Parking turnover rate

7. *Parking turnover rate in 15-min intervals during peak hour.*

The surveys also captured the peak parking demand on-site and along the immediate site frontage, at 15-minute intervals. The site frontage was included, as it was identified that on occasion some drivers do park on-street, particularly if they are a large vehicle or if they are towing a trailer or caravan. The below peak parking demand includes the observed on-street parking used by customers of the KFC stores.

Table 10 below summarises the peak parking demand across each period of the survey.

TABLE 10: PEAK PARKING DEMAND (INCLUDING ON-STREET CUSTOMER PARKING)

KFC Store	Period	Thursday (8th Dec 22)	Friday (9th Dec 22)	Saturday (10th Dec 22)
KFC Mudgee	Lunch (11am-2pm)	14	12	9
	Dinner (4pm-8pm)	10	9	13
KFC Lithgow	Lunch (11am-2pm)	12	11	12
	Dinner (4pm-8pm)	12	12	10
Maximum Parking Demand		14 Vehicles		

As shown above, the peak parking demand across both sites was **14** vehicles, which occurred on Thursday 8 December during the lunch peak. It is again noted that the Thursday Lunch time peak is the 99th percentile peak hour for the KFC Mudgee store and therefore represents the worst-case demand.

Further, the length of stay of dine-in customer vehicles parked on-site were also recorded, with a summary provided in **Table 11**.

TABLE 11: AVERAGE LENGTH OF STAY ON-SITE – DINE-IN

KFC Store	(MM:SS)	Thursday (8th Dec 22)	Friday (9th Dec 22)	Saturday (10th Dec 22)
KFC Mudgee	Lunch (11am-2pm)	12:30	13:18	12:21
	Dinner (4pm-8pm)	11:09	14:42	14:05
KFC Lithgow	Lunch (11am-2pm)	14:23	16:59	25:44
	Dinner (4pm-8pm)	18:01	16:10	19:59

As can be seen above, dine-in customers spend on average between **11 minutes** and **15 minutes** at the KFC Mudgee store and between **14 minutes** and **26 minutes** at the KFC Lithgow store.

9 Conclusions from Survey Results

Based upon the extensive, three-day traffic, parking and drive-through surveys undertaken of two comparable KFC stores (KFC Mudgee and KFC Lithgow), the following conclusions can be made:

- The surveys undertaken captured the 99th percentile operating day for the KFC Mudgee store, resulting in the identification of the worst-case results for that site.
- The peak period was identified as Thursday lunchtime (typically 12pm-1pm)
- The maximum observed drive-through of queue across both sites was identified as **10** vehicles.
- The peak parking demand across both sites was identified as **14** vehicles.
- It was observed that between **76% - 84%** of customers utilise the drive-through, and between **16% - 23%** of customers choose to dine-in across both stores during the survey.
- The peak drive-through throughput was observed to be **79** vehicles per hour at the KFC Mudgee store during Thursday;
- The peak traffic generation of KFC was **236** (118 in, 118 out) vehicles per hour, as identified at the KFC Lithgow store and **211** (107 in, 104 out) vehicles per hour at the KFC Mudgee store.

Given the conservative nature of these surveys (capturing the 99th percentile sales day for the Mudgee Restaurant) and the general consistency in the results observed across the KFC Mudgee and KFC Lithgow stores, adopting the above parameters for the design of the proposed KFC Mudgee is considered appropriate and conservative.

10 Evaluation of Proposal

Given the above data and analysis, **Table 12** compares the peak parking and drive-through demand for the site against the proposed provision within the proposed KFC Mudgee on Horatio Street.

TABLE 12: COMPARISION OF DEMAND VS PROVISION

Criteria	Demand	Proposed Provision	Assessment
Drive-Through Queuing Capacity	10	15	**Exceeds Demand**
On-Site Parking	14	23	**Exceeds Demand**

Using the results of the surveys of the two comparable KFC stores, the design outcomes of the proposed KFC Mudgee have been evaluated, with the following outcomes:

- The proposed KFC site provides **23** on-site car parking spaces which exceeds the demand for on-site parking of **14** spaces. A total of nine (**9**) additional car parking spaces are provided above the expected peak parking demand of the site.
- The proposed KFC is expected to have a maximum drive-through queue length of **10** vehicles. The proposed development has the ability to accommodate up to **15** vehicles before having any impact on Horatio Street.
- Given the above, it is unreasonable to conclude that the drive-through queue will have any impact on Horatio Street, with the entire queue during the absolute peak periods being able to be accommodated on-site.
    - It is noted that up to nine (**9**) vehicles can be accommodated within the drive-through queue before there is any interaction of the queue with on-site parking areas.
    - It is noted, that across all the surveys, the peak queue length of 10 vehicles occurred for no more than two (**2**) minutes at a time. It was observed that this peak queue was not sustained or long lasting.
    - If required by Council / TfNSW, during peak periods 1-2 of the on-site car parking spaces (spaces 6-7) can be restricted to ensure there is no interaction between the drive-through queue of 10 vehicles and the parked vehicles in these spaces. This can be implemented under a plan of management, if necessary.
- The SIDRA analysis previously conducted for the subject site (2 November 2022 letter) has already assessed a peak traffic generation greater than that identified during the above surveys. This analysis assessed a peak traffic generation of 240 vehicle trips per hour with consideration to a 10-year growth scenario (i.e., with a 20% (2% p.a.) growth of two-way traffic along Horatio Road, Mudgee):
    - The results of this analysis indicated all turn movements operated at a Level of Service "A" or "B", resulting in a satisfactory performance for the proposed entry and exit driveways as well as turning movements into the site from Horatio Street.
- The applicant will provide at least two (2) dedicated "waiting-bays" on-site, utilising the surplus available car parking, to assist with the management of the drive-through queues. A general concept plan for where these "waiting-bays" could be located is provided in **Annexure E** for reference.

In light of the above, the subject proposal will not have an adverse impact on the subject Classified Road due to any delays created on-site by queueing or otherwise.

Please contact the undersigned on 9521 7199 should you require further information or assistance.

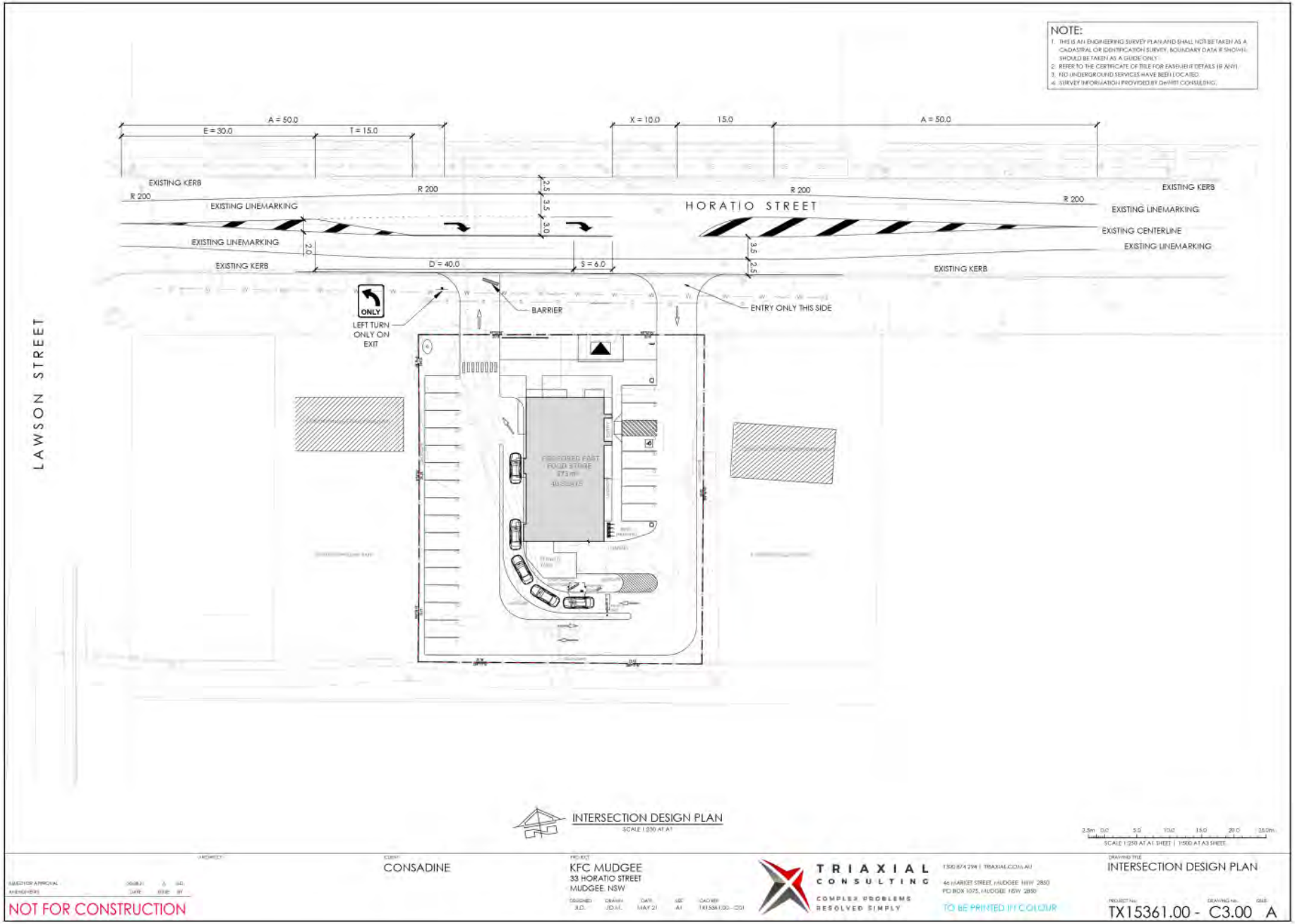
Yours faithfully,
McLaren Traffic Engineering

Tom Steal
Senior Traffic Engineer
BE Civil AMAITPM MIEAust
RMS Accredited Level 2 Road Safety Auditor

Aaron Tomlins
Traffic Engineer
BE(Hon)(Civil Engineering)/BCom
Accredited Level 1 Road Safety Auditor
AMAITPM GradIIEAust

McLaren
Traffic Engineering &
Road Safety Consultants

ANNEXURE A: PLANS
(1 SHEET)


NOTE:
1. THIS IS AN ENGINEERING SURVEY PLAN AND SHALL NOT BE TAKEN AS A CADASTRAL OR IDENTIFICATION SURVEY. BOUNDARY DATA IF SHOWN, SHOULD BE TAKEN AS A GUIDE ONLY.
2. REFER TO THE CERTIFICATE OF TITLE FOR EASEMENT DETAILS (IF ANY).
3. NO UNDERGROUND SERVICES HAVE BEEN LOCATED.
4. SURVEY INFORMATION PROVIDED BY DeWITT CONSULTING.
A = 50.0
E = 30.0
T = 15.0
X = 10.0
15.0
A = 50.0
EXISTING KERB
R 200
EXISTING LINEMARKING
HORATIO STREET
EXISTING CENTERLINE
D = 40.0
S = 6.0
ONLY
LEFT TURN ONLY ON EXIT
BARRIER
ENTRY ONLY THIS SIDE
LAWSON STREET
INTERSECTION DESIGN PLAN
SCALE 1:250 AT A1
SCALE 1:250 AT A1 SHEET | 1:500 AT A3 SHEET
CONSADINE
KFC MUDGEE
33 HORATIO STREET
MUDGEE, NSW
TRIAXIAL CONSULTING
COMPLEX PROBLEMS RESOLVED SIMPLY
TO BE PRINTED IN COLOUR
INTERSECTION DESIGN PLAN
NOT FOR CONSTRUCTION
TX15361.00 - C3.00 A

McLaren
Traffic Engineering &
Road Safety Consultants

ANNEXURE B: TFNSW LETTER
(2 SHEETS)

Transport for NSW

NSW GOVERNMENT

25 November 2022

TfNSW reference: WST20/00084/08

The General Manager
Mid-Western Regional Council
86 Market Street
MUDGEE NSW 2850

Attention: Ms Kayla Robson

Dear Kayla

DA0087/2022: LOT 2 & 3 DP743615; 33-35 Horatio Street, Mudgee 2850 NSW
Demolition of Dwelling and Development of Food and Drink Premises

I refer to email received 2 November 2022 from Aaron Tomlin, McLaren Traffic Engineering, providing additional information to Transport for NSW (TfNSW) for the proposed food and drink premises (KFC restaurant) at 33-35 Horatio Street, Mudgee.

TfNSW has reviewed the additional information and is not satisfied that the information and supporting SIDRA modelling adequately addresses the potential queuing from KFC operations. Instead, it is requested that an amended TIA providing an analytic queue analysis be provided in accordance with the detail described in **Attachment 1**.

If you have any questions, please contact Ridwan Quaium, on 0417 438 998 or email development.west@transport.nsw.gov.au.

Yours faithfully

Kylie-Anne Pont

Kylie-Anne Pont
Team Leader Development Services
West Region

Transport for NSW

NSW GOVERNMENT

Attachment 1

DA0087/2022: LOT 2 & 3 DP743615; 33-35 Horatio Street, Mudgee 2850 NSW
Demolition of Dwelling and Development of Food and Drink Premises

Context

Following TfNSW correspondence dated 13 September 2022, the proponent provided further information for TfNSW review and comment including the following:

- Response letter addressing concerns raised by TfNSW in correspondence letter dated 13 September 2022,
- An electronic SIDRA model adjusted to reflect a 5km/h exit cruise speed with every approaching vehicle stopped for 15 seconds upon entry to the site, and,
- Provision of three (3) draft amended designs with full reconfigured site layout to accommodate more on-site queuing space.

Additional Required Information

TfNSW recommends that an amended TIA be provided including a queuing analysis based on the following:

1. Three (3) day traffic counts for entry and exit driveways, being Thursday, Friday and Saturday, during midday and evening peaks at existing comparable KFC restaurants (e.g. existing Mudgee restaurant and another regional KFC (e.g. Singleton, Cowra).
2. Flow rate / serving rate of drive-thru traffic.
3. Peak hour volume provided in 15min intervals.
4. Volumes of dine in and drive-thru vehicles.
5. Maximum drive-thru queue length during the peak (including beyond property boundary, if applicable)
6. Maximum and average order length (mins) – even if redirected to a parking bay.
7. Parking turnover rate in 15min intervals during peak hour.

Additional Comment

1. Should the application be amended to include a new internal layout, TfNSW recommends that the configuration should be designed to accommodate the required queuing capacity (in accordance with the amended TiA addressing the points above), safe pedestrian access and on-site circulation.

McLaren
Traffic Engineering &
Road Safety Consultants

ANNEXURE C: 2 NOVEMBER 2022 SUPPLEMENTARY TRAFFIC AND PARKING ADVICE LETTER

(30 SHEETS)

M^C^LAREN TRAFFIC ENGINEERING

Address: Shop 7, 720 Old Princes Highway Sutherland NSW 2232
Postal: P.O Box 66 Sutherland NSW 1499

Telephone: (02) 9521 7199
Web: www.mclarentraffic.com.au
Email: admin@mclarentraffic.com.au

Division of RAMTRANS Australia ABN: 45067491678 RPEQ: 19457

Transport Planning, Traffic Impact Assessments, Road Safety Audits, Expert Witness

2 November 2022 Reference: 220486.02FA

The General Manager
Mid-Western Regional Council
86 Market Street, Mudgee
NSW 2850
Attention: Kayla Robson

SUPPLEMENTARY TRAFFIC AND PARKING ADVICE FOR THE PROPOSED FAST FOOD RESTAURANT (KFC) AT 33 HORATIO STREET, MUDGEE

Dear Kayla,

McLaren Traffic Engineering has been engaged to provide traffic and parking advice with regard to the proposed fast food restaurant (DA0087/2022) at 33 Horatio Street, Mudgee, with the proposed plans depicted in **Annexure A** for reference. This advice is provided in response to the comments issued by Transport for NSW (TfNSW) within their letter addressed to Mid-Western Regional Council dated 13 September 2022, reproduced in **Annexure B**, with respect to DA0087/2022 in response to a *Peer Review and Supplementary Traffic Advice* letter prepared by *McLaren Traffic Engineering* (**MTE Supplementary Traffic Advice Letter**), dated 15 July 2022 (MTE Reference: 220486.01FA). The comments made by TfNSW relevant to traffic and parking in their September letter are shown below reproduced (*italicised*) and responded to in the following Sections.

1 Traffic Generation Assumption

> *TfNSW has reviewed the peer review and supplementary traffic advice provided on 15 July 2022, including the electronic (SIDRA) analysis. It is understood that the traffic-generation rates for the proposed development assumes 60 vehicle trips entering the site in the PM peak period which results in one vehicle arriving on site every minute (on average). A worst-case scenario (being the 10 year horizon) doubles these figures (i.e. assumes 120 trips being 1 vehicle every 30secs).*

It is noted that TfNSW has misinterpreted the traffic analysis presented in the MTE Supplementary Traffic Advice Letter in the above statement. The 'worst-case' scenario assessed was in fact Scenario 3. The scenario where the site's traffic generation was doubled to assume 120 inbound vehicle trips (Scenario 4) which was a Sensitivity Test, not a representation of the realistic worst-case scenario. The subject KFC will not generate 120 inbound vehicle trips during any peak hour, thus this assessment is highly conservative and only provided for the purpose of a sensitivity analysis.

2 Accuracy of SIDRA Modelling

The intersection layout of each scenario in SIDRA provides for free-flowing traffic on exit of the intersection (i.e. onto the site) resulting in Level of Service A and no queues. TfNSW suggests that this layout and conclusions of the scenario are inaccurate as influences like reduction in speed from public road to the site, driveway design, shared access for drive-thru and parking services and internal drive-thru queuing are all relevant influences that would restrict the free-flow of traffic and would result in on-site delays. In addition, TfNSW suggests that the site is physically incapable of accommodating 60 trips across the peak hour, even when a practical split between drive-thru and dine-in services are assumed. Overall, queues within the classified road network are likely due to on-site blockages.

2.1 Adjustment of Model to Account for Reduced Entry Speed

In the first instance, the SIDRA model has been adjusted to reflect a 5km/h exit cruise speed. The results of this amended model are summarised in **Table 2** and **Table 3**, with the detailed results provided in **Annexure C** for reference.

TABLE 1: AM DRIVEWAY PERFORMANCE (SIDRA INTERSECTION 9.0)

Scenario	Degree of Saturation(1)	Turn Movement	Average Delay(2) (sec/vehicle)	Level of Service(3)(4)	95th Percentile Queue veh (m)
Scenario 1: 2021 Existing(5)	0.314	RHT-IN	10.9	A	0 (0m)
		LHT-IN	14.0	A	0 (0m)
		LHT-OUT	2.4	A	0 (0m)
		EB	0.1	A	0 (0m)
		WB	0.1	A	0 (0m)
Scenario 2: 2021 Future (Post-Development)	0.330	RHT-IN	11.3	A	0.1 (1m)
		LHT-IN	14.1	A	0 (0m)
		LHT-OUT	2.7	A	0.3 (1.9m)
		EB	0.1	A	0 (0m)
		WB	0.1	A	0 (0m)
Scenario 3: 2031 Growth + Future (Post-Development)	0.396	RHT-IN	12.3	A	0.2 (1.1m)
		LHT-IN	14.1	A	0 (0m)
		LHT-OUT	3.7	A	0.3 (2.2m)
		EB	0.2	A	0 (0m)
		WB	0.2	A	0 (0m)
Scenario 4: Sensitivity Testing	0.415	RHT-IN	12.8	A	0.3 (2.4m)
		LHT-IN	14.1	A	0 (0m)
		LHT-OUT	3.9	A	0.6 (4.5m)
		EB	0.2	A	0 (0m)
		WB	0.2	A	0 (0m)

Notes:

(1) The Degree of Saturation is the ratio of demand to capacity for the most disadvantaged movement.
(2) The average delay is the delay experienced on average by all vehicles. The value in brackets represents the delay to the most disadvantaged movement.
(3) The Level of Service is a qualitative measure of performance describing operational conditions. There are six levels of service, designated from A to F, with A representing the best operational condition and level of service F the worst.
(4) The Level of Service of the worst approach is an indicator of the operation of the intersection, with a worse Level of Service corresponding to long delays and reduced safety outcomes for that approach.
(5) The minimum input for any SIDRA movement is 1 vehicle, such that in Scenario 1, the RHT-IN, LHT-IN and LHT-OUT, are the results based upon a single movement.

TABLE 2: PM DRIVEWAY PERFORMANCE (SIDRA INTERSECTION 9.0)

Scenario	Degree of Saturation(1)	Turn Movement	Average Delay(2) (sec/vehicle)	Level of Service(3)(4)	95th Percentile Queue veh (m)
Scenario 1: 2021 Existing(5)	0.381	RHT-IN	11.8	A	0 (0m)
		LHT-IN	14.1	A	0 (0m)
		LHT-OUT	3.3	A	0 (0m)
		EB	0.1	A	0 (0m)
		WB	0.2	A	0 (0m)
Scenario 2: 2021 Future (Post-Development)	0.398	RHT-IN	12.4	A	0.2 (1.1m)
		LHT-IN	14.1	A	0 (0m)
		LHT-OUT	3.7	A	0.3 (2.2m)
		EB	0.1	A	0 (0m)
		WB	0.2	A	0 (0m)
Scenario 3: 2031 Growth + Future (Post-Development)	0.474	RHT-IN	14.2	A	0.2 (1.4m)
		LHT-IN	14.1	A	0 (0m)
		LHT-OUT	5.5	A	0.4 (2.7m)
		EB	0.2	A	0 (0m)
		WB	0.2	A	0 (0m)
Scenario 4: Sensitivity Testing	0.491	RHT-IN	14.9	B	0.4 (3.1m)
		LHT-IN	14.2	A	0 (0m)
		LHT-OUT	6.0	A	0.8 (5.9m)
		EB	0.2	A	0 (0m)
		WB	0.2	A	0 (0m)

The amended model takes into consideration the reduction in speed required for vehicles entering the site. As shown above, all movements into and out of the proposed development operate at a high level of efficiency generally with a level of service "A", which are the highest level of service that can be obtained for any movement. The level of service "A" and "B" performance is characterised by low approach delays and spare capacity. This high level of service is retained in both the 2031 10-year growth scenario and the sensitivity testing.

It is noted that the longest 95th percentile queue for any turn movement within the SIDRA model was found to be 0.8 vehicle lengths (5.9m) which occurred for the left turn out of the site, during the PM sensitivity testing. The adjusted modelling indicates that there will be no detrimental queueing along Horatio Street as a result of the proposed fact food development.

2.2 Queuing Capacity

In order to assure TfNSW that there will not be any queuing impacts on Horatio Street, a further assessment has been made of the internal queuing capacity. Firstly, under the existing design arrangements (as seen in **Annexure A**), the current internal layout includes a 17m setback from the driveway crossover (at Horatio Street) to the first parking space, which is enough room to accommodate at least 2 queued vehicles prior to the first potential point of conflict point on-site.

It should be noted that whilst unrealistic and supplementary to the revised analysis outlined in **Section 2.1**, a conservative approach has been adopted by MTE assuming that **every** car is be forced to wait 15 seconds upon arrival for a car to enter or exit the nearest car parking space to the entry driveway (parking space 1). Conventional queueing theory analysis was applied to this scenario which resulted in a 98th percentile vehicle queue of two (**2**) cars and this queue can easily be accommodated on site within the 17m offset, with the analysis provided in **Annexure D**. It should be reiterated that this scenario is unrealistic and extremely conservative, as it assumes that every single car is stopped for 15 seconds upon entry to the site. If considered necessary to satisfy the concerns of TfNSW, the first 1-2 car parking spaces can be restricted to staff spaces reducing their turnover and therefore further reducing the likelihood of queueing at the driveway.

When considering the proposed drive-through, the 6.1m width of the subject parking aisle and the one-way circulation proposed, enables passing of any queue formed along the subsequent parking aisle. A total queue length of 92m is available on-site between the collection point and Horatio Street, accommodating at least 15-vehicles in any drive-through queue.

Furthermore, a range of traffic generation surveys of KFC Restaurants in NSW have been commissioned by TfNSW (previously referred to as the RTA and RMS). The first surveys were undertaken in 1992 with the data presented in the document *Land Use Traffic Generation Data and Analysis 22 – Drive-Through Restaurants*, which is the basis of the KFC traffic generation rates as presented in the RTA Guide to Traffic Generating Developments 2002. Further subsequent surveys were commissioned by the RMS in 2016 and analysis conducted by *Bitzios Consulting* of KFC Restaurants across NSW. These traffic surveys identified the maximum queue length at each KFC during the survey periods. A summary of the maximum queue lengths observed is provided in **Table 3** on the following page.

TABLE 3: COMPARISION OF MAXIMUM DRIVE-THROUGH QUEUE OBSERVED

Survey	KFC Location	Frontage Road PM Peak Hour Two-Way Volumes	Maximum Drive-Through Queue Observed
1992 RTA Surveys	Asquith	-	6
	Campbelltown	-	7
	Engadine	-	8
	Lansvale	-	5
	Lidcombe	-	3
	Kings Park	-	5
	Wetherill Park	-	5
	Windsor	-	7
2016 Bitzios Consulting Surveys for RMS	Asquith	2,253	5
	Earlwood	835	6
	Granville	2,444	9
	Frenches Forest	3,629	13
	Mayfield / Newcastle	1,803	11
	Taree (Regional NSW)	1,355	5
	Grafton (Regional NSW)	2,478	11
Average Maximum Queue			**7 Vehicles**
Proposed Site	**Mudgee (Regional NSW)**	**1,208**	**15 Vehicle (Maximum On-Site Capacity)**

As shown in **Table 2**, the maximum drive-through queue length observed at any of the surveyed KFC Restaurants consisted of 13 vehicles, with the average maximum queue being 7 vehicles. The proposed Mudgee KFC has the capacity to store 15 cars in a drive-through queue, before having any impact on Horatio Street, which exceeds the maximum observed queue found at any KFC by two (2) cars. In the unlikely instance that the queue would reach 13 vehicles in length, the one-way nature and the 6.1m width of the entry driveway would enable vehicles to pass the queue, if required.

In light of the above, the site will not realistically generate any queueing that would impact Horatio Street (the Classified Road) and therefore the subject proposal will not have an adverse impact on the subject Classified Road due to any delays created on-site by queueing or otherwise.

Please contact the undersigned on 9521 7199 should you require further information or assistance.

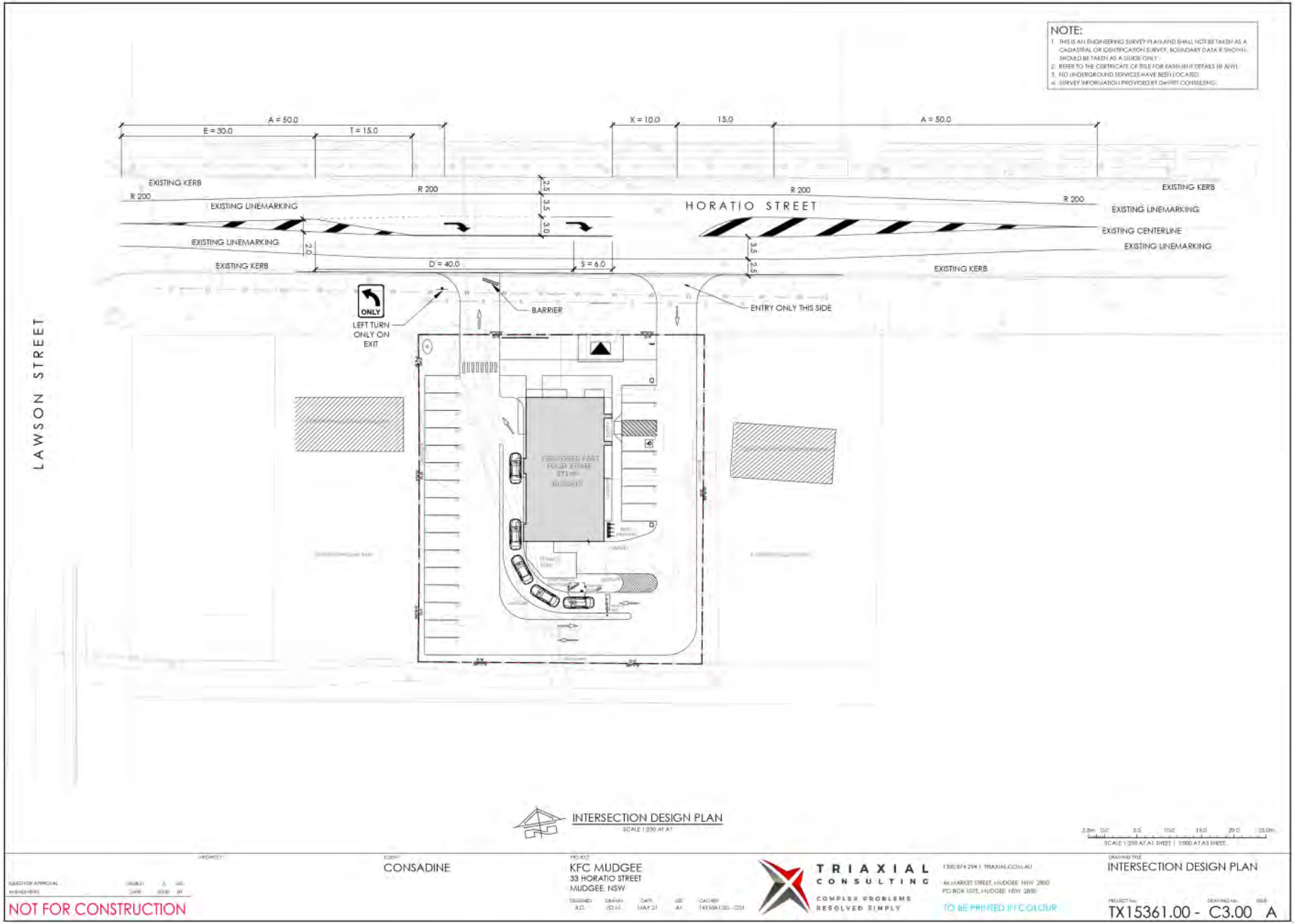
Yours faithfully,
McLaren Traffic Engineering

Tom Steal
Senior Traffic Engineer
BE Civil AMAITPM MIEAust
RMS Accredited Level 3 Road Safety Auditor

Aaron Tomlins
Traffic Engineer
BE(Hon)(Civil Engineering)/BCom
Accredited Level 1 Road Safety Auditor
AMAITPM GradIEAust

McLaren
Traffic Engineering &
Road Safety Consultants

ANNEXURE A: PLANS
(1 SHEET)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EXISTING KERB
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Road Safety Consultants

ANNEXURE B: TFNSW COMMENTS
(2 SHEETS)

Transport for NSW

WST20/00084/07 | SF2022/092150

NSW GOVERNMENT

The General Manager
Mid-Western Regional Council
86 Market Street
MUDGEE NSW 2850

DA0087/2022: LOT 2 & 3 DP743615, 33-35 Horatio Street, Mudgee 2850 NSW
Demolition of Dwelling and Development of Food and Drink Premises

13 September 2022

Attention: Kayla Robson

Dear Kayla,

I refer to the above-mentioned Development Application (DA) referred to Transport for NSW (TfNSW) on 15 July 2022 for further comment pursuant to clause 2.122 of *State Environmental Planning Policy (Transport and Infrastructure) 2021* in response to TfNSW's request for further information on 19 May 2022. The application was also referred to TfNSW in accordance with Section 3.16 of the *SEPP (Industry and Employment) 2021* and Section 138(2) of the *Roads Act 1993*.

TfNSW understands that the proposed development consists of the following:

- Demolition of dwelling,
- Development of food and drink premises (KFC restaurant) with a separate entry and exit access,
- Creation of a channelised right turn lane (CHR) treatment at the entry to the site on Horatio Street in accordance with Drawing No. C3.00 Issue A provided in the letter by MET, and,
- Left out only option at the exit.

TfNSW further understands that the proposed intersection treatment would result in changes to the existing parking arrangements on both the north and south sides of the road, as through traffic would be diverted towards the kerb.

TfNSW's primary interests are in the road network, traffic and broader transport issues. In particular, the efficiency and safety of the classified road network, the security of property assets and the integration of land use and transport.

Horatio Street (HW18) is a classified (State) road. Council is the roads authority for this road and all other public roads in the area, in accordance with Section 7 of the Roads Act *1993*.

TfNSW has reviewed the peer review and supplementary traffic advice provided on 15 July 2022, including the electronic (SIDRA) analysis. It is understood that the traffic-generation rates for the proposed development assumes 60 vehicle trips entering the site in the PM peak period which results in one vehicle arriving on site every minute (on average). A worst-case scenario (being the 10 year horizon) doubles these figures (i.e. assumes 120 trips being 1 vehicle every 30secs). The intersection layout of each scenario in SIDRA provides for free-flowing traffic on exit of the intersection (i.e. onto the site) resulting in Level of Service A and no queues. TfNSW suggests that this layout and conclusions of the scenario are inaccurate as influences like reduction in speed from public road to the site, driveway design, shared access for drive-thru and parking

Lvl 1, 51-55 Currajong Street, Parkes NSW 2870
E. development.west@transport.nsw.gov.au
1300 207 783
transport.nsw.gov.au

Transport for NSW

services and internal drive-thru queuing are all relevant influences that would restrict the free-flow of traffic and would result in on-site delays. In addition, TfNSW suggests that the site is physically incapable of accommodating 60 trips across the peak hour, even when a practical split between drive-thru and dine-in services are assumed. Overall, queues within the classified road network are likely due to on-site blockages.

Accordingly, TfNSW does not support the proposed development as it is likely to cause queues that would adversely affect the safety and efficient operation of the classified (State) road network. Should an application be made to seek access to the classified road network from Council via s.138 of the Roads Act, TfNSW would withhold concurrence.

Please forward a copy of Councils determination to TfNSW at development.west@transport.nsw.gov.au when it is sent to the applicant. If you wish to discuss this matter further, please contact the undersigned on. 0481 068 175.

Yours faithfully,

Kylie-Anne Pont
Team Leader Development Services
West Region | Community and Place
Regional and Outer Metropolitan

ANNEXURE C: SIDRA MOVEMENT SUMAMRY
(16 SHEETS)

MOVEMENT SUMMARY

Site: 01a [01a-EXAM-Horatio Street / KFC - Pt 1 (Entry) (Site Folder: General)]

Network: 01 [01EXAM - Horatio Street / KFC Mudgee - Existing (Before Development) (Network Folder: MTE Revised SIDRA - 22 10 24)]

Horatio Street / KFC - Part 1 (Entry)
33 Horatio Street, Mudgee, NSW
2021 EXISTING AM
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Horatio Street (E)														
4	L2	1	0.0	1	0.0	0.314	14.0	LOS A	0.0	0.0	0.00	0.00	0.00	45.6
5	T1	583	9.1	583	9.1	0.314	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
Approach		584	9.1	584	9.1	0.314	0.1	NA	0.0	0.0	0.00	0.00	0.00	49.8
West: Horatio Street (W)														
11	T1	576	10.5	576	10.5	0.312	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
12	R2	1	0.0	1	0.0	0.001	10.9	LOS A	0.0	0.0	0.54	0.72	0.54	6.7
Approach		577	10.5	577	10.5	0.312	0.0	NA	0.0	0.0	0.00	0.00	0.00	49.7
All Vehicles		1161	9.8	1161	9.8	0.314	0.1	NA	0.0	0.0	0.00	0.00	0.00	49.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Organisation: MCLAREN TRAFFIC ENGINEERING | Licence: PLUS / 1PC | Processed: Monday, 24 October 2022 10:09:22 AM
Project: \\mte_nas1\mte storage\Jobs\2022\220486\MTE SIDRA\KFC Mudgee - MTE SIDRAs - 22 10 24 - 5km Entry Speed.sip9

MOVEMENT SUMMARY

Site: 01b [01b-EXAM-Horatio Street / KFC - Pt 2 (Exit) (Site Folder: General)]

Network: 01 [01EXAM - Horatio Street / KFC Mudgee - Existing (Before Development) (Network Folder: MTE Revised SIDRA - 22 10 24)]

Horatio Street / KFC - Part 2 (Exit)
33 Horatio Street, Mudgee, NSW
2021 EXISTING AM
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg Satn v/c	Aver Delay sec	Level of Service	95% BACK OF QUEUE [Veh veh	Dist] m	Prop Que	Effective Stop Rate	Aver No Cycles	Aver Speed km/h
South: KFC Exit Driveway (S)														
1	L2	1	0.0	1	0.0	0.001	2.4	LOS A	0.0	0.0	0.51	0.30	0.51	23.1
Approach		1	0.0	1	0.0	0.001	2.4	LOS A	0.0	0.0	0.51	0.30	0.51	23.1
East: Horatio Street (E)														
5	T1	583	9.1	583	9.1	0.313	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
Approach		583	9.1	583	9.1	0.313	0.0	NA	0.0	0.0	0.00	0.00	0.00	49.8
West: Horatio Street (W)														
11	T1	576	10.5	576	10.5	0.312	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
Approach		576	10.5	576	10.5	0.312	0.1	NA	0.0	0.0	0.00	0.00	0.00	49.8
All Vehicles		1160	9.8	1160	9.8	0.313	0.1	NA	0.0	0.0	0.00	0.00	0.00	49.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Organisation: MCLAREN TRAFFIC ENGINEERING | Licence: PLUS / 1PC | Processed: Monday, 24 October 2022 10:09:22 AM
Project: \\mte_nas1\mte storage\Jobs\2022\220486\MTE SIDRA\KFC Mudgee - MTE SIDRAs - 22 10 24 - 5km Entry Speed.sip9

MOVEMENT SUMMARY

Site: 01a [01a-FUAM-Horatio Street / KFC - Pt 1 (Entry) - Post-Development (Site Folder: General)]

Network: 01 [02FUAM - Horatio Street / KFC Mudgee - Future (Post-Development) (Network Folder: MTE Revised SIDRA - 22 10 24)]

Horatio Street / KFC - Part 1 (Entry)
33 Horatio Street, Mudgee, NSW
2021 FUTURE (Post-Development) AM
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg Satn v/c	Aver Delay sec	Level of Service	95% BACK OF QUEUE [Veh veh	Dist] m	Prop Que	Effective Stop Rate	Aver No Cycles	Aver Speed km/h
East: Horatio Street (E)														
4	L2	32	0.0	32	0.0	0.330	14.1	LOS A	0.0	0.0	0.00	0.12	0.00	44.8
5	T1	583	9.0	583	9.0	0.330	0.1	LOS A	0.0	0.0	0.00	0.12	0.00	48.8
Approach		615	8.6	615	8.6	0.330	0.8	NA	0.0	0.0	0.00	0.12	0.00	48.6
West: Horatio Street (W)														
11	T1	607	9.9	607	9.9	0.330	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
12	R2	32	0.0	32	0.0	0.035	11.3	LOS A	0.1	1.0	0.56	0.85	0.56	6.6
Approach		639	9.4	639	9.4	0.330	0.6	NA	0.1	1.0	0.03	0.04	0.03	47.1
All Vehicles		1254	9.0	1254	9.0	0.330	0.7	NA	0.1	1.0	0.01	0.08	0.01	47.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Organisation: MCLAREN TRAFFIC ENGINEERING | Licence: PLUS / 1PC | Processed: Monday, 24 October 2022 10:09:24 AM
Project: \\mte_nas1\mte storage\Jobs\2022\220486\MTE SIDRA\KFC Mudgee - MTE SIDRAs - 22 10 24 - 5km Entry Speed.sip9

MOVEMENT SUMMARY

Site: 01b [01b-FUAM-Horatio Street / KFC - Pt 2 (Exit) - Post-Development (Site Folder: General)]

Network: 01 [02FUAM - Horatio Street / KFC Mudgee - Future (Post-Development) (Network Folder: MTE Revised SIDRA - 22 10 24)]

Horatio Street / KFC - Part 2 (Exit)
33 Horatio Street, Mudgee, NSW
2021 FUTURE (POST-Development) AM
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg Satn v/c	Aver Delay sec	Level of Service	95% BACK OF QUEUE [Veh veh	Dist] m	Prop Que	Effective Stop Rate	Aver No Cycles	Aver Speed km/h
South: KFC Exit Driveway (S)														
1	L2	63	0.0	63	0.0	0.073	2.7	LOS A	0.3	1.9	0.53	0.46	0.53	23.0
Approach		63	0.0	63	0.0	0.073	2.7	LOS A	0.3	1.9	0.53	0.46	0.53	23.0
East: Horatio Street (E)														
5	T1	583	9.0	583	9.0	0.313	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
Approach		583	9.0	583	9.0	0.313	0.0	NA	0.0	0.0	0.00	0.00	0.00	49.8
West: Horatio Street (W)														
11	T1	607	9.9	607	9.9	0.328	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
Approach		607	9.9	607	9.9	0.328	0.1	NA	0.0	0.0	0.00	0.00	0.00	49.8
All Vehicles		1254	9.0	1254	9.0	0.328	0.2	NA	0.3	1.9	0.03	0.02	0.03	46.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Organisation: MCLAREN TRAFFIC ENGINEERING | Licence: PLUS / 1PC | Processed: Monday, 24 October 2022 10:09:24 AM
Project: \\mte_nas1\mte storage\Jobs\2022\220486\MTE SIDRA\KFC Mudgee - MTE SIDRAs - 22 10 24 - 5km Entry Speed.sip9

MOVEMENT SUMMARY

Site: 01a [01a-FUAM+10YrGro - Horatio Street / KFC - Pt 1 (Entry) - Post-Development - 10Yr Growth (Site Folder: General)]

Network: 01 [03FUAM +10YrGro - Horatio Street / KFC Mudgee - Future (Post-Development) + 10Yr Growth (Network Folder: MTE Revised SIDRA - 22 10 24)]

Horatio Street / KFC - Part 1 (Entry)
33 Horatio Street, Mudgee, NSW
2031 FUTURE (Post-Development) + 10-Year 2%p.a Growth AM
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Horatio Street (E)														
4	L2	32	0.0	32	0.0	0.393	14.1	LOS A	0.0	0.0	0.00	0.10	0.00	44.9
5	T1	700	9.0	700	9.0	0.393	0.2	LOS A	0.0	0.0	0.00	0.10	0.00	48.9
Approach		731	8.6	731	8.6	0.393	0.8	NA	0.0	0.0	0.00	0.10	0.00	48.7
West: Horatio Street (W)														
11	T1	729	9.9	729	9.9	0.396	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
12	R2	32	0.0	32	0.0	0.043	12.3	LOS A	0.2	1.1	0.61	0.89	0.61	6.5
Approach		760	9.5	760	9.5	0.396	0.5	NA	0.2	1.1	0.03	0.04	0.03	47.5
All Vehicles		1492	9.1	1492	9.1	0.396	0.6	NA	0.2	1.1	0.01	0.07	0.01	48.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Organisation: MCLAREN TRAFFIC ENGINEERING | Licence: PLUS / 1PC | Processed: Monday, 24 October 2022 10:09:38 AM
Project: \\mte_nas1\mte storage\Jobs\2022\220486\MTE SIDRA\KFC Mudgee - MTE SIDRAs - 22 10 24 - 5km Entry Speed.sip9

MOVEMENT SUMMARY

Site: 01b [01b-FUAM+10YrGro - Horatio Street / KFC - Pt 2 (Exit) - Post-Development - 10-Yr Growth (Site Folder: General)]

Network: 01 [03FUAM +10YrGro - Horatio Street / KFC Mudgee - Future (Post-Development) + 10Yr Growth (Network Folder: MTE Revised SIDRA - 22 10 24)]

Horatio Street / KFC - Part 2 (Exit)
33 Horatio Street, Mudgee, NSW
2031 FUTURE (POST-Development) + 10-Year 2%p.a Growth AM
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: KFC Exit Driveway (S)														
1	L2	63	0.0	63	0.0	0.087	3.7	LOS A	0.3	2.2	0.58	0.56	0.58	22.8
Approach		63	0.0	63	0.0	0.087	3.7	LOS A	0.3	2.2	0.58	0.56	0.58	22.8
East: Horatio Street (E)														
5	T1	700	9.0	700	9.0	0.376	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
Approach		700	9.0	700	9.0	0.376	0.0	NA	0.0	0.0	0.00	0.00	0.00	49.8
West: Horatio Street (W)														
11	T1	729	9.9	729	9.9	0.394	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
Approach		729	9.9	729	9.9	0.394	0.2	NA	0.0	0.0	0.00	0.00	0.00	49.8
All Vehicles		1492	9.1	1492	9.1	0.394	0.2	NA	0.3	2.2	0.02	0.02	0.02	47.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Organisation: MCLAREN TRAFFIC ENGINEERING | Licence: PLUS / 1PC | Processed: Monday, 24 October 2022 10:09:38 AM
Project: \\mte_nas1\mte storage\Jobs\2022\220486\MTE SIDRA\KFC Mudgee - MTE SIDRAs - 22 10 24 - 5km Entry Speed.sip9

MOVEMENT SUMMARY

Site: 01a [01a-FUAM-Sensitivity - Horatio Street / KFC - Pt 1 (Entry) - Post-Development - 10Yr Growth - Sens (Site Folder: General)]

Network: 01 [04FUAM-Sensitivity - Horatio Street / KFC Mudgee - Future (Post-Development) + 10Yr Growth - Sensiti (Network Folder: MTE Revised SIDRA - 22 10 24)]

Horatio Street / KFC - Part 1 (Entry)
33 Horatio Street, Mudgee, NSW
2031 FUTURE (Post-Development) + 10-Year 2%p.a Growth AM - Sensitivity
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Horatio Street (E)														
4	L2	63	0.0	63	0.0	0.410	14.1	LOS A	0.0	0.0	0.00	0.19	0.00	44.3
5	T1	700	9.0	700	9.0	0.410	0.2	LOS A	0.0	0.0	0.00	0.19	0.00	48.1
Approach		763	8.3	763	8.3	0.410	1.3	NA	0.0	0.0	0.00	0.19	0.00	47.8
West: Horatio Street (W)														
11	T1	767	9.4	767	9.4	0.415	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
12	R2	63	0.0	63	0.0	0.090	12.8	LOS A	0.3	2.4	0.63	0.95	0.63	6.5
Approach		830	8.7	830	8.7	0.415	1.0	NA	0.3	2.4	0.05	0.07	0.05	45.5
All Vehicles		1593	8.5	1593	8.5	0.415	1.1	NA	0.3	2.4	0.03	0.13	0.03	46.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Organisation: MCLAREN TRAFFIC ENGINEERING | Licence: PLUS / 1PC | Processed: Monday, 24 October 2022 10:09:53 AM
Project: \\mte_nas1\mte storage\Jobs\2022\220486\MTE SIDRA\KFC Mudgee - MTE SIDRAs - 22 10 24 - 5km Entry Speed.sip9

MOVEMENT SUMMARY

Site: 01b [01b-FUAM-Sensitivity - Horatio Street / KFC - Pt 2 (Exit) - Post-Development - 10-Yr Growth - Sens (Site Folder: General)]

Network: 01 [04FUAM-Sensitivity - Horatio Street / KFC Mudgee - Future (Post-Development) + 10Yr Growth - Sensiti (Network Folder: MTE Revised SIDRA - 22 10 24)]

Horatio Street / KFC - Part 2 (Exit)
33 Horatio Street, Mudgee, NSW
2031 FUTURE (POST-Development) + 10-Year 2%p.a Growth AM - Sensitivity
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: KFC Exit Driveway (S)														
1	L2	126	0.0	126	0.0	0.174	3.9	LOS A	0.6	4.5	0.60	0.60	0.60	22.7
Approach		126	0.0	126	0.0	0.174	3.9	LOS A	0.6	4.5	0.60	0.60	0.60	22.7
East: Horatio Street (E)														
5	T1	700	9.0	700	9.0	0.376	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
Approach		700	9.0	700	9.0	0.376	0.0	NA	0.0	0.0	0.00	0.00	0.00	49.8
West: Horatio Street (W)														
11	T1	767	9.4	767	9.4	0.413	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
Approach		767	9.4	767	9.4	0.413	0.2	NA	0.0	0.0	0.00	0.00	0.00	49.8
All Vehicles		1593	8.5	1593	8.5	0.413	0.4	NA	0.6	4.5	0.05	0.05	0.05	45.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Organisation: MCLAREN TRAFFIC ENGINEERING | Licence: PLUS / 1PC | Processed: Monday, 24 October 2022 10:09:53 AM
Project: \\mte_nas1\mte storage\Jobs\2022\220486\MTE SIDRA\KFC Mudgee - MTE SIDRAs - 22 10 24 - 5km Entry Speed.sip9

MOVEMENT SUMMARY

Site: 01a [01a-EXPM-Horatio Street / KFC - Pt 1 (Entry) (Site Folder: General)]

Network: 01 [01EXPM - Horatio Street / KFC Mudgee - Existing (Before Development) (Network Folder: MTE Revised SIDRA - 22 10 24)]

Horatio Street / KFC - Part 1 (Entry)
33 Horatio Street, Mudgee, NSW
2021 EXISTING PM
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Horatio Street (E)														
4	L2	1	0.0	1	0.0	0.381	14.1	LOS A	0.0	0.0	0.00	0.00	0.00	45.5
5	T1	708	9.1	708	9.1	0.381	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
Approach		709	9.1	709	9.1	0.381	0.2	NA	0.0	0.0	0.00	0.00	0.00	49.8
West: Horatio Street (W)														
11	T1	563	10.5	563	10.5	0.305	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
12	R2	1	0.0	1	0.0	0.001	11.8	LOS A	0.0	0.0	0.59	0.74	0.59	6.6
Approach		564	10.5	564	10.5	0.305	0.0	NA	0.0	0.0	0.00	0.00	0.00	49.7
All Vehicles		1274	9.7	1274	9.7	0.381	0.1	NA	0.0	0.0	0.00	0.00	0.00	49.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Organisation: MCLAREN TRAFFIC ENGINEERING | Licence: PLUS / 1PC | Processed: Monday, 24 October 2022 10:09:55 AM
Project: \\mte_nas1\mte storage\Jobs\2022\220486\MTE SIDRA\KFC Mudgee - MTE SIDRAs - 22 10 24 - 5km Entry Speed.sip9

MOVEMENT SUMMARY

Site: 01b [01b-EXPM-Horatio Street / KFC - Pt 2 (Exit) (Site Folder: General)]

Network: 01 [01EXPM - Horatio Street / KFC Mudgee - Existing (Before Development) (Network Folder: MTE Revised SIDRA - 22 10 24)]

Horatio Street / KFC - Part 2 (Exit)
33 Horatio Street, Mudgee, NSW
2021 EXISTING PM
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: KFC Exit Driveway (S)														
1	L2	1	0.0	1	0.0	0.001	3.3	LOS A	0.0	0.0	0.56	0.36	0.56	22.9
Approach		1	0.0	1	0.0	0.001	3.3	LOS A	0.0	0.0	0.56	0.36	0.56	22.9
East: Horatio Street (E)														
5	T1	708	9.1	708	9.1	0.381	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
Approach		708	9.1	708	9.1	0.381	0.0	NA	0.0	0.0	0.00	0.00	0.00	49.8
West: Horatio Street (W)														
11	T1	563	10.5	563	10.5	0.305	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
Approach		563	10.5	563	10.5	0.305	0.1	NA	0.0	0.0	0.00	0.00	0.00	49.8
All Vehicles		1273	9.7	1273	9.7	0.381	0.1	NA	0.0	0.0	0.00	0.00	0.00	49.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Organisation: MCLAREN TRAFFIC ENGINEERING | Licence: PLUS / 1PC | Processed: Monday, 24 October 2022 10:09:55 AM
Project: \\mte_nas1\mte storage\Jobs\2022\220486\MTE SIDRA\KFC Mudgee - MTE SIDRAs - 22 10 24 - 5km Entry Speed.sip9

MOVEMENT SUMMARY

Site: 01a [01a-FUPM-Horatio Street / KFC - Pt 1 (Entry) - Post-Development (Site Folder: General)]

Network: 01 [02FUPM - Horatio Street / KFC Mudgee - Future (Post-Development) (Network Folder: MTE Revised SIDRA - 22 10 24)]

Horatio Street / KFC - Part 1 (Entry)
33 Horatio Street, Mudgee, NSW
2021 FUTURE (Post-Development) PM
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Horatio Street (E)														
4	L2	32	0.0	32	0.0	0.398	14.1	LOS A	0.0	0.0	0.00	0.10	0.00	44.9
5	T1	708	9.1	708	9.1	0.398	0.2	LOS A	0.0	0.0	0.00	0.10	0.00	48.9
Approach		740	8.7	740	8.7	0.398	0.8	NA	0.0	0.0	0.00	0.10	0.00	48.7
West: Horatio Street (W)														
11	T1	595	9.9	595	9.9	0.324	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
12	R2	32	0.0	32	0.0	0.043	12.4	LOS A	0.2	1.1	0.61	0.90	0.61	6.5
Approach		626	9.4	626	9.4	0.324	0.6	NA	0.2	1.1	0.03	0.05	0.03	47.0
All Vehicles		1366	9.0	1366	9.0	0.398	0.7	NA	0.2	1.1	0.01	0.08	0.01	47.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Project: \\mte_nas1\mte storage\Jobs\2022\220486\MTE SIDRA\KFC Mudgee - MTE SIDRAs - 22 10 24 - 5km Entry Speed.sip9

MOVEMENT SUMMARY

Site: 01b [01b-FUPM-Horatio Street / KFC - Pt 2 (Exit) - Post-Development (Site Folder: General)]

Network: 01 [02FUPM - Horatio Street / KFC Mudgee - Future (Post-Development) (Network Folder: MTE Revised SIDRA - 22 10 24)]

Horatio Street / KFC - Part 2 (Exit)
33 Horatio Street, Mudgee, NSW
2021 FUTURE (POST-Development) PM
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg Satn v/c	Aver Delay sec	Level of Service	95% BACK OF QUEUE [Veh veh	Dist] m	Prop Que	Effective Stop Rate	Aver No Cycles	Aver Speed km/h
South: KFC Exit Driveway (S)														
1	L2	63	0.0	63	0.0	0.088	3.7	LOS A	0.3	2.2	0.59	0.57	0.59	22.8
Approach		63	0.0	63	0.0	0.088	3.7	LOS A	0.3	2.2	0.59	0.57	0.59	22.8
East: Horatio Street (E)														
5	T1	708	9.1	708	9.1	0.381	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
Approach		708	9.1	708	9.1	0.381	0.0	NA	0.0	0.0	0.00	0.00	0.00	49.8
West: Horatio Street (W)														
11	T1	595	9.9	595	9.9	0.321	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
Approach		595	9.9	595	9.9	0.321	0.1	NA	0.0	0.0	0.00	0.00	0.00	49.8
All Vehicles		1366	9.0	1366	9.0	0.381	0.2	NA	0.3	2.2	0.03	0.03	0.03	47.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Organisation: MCLAREN TRAFFIC ENGINEERING | Licence: PLUS / 1PC | Processed: Monday, 24 October 2022 10:09:58 AM
Project: \\mte_nas1\mte storage\Jobs\2022\220486\MTE SIDRA\KFC Mudgee - MTE SIDRAs - 22 10 24 - 5km Entry Speed.sip9

MOVEMENT SUMMARY

Site: 01a [01a-FUPM+10YrGro - Horatio Street / KFC - Pt 1 (Entry) - Post-Development - 10Yr Growth (Site Folder: General)]

Network: 01 [03FUPM +10YrGro - Horatio Street / KFC Mudgee - Future (Post-Development) + 10Yr Growth (Network Folder: MTE Revised SIDRA - 22 10 24)]

Horatio Street / KFC - Part 1 (Entry)
33 Horatio Street, Mudgee, NSW
2031 FUTURE (Post-Development) + 10-Year 2%p.a Growth PM
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Horatio Street (E)														
4	L2	32	0.0	32	0.0	0.474	14.1	LOS A	0.0	0.0	0.00	0.08	0.00	44.9
5	T1	850	9.1	850	9.1	0.474	0.2	LOS A	0.0	0.0	0.00	0.08	0.00	49.0
Approach		882	8.8	882	8.8	0.474	0.7	NA	0.0	0.0	0.00	0.08	0.00	48.8
West: Horatio Street (W)														
11	T1	714	9.9	714	9.9	0.389	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
12	R2	32	0.0	32	0.0	0.056	14.2	LOS A	0.2	1.4	0.70	0.97	0.70	6.3
Approach		745	9.5	745	9.5	0.389	0.6	NA	0.2	1.4	0.03	0.04	0.03	47.3
All Vehicles		1627	9.1	1627	9.1	0.474	0.7	NA	0.2	1.4	0.01	0.06	0.01	48.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 01b [01b-FUPM+10YrGro - Horatio Street / KFC - Pt 2 (Exit) - Post-Development - 10-Yr Growth (Site Folder: General)]

Network: 01 [03FUPM +10YrGro - Horatio Street / KFC Mudgee - Future (Post-Development) + 10Yr Growth (Network Folder: MTE Revised SIDRA - 22 10 24)]

Horatio Street / KFC - Part 2 (Exit)
33 Horatio Street, Mudgee, NSW
2031 FUTURE (POST-Development) + 10-Year 2%p.a Growth PM
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: KFC Exit Driveway (S)														
1	L2	63	0.0	63	0.0	0.114	5.5	LOS A	0.4	2.7	0.69	0.69	0.69	22.3
Approach		63	0.0	63	0.0	0.114	5.5	LOS A	0.4	2.7	0.69	0.69	0.69	22.3
East: Horatio Street (E)														
5	T1	850	9.1	850	9.1	0.457	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.7
Approach		850	9.1	850	9.1	0.457	0.0	NA	0.0	0.0	0.00	0.00	0.00	49.7
West: Horatio Street (W)														
11	T1	714	9.9	714	9.9	0.386	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
Approach		714	9.9	714	9.9	0.386	0.2	NA	0.0	0.0	0.00	0.00	0.00	49.8
All Vehicles		1627	9.1	1627	9.1	0.457	0.3	NA	0.4	2.7	0.03	0.03	0.03	47.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Organisation: MCLAREN TRAFFIC ENGINEERING | Licence: PLUS / 1PC | Processed: Monday, 24 October 2022 10:10:12 AM
Project: \\mte_nas1\mte storage\Jobs\2022\220486\MTE SIDRA\KFC Mudgee - MTE SIDRAs - 22 10 24 - 5km Entry Speed.sip9

MOVEMENT SUMMARY

Site: 01a [01a-FUPM-Sensitivity - Horatio Street / KFC - Pt 1 (Entry) - Post-Development - 10Yr Growth - Sens (Site Folder: General)]

Network: 01 [04FUPM-Sensitivity - Horatio Street / KFC Mudgee - Future (Post-Development) + 10Yr Growth - Sensiti (Network Folder: MTE Revised SIDRA - 22 10 24)]

Horatio Street / KFC - Part 1 (Entry)
33 Horatio Street, Mudgee, NSW
2031 FUTURE (Post-Development) + 10-Year 2%p.a Growth PM - Sensitivity
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Horatio Street (E)														
4	L2	63	0.0	63	0.0	0.491	14.2	LOS A	0.0	0.0	0.00	0.16	0.00	44.4
5	T1	850	9.1	850	9.1	0.491	0.2	LOS A	0.0	0.0	0.00	0.16	0.00	48.3
Approach		913	8.5	913	8.5	0.491	1.2	NA	0.0	0.0	0.00	0.16	0.00	48.0
West: Horatio Street (W)														
11	T1	752	9.4	752	9.4	0.408	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
12	R2	63	0.0	63	0.0	0.120	14.9	LOS B	0.4	3.1	0.73	0.97	0.73	6.2
Approach		815	8.7	815	8.7	0.408	1.2	NA	0.4	3.1	0.06	0.08	0.06	45.3
All Vehicles		1728	8.6	1728	8.6	0.491	1.2	NA	0.4	3.1	0.03	0.12	0.03	46.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Organisation: MCLAREN TRAFFIC ENGINEERING | Licence: PLUS / 1PC | Processed: Monday, 24 October 2022 10:10:26 AM
Project: \\mte_nas1\mte storage\Jobs\2022\220486\MTE SIDRA\KFC Mudgee - MTE SIDRAs - 22 10 24 - 5km Entry Speed.sip9

MOVEMENT SUMMARY

Site: 01b [01b-FUPM-Sensitivity - Horatio Street / KFC - Pt 2 (Exit) - Post-Development - 10-Yr Growth - Sens (Site Folder: General)]

Network: 01 [04FUPM-Sensitivity - Horatio Street / KFC Mudgee - Future (Post-Development) + 10Yr Growth - Sensiti (Network Folder: MTE Revised SIDRA - 22 10 24)]

Horatio Street / KFC - Part 2 (Exit)
33 Horatio Street, Mudgee, NSW
2031 FUTURE (POST-Development) + 10-Year 2%p.a Growth PM - Sensitivity
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: KFC Exit Driveway (S)														
1	L2	126	0.0	126	0.0	0.227	6.0	LOS A	0.8	5.9	0.72	0.77	0.77	22.2
Approach		126	0.0	126	0.0	0.227	6.0	LOS A	0.8	5.9	0.72	0.77	0.77	22.2
East: Horatio Street (E)														
5	T1	850	9.1	850	9.1	0.457	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.7
Approach		850	9.1	850	9.1	0.457	0.0	NA	0.0	0.0	0.00	0.00	0.00	49.7
West: Horatio Street (W)														
11	T1	752	9.4	752	9.4	0.405	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
Approach		752	9.4	752	9.4	0.405	0.2	NA	0.0	0.0	0.00	0.00	0.00	49.8
All Vehicles		1728	8.6	1728	8.6	0.457	0.5	NA	0.8	5.9	0.05	0.06	0.06	45.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Organisation: MCLAREN TRAFFIC ENGINEERING | Licence: PLUS / 1PC | Processed: Monday, 24 October 2022 10:10:26 AM
Project: \\mte_nas1\mte storage\Jobs\2022\220486\MTE SIDRA\KFC Mudgee - MTE SIDRAs - 22 10 24 - 5km Entry Speed.sip9

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ANNEXURE D: QUEUING ANALYSIS
(1 SHEET)

Multi-Server Queue Worksheet

Service Bays	1	Arrival Rate (vehicles/hour)	60	Wait Time in Each Bay (seconds)	15
Vehicles/Second IN	0.016666667	Vehicles/Second OUT (per bay)	0.066666667		
P0	0.75	rho	0.25	rho (single-bay system assumed)	0.25

n	1st Term	Pn	P(>=n)
0	1	75.00%	25.00%
1	0.25	18.75%	6.25%
2	0.03125	4.69%	1.56%
3	0.0026	1.17%	0.39%
4	0.00016	0.29%	0.10%
5	5.1E-06	0.07%	0.02%
6	5.4E-07	0.02%	0.01%
7	1.2E-08	0.00%	0.00%
8	3.8E-10	0.00%	0.00%
9	1.1E-11	0.00%	0.00%
10	2.8E-13	0.00%	0.00%
11	8E-15	0.00%	0.00%
12	1.2E-16	0.00%	0.00%
13	2.4E-18	0.00%	0.00%
14	4.3E-20	0.00%	0.00%
15	7.1E-22	0.00%	0.00%
16	1.1E-23	0.00%	0.00%
17	1.6E-25	0.00%	0.00%
18	2.3E-27	0.00%	0.00%
19	3E-29	0.00%	0.00%
20	3.7E-31	0.00%	0.00%
21	4.5E-33	0.00%	0.00%
22	5.1E-35	0.00%	0.00%
23	5.5E-37	0.00%	0.00%

Percentile	Number of Vehicles in System	Number of Vehicles Queued
20%	100000	99999
60%	100000	99999
70%	100000	99999
80%	1	0
85%	1	0
90%	1	0
95%	2	1
98%	2	1

Single Bay System Assumed		
n	Pn	P(>=n)
0	75.00%	25.00%
1	18.75%	6.25%
2	4.69%	1.56%
3	1.17%	0.39%
4	0.29%	0.10%
5	0.07%	0.02%
6	0.02%	0.01%
7	0.00%	0.00%
8	0.00%	0.00%
9	0.00%	0.00%
10	0.00%	0.00%
11	0.00%	0.00%
12	0.00%	0.00%
13	0.00%	0.00%
14	0.00%	0.00%
15	0.00%	0.00%
16	0.00%	0.00%
17	0.00%	0.00%
18	0.00%	0.00%
19	0.00%	0.00%
20	0.00%	0.00%
21	0.00%	0.00%
22	0.00%	0.00%
23	0.00%	0.00%

	Vehicles in System	Number Vehicles Queued
98th Percentile Queue (Single Bay System)	1.821928098	1
98%	2	1

In the single-line, multiserver, single-phase model, customers form a single line and are served by the first server available. The model assumes that there are s identical servers, the service time distribution for *each server* is exponential, and the mean service time is $1/\mu$. Using these assumptions, we can describe the operating characteristics with the following formulas:

s = the number of servers in the system

$p = \frac{\lambda}{s\mu}$ = the average utilization of the system

$P_0 = \left[\sum_{n=0}^{s-1} \frac{(\lambda/\mu)^n}{n!} + \frac{(\lambda/\mu)^s}{s!}\left(\frac{1}{1-p}\right)\right]^{-1}$ = the probability that no customers are in the system

$L_Q = \frac{P_0(\lambda/\mu)^s p}{s!(1-p)^2}$ = the average number of customers waiting in line

$W_Q = \frac{L_Q}{\lambda}$ = the average time spent waiting in line

$W = W_Q + \frac{1}{\mu}$ = the average time spent in the system, including service

$L = \lambda W$ = the average number of customers in the service system

$P_n = \begin{cases} \frac{(\lambda/\mu)^n}{n!} P_0 & \text{for } n \le s \\ \frac{(\lambda/\mu)^n}{s!\,s^{n-s}} P_0 & \text{for } n > s \end{cases}$ = the probability that n customers are in the system at a given time

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ANNEXURE D: SURVEY DATA
(48 SHEETS)

TRANS TRAFFIC SURVEY

trafficsurvey.com.au

TURNING MOVEMENT SURVEY

KFC Lithgow on Great Western Hwy, Lithgow

GPS	*-33.489735, 150.133645*
Date:	Thu 08/12/22
Weather:	Fine
Suburban:	Lithgow
Customer:	McLaren

Survey Period	AM	11:00 AM-2:00 PM
	PM	4:00 PM-8:00 PM

All Vehicles

Time		Total Vehicles Parked On-Site
Period Start	Period End	
11:00	11:15	8
11:15	11:30	7
11:30	11:45	9
11:45	12:00	10
12:00	12:15	10
12:15	12:30	9
12:30	12:45	9
12:45	13:00	11
13:00	13:15	10
13:15	13:30	7
13:30	13:45	8
13:45	14:00	7
16:00	16:15	8
16:15	16:30	6
16:30	16:45	6
16:45	17:00	5
17:00	17:15	5
17:15	17:30	7
17:30	17:45	6
17:45	18:00	4
18:00	18:15	5
18:15	18:30	5
18:30	18:45	3
18:45	19:00	5
19:00	19:15	7
19:15	19:30	4
19:30	19:45	4
19:45	20:00	6

TRANS TRAFFIC SURVEY
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TURNING MOVEMENT SURVEY

KFC Lithgow on Great Western Hwy, Lithgow

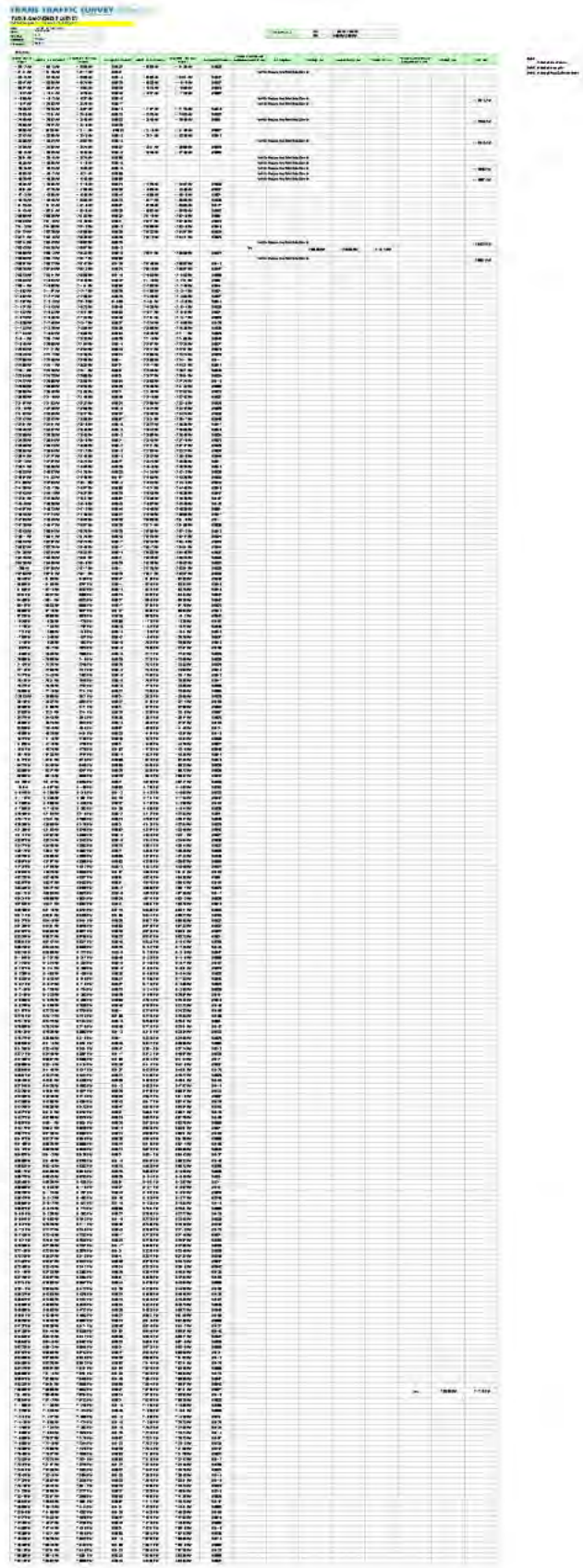
GPS *-33.489735, 150.133645*

Date:	Thu 08/12/22
Weather:	Fine
Suburban:	Lithgow
Customer:	McLaren

Survey Period	AM:	11:00 AM-2:00 PM
	PM:	4:00 PM-8:00 PM

All Vehicles

Time		Parked On West Side	Parked On East Side	Used KFC	Arrival Time	Activity	Departure Time	Length of Stay	Description
Period Start	Period End								
11:00	11:15					Dine - In	11:08:00 AM		Vehicle parked before suvery start time
11:15	11:30	2		1	11:18:30 AM	Dine - In	11:21:41 AM	0:03:11	
				1	11:26:33 AM	Dine - In	11:29:11 AM	0:02:38	
				1	11:26:35 AM	Dine - In	11:31:53 AM	0:05:18	
11:30	11:45	1		1	11:38:05 AM	Dine - In	11:50:58 AM	0:12:53	
				1	11:42:50 AM	Dine - In			Walk - In
11:45	12:00								
12:00	12:15	1		1		Dine - In	12:01:45 PM		Walk - Out & Pick-up
12:15	12:30	1		1	12:26:49 PM	Dine - In			Walk - In
				1	12:28:28 PM	Dine - In	12:30:14 PM	0:01:46	
12:30	12:45	1		1	12:35:56 PM	Dine - In	12:40:07 PM	0:04:11	
				1	12:36:09 PM	Dine - In	12:40:07 PM	0:03:58	
12:45	13:00		1	1	12:51:53 PM	Dine - In	12:55:08 PM	0:03:15	
13:00	13:15								
13:15	13:30			1	1:28:28 PM	Dine - In			Walk - in
13:30	13:45	1		1	1:35:38 PM	Dine - In	4:00:00 PM	2:24:22	Walk - in
				1	1:41:45 PM	Dine - In	1:44:24 PM	0:02:39	
13:45	14:00	1		1	1:55:13 PM	Dine - In	1:57:37 PM	0:02:24	
				1	1:56:49 PM	Dine - In	1:59:08 PM	0:02:19	Walk - in
				2	1:59:54 PM	Dine - In			Walk - in
16:00	16:15			1	4:09:21 PM	Dine - In	4:18:52 PM	0:09:31	Walk - in
				1	4:09:27 PM	Dine - In	4:18:52 PM	0:09:25	Walk - in
				1		Dine - In	4:12:08 PM		Vehicle parked before suvery start time
				1		Dine - In	4:14:01 PM		Vehicle parked before suvery start time
16:15	16:30								
16:30	16:45			1	4:36:36 PM	Dine - In			Walk - In
16:45	17:00								
17:00	17:15			2	5:13:46 PM	Dine - In	5:17:57 PM	0:04:11	Walk - In
				1	5:13:46 PM	Dine - In			Walk - In
17:15	17:30	1	1	1	5:19:04 PM	Dine - In	5:41:14 PM	0:22:10	
17:30	17:45			1	5:34:36 PM	Dine - In	5:43:53 PM	0:09:17	Walk - In
17:45	18:00								
18:00	18:15			1	6:06:37 PM	Dine - In	6:10:15 PM	0:03:38	Walk - In
18:15	18:30			1	6:24:06 PM	Dine - In	6:28:06 PM	0:04:00	Walk - In
				1		Dine - In	6:30:06 PM		Vehicle parked before suvery start time
				2		Dine - In	6:30:08 PM		Vehicle parked before suvery start time
18:30	18:45	1							
18:45	19:00								
19:00	19:15								
19:15	19:30			1	7:22:20 PM	Dine - In	7:27:04 PM	0:04:44	Walk - In
19:30	19:45	1		1	7:35:25 PM	Dine - In	7:39:11 PM	0:03:46	
19:45	20:00		1	1	7:55:04 PM	Dine - In	7:59:37 PM	0:04:33	



TRANS TRAFFIC SURVEY

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TURNING MOVEMENT SURVEY

KFC Lithgow on Great Western Hwy, Lithgow

GPS	*-33.489735, 150.133645*
Date:	Fri 09/12/22
Weather:	Fine
Suburban:	Lithgow
Customer:	McLaren

Survey Period	AM	11:00 AM-2:00 PM
	PM	4:00 PM-8:00 PM

All Vehicles

Time		Total Vehicles Parked On-Site
Period Start	Period End	
11:00	11:15	6
11:15	11:30	5
11:30	11:45	9
11:45	12:00	11
12:00	12:15	6
12:15	12:30	5
12:30	12:45	8
12:45	13:00	8
13:00	13:15	4
13:15	13:30	6
13:30	13:45	7
13:45	14:00	9
16:00	16:15	6
16:15	16:30	8
16:30	16:45	6
16:45	17:00	8
17:00	17:15	6
17:15	17:30	7
17:30	17:45	10
17:45	18:00	9
18:00	18:15	6
18:15	18:30	6
18:30	18:45	5
18:45	19:00	6
19:00	19:15	7
19:15	19:30	7
19:30	19:45	7
19:45	20:00	6

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TURNING MOVEMENT SURVEY

KFC Lithgow on Great Western Hwy, Lithgow

GPS -33.489735, 150.133645

Date:	Fri 09/12/22
Weather:	Fine
Suburban:	Lithgow
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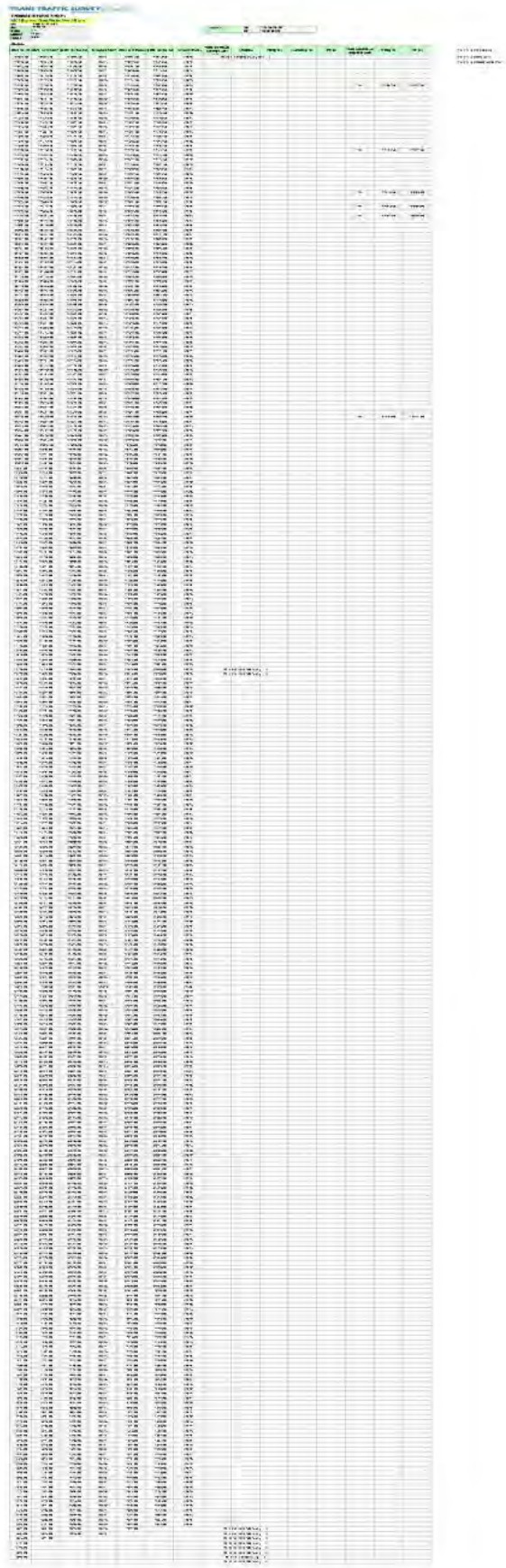
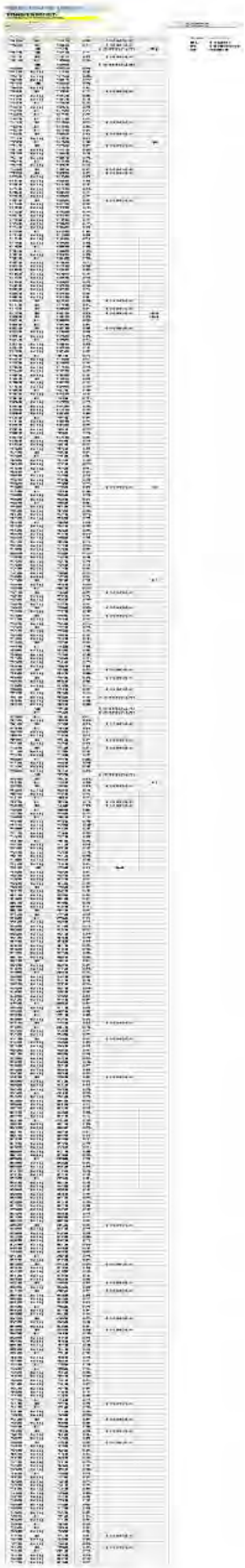
Survey Period	AM:	11:00 AM-2:00 PM
	PM:	4:00 PM-8:00 PM

All Vehicles

Time		Parked On West Side	Parked On East Side	Used KFC	Arrival Time	Activity	Departure Time	Length of Stay	Description
Period Start	Period End								
11:00	11:15								
11:15	11:30								
11:30	11:45			1	11:34:30 AM	Dine In	4:07:40 PM	4:33:10	Walk In
11:45	12:00								
12:00	12:15								
12:15	12:30								
12:30	12:45								
12:45	13:00	1		1	12:49:40 PM	Dine In	12:57:27 PM	0:07:47	
13:00	13:15	1	1	2	1:07:14 PM	Dine In	1:27:10 PM	0:19:56	
				1	1:11:41 PM	Dine In	1:14:28 PM	0:02:47	
				1	1:13:19 PM	Dine In	1:14:39 PM	0:01:20	
13:15	13:30			1	1:28:22 PM	Dine In			Walk In
13:30	13:45			1	1:31:54 PM	Dine In	1:41:48 PM	0:09:54	
13:45	14:00								
16:00	16:15			1		Dine In	4:07:40 PM		Walk Out
		1		1	4:13:34 PM	Dine In	4:17:30 PM	0:03:56	
16:15	16:30			1	4:27:15 PM	Dine In			Walk In
16:30	16:45			2	4:32:05 PM	Dine In	4:38:30 PM	0:06:25	Walk In
				1	4:32:05 PM	Dine In	4:35:23 PM	0:03:18	Walk Out
				1		Dine In	4:37:59 PM		Walk Out
				2	4:41:50 PM	Dine In			Drop off
16:45	17:00			1	4:59:50 PM	Dine In	7:09:37 PM	2:09:47	Walk In
17:00	17:15			1	5:08:46 PM	Dine In			Walk In
17:15	17:30								
17:30	17:45	1		2	5:37:19 PM	Dine In	5:42:34 PM	0:05:15	
17:45	18:00								
18:00	18:15								
18:15	18:30	1		1	6:20:07 PM	Dine In	6:22:29 PM	0:02:22	
18:30	18:45			1	6:33:05 PM	Dine In	6:38:21 PM	0:05:16	Walk In
				1	6:33:15 PM	Dine In	6:38:21 PM	0:05:06	Walk In
				1	6:35:50 PM	Dine In	7:00:40 PM	0:24:50	Cycle
				1	6:35:53 PM	Dine In	7:00:40 PM	0:24:47	Cycle
18:45	19:00								
19:00	19:15			1		Dine In	7:00:40 PM		Cycle
				1		Dine In	7:09:34 PM		Walk Out
19:15	19:30								
19:30	19:45								
19:45	20:00			2	7:49:49 PM	Dine In			Walk In



TRANS TRAFFIC SURVEY



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TURNING MOVEMENT SURVEY

KFC Lithgow on Great Western Hwy, Lithgow

GPS	*-33.489735, 150.133645*
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Customer:	McLaren

Survey Period	AM: 11:00 AM-2:00 PM
	PM: 4:00 PM-8:00 PM

All Vehicles

Time		Total Vehicles Parked On-Site
Period Start	Period End	
11:00	11:15	6
11:15	11:30	5
11:30	11:45	6
11:45	12:00	9
12:00	12:15	6
12:15	12:30	9
12:30	12:45	8
12:45	13:00	8
13:00	13:15	6
13:15	13:30	6
13:30	13:45	5
13:45	14:00	6
16:00	16:15	6
16:15	16:30	5
16:30	16:45	5
16:45	17:00	7
17:00	17:15	9
17:15	17:30	4
17:30	17:45	4
17:45	18:00	6
18:00	18:15	7
18:15	18:30	5
18:30	18:45	4
18:45	19:00	6
19:00	19:15	6
19:15	19:30	6
19:30	19:45	5
19:45	20:00	3

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TURNING MOVEMENT SURVEY

KFC Lithgow on Great Western Hwy, Lithgow

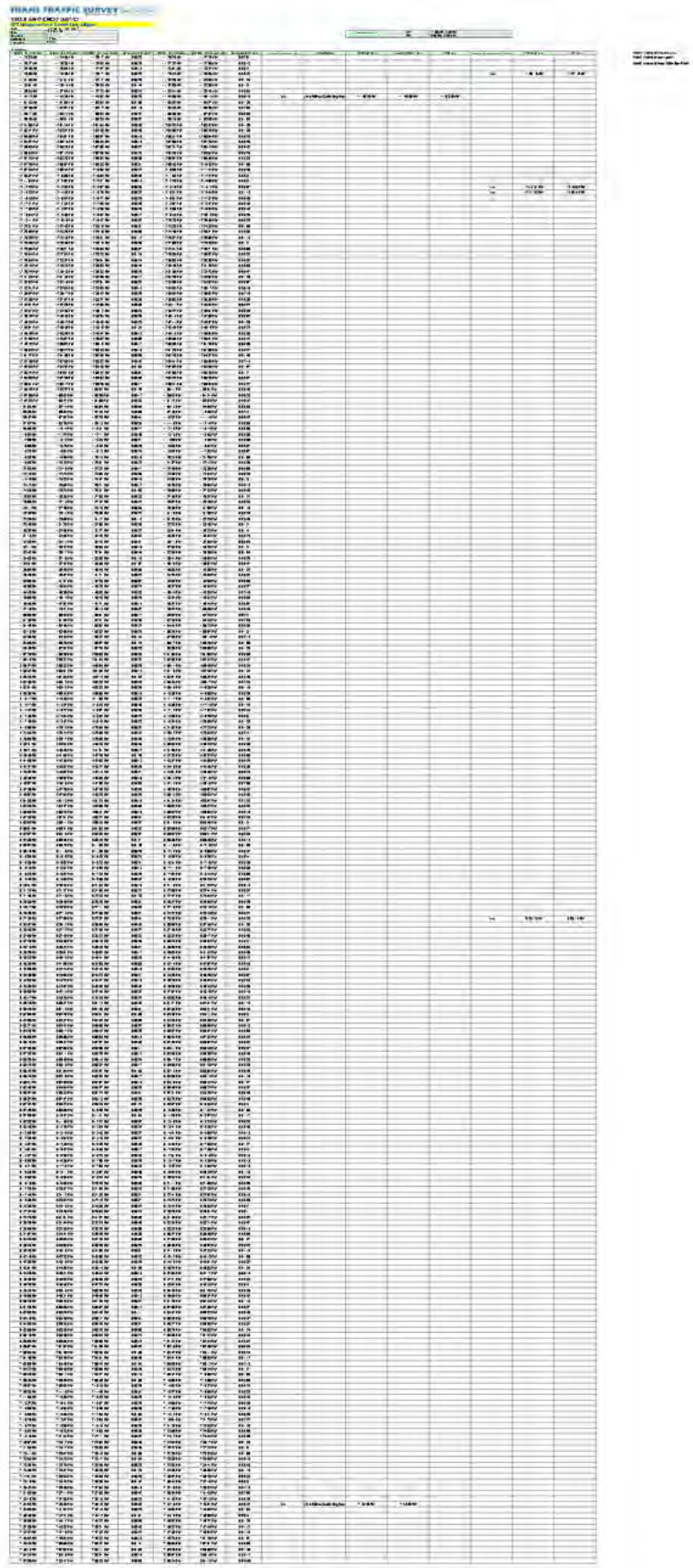
GPS *-33.489735, 150.133645*

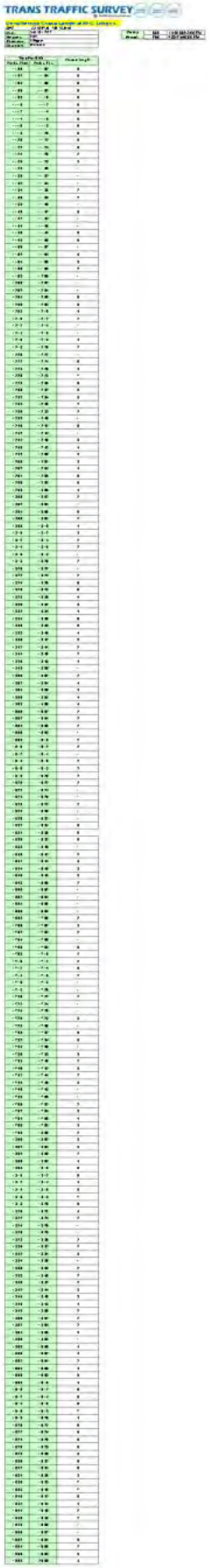
Date:	Sat 10/12/22
Weather:	Fine
Suburban:	Lithgow
Customer:	McLaren

Survey Period	AM:	11:00 AM-2:00 PM
	PM:	4:00 PM-8:00 PM

All Vehicles

Time		Parked On West Side	Parked On East Side	Used KFC	Arrival Time	Activity	Departure Time	Length of Stay	Description
Period Start	Period End								
11:00	11:15	2		1	11:00:57	Dine-in	11:06:21	0:05:24	
				1	11:03:34	Dine-in	11:22:55	0:19:21	
11:15	11:30								
11:30	11:45	1		1	11:33:42	Dine-in	11:38:52	0:05:10	
				1		Dine-in	11:37:20	11:37:20	Walk-Out
11:45	12:00			2	11:58:57	Dine-in	12:02:22	0:03:25	Walk-In
12:00	12:15			1	12:03:19	Dine-in	12:09:32	0:06:13	Walk-In
12:15	12:30								
12:30	12:45								
12:45	13:00			2	12:52:22	Dine-in	13:22:31	0:30:09	Walk-In
		1		1	12:54:32	Dine-in			Drop up
				1	12:54:36	Dine-in			Drop up
				2	12:59:33	Dine-in	13:13:44	0:14:11	Walk-In
13:00	13:15								
13:15	13:30			1		Dine-in	13:15:13		Walk-Out
13:30	13:45								
13:45	14:00	1		1	13:50:12	Dine-in	13:58:14	0:08:02	
16:00	16:15								
16:15	16:30			1	16:24:07	Dine-in			Walk-In
16:30	16:45	1		1	16:43:47	Dine-in	16:44:54	0:01:07	
16:45	17:00								
17:00	17:15	1		1	17:04:55	Dine-in	17:13:36	0:08:41	
17:15	17:30	1		1	17:24:19	Dine-in	17:26:34	0:02:15	
17:30	17:45	1		1	17:30:14	Dine-in	17:35:49	0:05:35	
17:45	18:00			3	17:51:38	Dine-in	18:32:21	0:40:43	Walk-In
18:00	18:15								
18:15	18:30			3		Dine-in	18:21:4		Walk-Out
18:30	18:45								
18:45	19:00	1		1	18:46:46	Dine-in	18:49:23	0:02:37	
19:00	19:15			2		Dine-in	18:52:56		Walk-Out
		1		1	18:57:54	Dine-in	18:58:46	0:00:52	
19:15	19:30								
19:30	19:45			2	19:41:46	Dine-in	19:48:31	0:06:45	Walk-In
19:45	20:00								




TRANS TRAFFIC SURVEY

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TURNING MOVEMENT SURVEY

KFC Mudgee on Church St, Mudgee

GPS *-32.597829, 149.587466*

Date:	Thu 08/12/22
Weather:	Fine
Suburban:	Mudgee
Customer:	McLaren

Survey Period	AM:	11:00 AM-2:00 PM
	PM:	4:00 PM-8:00 PM

All Vehicles

Time		Total Vehicles Parked On-Site
Period Start	Period End	
11:00	11:15	6
11:15	11:30	8
11:30	11:45	4
11:45	12:00	2
12:00	12:15	10
12:15	12:30	9
12:30	12:45	7
12:45	13:00	6
13:00	13:15	3
13:15	13:30	1
13:30	13:45	3
13:45	14:00	1
16:00	16:15	1
16:15	16:30	2
16:30	16:45	2
16:45	17:00	1
17:00	17:15	1
17:15	17:30	2
17:30	17:45	5
17:45	18:00	5
18:00	18:15	5
18:15	18:30	5
18:30	18:45	4
18:45	19:00	3
19:00	19:15	0
19:15	19:30	2
19:30	19:45	2
19:45	20:00	0

TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY

KFC Mudgee on Church St, Mudgee

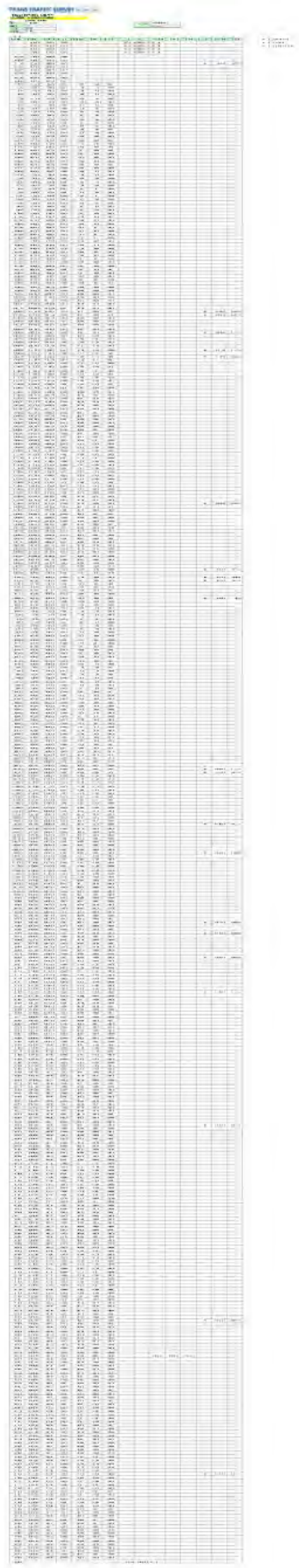
GPS -32.597829, 149.587466

Date:	Thu 08/12/22
Weather:	Fine
Suburban:	Mudgee
Customer:	McLaren

Survey Period		
	AM:	11:00 AM-2:00 PM
	PM:	4:00 PM-8:00 PM

All Vehicles

Time		Parked On West Side	Parked On East Side	Used KFC	Arrival Time	Activity	Departure Time	Length of Stay	Description
Period Start	Period End								
11:00	11:15	2	6	2	11:01:29 AM	Dine-in	11:06:36 AM	0:05:07	Walk In
				1	11:01:29 AM	Dine-in	11:07:06 AM	0:05:37	Walk In
				1	11:03:51 AM	Dine-in	11:09:10 AM	0:05:19	Walk In
				1	11:09:16 AM	Dine-in	11:18:55 AM	0:09:39	Walk In
				1	11:10:37 AM	Dine-in	11:16:56 AM	0:06:19	Walk Out
				2	11:11:48 AM	Dine-in	11:18:26 AM	0:06:38	
				3	11:12:05 AM	Dine-in	11:15:15 AM	0:03:10	Walk In
				1	11:12:18 AM	Dine-in	11:15:16 AM	0:02:58	
11:15	11:30	1	3	2		Dine-in	11:15:15 AM		Walk Out
				1		Dine-in	11:22:12 AM		Walk Out
				1	11:27:00 AM	Staff			Walk In
11:30	11:45	3	3	1	11:30:57 AM	Dine-in	11:32:57 AM	0:02:00	Walk In
				1		Staff	11:37:20 AM		Staff
				1	11:44:32 AM	Staff			Walk In
				1	11:48:52 AM	Dine-in	12:12:36 PM	0:23:44	Walk In
11:45	12:00	4	3	0					
12:00	12:15	4	3	1	12:04:06 PM	Dine-in			Walk In
				1		Dine-in	12:11:46 PM		Walk In
				1	12:12:31 PM	Dine-in	12:21:31 PM	0:09:00	Walk In
12:15	12:30	4	4	1	12:15:11 PM	Dine-in	12:15:21 PM	0:00:10	Walk In
				1	12:22:58 PM	Dine-in	12:26:04 PM	0:03:06	Walk In
				1	12:23:42 PM	Dine-in	12:27:29 PM	0:03:47	Walk In
				1	12:24:54 PM	Dine-in	12:52:09 PM	0:27:15	Walk In
				2	12:28:52 PM	Dine-in			Walk In
				1	12:26:05 PM	Dine-in	12:32:45 PM	0:06:40	
12:30	12:45	3	3	1	12:31:03 PM	Dine-in			Walk In
12:45	13:00	3	2	0		Dine-in			Walk In
13:00	13:15	2	3	1	1:03:16 PM	Dine-in	1:07:32 PM	0:04:16	Walk In
				1	1:12:42 PM	Dine-in			Walk In (Drop Off)
13:15	13:30	2	4	1		Dine-in	1:15:03 PM		Walk In
				1	1:17:07 PM	Dine-in			Walk In
				1	1:18:23 PM	Dine-in	1:20:20 PM	0:01:57	Walk In
				1	1:27:32 PM	Dine-in			Walk In
13:30	13:45	2	3	1		Dine-in	1:30:11 PM		Walk Out
				2		Dine-in	1:35:55 PM		Walk Out
				2	1:41:46 PM	Dine-in	5:27:05 PM	3:45:19	Walk In
13:45	14:00	2	3	1	1:53:57 PM	Dine-in	1:55:20 PM	0:01:23	Walk In
				1	1:56:11 PM	Dine-in			Walk In
16:00	16:15	2	2	1		Dine-in	4:01:32 PM		Walk In
				1	4:06:44 PM	Dine-in			Walk In
16:15	16:30	2	3	1	4:17:30 PM	Dine-in	4:27:25 PM	0:09:55	
				1	4:29:28 PM	Dine-in			Walk In
16:30	16:45	1	3	1	4:30:10 PM	Dine-in	4:57:14 PM	0:27:04	
				2		Dine-in	4:31:51 PM		Walk Out
				1		Dine-in	4:42:07 PM		Walk In, Pick Up
16:45	17:00	1	4	2	4:48:59 PM	Dine-in	5:13:50 PM	0:24:51	Walk In
				1	4:52:20 PM	Dine-in	5:38:29 PM	0:46:09	
				1	4:58:00 PM	Dine-in	7:42:22 PM	2:44:22	
				1		Dine-in	4:59:52 PM		Walk Out
17:00	17:15	0	4	1	5:02:41 PM		5:03:15 PM	0:00:34	Staff
				2		Dine-in	5:06:23 PM		Walk Out
17:15	17:30	0	4	1	5:21:31 PM	Dine-in			Walk In
17:30	17:45	0	3	2	5:32:56 PM	Dine-in	5:37:30 PM	0:04:34	Walk In
				1		Dine-in	5:35:23 PM		Walk Out
				1	5:37:51 PM	Dine-in	5:54:25 PM	0:16:34	
				1	5:38:55 PM	Dine-in			Walk In
17:45	18:00	0	2	1	5:48:08 PM	Dine-in	5:54:34 PM	0:06:26	Walk In
				1	5:56:20 PM	Dine-in	6:00:32 PM	0:04:12	
				1	5:58:56 PM	Dine-in			Walk In
18:00	18:15	1	3						
18:15	18:30	1	3	1	6:20:57 PM	Dine-in	6:33:19 PM	0:12:22	
18:30	18:45	0	2	1	6:40:08 PM	Dine-in			Walk In
				1		Dine-in	6:42:02 PM		Walk Out
				1	6:42:59 PM	Dine-in	7:23:02 PM	0:40:03	
18:45	19:00	0	2	1		Dine-in	6:46:24 PM		Walk Out
				1	6:49:08 PM	Dine-in	6:56:26 PM	0:07:18	
19:00	19:15	0	3	1	7:05:43 PM	Dine-in			Walk In, Pick Up
				1	7:09:48 PM	Dine-in	7:12:52 PM	0:03:04	
				1	7:11:00 PM	Dine-in	7:15:28 PM	0:04:28	Walk In
19:15	19:30	0	3	1	7:16:42 PM	Dine-in	7:19:07 PM	0:02:25	Walk In
				1	7:23:17 PM	Dine-in	7:25:22 PM	0:02:05	Walk In
				1	7:25:44 PM	Dine-in	7:42:21 PM	0:16:37	Walk In
19:30	19:45	2	4	2		Dine-in	7:30:35 PM		Walk Out
				1	7:30:58 PM	Dine-in	7:34:45 PM	0:03:47	Walk In
				2	7:36:22 PM	Dine-in			Walk In
19:45	20:00		2						



TRANS TRAFFIC SURVEY

TRANS TRAFFIC SURVEY trafficsurvey.com.au

TURNING MOVEMENT SURVEY

KFC Mudgee on Church St, Mudgee

GPS	*-32.597829, 149.587466*
Date:	Fri 09/12/22
Weather:	Fine
Suburban:	Mudgee
Customer:	McLaren

Survey Period	AM:11:00 AM-2:00 PM
	PM:4:00 PM-8:00 PM

All Vehicles

Time		Total Vehicles Parked On-Site
Period Start	Period End	
11:00	11:15	3
11:15	11:30	4
11:30	11:45	2
11:45	12:00	3
12:00	12:15	1
12:15	12:30	1
12:30	12:45	3
12:45	13:00	4
13:00	13:15	4
13:15	13:30	7
13:30	13:45	6
13:45	14:00	3
16:00	16:15	1
16:15	16:30	6
16:30	16:45	2
16:45	17:00	2
17:00	17:15	2
17:15	17:30	3
17:30	17:45	3
17:45	18:00	2
18:00	18:15	3
18:15	18:30	4
18:30	18:45	4
18:45	19:00	3
19:00	19:15	5
19:15	19:30	3
19:30	19:45	1
19:45	20:00	2

TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY

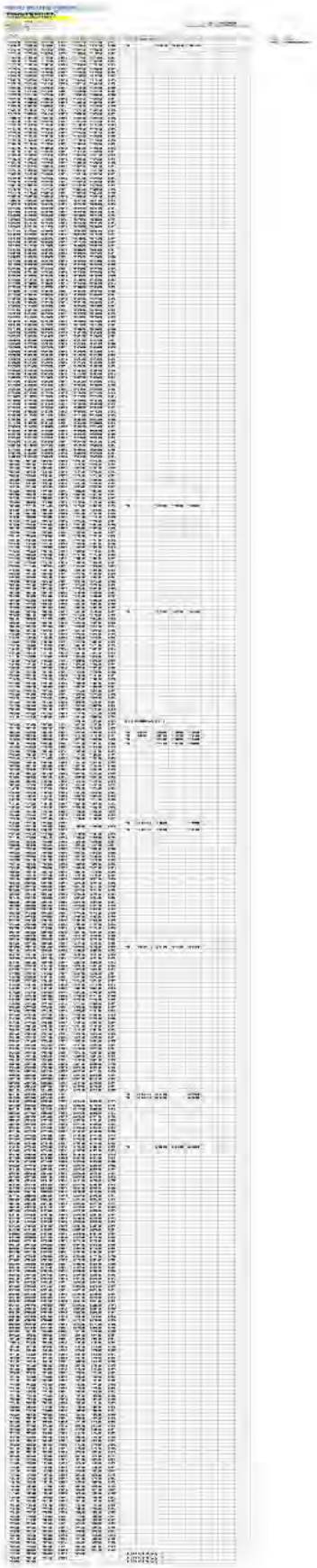
KFC Mudgee on Church St, Mudgee

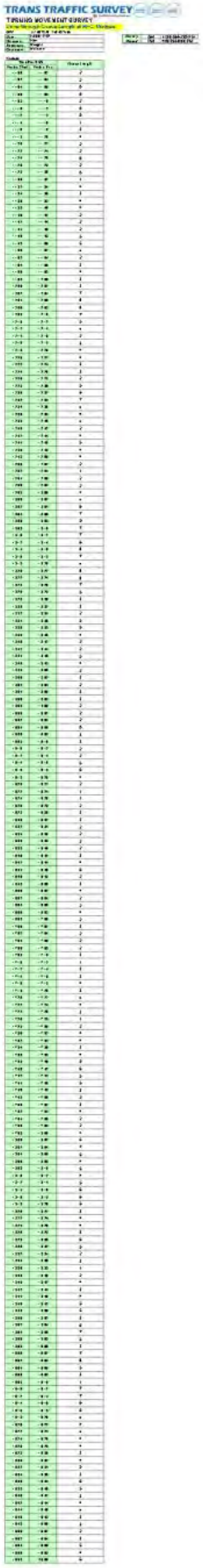
GPS	-32.597829, 149.597466
Date:	Fri 09/12/22
Weather:	Fine
Suburban:	Mudgee
Customer:	McLaren

Survey Period		
	AM:	11:00 AM-2:00 PM
	PM:	4:00 PM-8:00 PM

All Vehicles

Time Period Start	Time Period End	Parked On West Side	Parked On East Side	Used KFC	Arrival Time	Activity	Departure Time	Length of Stay	Description
11:00	11:15	0	3	3		Dine-in	11:10:02 AM		Walk Out
				1	11:14:26 AM	Dine-in			Walk In
11:15	11:30	1	2	1	11:28:11 AM	Dine-in			Walk In
				1	11:28:15 AM		1:31:41 PM	2:03:26 AM	Staff
11:30	11:45	3	4	1	11:34:42 AM	Dine-in	11:40:11 AM	12:05:29 AM	
				2	11:35:00 AM	Dine-in	11:53:01 AM	12:18:01 AM	
				1	11:36:36 AM	Dine-in			Walk In
11:45	12:00	2	3	1			11:52:11 AM		Staff
				3	11:53:48 AM	Dine-in			Walk In
12:00	12:15	3	3	1	12:00:39 PM				Staff
				1	12:01:19 PM	Dine-in	12:03:28 PM	12:02:09 AM	Walk In
				2	12:05:03 PM	Dine-in	12:29:57 PM	12:24:54 AM	
				1	12:07:43 PM	Dine-in	12:11:44 PM	12:04:01 AM	
				1	12:08:18 PM	Dine-in	12:12:53 PM	12:04:35 AM	Walk In
12:15	12:30	2	2						
12:30	12:45	2	4	1	12:30:51 PM	Dine-in	12:33:20 PM	12:02:29 AM	
				1	12:31:00 PM	Dine-in	12:50:10 PM	12:19:10 AM	Walk In
				1		Dine-in	12:31:34 PM		Walk In
				1			12:40:19 PM		Staff
				1	12:40:42 PM	Dine-in			Walk In
				1	12:44:40 PM				Staff
12:45	13:00	1	5	1	12:45:31 PM	Dine-in	12:50:41 PM	12:05:10 AM	
				1	12:47:55 PM	Dine-in	12:48:49 PM	12:00:54 AM	Walk In
				1	12:49:20 PM	Dine-in	12:50:44 PM	12:01:24 AM	Walk In
13:00	13:15	1	3	1	1:02:58 PM	Dine-in	1:05:42 PM	12:02:44 AM	Walk In
				1	1:09:49 PM	Dine-in			Walk In
				1	1:12:38 PM	Dine-in	1:16:27 PM	12:03:49 AM	Walk In
13:15	13:30	1	3	1	1:22:41 PM	Dine-in	1:26:42 PM	12:04:01 AM	Walk In
				1	1:22:54 PM	Dine-in	1:27:36 PM	12:04:42 AM	Walk In
				1	1:23:21 PM	Dine-in	1:23:43 PM	12:00:22 AM	Walk In
13:30	13:45	2	5	1	1:31:39 PM	Dine-in	1:38:12 PM	12:06:33 AM	Walk In
				1	1:40:01 PM				Staff
				1	1:40:23 PM	Dine-in			Walk In
13:45	14:00	3	3	1	1:45:35 PM	Dine-in	1:46:22 PM	12:00:47 AM	Walk In
				1	1:52:16 PM	Dine-in			Walk In
				3	1:52:23 PM	Dine-in			Walk In
				2	1:58:51 PM	Dine-in			Walk In
16:00	16:15	1	6	2		Dine-in	4:00:47 PM		Walk Out
				2		Dine-in	4:01:24 PM		Walk Out
				1	4:07:55 PM		4:22:26 PM		Staff
				5		Dine-in	4:09:43 PM		Walk Out
				1	4:13:01 PM	Dine-in	4:17:24 PM	12:04:23 AM	Drop Off
16:15	16:30	1	4	1	4:25:18 PM		5:48:25 PM		Staff
				3		Dine-in	4:25:51 PM		Walk Out
				1	4:27:49 PM	Dine-in	4:28:54 PM	12:01:05 AM	Walk In
16:30	16:45	1	4	2	4:30:19 PM	Dine-in	4:36:30 PM	12:06:11 AM	Walk In
				1	4:31:51 PM	Dine-in	4:41:26 PM	12:09:35 AM	Walk In
				1	4:32:09 PM	Dine-in	4:41:26 PM	12:09:17 AM	Walk In
				1	4:39:34 PM	Dine-in	4:43:38 PM	12:04:04 AM	
				1	4:44:44 PM	Dine-in			Walk In
16:45	17:00	1	2	2	4:47:50 PM	Dine-in	4:48:30 PM	12:00:40 AM	Walk In
				1	4:50:35 PM	Dine-in	4:56:37 PM	12:06:02 AM	Walk In
				3	4:53:00 PM	Dine-in	5:01:09 PM	12:08:09 AM	Walk In
17:00	17:15	0	2						
17:15	17:30	0	4	2	5:21:07 PM	Dine-in	5:27:43 PM	12:06:36 AM	Walk In
17:30	17:45	1	3	1	5:31:07 PM	Dine-in	5:34:28 PM	12:03:21 AM	Walk In
				1			5:32:53 PM		Staff
				1	5:34:37 PM	Dine-in	5:51:58 PM	12:17:21 AM	Walk In
				1		Dine-in	5:35:36 PM		Walk Out
				1	5:37:53 PM				Staff
				1	5:37:53 PM		5:48:37 PM	12:10:44 AM	Staff
				1	5:42:57 PM	Dine-in	5:48:05 PM	12:05:08 AM	Walk In
17:45	18:00	2	2	1	5:48:47 PM	Dine-in			Walk In
				2	5:53:11 PM	Dine-in	6:28:44 PM	12:35:33 AM	Walk In
				1	5:56:09 PM				Staff
18:00	18:15	1	2	1			6:01:53 PM		Staff
				1	6:02:13 PM	Dine-in	6:10:54 PM	12:08:41 AM	Walk In
				1	6:13:47 PM	Dine-in	6:19:10 PM	12:05:23 AM	
				1		Dine-in	6:14:57 PM		Walk In
18:15	18:30	0	2	1	6:18:53 PM	Dine-in			Walk In
				1	6:22:41 PM	Dine-in	6:28:22 PM	12:05:41 AM	Walk In
18:30	18:45	0	2	1	6:32:12 PM	Dine-in	6:48:17 PM	12:16:05 AM	Walk In
				1	6:37:20 PM	Dine-in	6:44:38 PM	12:07:18 AM	Walk In
				3	6:37:22 PM	Dine-in	7:10:05 PM	12:32:43 AM	Walk In
				1	6:38:33 PM	Dine-in	6:38:42 PM	12:00:09 AM	Walk In
18:45	19:00	0	2	3	6:58:00 PM	Dine-in	7:18:10 PM	12:20:10 AM	Walk In
				2	6:58:15 PM	Dine-in	7:22:00 PM	12:23:45 AM	Walk In
19:00	19:15	0	2	2	7:07:06 PM	Dine-in	7:15:09 PM	12:08:03 AM	Walk In
				1	7:11:44 PM	Dine-in	7:20:27 PM	12:08:43 AM	Walk In
19:15	19:30	0	2	2					
19:30	19:45	0	1	1	7:32:58 PM	Dine-in	7:35:55 PM	12:02:57 AM	Walk In
19:45	20:00	0	1	1	7:47:34 PM	Dine-in	7:48:58 PM	12:01:24 AM	Walk In





TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY

TRANS TRAFFIC SURVEY trafficsurvey.com.au

TURNING MOVEMENT SURVEY

KFC Mudgee on Church St, Mudgee

GPS	*-32.597829, 149.587466*
Date:	Sat 10/12/22
Weather:	Fine
Suburban:	Mudgee
Customer:	McLaren

Survey Period	AM:	11:00 AM-2:00 PM
	PM:	4:00 PM-8:00 PM

All Vehicles

Time		Total Vehicles Parked On-Sit
Period Start	Period End	
11:00	11:15	2
11:15	11:30	2
11:30	11:45	3
11:45	12:00	4
12:00	12:15	2
12:15	12:30	2
12:30	12:45	4
12:45	13:00	7
13:00	13:15	3
13:15	13:30	3
13:30	13:45	4
13:45	14:00	2
16:00	16:15	9
16:15	16:30	7
16:30	16:45	7
16:45	17:00	8
17:00	17:15	7
17:15	17:30	6
17:30	17:45	4
17:45	18:00	3
18:00	18:15	2
18:15	18:30	4
18:30	18:45	3
18:45	19:00	3
19:00	19:15	6
19:15	19:30	7
19:30	19:45	11
19:45	20:00	7

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TURNING MOVEMENT SURVEY

KFC Mudgee on Church St, Mudgee

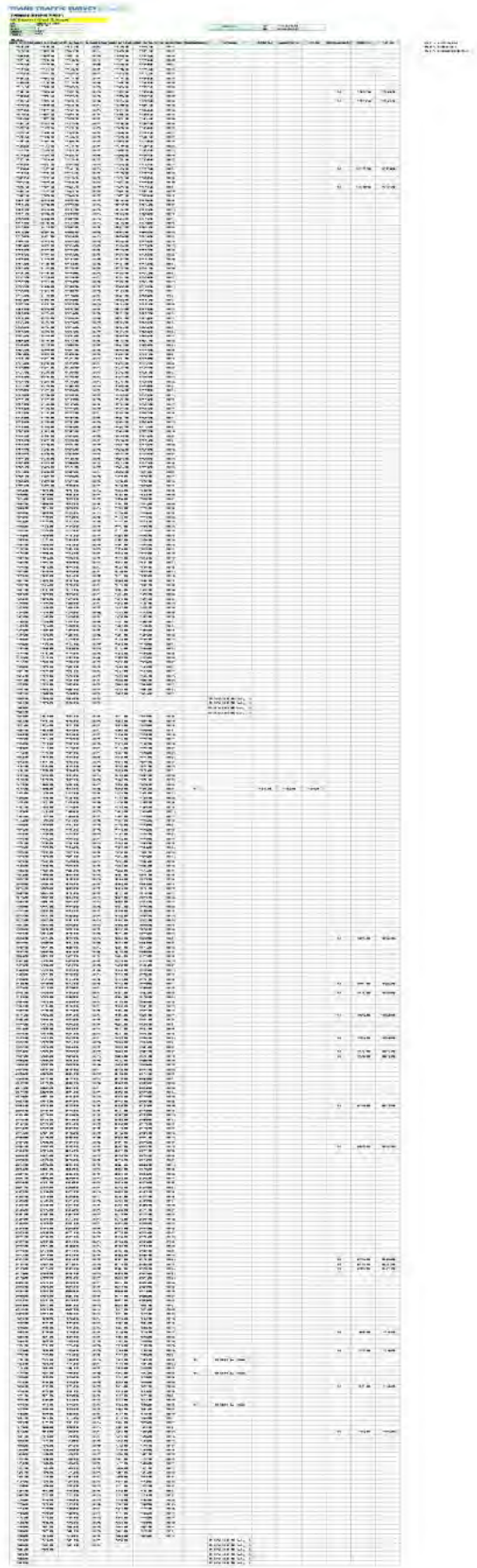
GPS -33.831216, 151.128259

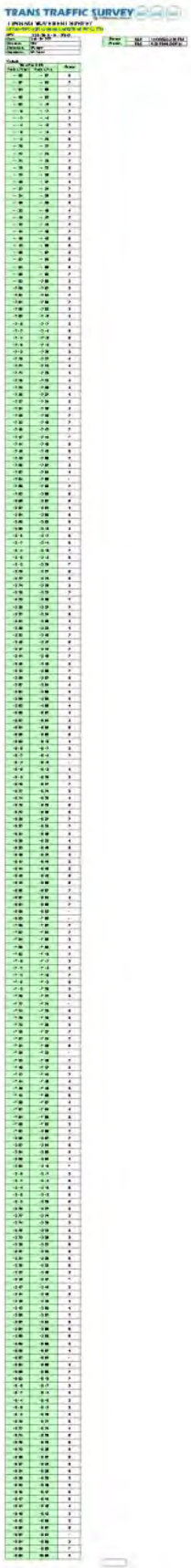
Date:	Sat 10/12/22
Weather:	Fine
Suburban:	Mudgee
Customer:	McLaren

Survey Period	AM	11:00 AM-2:00 PM
	PM	4:00 PM-8:00 PM

All Vehicles

Time Period Start	Time Period End	Parked On West Side	Parked On East Side	Used KFC	Arrival Time	Activity	Departure Time	Length of Stay	Description
11:00	11:15	2	4				11:04:12 AM		Staff
					11:08:46				Staff
11:15	11:30	1	7				11:23:31 AM		Staff
					11:27:18 AM				Staff
					11:28:03 AM				Staff
				2	11:28:37 AM		11:39:43 AM	0:11:06	Walk In
11:30	11:45	1	5	2	11:32:58 AM	Dine-in	11:43:22 AM	0:10:24	Walk In
				1	11:34:34 AM	Dine-in	11:41:14 AM	0:06:40	Walk In
				1	11:39:57 AM	Dine-in	11:43:22 AM	0:03:25	Walk In
11:45	12:00	2	6	1			11:55:17 AM		Staff Walk In, Entered Before Survey Start Time
12:00	12:15	2	2	1	12:00:05 PM	Dine-in	12:08:38 PM	0:08:33	Walk In
					12:05:59 PM				Staff
12:15	12:30	2	3	1	12:13:09 PM	Dine-in	12:34:17 PM	0:21:08	Walk In
				1	12:16:43 PM	Dine-in	12:29:01 PM	0:12:18	Walk In
12:30	12:45	2	5	2	12:15:50 PM		12:36:56 PM	0:21:06	Bicycle
12:45	13:00	0	6	1	12:47:28 PM	Dine-in	12:55:34 PM	0:08:06	Walk In
							12:49:18 PM		Staff
					12:49:34 PM				Staff
13:00	13:15	0	4	1			1:00:22 PM		Walk In, Entered Before Survey Start Time
				3	1:01:53 PM	Dine-in			Walk In
				2	1:12:20 PM	Dine-in			Walk In
13:15	13:30	2	3	0	1:25:54 PM		1:26:48 PM	0:00:54	Walk In
				1	1:26:28 PM	Dine-in	1:39:34 PM	0:13:06	Walk In
				0	1:27:05 PM		1:28:06 PM	0:01:01	Walk In
13:30	13:45	1	4	1	1:31:21 PM	Dine-in	1:33:36 PM	0:02:15	Walk In
				3	1:37:40 PM	Dine-in	1:56:08 PM	0:18:28	Walk In
13:45	14:00	2	3	1	1:46:39 PM				Walk In
				1	1:55:40 PM				
							1:56:08 PM		Walk In
16:00	16:15	0	1				4:01:32 PM		Staff
							4:06:09 PM		Staff
				3			4:07:47 PM		Bicycle
16:15	16:30	0	1	0	12:00:00 AM		12:00:00 AM	0:00:00	
16:30	16:45	0	2	1	4:43:32 PM	Dine-in			Walk In
16:45	17:00	0	2	1	4:45:36 PM	Dine-in			Walk In
				1	4:48:10 PM	Dine-in	5:05:55 PM	0:17:45	Walk In
				1	4:48:17 PM	Dine-in	5:05:55 PM	0:17:38	Walk In
				1	4:55:19 PM	Dine-in			Walk In
17:00	17:15	0	1	1		Dine-in	5:05:55 PM		Walk In
17:15	17:30	0	1	1	5:17:15 PM	Dine-in	5:20:43 PM	0:03:28	Walk In
				1	5:24:26 PM	Dine-in	5:29:10 PM	0:04:44	Walk In
							5:25:30 PM		Staff
					5:25:56 PM				Staff
				1	5:28:11 PM	Dine-in	5:28:54 PM	0:00:43	
							5:29:58 PM		Staff
17:30	17:45	0	0	0	12:00:00 AM	0	12:00:00 AM	0:00:00	0
17:45	18:00	0	5				5:48:06 PM		Staff
					5:48:31 PM				Staff
							5:50:00 PM		Staff
					5:50:29 PM				Staff
				2	5:53:01 PM	Other	5:54:02 PM	0:01:01	
							5:54:07 PM		Staff
					5:55:31 PM				Staff
					5:58:10 PM				Staff
				2	5:59:45 PM	Dine-in	6:00:38 PM	0:00:53	Walk In Pick Up Of Car
18:00	18:15	1	5				6:00:00 PM		Staff
					6:00:30 PM				Staff
				1	6:00:57 PM	Dine-in	6:12:35 PM	0:11:38	Drop Off & Pick Up
18:15	18:30	0	1	1	6:20:07 PM	Dine-in	6:20:29 PM	0:00:22	Walk In
							6:20:36 PM		Staff
					6:21:13 PM				Staff
18:30	18:45	1	0	1	6:34:39 PM	Dine-in	6:42:56 PM	0:08:17	Walk In
				1	6:38:05 PM	Dine-in	6:44:45 PM	0:06:40	Walk In
18:45	19:00	0	3				6:51:34 PM		Staff
					6:52:01 PM				Staff
							6:52:15 PM		Staff
					6:52:45 PM				Staff
							6:52:42 PM		Staff
					6:53:02 PM				Staff
19:00	19:15	1	2	2	7:03:45 PM	Dine-in	7:10:27 PM	0:06:42	Walk In
							7:10:30 PM		Staff
					7:11:40 PM				Staff
				2	7:13:56 PM	Dine-in	7:21:04 PM	0:07:08	Walk In
19:15	19:30	0	3				7:26:38 PM		Staff
					7:27:13 PM				Staff
19:30	19:45	0	2	0	12:00:00 AM		12:00:00 AM	0:00:00	
19:45	20:00	0	4	1	7:47:00 PM	Dine-in	7:49:06 PM	0:02:06	Car




TRANS TRAFFIC SURVEY

TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY

Intersection of KFC Access Driveway and Great Western

GPS	-33.4499 [illegible]	North:	Great Western Hwy	Survey	AM	11:00 AM-12:00 PM	
Date:	Thu 01/12/22	East:	NA	Period	PM	4:00 PM-5:00 PM	
Weather:	Fine	South:	Great Western Hwy	Traffic	AM	11:00 AM-12:00 PM	
Suburban:	Lithgow	West:	KFC Access Driveway	Peak	PM	12:00 PM-1:00 PM	
Cyclists:	Mr Lanet						

All Vehicles

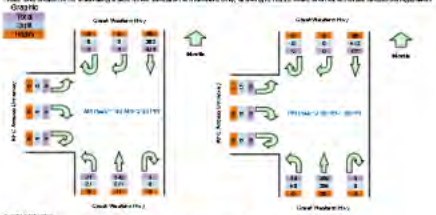
Time		In Approach Great Westerl			In Approach Great Western			Approach KFC Access Drw			Hourly Total	
Period Start	Period End	U	R	SB	U	NB	L	U	R	L	Hour	Peak
11:00	11:15	0	0	108	0	78	7	0	0	1	804	Peak
11:15	11:30	0	0	119	0	97	4	0	0	1		
11:30	11:45	0	0	100	0	88	3	0	0	2		
11:45	12:00	0	0	99	0	79	11	0	0	3		
12:00	12:15	0	0	127	0	88	13	0	0	7	882	Peak
12:15	12:30	0	0	140	0	98	11	0	0	5	920	
12:30	12:45	0	0	109	0	78	8	0	0	3	891	
12:45	13:00	0	0	105	0	90	14	0	0	3	890	
13:00	13:15	0	0	80	0	96	8	0	0	1	873	
13:15	13:30	0	0	129	0	90	9	0	0	4	766	
13:30	13:45	0	0	108	0	90	3	0	0	0	675	
13:45	14:00	0	0	110	0	78	8	0	0	3	195	
16:00	16:15	0	0	111	0	77	9	0	0	2	634	
16:15	16:30	0	0	75	0	69	4	0	0	1	614	
16:30	16:45	0	0	97	0	98	3	0	0	0	697	
16:45	17:00	0	0	89	0	91	9	0	0	3	714	
17:00	17:15	0	0	91	0	72	10	0	0	7	745	
17:15	17:30	0	0	108	0	107	12	0	0	5	708	
17:30	17:45	0	0	87	0	73	8	0	0	7	695	
17:45	18:00	0	0	80	0	70	11	0	0	2	666	
18:00	18:15	0	0	90	0	70	7	0	0	1	621	
18:15	18:30	0	0	85	0	64	8	0	0	4	598	
18:30	18:45	0	0	91	0	46	12	0	0	4	504	
18:45	19:00	0	0	65	0	57	9	0	0	4	457	
19:00	19:15	0	0	80	0	34	8	0	0	3	434	
19:15	19:30	0	0	89	0	33	12	0	0	4		
19:30	19:45	0	0	61	0	45	8	0	0	2		
19:45	20:00	0	0	85	0	35	8	0	0	4		

Peak Time		In Approach Great Westerl			In Approach Great Western			Approach KFC Access Drw			Peak total
Period Start	Period End	U	R	SB	U	NB	L	U	R	L	
11:00	12:00	0	0	426	0	342	27	0	0	9	804
12:00	13:00	0	0	477	0	389	45	0	0	17	882

Note: Site sketch is for illustrating traffic flows. Direction is indicative only, drawing is not to scale and not an exact sketch of location.

Graphic

Total
Light
Heavy



Light Vehicles

Time		In Approach Great Westerl			In Approach Great Western			Approach KFC Access Drw		
Period Start	Period End	U	R	SB	U	NB	L	U	R	L
11:00	11:15	0	0	89	0	63	7	0	0	1
11:15	11:30	0	0	100	0	74	4	0	0	1
11:30	11:45	0	0	90	0	68	3	0	0	2
11:45	12:00	0	0	83	0	68	11	0	0	3
12:00	12:15	0	0	108	0	73	15	0	0	6
12:15	12:30	0	0	126	0	76	11	0	0	3
12:30	12:45	0	0	82	0	66	6	0	0	3
12:45	13:00	0	0	96	0	77	14	0	0	3
13:00	13:15	0	0	80	0	79	8	0	0	1
13:15	13:30	0	0	113	0	80	9	0	0	4
13:30	13:45	0	0	104	0	81	3	0	0	0
13:45	14:00	0	0	90	0	63	8	0	0	2
16:00	16:15	0	0	99	0	66	3	0	0	2
16:15	16:30	0	0	72	0	65	4	0	0	1
16:30	16:45	0	0	91	0	84	3	0	0	0
16:45	17:00	0	0	85	0	49	9	0	0	3
17:00	17:15	0	0	77	0	71	10	0	0	7
17:15	17:30	0	0	100	0	88	12	0	0	5
17:30	17:45	0	0	81	0	66	8	0	0	7
17:45	18:00	0	0	72	0	62	11	0	0	2
18:00	18:15	0	0	83	0	59	7	0	0	1
18:15	18:30	0	0	79	0	56	8	0	0	4
18:30	18:45	0	0	81	0	42	11	0	0	4
18:45	19:00	0	0	81	0	52	9	0	0	4
19:00	19:15	0	0	81	0	28	8	0	0	3
19:15	19:30	0	0	80	0	29	12	0	0	4
19:30	19:45	0	0	84	0	38	8	0	0	2
19:45	20:00	0	0	80	0	31	8	0	0	4

Peak Time		In Approach Great Westerl			In Approach Great Western			Approach KFC Access Drw			Peak total
Period Start	Period End	U	R	SB	U	NB	L	U	R	L	
11:00	12:00	0	0	362	0	271	27	0	0	9	669
12:00	13:00	0	0	412	0	294	45	0	0	17	771

Heavy Vehicles

Time		In Approach Great Westerl			In Approach Great Western			Approach KFC Access Drw		
Period Start	Period End	U	R	SB	U	NB	L	U	R	L
11:00	11:15	0	0	19	0	15	0	0	0	0
11:15	11:30	0	0	19	0	23	0	0	0	0
11:30	11:45	0	0	10	0	20	0	0	0	0
11:45	12:00	0	0	16	0	13	0	0	0	0
12:00	12:15	0	0	19	0	15	0	0	0	1
12:15	12:30	0	0	14	0	19	0	0	0	0
12:30	12:45	0	0	23	0	5	0	0	0	0
12:45	13:00	0	0	9	0	13	0	0	0	0
13:00	13:15	0	0	5	0	17	0	0	0	0
13:15	13:30	0	0	16	0	10	0	0	0	0
13:30	13:45	0	0	24	0	9	0	0	0	0
13:45	14:00	0	0	17	0	13	0	0	0	1
16:00	16:15	0	0	12	0	11	0	0	0	0
16:15	16:30	0	0	3	0	4	0	0	0	0
16:30	16:45	0	0	6	0	4	0	0	0	0
16:45	17:00	0	0	3	0	2	0	0	0	0
17:00	17:15	0	0	4	0	5	0	0	0	0
17:15	17:30	0	0	8	0	19	0	0	0	0
17:30	17:45	0	0	6	0	7	0	0	0	0
17:45	18:00	0	0	8	0	8	0	0	0	0
18:00	18:15	0	0	7	0	11	0	0	0	0
18:15	18:30	0	0	7	0	8	0	0	0	0
18:30	18:45	0	0	10	0	4	1	0	0	0
18:45	19:00	0	0	7	0	5	0	0	0	0
19:00	19:15	0	0	9	0	5	0	0	0	0
19:15	19:30	0	0	9	0	8	0	0	0	0
19:30	19:45	0	0	7	0	7	0	0	0	0
19:45	20:00	0	0	6	0	4	0	0	0	0

Peak Time		In Approach Great Westerl			In Approach Great Western			Approach KFC Access Drw			Peak total
Period Start	Period End	U	R	SB	U	NB	L	U	R	L	
11:00	12:00	0	0	64	0	71	0	0	0	0	135
12:00	13:00	0	0	65	0	33	0	0	0	1	121

TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY

Intersection of Flint McCleland Ave and KFC Access Drw

GPS	-33.490990, 150.133078						
Date	Thu 08.12.22	North:	KFC Access Driveway	Survey	AM	11:00 AM-2:00 PM	
Weather:	Fine	East:	Flint McCleland Ave	Period	PM	4:00 PM-8:00 PM	
Suburban	Bowenfels	South:	N/A	Traffic	AM	11:00 AM-12:00 PM	
Customer:	MCS Bell	West:	Flint MCCleland Ave	Peak	PM	12:30 PM-1:30 PM	

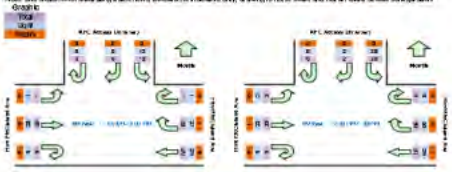
All Vehicles

Time		Approach KFC Access Drwy			Approach Flint McCleland Ave			Approach Flint McCleland Ave			Hourly Totals	
Period Start	Period End	U	R	L	U	R	WB	U	EB	L	Hour	Peak
11:00	11:15	0	0	3	1	7	5	0	4	0	91	Peak
11:15	11:30	0	0	4	0	7	6	0	9	1		
11:30	11:45	0	0	3	0	6	4	0	7	0		
11:45	12:00	0	0	3	0	5	5	0	5	0		
12:00	12:15	0	0	2	0	17	6	0	9	0	147	
12:15	12:30	0	1	5	0	10	7	0	5	0	145	
12:30	12:45	0	1	9	0	12	9	0	5	1	153	Peak
12:45	13:00	0	1	6	0	12	7	0	10	0	138	
13:00	13:15	0	0	2	0	9	13	0	10	1	129	
13:15	13:30	0	0	9	0	11	8	0	8	1	94	
13:30	13:45	0	0	5	0	7	9	0	7	0	87	
13:45	14:00	0	0	3	0	5	5	0	13	0	79	
16:00	16:15	0	0	3	0	7	14	0	8	0	127	
16:15	16:30	0	0	6	0	3	7	0	9	0	122	
16:30	16:45	0	0	6	0	6	12	0	9	1	136	
16:45	17:00	0	0	3	0	4	14	0	13	0	138	
17:00	17:15	0	0	1	0	7	8	0	9	2	128	
17:15	17:30	0	0	4	0	13	15	0	7	0	136	
17:30	17:45	0	1	2	0	7	13	0	11	0	126	
17:45	18:00	0	1	5	0	9	6	0	9	0	113	
18:00	18:15	0	0	4	0	5	9	0	5	2	108	
18:15	18:30	0	1	7	0	10	7	0	4	0	98	
18:30	18:45	0	0	5	0	2	7	0	6	3	79	
18:45	19:00	0	0	5	0	12	3	0	5	0	77	
19:00	19:15	0	0	2	0	4	4	0	7	0	70	
19:15	19:30	0	0	3	0	2	5	0	3	0		
19:30	19:45	0	0	5	0	5	5	0	3	0		
19:45	20:00	0	1	1	0	7	4	0	5	0		

Peak Time		Approach KFC Access Drwy			Approach Flint McCleland Ave			Approach Flint McCleland Ave			Peak total
Period Start	Period End	U	R	L	U	R	WB	U	EB	L	
11:00	12:00	0	0	13	1	27	20	0	22	1	91
12:30	13:30	0	2	26	0	50	35	0	33	3	153

Note: Site sketch is for visualizing traffic flows. Dimension is indicative only, drawing is not to scale and not an exact street configuration.

Graphic



Light Vehicles

Time		Approach KFC Access Drwy			Approach Flint McCleland Ave			Approach Flint McCleland Ave		
Period Start	Period End	U	R	L	U	R	WB	U	EB	L
11:00	11:15	0	0	3	1	7	5	0	4	0
11:15	11:30	0	0	4	0	7	6	0	9	1
11:30	11:45	0	0	3	0	6	4	0	7	0
11:45	12:00	0	0	3	0	5	5	0	5	0
12:00	12:15	0	0	2	0	17	6	0	9	0
12:15	12:30	0	1	5	0	10	7	0	5	0
12:30	12:45	0	1	9	0	12	9	0	5	1
12:45	13:00	0	1	6	0	12	7	0	9	0
13:00	13:15	0	0	2	0	9	13	0	10	1
13:15	13:30	0	0	9	0	11	7	0	8	1
13:30	13:45	0	0	5	0	6	9	0	5	0
13:45	14:00	0	0	2	0	5	5	0	13	0
16:00	16:15	0	0	3	0	7	14	0	8	0
16:15	16:30	0	0	6	0	3	6	0	9	0
16:30	16:45	0	0	6	0	6	12	0	8	1
16:45	17:00	0	0	3	0	4	14	0	13	0
17:00	17:15	0	0	1	0	7	8	0	9	2
17:15	17:30	0	0	4	0	13	15	0	7	0
17:30	17:45	0	1	2	0	7	14	0	11	0
17:45	18:00	0	1	5	0	9	6	0	9	0
18:00	18:15	0	0	4	0	4	9	0	8	2
18:15	18:30	0	1	6	0	10	7	0	4	0
18:30	18:45	0	0	5	0	2	7	0	6	3
18:45	19:00	0	0	5	0	12	3	0	5	0
19:00	19:15	0	0	2	0	4	4	0	7	0
19:15	19:30	0	0	3	0	2	5	0	3	0
19:30	19:45	0	0	5	0	5	5	0	2	0
19:45	20:00	0	1	1	0	7	4	0	5	0

Peak Time		Approach KFC Access Drwy			Approach Flint McCleland Ave			Approach Flint McCleland Ave			Peak total
Period Start	Period End	U	R	L	U	R	WB	U	EB	L	
11:00	12:00	0	0	13	1	27	20	0	22	1	90
12:30	13:30	0	2	22	0	50	35	0	32	3	151

Heavy Vehicles

Time		Approach KFC Access Drwy			Approach Flint McCleland Ave			Approach Flint McCleland Ave		
Period Start	Period End	U	R	L	U	R	WB	U	EB	L
11:00	11:15	0	0	0	0	0	0	0	0	0
11:15	11:30	0	0	0	0	0	0	0	0	0
11:30	11:45	0	0	0	0	0	0	0	0	0
11:45	12:00	0	0	0	0	1	0	0	0	0
12:00	12:15	0	0	0	0	0	0	0	0	0
12:15	12:30	0	0	0	0	0	0	0	0	0
12:30	12:45	0	0	0	0	0	0	0	0	0
12:45	13:00	0	0	0	0	0	0	0	1	0
13:00	13:15	0	0	0	0	0	0	0	0	0
13:15	13:30	0	0	0	0	0	1	0	0	0
13:30	13:45	0	0	0	0	1	0	0	1	0
13:45	14:00	0	0	1	0	0	0	0	0	0
16:00	16:15	0	0	0	0	0	0	0	0	0
16:15	16:30	0	0	0	0	0	1	0	0	0
16:30	16:45	0	0	0	0	0	0	0	1	0
16:45	17:00	0	0	0	0	0	0	0	0	0
17:00	17:15	0	0	0	0	0	0	0	0	0
17:15	17:30	0	0	0	0	0	0	0	0	0
17:30	17:45	0	0	0	0	0	1	0	0	0
17:45	18:00	0	0	0	0	0	0	0	0	0
18:00	18:15	0	0	0	0	1	0	0	0	0
18:15	18:30	0	0	1	0	0	0	0	0	0
18:30	18:45	0	0	0	0	0	0	0	0	0
18:45	19:00	0	0	0	0	0	0	0	0	0
19:00	19:15	0	0	0	0	0	0	0	0	0
19:15	19:30	0	0	0	0	0	0	0	0	0
19:30	19:45	0	0	0	0	0	0	0	1	0
19:45	20:00	0	0	0	0	0	0	0	0	0

Peak Time		Approach KFC Access Drwy			Approach Flint McCleland Ave			Approach Flint McCleland Ave			Peak total
Period Start	Period End	U	R	L	U	R	WB	U	EB	L	
11:00	12:00	0	0	0	0	1	0	0	0	0	1
12:30	13:30	0	0	0	0	0	1	0	1	0	2

TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY

Intersection of Lands St and KFC Access Driveway, Bow

GPS	-33.488471, 150.432713							
Date	Thu 01/12/22	North:	Lands St	Survey	AM	11:00 AM-12:00 PM		
Weather	Fine	East:	KFC Access Driveway	Period	PM	4:00 PM-5:00 PM		
Suburban	Bowenfels	South:	Lands St	Traffic	AM	11:00 AM-12:00 PM		
Customer	MCS Inc	Way:	N/A	Peak	PM	3:00 PM-6:00 PM		

All Vehicles

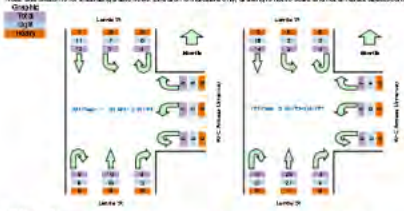
Time		North Approach Lands St			Approach KFC Access Drw			South Approach Lands St			Hourly Total	
Period Start	Period End	U	SS	L	U	R	L	U	R	NS	Hour	Peak
11:00	11:15	0	1	2	0	0	0	0	0	1	34	Peak
11:15	11:30	0	4	0	0	0	1	0	0	3		
11:30	11:45	0	4	1	0	0	0	0	1	1		
11:45	12:00	0	3	4	0	0	1	0	2	5		
12:00	12:15	0	7	1	0	0	3	0	1	0	49	
12:15	12:30	0	5	0	0	0	0	0	1	4	47	
12:30	12:45	0	3	4	0	0	2	0	3	3	48	
12:45	13:00	0	2	0	0	1	0	0	1	3	46	
13:00	13:15	0	6	0	0	1	0	1	0	6	32	
13:15	13:30	0	3	3	0	1	0	0	1	4	36	
13:30	13:45	0	2	2	0	0	0	0	1	3	26	
13:45	14:00	1	6	1	0	0	0	0	0	3	13	
16:00	16:15	0	5	1	0	0	1	0	0	3	42	
16:15	16:30	0	3	2	0	0	0	0	0	3	36	
16:30	16:45	0	5	0	0	0	1	0	0	3	44	
16:45	17:00	0	3	1	0	0	0	0	0	5	33	
17:00	17:15	0	4	0	0	0	0	0	0	5	34	Peak
17:15	17:30	0	3	1	0	1	0	0	0	11	32	
17:30	17:45	0	5	1	0	2	0	0	3	7	43	
17:45	18:00	0	4	0	0	1	0	0	1	5	33	
18:00	18:15	0	2	0	0	0	2	0	1	2	32	
18:15	18:30	0	2	1	0	0	0	0	0	4	31	
18:30	18:45	0	4	2	0	0	0	0	0	2	33	
18:45	19:00	0	3	2	0	1	1	0	0	3	28	
19:00	19:15	0	3	0	0	0	0	0	2	1	24	
19:15	19:30	0	2	2	0	0	1	0	1	3		
19:30	19:45	0	1	0	0	0	0	0	0	2		
19:45	20:00	0	2	1	0	1	0	0	0	2		

Peak Time		North Approach Lands St			Approach KFC Access Drw			South Approach Lands St			Peak Total
Period Start	Period End	U	SS	L	U	R	L	U	R	NS	
11:00	12:00	0	12	7	0	0	2	0	3	10	34
17:00	18:00	0	16	2	0	4	0	0	4	26	34

Note: Site sketch is for illustrating traffic flows. Direction is indicative only, drawing is not to scale and not an exact representation.

Graphic

Total
Light
Heavy



Light Vehicles

Time		North Approach Lands St			Approach KFC Access Drw			South Approach Lands St		
Period Start	Period End	U	SS	L	U	R	L	U	R	NS
11:00	11:15	0	1	2	0	0	0	0	0	1
11:15	11:30	0	3	0	0	0	1	0	0	3
11:30	11:45	0	4	1	0	0	0	0	1	1
11:45	12:00	0	3	4	0	0	1	0	2	5
12:00	12:15	0	7	1	0	0	3	0	1	0
12:15	12:30	0	5	0	0	0	0	0	1	4
12:30	12:45	0	3	4	0	0	2	0	3	3
12:45	13:00	0	2	0	0	1	0	0	1	3
13:00	13:15	0	6	0	0	1	0	1	0	5
13:15	13:30	0	3	3	0	1	0	0	1	3
13:30	13:45	0	0	2	0	0	0	0	1	3
13:45	14:00	1	6	1	0	0	0	0	0	3
16:00	16:15	0	5	1	0	0	1	0	0	3
16:15	16:30	0	3	2	0	0	0	0	0	3
16:30	16:45	0	3	0	0	0	1	0	0	3
16:45	17:00	0	3	1	0	0	0	0	0	5
17:00	17:15	0	4	0	0	0	0	0	0	5
17:15	17:30	0	3	1	0	1	0	0	0	11
17:30	17:45	0	5	1	0	2	0	0	3	5
17:45	18:00	0	4	0	0	1	0	0	1	5
18:00	18:15	0	1	0	0	0	2	0	1	2
18:15	18:30	0	2	1	0	0	0	0	0	4
18:30	18:45	0	4	2	0	0	0	0	0	2
18:45	19:00	0	3	2	0	0	1	0	0	3
19:00	19:15	0	3	0	0	0	0	0	2	1
19:15	19:30	0	2	2	0	0	1	0	1	3
19:30	19:45	0	1	0	0	0	0	0	0	2
19:45	20:00	0	2	1	0	1	0	0	0	2

Peak Time		North Approach Lands St			Approach KFC Access Drw			South Approach Lands St			Peak Total
Period Start	Period End	U	SS	L	U	R	L	U	R	NS	
11:00	12:00	0	11	7	0	0	2	0	3	10	33
17:00	18:00	0	16	2	0	4	0	0	4	27	33

Heavy Vehicles

Time		North Approach Lands St			Approach KFC Access Drw			South Approach Lands St		
Period Start	Period End	U	SS	L	U	R	L	U	R	NS
11:00	11:15	0	0	0	0	0	0	0	0	0
11:15	11:30	0	1	0	0	0	0	0	0	0
11:30	11:45	0	0	0	0	0	0	0	0	0
11:45	12:00	0	0	0	0	0	0	0	0	0
12:00	12:15	0	0	0	0	0	0	0	0	0
12:15	12:30	0	1	0	0	0	0	0	0	0
12:30	12:45	0	0	0	0	0	0	0	0	0
12:45	13:00	0	0	0	0	0	0	0	0	0
13:00	13:15	0	0	0	0	0	0	0	0	0
13:15	13:30	0	0	0	0	0	0	0	0	1
13:30	13:45	0	2	0	0	0	0	0	0	0
13:45	14:00	0	0	0	0	0	0	0	0	0
16:00	16:15	0	0	0	0	0	0	0	0	0
16:15	16:30	0	0	0	0	0	0	0	0	0
16:30	16:45	0	2	0	0	0	0	0	0	0
16:45	17:00	0	0	0	0	0	0	0	0	0
17:00	17:15	0	0	0	0	0	0	0	0	0
17:15	17:30	0	0	0	0	0	0	0	0	0
17:30	17:45	0	0	0	0	0	0	0	0	1
17:45	18:00	0	0	0	0	0	0	0	0	0
18:00	18:15	0	1	0	0	0	0	0	0	0
18:15	18:30	0	0	0	0	0	0	0	0	0
18:30	18:45	0	0	0	0	0	0	0	0	0
18:45	19:00	0	0	0	0	1	0	0	0	0
19:00	19:15	0	0	0	0	0	0	0	0	0
19:15	19:30	0	0	0	0	0	0	0	0	0
19:30	19:45	0	0	0	0	0	0	0	0	0
19:45	20:00	0	0	0	0	0	0	0	0	0

Peak Time		North Approach Lands St			Approach KFC Access Drw			South Approach Lands St			Peak Total
Period Start	Period End	U	SS	L	U	R	L	U	R	NS	
11:00	12:00	0	1	0	0	0	0	0	0	0	1
17:00	18:00	0	0	0	0	0	0	0	0	1	1

TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY

Intersection of KFC Access (North) and Great Western Hi

GPS	-33.49972, 150.13597	North:	Great Western Hwy	Survey	AM	11:00 AM-2:00 PM
Date	Thu 08/12/22	East:	N/A	Period	PM	4:00 PM-6:00 PM
Weather:	Fine	South:	Great Western Hwy	Traffic	AM	11:00 AM-12:00 PM
Suburb:	Ulington	West:	KFC Access (North)	Peak	PM	12:00 PM-1:00 PM
Surveyor:	MCS Staff					

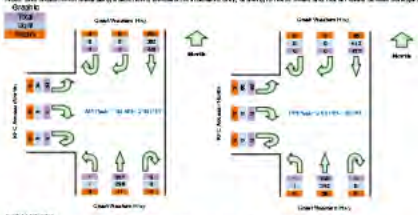
All Vehicles

Time		In Approach Great Western						In Approach Great Western						In Approach KFC Access (N						Hourly Total	
Period Start	Period End	U	R	SR	U	NR	L	U	R	L											Peak
11:00	11:15	0	0	108	0	83	0	0	0	6										828	Peak
11:15	11:30	0	0	119	0	102	0	0	0	7											
11:30	11:45	0	0	100	0	92	1	0	0	7											
11:45	12:00	0	0	99	0	90	0	0	0	14											
12:00	12:15	0	0	127	0	104	1	0	0	24										942	Peak
12:15	12:30	0	0	140	0	106	0	0	0	11										888	
12:30	12:45	0	0	109	0	87	0	0	0	19										853	
12:45	13:00	0	0	105	0	101	0	0	0	12										930	
13:00	13:15	0	0	80	0	105	0	0	0	15										915	
13:15	13:30	0	0	129	0	97	2	0	0	16										776	
13:30	13:45	0	0	158	0	94	0	0	0	6										492	
13:45	14:00	0	0	110	0	84	0	0	0	10										204	
16:00	16:15	0	0	111	0	82	0	0	0	5										580	
16:15	16:30	0	0	75	0	73	0	0	0	4										630	
16:30	16:45	0	0	97	0	61	0	0	0	3										719	
16:45	17:00	0	0	69	0	60	0	0	0	9										734	
17:00	17:15	0	0	81	0	67	0	0	0	11										768	
17:15	17:30	0	0	104	0	119	0	0	0	14										762	
17:30	17:45	0	0	67	0	81	0	0	0	5										607	
17:45	18:00	0	0	80	0	81	0	0	0	11										670	
18:00	18:15	0	0	90	0	77	0	0	0	5										643	
18:15	18:30	0	0	86	0	72	0	0	0	6										579	
18:30	18:45	0	0	91	0	57	0	0	0	11										529	
18:45	19:00	0	0	66	0	66	0	0	0	11										450	
19:00	19:15	0	0	60	0	42	0	0	0	7										436	
19:15	19:30	0	0	59	0	43	0	0	0	12											
19:30	19:45	0	0	61	0	53	0	0	0	9											
19:45	20:00	0	0	36	0	43	0	0	0	7											

Peak Time		In Approach Great Western						In Approach Great Western						In Approach KFC Access (N						Peak total
Period Start	Period End	U	R	SR	U	NR	L	U	R	L										
11:00	12:00	0	0	426	0	367	1	0	0	24										828
12:00	13:00	0	0	477	0	396	1	0	0	66										942

Note: Site sketch only (indicating traffic flow). Dimension is indicative only, drawing is not to scale and not an exact street configuration.

Graphic



Light Vehicles

Time		In Approach Great Western						In Approach Great Western						In Approach KFC Access (N							
Period Start	Period End	U	R	SR	U	NR	L	U	R	L											
11:00	11:15	0	0	89	0	66	0	0	0	5								0	0		
11:15	11:30	0	0	100	0	79	0	0	0	7								0	0		
11:30	11:45	0	0	90	0	72	1	0	0	7								0	0		
11:45	12:00	0	0	83	0	77	0	0	0	14								0	0		
12:00	12:15	0	0	108	0	88	1	0	0	24								0	0		
12:15	12:30	0	0	126	0	87	0	0	0	11								0	0		
12:30	12:45	0	0	82	0	79	0	0	0	19								0	0		
12:45	13:00	0	0	96	0	88	0	0	0	12								0	0		
13:00	13:15	0	0	85	0	88	0	0	0	15								0	0		
13:15	13:30	0	0	113	0	87	2	0	0	16								0	0		
13:30	13:45	0	0	134	0	88	0	0	0	5								0	0		
13:45	14:00	0	0	93	0	70	0	0	0	9								0	0		
16:00	16:15	0	0	99	0	71	0	0	0	5								0			#REF
16:15	16:30	0	0	72	0	69	0	0	0	4								0			#REF
16:30	16:45	0	0	91	0	57	0	0	0	3								0			#REF
16:45	17:00	0	0	65	0	58	0	0	0	9								0			#REF
17:00	17:15	0	0	77	0	61	0	0	0	11								0			#REF
17:15	17:30	0	0	100	0	100	0	0	0	14								0			#REF
17:30	17:45	0	0	61	0	74	0	0	0	5								0			#REF
17:45	18:00	0	0	72	0	73	0	0	0	11								0			#REF
18:00	18:15	0	0	83	0	68	0	0	0	5								0			#REF
18:15	18:30	0	0	79	0	66	0	0	0	6								0			#REF
18:30	18:45	0	0	81	0	53	0	0	0	11								0			#REF
18:45	19:00	0	0	61	0	61	0	0	0	11								0			#REF
19:00	19:15	0	0	51	0	36	0	0	0	7								0			#REF
19:15	19:30	0	0	50	0	37	0	0	0	12								0			#REF
19:30	19:45	0	0	34	0	46	0	0	0	9								0			#REF
19:45	20:00	0	0	30	0	39	0	0	0	7								0			#REF

Peak Time		In Approach Great Western						In Approach Great Western						In Approach KFC Access (N						Peak total
Period Start	Period End	U	R	SR	U	NR	L	U	R	L										
11:00	12:00	0	0	362	0	296	1	0	0	24										683
12:00	13:00	0	0	413	0	342	1	0	0	66										821

Heavy Vehicles

Time		In Approach Great Western						In Approach Great Western						In Approach KFC Access (N						
Period Start	Period End	U	R	SR	U	NR	L	U	R	L										
11:00	11:15	0	0	19	0	18	0	0	0	0										
11:15	11:30	0	0	19	0	23	0	0	0	0										
11:30	11:45	0	0	10	0	20	0	0	0	0										
11:45	12:00	0	0	16	0	13	0	0	0	0										
12:00	12:15	0	0	19	0	16	0	0	0	0										
12:15	12:30	0	0	14	0	19	0	0	0	0										
12:30	12:45	0	0	23	0	8	0	0	0	0										
12:45	13:00	0	0	9	0	13	0	0	0	0										
13:00	13:15	0	0	3	0	17	0	0	0	0										
13:15	13:30	0	0	16	0	10	0	0	0	0										
13:30	13:45	0	0	24	0	9	0	0	0	0										
13:45	14:00	0	0	17	0	14	0	0	0	1										
16:00	16:15	0	0	12	0	11	0	0	0	0										
16:15	16:30	0	0	3	0	4	0	0	0	0										
16:30	16:45	0	0	6	0	4	0	0	0	0										
16:45	17:00	0	0	3	0	2	0	0	0	0										
17:00	17:15	0	0	4	0	6	0	0	0	0										
17:15	17:30	0	0	6	0	19	0	0	0	0										
17:30	17:45	0	0	6	0	7	0	0	0	0										
17:45	18:00	0	0	8	0	8	0	0	0	0										
18:00	18:15	0	0	7	0	11	0	0	0	0										
18:15	18:30	0	0	7	0	6	0	0	0	0										
18:30	18:45	0	0	10	0	4	0	0	0	0										
18:45	19:00	0	0	7	0	5	0	0	0	0										
19:00	19:15	0	0	9	0	6	0	0	0	0										
19:15	19:30	0	0	9	0	6	0	0	0	0										
19:30	19:45	0	0	7	0	7	0	0	0	0										
19:45	20:00	0	0	6	0	4	0	0	0	0										

Peak Time		In Approach Great Western						In Approach Great Western						In Approach KFC Access (N						Peak total
Period Start	Period End	U	R	SR	U	NR	L	U	R	L										
11:00	12:00	0	0	64	0	71	0	0	0	0										135
12:00	13:00	0	0	65	0	56	0	0	0	0										121

TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY

Intersection of KFC Access (South) and Great Western H

GPS	-33.4[illegible] 150.[illegible]	North:	Great Western Hwy	Survey Period	AM	11:00 AM-12:00 PM	
Date:	Fri 04/11/2022	East:	NAP		PM	4:00 PM-5:00 PM	
Weather:	Fine	South:	Great Western Hwy	Traffic Peak	AM	11:00 AM-12:00 PM	
Suburb/town:	Lithgow	West:	KFC Access (South)		PM	4:15 PM-5:15 PM	
Cyclists:	NO Cyclist						

All Vehicles

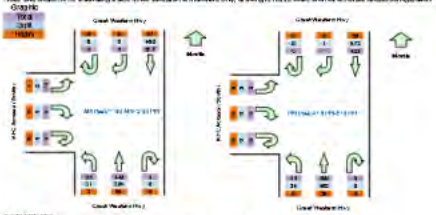
Time		B Approach Great Western H				D Approach Great Western H				E Approach KFC Access (S)				Hourly Total	Peak
Period Start	Period End	U	R	SB	U	NB	L	U	R	L					
11:00	11:15	0	0	139	0	118	8	0	0	2				1008	Peak
11:15	11:30	0	0	118	0	106	8	0	0	1					
11:30	11:45	0	0	142	0	98	9	0	0	1					
11:45	12:00	0	0	118	0	126	10	0	0	6					
12:00	12:15	0	0	123	0	107	10	0	0	7	1043				
12:15	12:30	0	0	141	0	109	9	0	0	2	1048				
12:30	12:45	0	0	151	0	103	12	0	0	9	1042				
12:45	13:00	0	0	122	0	111	13	0	0	2	1035				
13:00	13:15	0	0	144	0	99	9	0	0	4	1061				
13:15	13:30	0	0	146	0	87	17	0	0	3	911				
13:30	13:45	0	0	137	0	124	10	0	0	8	996				
13:45	14:00	0	0	139	0	123	11	0	0	4	977				
16:00	16:15	0	0	138	0	149	3	0	0	3	1142				
16:15	16:30	0	0	134	0	115	7	0	0	4	1159	Peak			
16:30	16:45	0	0	142	0	129	8	0	0	2	1132				
16:45	17:00	0	1	152	0	118	12	0	0	1	1121				
17:00	17:15	0	0	155	0	141	7	0	0	2	1076				
17:15	17:30	0	0	115	0	117	9	0	0	3	1019				
17:30	17:45	0	0	134	0	114	13	0	0	3	1020				
17:45	18:00	0	0	114	0	122	8	0	0	5	953				
18:00	18:15	0	0	117	0	117	15	0	0	9	922				
18:15	18:30	0	0	132	0	97	17	0	0	1	850				
18:30	18:45	0	0	90	0	99	16	0	0	1	753				
18:45	19:00	0	0	94	0	100	10	0	0	4	718				
19:00	19:15	0	0	75	0	92	12	0	0	6	630				
19:15	19:30	0	0	95	0	68	14	0	0	4					
19:30	19:45	0	0	74	0	46	16	0	0	5					
19:45	20:00	0	0	85	0	34	7	0	0	3					

Peak Time		B Approach Great Western H				D Approach Great Western H				E Approach KFC Access (S)		Peak total
Period Start	Period End	U	R	SB	U	NB	L	U	R	L		
11:00	12:00	0	0	517	0	445	33	0	0	10		1005
16:15	17:15	0	1	623	0	476	34	0	0	4		1138

Note: Site sketch is for illustrating traffic flows. Direction is indicative only, drawing is not to scale and not an exact sketch of location.

Graphic

Total
Light
Heavy



Light Vehicles

Time		B Approach Great Western H				D Approach Great Western H				E Approach KFC Access (S)	
Period Start	Period End	U	R	SB	U	NB	L	U	R	L	
11:00	11:15	0	0	123	0	101	7	0	0	1	
11:15	11:30	0	0	106	0	95	8	0	0	1	
11:30	11:45	0	0	133	0	83	9	0	0	1	
11:45	12:00	0	0	95	0	103	10	0	0	5	
12:00	12:15	0	0	109	0	93	10	0	0	5	
12:15	12:30	0	0	131	0	101	9	0	0	2	
12:30	12:45	0	0	140	0	92	12	0	0	9	
12:45	13:00	0	0	104	0	97	13	0	0	2	
13:00	13:15	0	0	127	0	86	9	0	0	4	
13:15	13:30	0	0	123	0	73	17	0	0	3	
13:30	13:45	0	0	121	0	109	10	0	0	8	
13:45	14:00	0	0	119	0	110	11	0	0	4	
16:00	16:15	0	0	125	0	136	3	0	0	3	
16:15	16:30	0	0	135	0	105	7	0	0	4	
16:30	16:45	0	0	128	0	113	8	0	0	2	
16:45	17:00	0	1	132	0	110	12	0	0	1	
17:00	17:15	0	0	138	0	135	7	0	0	2	
17:15	17:30	0	0	106	0	105	9	0	0	3	
17:30	17:45	0	0	124	0	104	13	0	0	5	
17:45	18:00	0	0	106	0	113	8	0	0	5	
18:00	18:15	0	0	110	0	110	15	0	0	9	
18:15	18:30	0	0	123	0	93	17	0	0	1	
18:30	18:45	0	0	84	0	97	16	0	0	1	
18:45	19:00	0	0	87	0	91	10	0	0	4	
19:00	19:15	0	0	70	0	87	12	0	0	6	
19:15	19:30	0	0	89	0	59	14	0	0	4	
19:30	19:45	0	0	68	0	44	16	0	0	5	
19:45	20:00	0	0	82	0	32	7	0	0	3	

Peak Time		B Approach Great Western H				D Approach Great Western H				E Approach KFC Access (S)		Peak total
Period Start	Period End	U	R	SB	U	NB	L	U	R	L		
11:00	12:00	0	0	480	0	384	31	0	0	9		904
16:15	17:15	0	1	573	0	453	34	0	0	4		1065

Heavy Vehicles

Time		B Approach Great Western H				D Approach Great Western H				E Approach KFC Access (S)
Period Start	Period End	U	R	SB	U	NB	L	U	R	L
11:00	11:15	0	0	16	0	17	1	0	0	1
11:15	11:30	0	0	12	0	11	1	0	0	0
11:30	11:45	0	0	9	0	13	0	0	0	0
11:45	12:00	0	0	20	0	23	0	0	0	0
12:00	12:15	0	0	14	0	12	0	0	0	1
12:15	12:30	0	0	10	0	8	0	0	0	0
12:30	12:45	0	0	21	0	11	0	0	0	0
12:45	13:00	0	0	18	0	14	0	0	0	0
13:00	13:15	0	0	17	0	9	0	0	0	0
13:15	13:30	0	0	23	0	12	0	0	0	0
13:30	13:45	0	0	16	0	15	0	0	0	0
13:45	14:00	0	0	20	0	13	0	0	0	0
16:00	16:15	0	0	11	0	13	0	0	0	0
16:15	16:30	0	0	19	0	10	0	0	0	0
16:30	16:45	0	0	14	0	12	0	0	0	0
16:45	17:00	0	0	10	0	8	0	0	0	0
17:00	17:15	0	0	7	0	6	0	0	0	0
17:15	17:30	0	0	9	0	12	0	0	0	0
17:30	17:45	0	0	10	0	10	0	0	0	0
17:45	18:00	0	0	8	0	7	0	0	0	0
18:00	18:15	0	0	7	0	7	0	0	0	0
18:15	18:30	0	0	9	0	4	0	0	0	0
18:30	18:45	0	0	9	0	2	0	0	0	0
18:45	19:00	0	0	7	0	9	0	0	0	0
19:00	19:15	0	0	5	0	5	0	0	0	0
19:15	19:30	0	0	7	0	7	0	0	0	0
19:30	19:45	0	0	6	0	4	0	0	0	0
19:45	20:00	0	0	4	0	2	0	0	0	0

Peak Time		B Approach Great Western H				D Approach Great Western H				E Approach KFC Access (S)		Peak total
Period Start	Period End	U	R	SB	U	NB	L	U	R	L		
11:00	12:00	0	0	37	0	34	2	0	0	1		74
16:15	17:15	0	0	50	0	36	0	0	0	0		86

TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY

Intersection of Flint McCleland Ave and KFC Access Drw

GPS	-33.480500, 150.1.33228								
Date	16/09/2022	North:	KFC Access Driveway			Survey	AM	11:00 AM-2:00 PM	
Weather:	Fine	East:	Flint McCleland Ave			Period	PM	4:00 PM-6:00 PM	
Suburb/town:	Bowraville	South:	N/A			Traffic	AM	11:00 AM-12:00 PM	
Customer:	MCL3611	West:	Flint MCCleland Ave			Peak	PM	3:15 PM-5:15 PM	

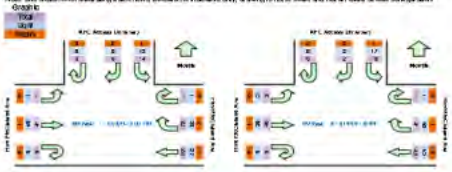
All Vehicles

Time		Approach KFC Access Drwy			Approach Flint McCleland N			Approach Flint McCleland S			Hourly Total	Peak
Period Start	Period End	U	R	L	U	R	WE	U	EB	L		
11:00	11:15	0	0	2	0	4	11	0	13	0	107	Peak
11:15	11:30	0	0	2	0	1	5	0	10	0		
11:30	11:45	0	0	5	1	3	6	0	9	0		
11:45	12:00	0	0	5	0	12	6	0	9	1		
12:00	12:15	0	0	10	0	11	5	0	4	0	134	
12:15	12:30	0	0	2	0	1	9	0	11	0	131	
12:30	12:45	0	0	10	0	13	9	0	9	0	137	
12:45	13:00	0	0	9	0	10	6	0	9	0	137	
13:00	13:15	0	1	4	0	9	6	0	9	0	121	
13:15	13:30	0	0	5	0	5	7	0	9	0	90	
13:30	13:45	0	0	9	0	16	6	0	10	0	61	
13:45	14:00	0	0	2	0	3	7	0	8	0	15	
16:00	16:15	0	0	4	0	5	9	0	14	0	112	
16:15	16:30	0	0	3	0	3	10	0	9	0	119	
16:30	16:45	0	1	2	0	6	10	0	12	2	131	
16:45	17:00	0	1	3	0	1	12	0	10	1	128	
17:00	17:15	0	1	2	0	6	12	0	12	0	145	
17:15	17:30	0	0	2	0	10	12	0	13	0	143	Peak
17:30	17:45	0	0	4	1	9	12	0	4	0	141	
17:45	18:00	0	1	4	0	9	11	0	12	2	125	
18:00	18:15	0	1	5	0	13	5	0	5	1	100	
18:15	18:30	0	0	9	0	7	6	0	7	1	91	
18:30	18:45	0	0	4	0	1	3	0	6	0	78	
18:45	19:00	0	0	1	0	5	5	0	7	1	95	
19:00	19:15	0	0	5	0	12	7	0	3	0	96	
19:15	19:30	0	0	3	0	1	6	0	7	0		
19:30	19:45	0	0	5	0	11	7	0	5	0		
19:45	20:00	0	0	3	0	5	5	0	5	0		

Peak Time		Approach KFC Access Drwy			Approach Flint McCleland N			Approach Flint McCleland S			Peak total
Period Start	Period End	U	R	L	U	R	WE	U	EB	L	
11:00	12:00	0	0	14	1	22	26	0	43	1	107
17:15	18:15	0	2	16	1	41	43	0	40	3	145

Note: Site sketch is for visualizing traffic flows. Direction is indicative only, drawing is not to scale and not an exact street configuration.

Graphic



Light Vehicles

Time		Approach KFC Access Drwy			Approach Flint McCleland N			Approach Flint McCleland S		
Period Start	Period End	U	R	L	U	R	WE	U	EB	L
11:00	11:15	0	0	2	0	4	11	0	13	0
11:15	11:30	0	0	2	0	1	4	0	10	0
11:30	11:45	0	0	4	1	3	6	0	9	0
11:45	12:00	0	0	5	0	10	6	0	8	1
12:00	12:15	0	0	10	0	11	5	0	3	0
12:15	12:30	0	0	2	0	1	9	0	11	0
12:30	12:45	0	0	10	0	13	9	0	9	0
12:45	13:00	0	0	9	0	10	6	0	9	0
13:00	13:15	0	1	4	0	9	6	0	9	0
13:15	13:30	0	0	5	0	5	7	0	9	0
13:30	13:45	0	0	9	0	16	6	0	10	0
13:45	14:00	0	0	2	0	3	7	0	5	0
16:00	16:15	0	0	4	0	5	9	0	14	0
16:15	16:30	0	0	3	0	3	10	0	9	0
16:30	16:45	0	1	2	0	6	10	0	12	2
16:45	17:00	0	1	3	0	1	12	0	10	1
17:00	17:15	0	1	2	0	6	11	0	12	0
17:15	17:30	0	0	2	0	10	12	0	12	0
17:30	17:45	0	0	4	1	5	12	0	4	0
17:45	18:00	0	1	3	0	9	11	0	12	2
18:00	18:15	0	1	5	0	13	5	0	5	1
18:15	18:30	0	0	9	0	7	6	0	7	1
18:30	18:45	0	0	4	0	1	3	0	6	0
18:45	19:00	0	0	1	0	5	5	0	7	1
19:00	19:15	0	0	5	0	12	7	0	3	0
19:15	19:30	0	0	3	0	1	6	0	7	0
19:30	19:45	0	0	5	0	11	7	0	5	0
19:45	20:00	0	0	3	0	5	5	0	5	0

Peak Time		Approach KFC Access Drwy			Approach Flint McCleland N			Approach Flint McCleland S			Peak total
Period Start	Period End	U	R	L	U	R	WE	U	EB	L	
11:00	12:00	0	0	13	1	20	27	0	40	1	102
17:15	18:15	0	2	17	1	40	43	0	39	3	145

Heavy Vehicles

Time		Approach KFC Access Drwy			Approach Flint McCleland N			Approach Flint McCleland S		
Period Start	Period End	U	R	L	U	R	WE	U	EB	L
11:00	11:15	0	0	0	0	0	0	0	0	0
11:15	11:30	0	0	0	0	0	1	0	0	0
11:30	11:45	0	0	1	0	0	0	0	0	0
11:45	12:00	0	0	0	0	2	0	0	1	0
12:00	12:15	0	0	0	0	0	0	0	1	0
12:15	12:30	0	0	0	0	0	0	0	0	0
12:30	12:45	0	0	0	0	0	0	0	0	0
12:45	13:00	0	0	0	0	0	0	0	0	0
13:00	13:15	0	0	0	0	0	0	0	0	0
13:15	13:30	0	0	0	0	0	0	0	0	0
13:30	13:45	0	0	0	0	0	0	0	0	0
13:45	14:00	0	0	0	0	0	0	0	1	0
16:00	16:15	0	0	0	0	0	0	0	0	0
16:15	16:30	0	0	0	0	0	0	0	0	0
16:30	16:45	0	0	0	0	0	0	0	0	0
16:45	17:00	0	0	0	0	0	0	0	0	0
17:00	17:15	0	0	0	0	0	1	0	0	0
17:15	17:30	0	0	0	0	0	0	0	1	0
17:30	17:45	0	0	0	0	1	0	0	0	0
17:45	18:00	0	0	1	0	0	0	0	0	0
18:00	18:15	0	0	0	0	0	0	0	0	0
18:15	18:30	0	0	0	0	0	0	0	0	0
18:30	18:45	0	0	0	0	0	0	0	0	0
18:45	19:00	0	0	0	0	0	0	0	0	0
19:00	19:15	0	0	0	0	0	0	0	0	0
19:15	19:30	0	0	0	0	0	0	0	0	0
19:30	19:45	0	0	0	0	0	0	0	0	0
19:45	20:00	0	0	0	0	0	0	0	0	0

Peak Time		Approach KFC Access Drwy			Approach Flint McCleland N			Approach Flint McCleland S			Peak total
Period Start	Period End	U	R	L	U	R	WE	U	EB	L	
11:00	12:00	0	0	1	0	2	1	0	1	0	5
17:15	18:15	0	0	1	0	1	0	0	1	0	3

TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY

Intersection of Lands St and KFC Access Driveway, Bow

GPS	-33.488471, 150.132713						
Date	Fri 05/12/2022	North:	Lands St	Survey	Ave	11:00 AM-2:00 PM	
Weather	Fine	East:	KFC Access Driveway	Period	Pk	4:00 PM-6:00 PM	
Suburban	Bowenfels	South:	Lands St	Traffic	Ave	11:00 AM-12:00 PM	
Customer	MCS Inc	West:	N/A	Peak	Pk	3:15 PM-4:15 PM	

All Vehicles

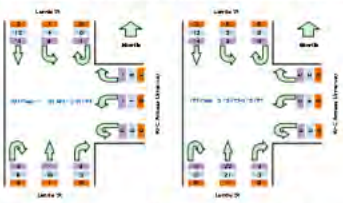
Time		North Approach Lands St			Approach KFC Access Drive			South Approach Lands St			Hourly Total	
Period Start	Period End	U	SR	L	U	R	L	U	R	NR	Hour	Peak
11:00	11:15	0	3	3	0	1	0	0	1	3	35	Peak
11:15	11:30	0	5	1	0	0	0	0	0	3		
11:30	11:45	0	2	0	0	0	1	0	2	1		
11:45	12:00	0	4	1	0	0	0	0	0	4		
12:00	12:15	0	1	0	0	1	1	0	0	1	33	
12:15	12:30	0	6	2	0	0	1	0	0	2	33	
12:30	12:45	0	4	1	0	0	0	0	3	2	32	
12:45	13:00	0	3	2	0	0	0	0	1	2	34	
13:00	13:15	0	2	0	0	0	0	0	0	2	34	
13:15	13:30	0	4	0	0	1	0	0	0	3	30	
13:30	13:45	0	6	1	0	0	1	0	1	3	20	
13:45	14:00	0	1	1	0	0	1	0	1	4	8	
16:00	16:15	0	5	2	0	0	0	1	1	3	40	
16:15	16:30	0	3	1	0	0	0	0	3	3	39	
16:30	16:45	0	5	2	0	0	0	0	0	4	44	
16:45	17:00	0	1	1	0	0	0	0	0	5	41	
17:00	17:15	0	5	1	0	1	1	0	0	3	48	
17:15	17:30	0	6	0	0	0	2	0	0	7	50	Peak
17:30	17:45	0	1	1	0	1	0	0	0	5	44	
17:45	18:00	0	6	1	0	0	1	0	2	4	46	
18:00	18:15	0	3	1	0	1	1	0	1	6	42	
18:15	18:30	0	4	1	0	0	0	0	0	4	34	
18:30	18:45	0	2	2	0	0	1	0	1	4	34	
18:45	19:00	0	6	0	0	1	0	0	1	2	31	
19:00	19:15	0	1	0	0	0	0	0	0	4	26	
19:15	19:30	0	3	1	0	0	1	0	3	1		
19:30	19:45	0	2	0	0	0	1	0	0	4		
19:45	20:00	0	2	1	0	0	1	0	0	1		

Peak Time		North Approach Lands St			Approach KFC Access Drive			South Approach Lands St			Peak
Period Start	Period End	U	SR	L	U	R	L	U	R	NR	total
11:00	12:00	0	14	5	0	1	1	0	3	11	35
17:15	18:15	0	16	3	0	2	4	0	3	22	90

Note: Site sketch is for illustrating traffic flows. Direction is indicative only, drawing is not to scale and not an exact representation/location.

Graphic

Total
Light
Heavy



Light Vehicles

Time		North Approach Lands St			Approach KFC Access Drive			South Approach Lands St		
Period Start	Period End	U	SR	L	U	R	L	U	R	NR
11:00	11:15	0	3	2	0	0	0	0	1	3
11:15	11:30	0	4	1	0	0	0	0	0	2
11:30	11:45	0	2	0	0	0	1	0	2	1
11:45	12:00	0	3	1	0	0	0	0	0	4
12:00	12:15	0	1	0	0	1	0	0	0	1
12:15	12:30	0	5	2	0	0	1	0	0	2
12:30	12:45	0	4	1	0	0	0	0	3	2
12:45	13:00	0	3	2	0	0	0	0	1	2
13:00	13:15	0	2	0	0	0	0	0	0	2
13:15	13:30	0	4	0	0	1	0	0	0	3
13:30	13:45	0	5	1	0	0	1	0	1	3
13:45	14:00	0	1	1	0	0	1	0	1	4
16:00	16:15	0	5	2	0	0	0	1	1	3
16:15	16:30	0	3	1	0	0	0	0	3	3
16:30	16:45	0	4	2	0	0	0	0	0	4
16:45	17:00	0	1	1	0	0	0	0	0	5
17:00	17:15	0	5	1	0	1	1	0	0	3
17:15	17:30	0	4	0	0	0	2	0	0	5
17:30	17:45	0	1	1	0	1	0	0	0	5
17:45	18:00	0	6	1	0	0	1	0	2	4
18:00	18:15	0	2	1	0	1	1	0	1	6
18:15	18:30	0	4	1	0	0	0	0	0	4
18:30	18:45	0	2	2	0	0	1	0	1	4
18:45	19:00	0	6	0	0	1	0	0	1	2
19:00	19:15	0	1	0	0	0	0	0	0	4
19:15	19:30	0	3	1	0	0	1	0	3	1
19:30	19:45	0	2	0	0	0	1	0	0	4
19:45	20:00	0	2	1	0	0	1	0	0	1

Peak Time		North Approach Lands St			Approach KFC Access Drive			South Approach Lands St			Peak
Period Start	Period End	U	SR	L	U	R	L	U	R	NR	total
11:00	12:00	0	12	4	0	0	1	0	3	10	30
17:15	18:15	0	13	3	0	2	4	0	3	21	46

Heavy Vehicles

Time		North Approach Lands St			Approach KFC Access Drive			South Approach Lands St		
Period Start	Period End	U	SR	L	U	R	L	U	R	NR
11:00	11:15	0	0	1	0	1	0	0	0	0
11:15	11:30	0	1	0	0	0	0	0	0	1
11:30	11:45	0	0	0	0	0	0	0	0	0
11:45	12:00	0	1	0	0	0	0	0	0	0
12:00	12:15	0	0	0	0	0	1	0	0	0
12:15	12:30	0	1	0	0	0	0	0	0	0
12:30	12:45	0	0	0	0	0	0	0	0	0
12:45	13:00	0	0	0	0	0	0	0	0	0
13:00	13:15	0	0	0	0	0	0	0	0	0
13:15	13:30	0	0	0	0	0	0	0	0	0
13:30	13:45	0	1	0	0	0	0	0	0	0
13:45	14:00	0	0	0	0	0	0	0	0	0
16:00	16:15	0	0	0	0	0	0	0	0	0
16:15	16:30	0	0	0	0	0	0	0	0	0
16:30	16:45	0	1	0	0	0	0	0	0	0
16:45	17:00	0	0	0	0	0	0	0	0	0
17:00	17:15	0	0	0	0	0	0	0	0	0
17:15	17:30	0	2	0	0	0	0	0	0	1
17:30	17:45	0	0	0	0	0	0	0	0	0
17:45	18:00	0	0	0	0	0	0	0	0	0
18:00	18:15	0	1	0	0	0	0	0	0	0
18:15	18:30	0	0	0	0	0	0	0	0	0
18:30	18:45	0	0	0	0	0	0	0	0	0
18:45	19:00	0	0	0	0	0	0	0	0	0
19:00	19:15	0	0	0	0	0	0	0	0	0
19:15	19:30	0	0	0	0	0	0	0	0	0
19:30	19:45	0	0	0	0	0	0	0	0	0
19:45	20:00	0	0	0	0	0	0	0	0	0

Peak Time		North Approach Lands St			Approach KFC Access Drive			South Approach Lands St			Peak
Period Start	Period End	U	SR	L	U	R	L	U	R	NR	total
11:00	12:00	0	2	1	0	1	0	0	0	1	5
17:15	18:15	0	3	0	0	0	0	0	0	1	4

TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY

Intersection of KFC Access (North) and Great Western Hi

GPS	-33.408873, 150.03057	North:	Great Western Hwy	Survey	Am	11:00 AM-12:00 PM	
Date:	Fri 04/11/2022	East:	NA	Period	PM	4:00 PM-5:00 PM	
Weather:	Fine	South:	Great Western Hwy	Traffic	AM	11:00 AM-12:00 PM	
Suburb/town:	Lithgow	West:	KFC Access (North)	Peak	PM	4:15 PM-5:15 PM	
Cyclo Counter:	MC1301						

All Vehicles

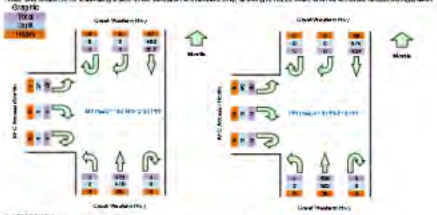
Time		In Approach: Great Western Hi				In Approach: Great Western Hi				In Approach: KFC Access (N		Hourly Total	
Period Start	Period End	U	R	SB	U	NB	L	U	R	L			Peak
11:00	11:15	0	0	139	0	126	0	0	0	6		1022	Peak
11:15	11:30	0	0	118	0	111	0	0	0	5			
11:30	11:45	0	0	142	0	104	1	0	0	7			
11:45	12:00	0	0	118	0	134	1	0	0	10			
12:00	12:15	0	0	123	0	122	1	0	0	14		1076	
12:15	12:30	0	0	141	0	118	0	0	0	5		1080	
12:30	12:45	0	0	151	0	112	0	0	0	9		1071	
12:45	13:00	0	0	122	0	126	0	0	0	17		1070	
13:00	13:15	0	0	144	0	107	0	0	0	13		1080	
13:15	13:30	0	0	146	0	99	0	1	0	12		1115	
13:30	13:45	0	0	137	0	133	1	0	0	10		1198	
13:45	14:00	0	0	139	0	121	0	0	0	7		1277	
16:00	16:15	0	0	138	0	136	0	0	0	7		1180	
16:15	16:30	0	0	134	0	122	2	0	0	7		1205	Peak
16:30	16:45	0	0	142	0	140	0	0	0	15		1171	
16:45	17:00	0	0	153	0	127	0	0	0	9		1140	
17:00	17:15	0	0	155	0	130	0	0	0	9		1098	
17:15	17:30	0	0	115	0	127	0	0	0	9		1043	
17:30	17:45	0	0	134	0	123	0	0	0	9		1033	
17:45	18:00	0	0	114	0	128	1	0	0	14		1011	
18:00	18:15	0	0	117	0	134	2	0	0	16		970	
18:15	18:30	0	0	132	0	114	0	1	0	15		894	
18:30	18:45	0	0	90	0	114	0	0	0	15		819	
18:45	19:00	0	0	94	0	111	0	0	0	11		746	
19:00	19:15	0	0	75	0	109	0	0	0	12		680	
19:15	19:30	0	0	95	0	77	0	0	0	11			
19:30	19:45	0	0	74	0	84	0	0	0	15			
19:45	20:00	0	0	85	0	84	0	0	0	10			

Peak Time		In Approach: Great Western Hi				In Approach: Great Western Hi				In Approach: KFC Access (N		Peak total
Period Start	Period End	U	R	SB	U	NB	L	U	R	L		
11:00	12:00	0	0	517	0	475	2	0	0	28		1022
16:15	17:15	0	0	604	0	536	2	0	0	40		1205

Note: Site sketch is for illustrating traffic flows. Direction is indicative only, drawing is not to scale and not an exact sketch of location.

Graphic

Total
Light
Heavy



Light Vehicles

Time		In Approach: Great Western Hi				In Approach: Great Western Hi				In Approach: KFC Access (N	
Period Start	Period End	U	R	SB	U	NB	L	U	R	L	
11:00	11:15	0	0	123	0	100	0	0	0	5	
11:15	11:30	0	0	106	0	100	0	0	0	5	
11:30	11:45	0	0	133	0	91	1	0	0	7	
11:45	12:00	0	0	95	0	111	1	0	0	10	
12:00	12:15	0	0	109	0	109	1	0	0	14	
12:15	12:30	0	0	131	0	110	0	0	0	5	
12:30	12:45	0	0	140	0	101	0	0	0	9	
12:45	13:00	0	0	104	0	114	0	0	0	17	
13:00	13:15	0	0	127	0	96	0	0	0	13	
13:15	13:30	0	0	123	0	87	0	1	0	12	
13:30	13:45	0	0	121	0	115	1	0	0	10	
13:45	14:00	0	0	119	0	115	0	0	0	7	
16:00	16:15	0	0	125	0	143	0	0	0	7	
16:15	16:30	0	0	135	0	112	2	0	0	7	
16:30	16:45	0	0	120	0	126	0	0	0	15	
16:45	17:00	0	0	153	0	119	0	0	0	9	
17:00	17:15	0	0	130	0	144	0	0	0	9	
17:15	17:30	0	0	106	0	115	0	0	0	9	
17:30	17:45	0	0	124	0	113	0	0	0	9	
17:45	18:00	0	0	106	0	121	1	0	0	14	
18:00	18:15	0	0	110	0	127	2	0	0	16	
18:15	18:30	0	0	123	0	110	0	1	0	15	
18:30	18:45	0	0	84	0	112	0	0	0	15	
18:45	19:00	0	0	87	0	102	0	0	0	11	
19:00	19:15	0	0	70	0	100	0	0	0	12	
19:15	19:30	0	0	89	0	70	0	0	0	11	
19:30	19:45	0	0	66	0	80	0	0	0	15	
19:45	20:00	0	0	82	0	82	0	0	0	10	

Peak Time		In Approach: Great Western Hi				In Approach: Great Western Hi				In Approach: KFC Access (N		Peak total
Period Start	Period End	U	R	SB	U	NB	L	U	R	L		
11:00	12:00	0	0	460	0	430	2	0	0	27		899
16:15	17:15	0	0	574	0	503	2	0	0	40		1119

Heavy Vehicles

Time		In Approach: Great Western Hi				In Approach: Great Western Hi				In Approach: KFC Access (N	
Period Start	Period End	U	R	SB	U	NB	L	U	R	L	
11:00	11:15	0	0	16	0	16	0	0	0	1	
11:15	11:30	0	0	12	0	11	0	0	0	0	
11:30	11:45	0	0	9	0	13	0	0	0	0	
11:45	12:00	0	0	20	0	23	0	0	0	0	
12:00	12:15	0	0	14	0	13	0	0	0	0	
12:15	12:30	0	0	10	0	8	0	0	0	0	
12:30	12:45	0	0	21	0	11	0	0	0	0	
12:45	13:00	0	0	18	0	14	0	0	0	0	
13:00	13:15	0	0	17	0	9	0	0	0	0	
13:15	13:30	0	0	23	0	12	0	0	0	0	
13:30	13:45	0	0	16	0	13	0	0	0	0	
13:45	14:00	0	0	20	0	13	0	0	0	0	
16:00	16:15	0	0	11	0	13	0	0	0	0	
16:15	16:30	0	0	19	0	10	0	0	0	0	
16:30	16:45	0	0	14	0	12	0	0	0	0	
16:45	17:00	0	0	10	0	8	0	0	0	0	
17:00	17:15	0	0	7	0	6	0	0	0	0	
17:15	17:30	0	0	9	0	12	0	0	0	0	
17:30	17:45	0	0	10	0	10	0	0	0	0	
17:45	18:00	0	0	8	0	7	0	0	0	0	
18:00	18:15	0	0	7	0	7	0	0	0	0	
18:15	18:30	0	0	9	0	4	0	0	0	0	
18:30	18:45	0	0	9	0	2	0	0	0	0	
18:45	19:00	0	0	7	0	9	0	0	0	0	
19:00	19:15	0	0	6	0	3	0	0	0	0	
19:15	19:30	0	0	7	0	7	0	0	0	0	
19:30	19:45	0	0	8	0	4	0	0	0	0	
19:45	20:00	0	0	4	0	2	0	0	0	0	

Peak Time		In Approach: Great Western Hi				In Approach: Great Western Hi				In Approach: KFC Access (N		Peak total
Period Start	Period End	U	R	SB	U	NB	L	U	R	L		
11:00	12:00	0	0	57	0	63	0	0	0	1		121
16:15	17:15	0	0	30	0	36	0	0	0	0		66

TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY

Intersection of KFC Access (South) and Great Western H

GPS	-33.4[illegible]		North:	Great Western Hwy	Survey	AM	11:00 AM-12:00 PM
Date:	Sat 10/12/22		East:	NW	Period	PM	4:00 PM-5:00 PM
Weather:	Fine		South:	Great Western Hwy	Traffic	AM	11:00 AM-12:00 PM
Suburb/town:	Lithgow		West:	KFC Access (South)	Peak	PM	12:00 PM-1:00 PM
Cus Name:	MCLand						

All Vehicles

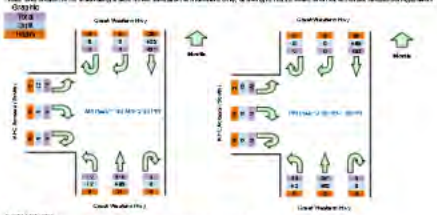
Time		In Approach: Great Westa			In Approach: Great Western			In Approach: KFC Access (Sc			Hourly Total	
Period Start	Period End	U	R	SB	U	NB	L	U	R	L		Peak
11:00	11:15	0	0	103	0	126	0	0	0	1	985	Peak
11:15	11:30	0	0	120	0	129	1	0	0	2		
11:30	11:45	0	0	122	0	122	6	0	0	4		
11:45	12:00	0	0	106	0	131	3	0	0	3		
12:00	12:15	0	0	126	0	133	13	0	0	4	1029	Peak
12:15	12:30	0	0	119	0	129	12	0	0	7	999	
12:30	12:45	0	0	118	0	119	7	0	0	3	962	
12:45	13:00	0	0	122	0	107	11	0	0	4	900	
13:00	13:15	0	0	120	0	118	6	0	0	2	929	
13:15	13:30	0	0	116	0	83	9	0	0	4	850	
13:30	13:45	0	0	106	0	67	6	0	0	2	471	
13:45	14:00	0	0	160	0	116	10	0	0	4	276	
16:00	16:15	0	0	121	0	94	9	0	0	4	806	
16:15	16:30	0	0	89	0	92	11	0	0	5	738	
16:30	16:45	0	0	102	0	88	7	0	0	1	744	
16:45	17:00	0	0	87	0	81	12	0	0	3	736	
17:00	17:15	0	0	77	0	63	12	0	0	5	732	
17:15	17:30	0	0	111	0	67	6	0	0	2	745	
17:30	17:45	0	0	101	0	73	11	0	0	3	682	
17:45	18:00	0	0	97	0	88	13	0	0	1	619	
18:00	18:15	0	0	75	0	99	12	0	0	3	566	
18:15	18:30	0	0	87	0	66	7	0	0	3	531	
18:30	18:45	0	0	97	0	36	7	0	0	3	504	
18:45	19:00	0	0	80	0	53	14	0	0	3	456	
19:00	19:15	0	0	57	0	71	4	0	0	3	409	
19:15	19:30	0	0	46	0	50	10	0	0	2		
19:30	19:45	0	0	40	0	31	8	0	0	0		
19:45	20:00	0	0	33	0	44	3	0	0	1		

Peak Time		In Approach: Great Westa			In Approach: Great Western			In Approach: KFC Access (Sc			Peak
Period Start	Period End	U	R	SB	U	NB	L	U	R	L	total
11:00	12:00	0	0	451	0	510	12	0	0	12	985
12:00	13:00	0	0	489	0	481	43	0	0	20	1025

Note: Site sketch is for illustrating traffic flows. Direction & indicative only, drawing is not to scale and not an exact sketch on location.

Graphic

Total
Split
Hourly



Light Vehicles

Time		In Approach: Great Westa			In Approach: Great Western			In Approach: KFC Access (Sc		
Period Start	Period End	U	R	SB	U	NB	L	U	R	L
11:00	11:15	0	0	99	0	121	0	0	0	1
11:15	11:30	0	0	114	0	121	1	0	0	2
11:30	11:45	0	0	113	0	119	6	0	0	4
11:45	12:00	0	0	97	0	125	3	0	0	3
12:00	12:15	0	0	121	0	126	13	0	0	4
12:15	12:30	0	0	114	0	121	12	0	0	6
12:30	12:45	0	0	114	0	113	7	0	0	4
12:45	13:00	0	0	116	0	102	11	0	0	4
13:00	13:15	0	0	116	0	114	6	0	0	2
13:15	13:30	0	0	113	0	80	9	0	0	4
13:30	13:45	0	0	102	0	67	6	0	0	2
13:45	14:00	0	0	153	0	106	10	0	0	4
16:00	16:15	0	0	111	0	91	9	0	0	4
16:15	16:30	0	0	87	0	91	11	0	0	5
16:30	16:45	0	0	99	0	83	7	0	0	1
16:45	17:00	0	0	84	0	79	12	0	0	3
17:00	17:15	0	0	69	0	60	12	0	0	5
17:15	17:30	0	0	106	0	64	6	0	0	2
17:30	17:45	0	0	100	0	73	11	0	0	3
17:45	18:00	0	0	94	0	88	13	0	0	1
18:00	18:15	0	0	75	0	96	12	0	0	3
18:15	18:30	0	0	83	0	65	7	0	0	3
18:30	18:45	0	0	95	0	35	7	0	0	3
18:45	19:00	0	0	80	0	49	14	0	0	3
19:00	19:15	0	0	39	0	66	4	0	0	3
19:15	19:30	0	0	45	0	49	10	0	0	2
19:30	19:45	0	0	38	0	29	8	0	0	0
19:45	20:00	0	0	33	0	41	3	0	0	1

Peak Time		In Approach: Great Westa			In Approach: Great Western			In Approach: KFC Access (Sc			Peak
Period Start	Period End	U	R	SB	U	NB	L	U	R	L	total
11:00	12:00	0	0	428	0	489	12	0	0	12	938
12:00	13:00	0	0	468	0	462	43	0	0	19	992

Heavy Vehicles

Time		In Approach: Great Westa			In Approach: Great Western			In Approach: KFC Access (Sc		
Period Start	Period End	U	R	SB	U	NB	L	U	R	L
11:00	11:15	0	0	4	0	7	0	0	0	0
11:15	11:30	0	0	6	0	8	0	0	0	0
11:30	11:45	0	0	7	0	3	0	0	0	0
11:45	12:00	0	0	9	0	3	0	0	0	0
12:00	12:15	0	0	5	0	7	0	0	0	0
12:15	12:30	0	0	5	0	4	0	0	0	1
12:30	12:45	0	0	4	0	3	0	0	0	1
12:45	13:00	0	0	6	0	5	0	0	0	0
13:00	13:15	0	0	4	0	4	0	0	0	0
13:15	13:30	0	0	3	0	3	0	0	0	0
13:30	13:45	0	0	4	0	5	0	0	0	0
13:45	14:00	0	0	7	0	5	0	0	0	0
16:00	16:15	0	0	10	0	3	0	0	0	0
16:15	16:30	0	0	2	0	1	0	0	0	0
16:30	16:45	0	0	3	0	3	0	0	0	0
16:45	17:00	0	0	3	0	2	0	0	0	0
17:00	17:15	0	0	6	0	3	0	0	0	0
17:15	17:30	0	0	5	0	3	0	0	0	0
17:30	17:45	0	0	1	0	0	0	0	0	0
17:45	18:00	0	0	3	0	0	0	0	0	0
18:00	18:15	0	0	0	0	3	0	0	0	0
18:15	18:30	0	0	4	0	1	0	0	0	0
18:30	18:45	0	0	2	0	1	0	0	0	0
18:45	19:00	0	0	2	0	4	0	0	0	0
19:00	19:15	0	0	2	0	3	0	0	0	0
19:15	19:30	0	0	1	0	1	0	0	0	0
19:30	19:45	0	0	2	0	2	0	0	0	0
19:45	20:00	0	0	0	0	3	0	0	0	0

Peak Time		In Approach: Great Westa			In Approach: Great Western			In Approach: KFC Access (Sc			Peak
Period Start	Period End	U	R	SB	U	NB	L	U	R	L	total
11:00	12:00	0	0	26	0	21	0	0	0	0	47
12:00	13:00	0	0	20	0	19	0	0	0	2	41

TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY

Intersection of Ninda Pl and KFC Access Driveway, Bowraville

GPS	-30.480900, 152.513028						
Date	Sat 10/11/2022	North:	KFC Access Driveway	Survey	AM	11:00 AM-2:00 PM	
Weather:	Fine	East:	Ninda Pl	Period	PM	4:00 PM-8:00 PM	
Suburban:	Bowraville	South:	N/A	Traffic	AM	11:00 AM-12:00 PM	
Customer:	MCL Self	West:	Ninda Pl	Peak	PM	1:00 PM-2:00 PM	

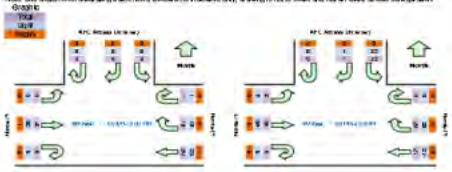
All Vehicles

Time		Approach KFC Access Drive			East Approach Ninda Pl			West Approach Ninda Pl			Hourly Total	
Period Start	Period End	U	R	L	U	R	W/E	U	EB	L	Hour	Peak
11:00	11:15	0	0	0	0	5	5	0	5	0	89	Peak
11:15	11:30	0	0	2	1	3	11	0	11	0		
11:30	11:45	0	0	3	0	1	9	0	7	0		
11:45	12:00	0	0	4	0	5	5	0	5	0		
12:00	12:15	0	0	4	2	3	5	0	11	0	92	
12:15	12:30	0	0	3	0	3	3	0	7	2	100	
12:30	12:45	0	0	5	0	7	5	0	5	0	99	
12:45	13:00	0	0	5	0	3	7	0	4	2	119	
13:00	13:15	0	1	10	0	9	4	0	11	1	125	Peak
13:15	13:30	0	0	2	0	4	5	0	5	0	89	
13:30	13:45	0	0	10	0	11	11	0	11	2	72	
13:45	14:00	0	0	1	0	5	7	0	12	2	77	
16:00	16:15	0	0	1	0	5	5	0	5	0	90	
16:15	16:30	0	0	3	0	4	10	0	9	1	88	
16:30	16:45	0	0	3	0	2	7	0	5	0	84	
16:45	17:00	0	0	3	0	3	12	0	5	0	93	
17:00	17:15	0	0	2	0	3	9	0	5	0	87	
17:15	17:30	0	0	5	0	3	5	0	5	0	85	
17:30	17:45	0	0	5	0	5	7	0	5	0	89	
17:45	18:00	0	0	9	0	3	4	0	1	1	76	
18:00	18:15	0	0	3	0	7	4	0	3	0	73	
18:15	18:30	0	0	9	0	12	2	0	4	0	71	
18:30	18:45	0	0	1	0	4	4	0	5	0	62	
18:45	19:00	0	0	3	0	1	5	0	5	1	58	
19:00	19:15	0	0	3	0	3	1	0	5	1	53	
19:15	19:30	0	0	2	0	4	7	0	5	0		
19:30	19:45	0	0	3	0	2	3	0	2	0		
19:45	20:00	0	0	3	0	5	1	0	3	0		

Peak Time		Approach KFC Access Drive			East Approach Ninda Pl			West Approach Ninda Pl			Peak total
Period Start	Period End	U	R	L	U	R	W/E	U	EB	L	
11:00	12:00	0	0	3	1	38	29	0	30	0	87
13:00	14:00	0	1	23	0	29	27	0	40	3	125

Note: Site sketch is for illustrating traffic flows. Dimension is indicative only, drawing is not to scale and not an exact street configuration.

Graphic



Light Vehicles

Time		Approach KFC Access Drive			East Approach Ninda Pl			West Approach Ninda Pl		
Period Start	Period End	U	R	L	U	R	W/E	U	EB	L
11:00	11:15	0	0	0	0	5	5	0	5	0
11:15	11:30	0	0	2	1	3	10	0	10	0
11:30	11:45	0	0	3	0	1	9	0	7	0
11:45	12:00	0	0	4	0	5	5	0	5	0
12:00	12:15	0	0	4	2	3	5	0	11	0
12:15	12:30	0	0	3	0	1	3	0	7	2
12:30	12:45	0	0	5	0	7	5	0	5	0
12:45	13:00	0	0	5	0	3	7	0	4	2
13:00	13:15	0	1	10	0	9	4	0	11	1
13:15	13:30	0	0	2	0	4	5	0	5	0
13:30	13:45	0	0	10	0	11	11	0	11	2
13:45	14:00	0	0	1	0	5	7	0	12	2
16:00	16:15	0	0	1	0	5	5	0	5	0
16:15	16:30	0	0	3	0	4	10	0	9	1
16:30	16:45	0	0	3	0	2	7	0	5	0
16:45	17:00	0	0	3	0	3	12	0	5	0
17:00	17:15	0	0	2	0	3	9	0	5	0
17:15	17:30	0	0	5	0	3	5	0	5	0
17:30	17:45	0	0	5	0	5	7	0	5	0
17:45	18:00	0	0	9	0	3	4	0	1	1
18:00	18:15	0	0	3	0	7	4	0	3	0
18:15	18:30	0	0	9	0	12	2	0	4	0
18:30	18:45	0	0	1	0	4	4	0	5	0
18:45	19:00	0	0	3	0	0	5	0	5	1
19:00	19:15	0	0	2	0	3	1	0	5	1
19:15	19:30	0	0	2	0	4	7	0	5	0
19:30	19:45	0	0	3	0	2	3	0	2	0
19:45	20:00	0	0	3	0	5	1	0	3	0

Peak Time		Approach KFC Access Drive			East Approach Ninda Pl			West Approach Ninda Pl			Peak total
Period Start	Period End	U	R	L	U	R	W/E	U	EB	L	
11:00	12:00	0	0	3	1	38	29	0	30	0	87
13:00	14:00	0	1	23	0	29	27	0	40	3	125

Heavy Vehicles

Time		Approach KFC Access Drive			East Approach Ninda Pl			West Approach Ninda Pl		
Period Start	Period End	U	R	L	U	R	W/E	U	EB	L
11:00	11:15	0	0	0	0	0	0	0	0	0
11:15	11:30	0	0	0	0	0	1	0	1	0
11:30	11:45	0	0	0	0	0	0	0	0	0
11:45	12:00	0	0	0	0	0	0	0	0	0
12:00	12:15	0	0	0	0	0	0	0	0	0
12:15	12:30	0	0	0	0	2	0	0	0	0
12:30	12:45	0	0	0	0	0	0	0	0	0
12:45	13:00	0	0	0	0	0	0	0	0	0
13:00	13:15	0	0	0	0	0	0	0	0	0
13:15	13:30	0	0	0	0	0	0	0	0	0
13:30	13:45	0	0	0	0	0	0	0	0	0
13:45	14:00	0	0	0	0	0	0	0	0	0
16:00	16:15	0	0	0	0	0	0	0	0	0
16:15	16:30	0	0	0	0	0	0	0	0	0
16:30	16:45	0	0	0	0	0	0	0	0	0
16:45	17:00	0	0	0	0	0	0	0	0	0
17:00	17:15	0	0	0	0	0	0	0	0	0
17:15	17:30	0	0	0	0	0	0	0	0	0
17:30	17:45	0	0	0	0	0	0	0	0	0
17:45	18:00	0	0	0	0	0	0	0	0	0
18:00	18:15	0	0	0	0	0	0	0	0	0
18:15	18:30	0	0	0	0	0	0	0	0	0
18:30	18:45	0	0	0	0	0	0	0	0	0
18:45	19:00	0	0	0	0	1	0	0	0	0
19:00	19:15	0	0	1	0	0	0	0	0	0
19:15	19:30	0	0	0	0	0	0	0	0	0
19:30	19:45	0	0	0	0	0	0	0	0	0
19:45	20:00	0	0	0	0	0	0	0	0	0

Peak Time		Approach KFC Access Drive			East Approach Ninda Pl			West Approach Ninda Pl			Peak total
Period Start	Period End	U	R	L	U	R	W/E	U	EB	L	
11:00	12:00	0	0	0	0	0	1	0	1	0	2
13:00	14:00	0	0	0	0	0	0	0	0	0	0

TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY

Intersection of Lands St and KFC Access Driveway, Bom

GPS	-33.4884171, 150.432713							
Date	Sat 10/12/22	North:	Lands St	Survey	AM	11:00 AM-2:00 PM		
Weather	Fine	East:	KFC Access Driveway	Period	PM	4:00 PM-8:00 PM		
Suburban	Bowraville	South:	Lands St	Traffic	AM	11:00 AM-12:00 PM		
Customer	MCDBR	West:	N/A	Peak	PM	12:00 PM-1:00 PM		

All Vehicles

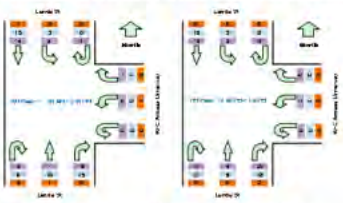
Time		North Approach Lands St			Approach KFC Access Drw			South Approach Lands St			Hourly Total	
Period Start	Period End	U	SR	L	U	R	L	U	R	NR	Hour	Peak
11:00	11:15	0	3	1	0	0	1	0	1	2	30	Peak
11:15	11:30	0	6	0	0	0	2	0	4	7		
11:30	11:45	0	4	2	0	0	0	0	6	1		
11:45	12:00	0	3	0	0	1	1	0	4	1		
12:00	12:15	0	3	0	0	1	7	0	3	1	49	Peak
12:15	12:30	0	4	1	0	1	0	0	7	2	42	
12:30	12:45	0	2	0	0	0	0	0	5	1	32	
12:45	13:00	0	1	2	0	1	0	0	5	2	30	
13:00	13:15	0	3	1	0	0	1	0	2	1	34	
13:15	13:30	0	2	0	0	0	0	0	1	2	26	
13:30	13:45	0	3	1	0	1	1	0	0	0	21	
13:45	14:00	0	3	3	0	0	2	0	1	4	15	
15:00	15:15	0	5	0	0	0	1	0	1	2	35	
15:15	15:30	0	3	0	0	0	1	0	1	2	36	
15:30	15:45	0	4	0	0	0	0	0	1	4	35	
15:45	17:00	0	1	1	0	0	1	0	1	5	35	
17:00	17:15	0	2	2	0	0	0	0	0	6	29	
17:15	17:30	0	2	1	0	0	0	0	0	3	23	
17:30	17:45	0	4	1	0	1	1	0	0	2	24	
17:45	18:00	0	1	1	0	0	0	0	1	1	19	
18:00	18:15	0	1	0	0	1	0	0	1	1	24	
18:15	18:30	0	4	1	0	0	1	0	0	1	23	
18:30	18:45	0	1	0	0	2	1	0	0	0	24	
18:45	19:00	0	2	2	0	0	0	0	1	4	23	
19:00	19:15	0	2	0	0	1	0	0	0	0	19	
19:15	19:30	0	2	1	0	1	2	0	0	2		
19:30	19:45	0	0	1	0	0	1	0	0	1		
19:45	20:00	0	1	1	0	1	0	0	1	1		

Peak Time		North Approach Lands St			Approach KFC Access Drw			South Approach Lands St			Peak
Period Start	Period End	U	SR	L	U	R	L	U	R	NR	total
11:00	12:00	0	16	3	0	1	4	0	15	11	50
12:00	13:00	0	10	3	0	3	7	0	20	5	49

Note: Site sketch is for illustrating traffic flows. Direction is indicative only, drawing is not to scale and not an exact speaking representation

Graphic

Total
Light
Heavy



Light Vehicles

Time		North Approach Lands St			Approach KFC Access Drw			South Approach Lands St		
Period Start	Period End	U	SR	L	U	R	L	U	R	NR
11:00	11:15	0	3	1	0	0	1	0	1	2
11:15	11:30	0	6	0	0	0	1	0	4	6
11:30	11:45	0	4	2	0	0	0	0	6	1
11:45	12:00	0	2	0	0	1	1	0	4	1
12:00	12:15	0	3	0	0	1	7	0	3	1
12:15	12:30	0	4	1	0	1	0	0	6	2
12:30	12:45	0	2	0	0	0	0	0	4	1
12:45	13:00	0	1	2	0	1	0	0	5	2
13:00	13:15	0	3	1	0	0	1	0	2	1
13:15	13:30	0	2	0	0	0	0	0	1	2
13:30	13:45	0	3	1	0	1	1	0	0	0
13:45	14:00	0	4	3	0	0	2	0	1	4
15:00	15:15	0	5	0	0	0	1	0	1	2
15:15	15:30	0	3	0	0	0	1	0	1	2
15:30	15:45	0	4	0	0	0	0	0	1	4
15:45	17:00	0	1	1	0	0	1	0	1	5
17:00	17:15	0	2	2	0	0	0	0	0	6
17:15	17:30	0	2	1	0	0	0	0	0	3
17:30	17:45	0	4	1	0	1	1	0	0	2
17:45	18:00	0	1	1	0	0	0	0	1	1
18:00	18:15	0	1	0	0	1	0	0	1	1
18:15	18:30	0	4	1	0	0	1	0	0	1
18:30	18:45	0	1	0	0	2	1	0	0	0
18:45	19:00	0	2	2	0	0	0	0	1	4
19:00	19:15	0	2	0	0	1	0	0	0	0
19:15	19:30	0	2	1	0	1	2	0	0	2
19:30	19:45	0	0	1	0	0	1	0	0	1
19:45	20:00	0	1	1	0	1	0	0	1	1

Peak Time		North Approach Lands St			Approach KFC Access Drw			South Approach Lands St			Peak
Period Start	Period End	U	SR	L	U	R	L	U	R	NR	total
11:00	12:00	0	13	3	0	1	3	0	13	10	47
12:00	13:00	0	10	3	0	3	7	0	18	5	47

Heavy Vehicles

Time		North Approach Lands St			Approach KFC Access Drw			South Approach Lands St		
Period Start	Period End	U	SR	L	U	R	L	U	R	NR
11:00	11:15	0	0	0	0	0	0	0	0	0
11:15	11:30	0	0	0	0	0	1	0	0	1
11:30	11:45	0	0	0	0	0	0	0	0	0
11:45	12:00	0	1	0	0	0	0	0	0	0
12:00	12:15	0	0	0	0	0	0	0	0	0
12:15	12:30	0	0	0	0	0	0	0	1	0
12:30	12:45	0	0	0	0	0	0	0	1	0
12:45	13:00	0	0	0	0	0	0	0	0	0
13:00	13:15	0	0	0	0	0	0	0	0	0
13:15	13:30	0	0	0	0	0	0	0	0	0
13:30	13:45	0	0	0	0	0	0	0	0	0
13:45	14:00	0	1	0	0	0	0	0	0	0
15:00	15:15	0	0	0	0	0	0	0	0	0
15:15	15:30	0	0	0	0	0	0	0	0	0
15:30	15:45	0	0	0	0	0	0	0	0	0
15:45	17:00	0	0	0	0	0	0	0	0	0
17:00	17:15	0	0	0	0	0	0	0	0	0
17:15	17:30	0	0	0	0	0	0	0	0	0
17:30	17:45	0	0	0	0	0	0	0	0	0
17:45	18:00	0	0	0	0	0	0	0	0	0
18:00	18:15	0	0	0	0	0	0	0	0	0
18:15	18:30	0	0	0	0	0	0	0	0	0
18:30	18:45	0	0	0	0	0	0	0	0	0
18:45	19:00	0	0	0	0	0	0	0	0	0
19:00	19:15	0	0	0	0	0	0	0	0	0
19:15	19:30	0	0	0	0	0	0	0	0	0
19:30	19:45	0	0	0	0	0	0	0	0	0
19:45	20:00	0	0	0	0	0	0	0	0	0

Peak Time		North Approach Lands St			Approach KFC Access Drw			South Approach Lands St			Peak
Period Start	Period End	U	SR	L	U	R	L	U	R	NR	total
11:00	12:00	0	1	0	0	0	1	0	0	1	3
12:00	13:00	0	0	0	0	0	0	0	2	0	2

TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY

Intersection of KFC Access (North) and Great Western Hi

GPS	-33.499873, 150.128957	North:	Great Western Hwy	Survey	AM	11:00 AM-2:00 PM
Date:	Sat 10/7/2021	East:	NAP	Period	PM	4:00 PM-8:00 PM
Weather:	Fine	South:	Great Western Hwy	Traffic	AM	11:00 AM-12:00 PM
Suburb/town:	Lithgow	West:	KFC Access (North)	Peak	PM	12:00 PM-1:00 PM
Civil Engr:	MCLand					

All Vehicles

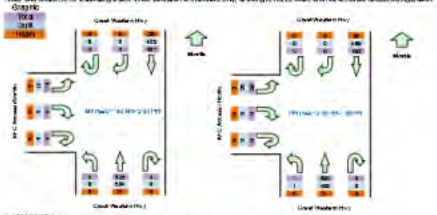
Time		In Approach: Great West			In Approach: Great Western			In Approach: KFC Access (N			Hourly Total	
Period Start	Period End	U	R	SR	U	NR	L	U	R	L	Hour	Peak
11:00	11:15	0	0	103	0	128	0	0	0	0	990	Peak
11:15	11:30	0	0	120	0	134	0	0	0	4		
11:30	11:45	0	0	122	0	129	0	0	0	7		
11:45	12:00	0	0	106	0	134	0	0	0	3		
12:00	12:15	0	0	126	0	139	0	0	0	5	1044	Peak
12:15	12:30	0	0	119	0	136	1	0	0	11	1025	
12:30	12:45	0	0	118	0	129	0	0	0	8	975	
12:45	13:00	0	0	122	0	120	0	0	0	13	933	
13:00	13:15	0	0	120	0	125	0	0	0	7	964	
13:15	13:30	0	0	116	0	93	0	0	0	8	712	
13:30	13:45	0	0	106	0	93	0	3	0	7	486	
13:45	14:00	0	0	140	0	121	0	0	0	13	268	
16:00	16:15	0	0	121	0	104	0	0	0	10	829	
16:15	16:30	0	0	89	0	102	0	0	0	9	748	
16:30	16:45	0	0	102	0	94	1	0	0	7	759	
16:45	17:00	0	0	87	0	89	1	0	0	9	739	
17:00	17:15	0	0	77	0	73	0	0	0	6	754	
17:15	17:30	0	0	111	0	93	0	0	0	7	798	
17:30	17:45	0	0	101	0	76	0	0	0	5	697	
17:45	18:00	0	0	97	0	97	0	0	0	7	637	
18:00	18:15	0	0	75	0	71	0	1	0	12	575	
18:15	18:30	0	0	87	0	75	0	1	0	9	556	
18:30	18:45	0	0	87	0	62	0	0	0	5	531	
18:45	19:00	0	0	80	0	68	2	0	0	12	492	
19:00	19:15	0	0	87	0	76	1	2	0	5	443	
19:15	19:30	0	0	46	0	63	0	0	0	16		
19:30	19:45	0	0	40	0	38	0	1	0	6		
19:45	20:00	0	0	33	0	31	0	1	0	7		

Peak Time		In Approach: Great West			In Approach: Great Western			In Approach: KFC Access (N			Peak
Period Start	Period End	U	R	SR	U	NR	L	U	R	L	total
11:00	12:00	0	0	451	0	526	0	0	0	14	990
12:00	13:00	0	0	489	0	530	1	0	0	36	1044

Note: Site sketch is for illustrating traffic flows. Direction is indicative only, drawing is not to scale and not an exact sketch of location.

Graphic

Total
Light
Heavy



Light Vehicles

Time		In Approach: Great West			In Approach: Great Western			In Approach: KFC Access (N		
Period Start	Period End	U	R	SR	U	NR	L	U	R	L
11:00	11:15	0	0	99	0	121	0	0	0	0
11:15	11:30	0	0	114	0	126	0	0	0	4
11:30	11:45	0	0	113	0	126	0	0	0	7
11:45	12:00	0	0	97	0	131	0	0	0	3
12:00	12:15	0	0	121	0	132	0	0	0	5
12:15	12:30	0	0	114	0	131	1	0	0	10
12:30	12:45	0	0	114	0	121	0	0	0	7
12:45	13:00	0	0	116	0	115	0	0	0	13
13:00	13:15	0	0	116	0	121	0	0	0	7
13:15	13:30	0	0	113	0	90	0	0	0	8
13:30	13:45	0	0	102	0	90	0	3	0	7
13:45	14:00	0	0	133	0	123	0	0	0	13
16:00	16:15	0	0	111	0	101	0	0	0	10
16:15	16:30	0	0	87	0	101	0	0	0	9
16:30	16:45	0	0	99	0	91	1	0	0	7
16:45	17:00	0	0	84	0	87	1	0	0	9
17:00	17:15	0	0	69	0	70	0	0	0	6
17:15	17:30	0	0	106	0	90	0	0	0	7
17:30	17:45	0	0	100	0	76	0	0	0	5
17:45	18:00	0	0	94	0	97	0	0	0	7
18:00	18:15	0	0	75	0	68	0	1	0	12
18:15	18:30	0	0	83	0	74	0	1	0	5
18:30	18:45	0	0	85	0	61	0	0	0	5
18:45	19:00	0	0	80	0	61	2	0	0	12
19:00	19:15	0	0	80	0	73	1	2	0	5
19:15	19:30	0	0	43	0	64	0	0	0	16
19:30	19:45	0	0	38	0	38	0	1	0	6
19:45	20:00	0	0	33	0	46	0	1	0	7

Peak Time		In Approach: Great West			In Approach: Great Western			In Approach: KFC Access (N			Peak
Period Start	Period End	U	R	SR	U	NR	L	U	R	L	total
11:00	12:00	0	0	428	0	504	0	0	0	14	945
12:00	13:00	0	0	465	0	496	1	0	0	36	1001

Heavy Vehicles

Time		In Approach: Great West			In Approach: Great Western			In Approach: KFC Access (N		
Period Start	Period End	U	R	SR	U	NR	L	U	R	L
11:00	11:15	0	0	4	0	7	0	0	0	0
11:15	11:30	0	0	6	0	8	0	0	0	0
11:30	11:45	0	0	7	0	3	0	0	0	0
11:45	12:00	0	0	9	0	3	0	0	0	0
12:00	12:15	0	0	5	0	7	0	0	0	0
12:15	12:30	0	0	5	0	5	0	0	0	1
12:30	12:45	0	0	4	0	4	0	0	0	1
12:45	13:00	0	0	6	0	5	0	0	0	0
13:00	13:15	0	0	4	0	4	0	0	0	0
13:15	13:30	0	0	3	0	3	0	0	0	0
13:30	13:45	0	0	4	0	5	0	0	0	0
13:45	14:00	0	0	7	0	5	0	0	0	0
16:00	16:15	0	0	10	0	3	0	0	0	0
16:15	16:30	0	0	2	0	1	0	0	0	0
16:30	16:45	0	0	3	0	3	0	0	0	0
16:45	17:00	0	0	3	0	2	0	0	0	0
17:00	17:15	0	0	6	0	3	0	0	0	0
17:15	17:30	0	0	5	0	3	0	0	0	0
17:30	17:45	0	0	1	0	0	0	0	0	0
17:45	18:00	0	0	3	0	0	0	0	0	0
18:00	18:15	0	0	0	0	3	0	0	0	0
18:15	18:30	0	0	4	0	1	0	0	0	0
18:30	18:45	0	0	2	0	1	0	0	0	0
18:45	19:00	0	0	2	0	4	0	0	0	0
19:00	19:15	0	0	2	0	3	0	0	0	0
19:15	19:30	0	0	1	0	1	0	0	0	0
19:30	19:45	0	0	2	0	2	0	0	0	0
19:45	20:00	0	0	0	0	3	0	0	0	0

Peak Time		In Approach: Great West			In Approach: Great Western			In Approach: KFC Access (N			Peak
Period Start	Period End	U	R	SR	U	NR	L	U	R	L	total
11:00	12:00	0	0	26	0	21	0	0	0	0	47
12:00	13:00	0	0	20	0	21	0	0	0	0	41

TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY

Intersection of Church St and KFC Access (North), Mudgee

GPS	-32.597914, 149.587901	North	Church St	Survey	AM	11:00 AM-12:00 PM
Date	Thu 03/12/22	East	KFC Access (North)	Period	PM	4:00 PM-5:00 PM
Weather	Fine	South	Church St	Traffic	AM	11:00 AM-12:00 PM
Suburban	Mudgee	West	NR	Peak	PM	4:00 PM-5:00 PM
Customer	MCL Const					

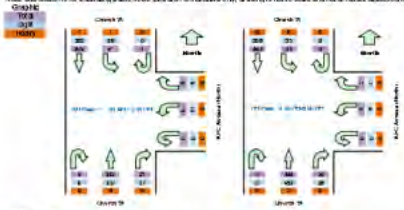
All Vehicles

Time		North Approach Church St				East Approach KFC Access (N)			South Approach Church St			Hourly Total	
Period Start	Period End	U	SR	L	U	R	L	U	R	NR		Hour	Peak
11:00	11:15	0	38	15	0	1	2	0	6	69		750	Peak
11:15	11:30	0	41	16	0	2	3	0	8	46			
11:30	11:45	0	107	19	0	3	3	0	4	110			
11:45	12:00	0	110	19	0	3	4	0	9	110			
12:00	12:15	0	100	23	0	1	2	1	11	92		906	
12:15	12:30	0	97	16	0	2	3	0	10	107		898	
12:30	12:45	0	101	15	0	1	2	0	8	93		886	
12:45	13:00	0	106	11	0	2	2	0	8	92		817	
13:00	13:15	0	87	12	0	4	5	0	9	93		792	
13:15	13:30	0	91	6	0	1	2	0	5	90		782	
13:30	13:45	0	113	3	0	0	0	0	6	68		765	
13:45	14:00	0	101	13	0	1	1	0	4	78		795	
16:00	16:15	0	129	9	0	2	1	0	5	134		1092	Peak
16:15	16:30	0	141	12	0	1	2	0	10	107		1067	
16:30	16:45	0	142	10	0	2	1	0	4	102		1082	
16:45	17:00	0	152	4	0	2	1	0	7	112		1077	
17:00	17:15	0	122	10	0	0	3	0	8	132		1018	
17:15	17:30	0	118	13	0	1	1	0	9	126		951	
17:30	17:45	0	134	6	0	1	2	0	9	102		906	
17:45	18:00	0	97	11	0	0	4	0	9	98		859	
18:00	18:15	1	89	9	0	1	2	0	5	101		848	
18:15	18:30	0	102	4	0	1	4	1	20	92		794	
18:30	18:45	0	105	15	0	0	3	0	10	78		690	
18:45	19:00	0	86	10	0	1	7	0	9	69		626	
19:00	19:15	0	83	12	0	1	2	0	3	53		539	
19:15	19:30	0	53	6	0	0	0	0	6	34			
19:30	19:45	0	80	14	0	2	0	0	5	45			
19:45	20:00	0	72	6	0	2	0	0	3	30			

Peak Time		North Approach Church St				East Approach KFC Access (N)			South Approach Church St			Peak
Period Start	Period End	U	SR	L	U	R	L	U	R	NR		total
11:00	12:00	0	302	61	0	9	14	0	27	343		757
16:00	17:00	0	564	35	0	7	5	0	36	480		1092

Note: Site sketch is for illustrating traffic flows. Direction is indicative only, drawing is not to scale and not an exact representation

Graphic
- Total
- Light
- Heavy



Light Vehicles

Time		North Approach Church St				East Approach KFC Access (N)			South Approach Church St		
Period Start	Period End	U	SR	L	U	R	L	U	R	NR	
11:00	11:15	0	38	15	0	1	2	0	6	68	
11:15	11:30	0	38	16	0	2	3	0	8	43	
11:30	11:45	0	106	19	0	3	3	0	4	106	
11:45	12:00	0	100	14	0	3	4	0	9	110	
12:00	12:15	0	97	23	0	1	2	1	11	91	
12:15	12:30	0	94	16	0	2	3	0	9	102	
12:30	12:45	0	101	15	0	1	2	0	7	93	
12:45	13:00	0	106	10	0	2	2	0	8	91	
13:00	13:15	0	86	12	0	4	4	0	9	92	
13:15	13:30	0	89	6	0	1	2	0	3	89	
13:30	13:45	0	111	3	0	0	0	0	6	68	
13:45	14:00	0	100	13	0	1	1	0	4	75	
16:00	16:15	0	127	9	0	2	1	0	5	133	
16:15	16:30	0	138	12	0	1	2	0	10	106	
16:30	16:45	0	140	10	0	2	1	0	4	101	
16:45	17:00	0	151	4	0	2	1	0	7	112	
17:00	17:15	0	121	10	0	0	3	0	8	132	
17:15	17:30	0	115	13	0	1	1	0	9	126	
17:30	17:45	0	133	6	0	1	2	0	9	102	
17:45	18:00	0	96	11	0	0	4	0	9	97	
18:00	18:15	1	89	9	0	1	2	0	5	101	
18:15	18:30	0	102	4	0	1	4	1	20	91	
18:30	18:45	0	104	15	0	0	3	0	10	78	
18:45	19:00	0	83	10	0	1	7	0	9	68	
19:00	19:15	0	83	12	0	1	2	0	3	52	
19:15	19:30	0	52	6	0	0	0	0	6	33	
19:30	19:45	0	78	14	0	2	0	0	5	45	
19:45	20:00	0	72	6	0	2	0	0	3	30	

Peak Time		North Approach Church St				East Approach KFC Access (N)			South Approach Church St			Peak
Period Start	Period End	U	SR	L	U	R	L	U	R	NR		total
11:00	12:00	0	302	60	0	9	14	0	27	337		749
16:00	17:00	0	556	35	0	7	5	0	36	482		1081

Heavy Vehicles

Time		North Approach Church St				East Approach KFC Access (N)			South Approach Church St		
Period Start	Period End	U	SR	L	U	R	L	U	R	NR	
11:00	11:15	0	0	0	0	0	0	0	0	1	
11:15	11:30	0	3	0	0	0	0	0	0	1	
11:30	11:45	0	1	0	0	0	0	0	0	2	
11:45	12:00	0	3	1	0	0	0	0	0	2	
12:00	12:15	0	3	0	0	0	0	0	0	1	
12:15	12:30	0	3	0	0	0	0	0	1	3	
12:30	12:45	0	0	0	0	0	0	0	1	0	
12:45	13:00	0	0	1	0	0	0	0	0	1	
13:00	13:15	0	1	0	0	0	1	0	0	1	
13:15	13:30	0	2	0	0	0	0	0	0	1	
13:30	13:45	0	2	0	0	0	0	0	0	0	
13:45	14:00	0	1	0	0	0	0	0	0	1	
16:00	16:15	0	2	0	0	0	0	0	0	1	
16:15	16:30	0	3	0	0	0	0	0	0	1	
16:30	16:45	0	2	0	0	0	0	0	0	1	
16:45	17:00	0	1	0	0	0	0	0	0	0	
17:00	17:15	0	1	0	0	0	0	0	0	0	
17:15	17:30	0	0	0	0	0	0	0	0	0	
17:30	17:45	0	1	0	0	0	0	0	0	0	
17:45	18:00	0	1	0	0	0	0	0	0	1	
18:00	18:15	0	0	0	0	0	0	0	0	0	
18:15	18:30	0	1	0	0	0	0	0	0	1	
18:30	18:45	0	1	0	0	0	0	0	0	0	
18:45	19:00	0	1	0	0	0	0	0	0	1	
19:00	19:15	0	0	0	0	0	0	0	0	1	
19:15	19:30	0	1	0	0	0	0	0	0	1	
19:30	19:45	0	2	0	0	0	0	0	0	0	
19:45	20:00	0	0	0	0	0	0	0	0	0	

Peak Time		North Approach Church St				East Approach KFC Access (N)			South Approach Church St			Peak
Period Start	Period End	U	SR	L	U	R	L	U	R	NR		total
11:00	12:00	0	7	1	0	0	0	0	0	5		14
16:00	17:00	0	8	0	0	0	0	0	0	3		11

TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY

Intersection of Church St and KFC Access (South), Mudgee

GPS	-32.597906, 149.587357	North	Church St	Survey	AM	11:00 AM-12:00 PM
Date	Thu 03/12/22	East	KFC Access (South)	Period	PM	4:00 PM-5:00 PM
Weather	Fine	South	Church St	Traffic	AM	11:00 AM-12:00 PM
Suburban	Mudgee	West	NA	Peak	PM	4:00 PM-5:00 PM
Customer	MCL Const					

All Vehicles

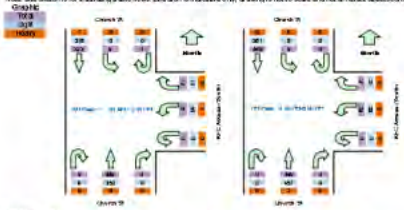
Time		North Approach Church St			Approach KFC Access (S)			South Approach Church St			Hourly Total	
Period Start	Period End	U	SR	L	U	R	L	U	R	NR	Hour	Peak
11:00	11:15	0	60	0	0	3	9	0	0	72	744	Peak
11:15	11:30	0	44	0	0	3	14	0	0	61		
11:30	11:45	0	112	0	0	3	12	0	0	111		
11:45	12:00	0	107	0	0	3	18	0	0	126		
12:00	12:15	0	110	0	0	11	12	0	0	93	894	
12:15	12:30	0	102	0	0	3	17	0	0	114	880	
12:30	12:45	0	110	0	0	5	17	0	0	96	890	
12:45	13:00	0	106	0	0	5	10	0	0	95	812	
13:00	13:15	0	92	0	0	5	11	0	0	97	799	
13:15	13:30	0	93	0	0	4	8	0	0	91	764	
13:30	13:45	0	113	0	0	2	7	0	0	71	765	
13:45	14:00	0	102	0	0	4	13	0	0	78	795	
16:00	16:15	0	130	0	0	5	6	0	0	134	1076	Peak
16:15	16:30	0	143	0	0	10	8	0	0	102	1077	
16:30	16:45	0	143	0	0	3	8	0	0	103	1076	
16:45	17:00	0	153	0	0	3	6	0	0	115	1073	
17:00	17:15	0	125	0	0	6	9	0	0	134	1015	
17:15	17:30	0	119	0	0	5	13	0	0	129	944	
17:30	17:45	0	138	0	0	2	9	0	0	109	913	
17:45	18:00	0	101	0	0	5	10	0	0	101	872	
18:00	18:15	0	91	0	0	5	6	0	0	101	834	
18:15	18:30	0	108	0	0	4	15	0	0	109	834	
18:30	18:45	0	110	0	0	4	17	0	0	84	830	
18:45	19:00	0	93	0	0	3	9	0	0	98	820	
19:00	19:15	0	83	0	0	3	12	0	0	53	738	
19:15	19:30	0	33	0	0	3	9	0	0	37		
19:30	19:45	0	80	0	0	5	12	0	0	45		
19:45	20:00	0	72	0	0	3	8	0	0	32		

Peak Time		North Approach Church St			Approach KFC Access (S)			South Approach Church St			Peak
Period Start	Period End	U	SR	L	U	R	L	U	R	NR	total
11:00	12:00	0	323	0	0	12	51	0	0	396	782
16:00	17:00	0	566	0	0	21	25	0	0	480	1078

Note: Site sketch is for illustrating traffic flows. Direction is indicative only, drawing is not to scale and not an exact speed/cross/location

Graphic

Total
Light
Heavy



Light Vehicles

Time		North Approach Church St			Approach KFC Access (S)			South Approach Church St		
Period Start	Period End	U	SR	L	U	R	L	U	R	NR
11:00	11:15	0	60	0	0	3	9	0	0	71
11:15	11:30	0	41	0	0	3	14	0	0	60
11:30	11:45	0	111	0	0	3	12	0	0	109
11:45	12:00	0	104	0	0	3	18	0	0	122
12:00	12:15	0	100	0	0	11	12	0	0	92
12:15	12:30	0	99	0	0	3	16	0	0	108
12:30	12:45	0	103	0	0	5	16	0	0	95
12:45	13:00	0	106	0	0	5	10	0	0	94
13:00	13:15	0	90	0	0	5	11	0	0	96
13:15	13:30	0	91	0	0	4	8	0	0	90
13:30	13:45	0	111	0	0	2	7	0	0	71
13:45	14:00	0	101	0	0	4	13	0	0	75
16:00	16:15	0	128	0	0	5	6	0	0	133
16:15	16:30	0	140	0	0	10	8	0	0	106
16:30	16:45	0	141	0	0	3	8	0	0	102
16:45	17:00	0	152	0	0	3	6	0	0	115
17:00	17:15	0	124	0	0	5	9	0	0	134
17:15	17:30	0	119	0	0	5	13	0	0	129
17:30	17:45	0	138	0	0	2	9	0	0	109
17:45	18:00	0	100	0	0	5	10	0	0	100
18:00	18:15	0	91	0	0	5	6	0	0	101
18:15	18:30	0	107	0	0	4	15	0	0	108
18:30	18:45	0	109	0	0	4	17	0	0	84
18:45	19:00	0	92	0	0	3	9	0	0	94
19:00	19:15	0	83	0	0	3	12	0	0	52
19:15	19:30	0	32	0	0	3	9	0	0	36
19:30	19:45	0	78	0	0	5	12	0	0	45
19:45	20:00	0	72	0	0	3	8	0	0	32

Peak Time		North Approach Church St			Approach KFC Access (S)			South Approach Church St			Peak
Period Start	Period End	U	SR	L	U	R	L	U	R	NR	total
11:00	12:00	0	315	0	0	12	50	0	0	392	769
16:00	17:00	0	561	0	0	21	25	0	0	477	1085

Heavy Vehicles

Time		North Approach Church St			Approach KFC Access (S)			South Approach Church St		
Period Start	Period End	U	SR	L	U	R	L	U	R	NR
11:00	11:15	0	0	0	0	0	0	0	0	1
11:15	11:30	0	3	0	0	0	0	0	0	1
11:30	11:45	0	1	0	0	0	0	0	0	2
11:45	12:00	0	3	0	0	0	1	0	0	2
12:00	12:15	0	2	0	0	0	0	0	0	1
12:15	12:30	0	3	0	0	0	1	0	0	6
12:30	12:45	0	0	0	0	0	1	0	0	1
12:45	13:00	0	0	0	0	0	0	0	0	1
13:00	13:15	0	2	0	0	0	0	0	0	1
13:15	13:30	0	2	0	0	0	0	0	0	1
13:30	13:45	0	2	0	0	0	0	0	0	0
13:45	14:00	0	1	0	0	0	0	0	0	1
16:00	16:15	0	2	0	0	0	0	0	0	1
16:15	16:30	0	3	0	0	0	0	0	0	1
16:30	16:45	0	2	0	0	0	0	0	0	1
16:45	17:00	0	1	0	0	0	0	0	0	0
17:00	17:15	0	1	0	0	0	0	0	0	0
17:15	17:30	0	0	0	0	0	0	0	0	0
17:30	17:45	0	1	0	0	0	0	0	0	0
17:45	18:00	0	1	0	0	0	0	0	0	1
18:00	18:15	0	0	0	0	0	0	0	0	0
18:15	18:30	0	1	0	0	0	0	0	0	1
18:30	18:45	0	1	0	0	0	0	0	0	0
18:45	19:00	0	1	0	0	0	0	0	0	1
19:00	19:15	0	0	0	0	0	0	0	0	1
19:15	19:30	0	1	0	0	0	0	0	0	1
19:30	19:45	0	2	0	0	0	0	0	0	0
19:45	20:00	0	0	0	0	0	0	0	0	0

Peak Time		North Approach Church St			Approach KFC Access (S)			South Approach Church St			Peak
Period Start	Period End	U	SR	L	U	R	L	U	R	NR	total
11:00	12:00	0	7	0	0	0	1	0	0	5	14
16:00	17:00	0	8	0	0	0	0	0	0	3	11

TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY

Intersection of Church St and KFC Access (North), Mudg

GPS	-32.5879 14, 149.187361							
Date:	Fri 09/12/2022	North:	Church St			Survey	AM	11:00 AM-12:00 PM
Weather:	Fine	East:	KFC Access (North)			Period	PM	4:00 PM-5:00 PM
Suburb/town:	Mudgee	South:	Church St			Traffic	AM	11:00 AM-12:00 PM
Customer:	MCLand	West:	NR			Peak	PM	4:00 PM-5:00 PM

All Vehicles

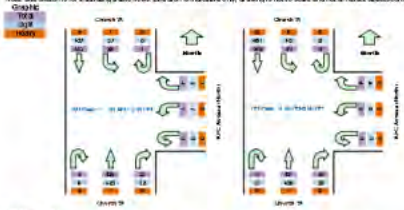
Time		North Approach Church St				East Approach KFC Access (N)			South Approach Church St			Hourly Total	
Period Start	Period End	U	SB	L	U	R	L	U	R	NB		Hour	Peak
11:00	11:15	0	102	4	0	1	0	0	2	96		943	Peak
11:15	11:30	0	122	5	0	0	3	0	5	106			
11:30	11:45	0	96	17	0	3	3	0	5	110			
11:45	12:00	0	120	12	0	0	1	0	10	114			
12:00	12:15	0	99	14	0	1	2	0	6	106		908	
12:15	12:30	0	97	4	0	0	1	0	6	107		907	
12:30	12:45	0	104	18	0	3	0	0	5	97		911	
12:45	13:00	0	106	14	0	1	2	0	6	106		920	
13:00	13:15	0	113	13	0	3	1	0	10	89		937	
13:15	13:30	0	97	14	0	0	2	0	12	96		879	
13:30	13:45	0	103	19	0	1	4	0	1	106		857	
13:45	14:00	0	113	17	0	3	3	0	2	81		821	
16:00	16:15	0	138	7	0	0	2	0	6	99		970	Peak
16:15	16:30	0	106	10	0	3	2	0	5	101		986	
16:30	16:45	0	123	9	0	2	1	0	3	105		948	
16:45	17:00	0	108	14	0	0	3	0	6	96		938	
17:00	17:15	0	122	4	0	2	0	0	6	100		952	
17:15	17:30	0	117	12	0	2	0	0	4	112		933	
17:30	17:45	0	136	7	0	0	0	0	9	101		875	
17:45	18:00	0	100	2	0	0	2	0	12	112		758	
18:00	18:15	0	91	10	0	1	2	0	9	92		754	
18:15	18:30	0	89	15	0	1	2	0	5	81		699	
18:30	18:45	0	84	11	0	0	2	0	3	73		663	
18:45	19:00	0	86	14	0	2	0	0	9	76		624	
19:00	19:15	0	78	10	0	1	0	0	6	53		358	
19:15	19:30	0	67	19	0	1	2	0	5	63			
19:30	19:45	0	72	9	0	2	2	0	10	49			
19:45	20:00	0	81	3	0	1	1	0	8	31			

Peak Time		North Approach Church St				East Approach KFC Access (N)			South Approach Church St			Peak Total
Period Start	Period End	U	SB	L	U	R	L	U	R	NB		
11:00	12:00	0	442	38	0	4	7	0	22	430		943
16:00	17:00	0	489	40	0	8	8	0	30	431		972

Note: Site sketch is for illustrating traffic flows. Direction is indicative only, drawing is not to scale and not an exact speed/conditions/location

Graphic

Total
Light
Heavy



Light Vehicles

Time		North Approach Church St				East Approach KFC Access (N)			South Approach Church St		
Period Start	Period End	U	SB	L	U	R	L	U	R	NB	
11:00	11:15	0	102	4	0	1	0	0	2	96	
11:15	11:30	0	121	5	0	0	3	0	5	106	
11:30	11:45	0	96	16	0	2	3	0	5	109	
11:45	12:00	0	119	12	0	0	1	0	10	110	
12:00	12:15	0	99	14	0	1	2	0	6	105	
12:15	12:30	0	94	4	0	0	1	0	6	105	
12:30	12:45	0	100	18	0	3	0	0	5	96	
12:45	13:00	0	105	14	0	1	2	0	6	100	
13:00	13:15	0	112	13	0	3	1	0	10	88	
13:15	13:30	0	96	14	0	0	2	0	12	94	
13:30	13:45	0	101	19	0	1	4	0	1	103	
13:45	14:00	0	114	17	0	3	3	0	2	81	
16:00	16:15	0	132	7	0	0	2	0	6	99	
16:15	16:30	0	106	10	0	3	2	0	5	101	
16:30	16:45	0	122	9	0	2	1	0	3	104	
16:45	17:00	0	102	14	0	0	3	0	6	96	
17:00	17:15	0	122	4	0	2	0	0	6	99	
17:15	17:30	0	117	12	0	2	0	0	4	112	
17:30	17:45	0	136	7	0	0	0	0	9	101	
17:45	18:00	0	99	2	0	0	2	0	12	112	
18:00	18:15	0	91	10	0	1	2	0	9	92	
18:15	18:30	0	89	15	0	1	2	0	5	81	
18:30	18:45	0	84	11	0	0	2	0	3	73	
18:45	19:00	0	84	14	0	2	0	0	9	76	
19:00	19:15	0	77	10	0	1	0	0	6	53	
19:15	19:30	0	66	15	0	1	2	0	5	61	
19:30	19:45	0	71	9	0	2	2	0	10	49	
19:45	20:00	0	80	3	0	1	1	0	8	31	

Peak Time		North Approach Church St				East Approach KFC Access (N)			South Approach Church St			Peak Total
Period Start	Period End	U	SB	L	U	R	L	U	R	NB		
11:00	12:00	0	437	37	0	3	7	0	22	423		929
16:00	17:00	0	481	40	0	8	8	0	30	430		994

Heavy Vehicles

Time		North Approach Church St				East Approach KFC Access (N)			South Approach Church St		
Period Start	Period End	U	SB	L	U	R	L	U	R	NB	
11:00	11:15	0	0	0	0	0	0	0	0	2	
11:15	11:30	0	1	0	0	0	0	0	0	0	
11:30	11:45	0	0	1	0	1	0	0	0	1	
11:45	12:00	0	4	0	0	0	0	0	0	4	
12:00	12:15	0	0	0	0	0	0	0	0	1	
12:15	12:30	0	3	0	0	0	0	0	0	2	
12:30	12:45	0	4	0	0	0	0	0	0	1	
12:45	13:00	0	1	0	0	0	0	0	0	2	
13:00	13:15	0	1	0	0	0	0	0	0	1	
13:15	13:30	0	2	0	0	0	0	0	0	2	
13:30	13:45	0	2	0	0	0	0	0	0	5	
13:45	14:00	0	1	0	0	0	0	0	0	0	
16:00	16:15	0	2	0	0	0	0	0	0	0	
16:15	16:30	0	1	0	0	0	0	0	0	0	
16:30	16:45	0	1	0	0	0	0	0	0	1	
16:45	17:00	0	3	0	0	0	0	0	0	0	
17:00	17:15	0	0	0	0	0	0	0	0	1	
17:15	17:30	0	0	0	0	0	0	0	0	0	
17:30	17:45	0	0	0	0	0	0	0	0	0	
17:45	18:00	0	1	0	0	0	0	0	0	0	
18:00	18:15	0	0	0	0	0	0	0	0	0	
18:15	18:30	0	0	0	0	0	0	0	0	0	
18:30	18:45	0	0	0	0	0	0	0	0	1	
18:45	19:00	0	2	0	0	0	0	0	0	0	
19:00	19:15	0	1	0	0	0	0	0	0	0	
19:15	19:30	0	1	0	0	0	0	0	0	2	
19:30	19:45	0	1	0	0	0	0	0	0	0	
19:45	20:00	0	1	0	0	0	0	0	0	0	

Peak Time		North Approach Church St				East Approach KFC Access (N)			South Approach Church St			Peak Total
Period Start	Period End	U	SB	L	U	R	L	U	R	NB		
11:00	12:00	0	5	1	0	1	0	0	0	7		14
16:00	17:00	0	8	0	0	0	0	0	0	1		9

TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY

Intersection of Church St and KFC Access (South), Mudg

GPS	-32.597906, 149.187257	North	Church St	Survey	AM	11:00 AM-12:00 PM
Date	Fri 09/12/2022	East	KFC Access (South)	Period	PM	4:00 PM-5:00 PM
Weather	Fine	South	Church St	Traffic	AM	11:00 AM-12:00 PM
Suburb/Town	Mudgee	West	N/A	Peak	PM	3:00 PM-6:00 PM
Customer	MCL Const					

All Vehicles

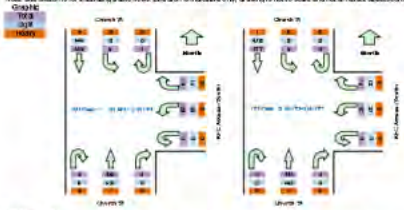
Time		North Approach Church St			Approach KFC Access (So South) Approach Church St						Hourly Total	
Period Start	Period End	U	SR	L	U	R	L	U	R	NR	Hour	Peak
11:00	11:15	0	102	0	0	2	2	0	0	96	500	Peak
11:15	11:30	0	125	0	0	2	6	0	0	111		
11:30	11:45	0	101	0	0	3	9	0	0	112		
11:45	12:00	0	121	0	0	7	12	0	0	117		
12:00	12:15	0	101	0	0	4	15	0	0	105	908	
12:15	12:30	0	98	0	0	2	10	0	0	113	907	
12:30	12:45	0	104	0	0	4	13	0	0	98	902	
12:45	13:00	0	106	0	0	4	13	0	0	107	911	
13:00	13:15	0	114	0	0	3	20	0	0	96	888	
13:15	13:30	0	99	0	0	11	11	0	0	97	890	
13:30	13:45	0	107	0	0	2	12	0	0	107	437	
13:45	14:00	0	115	0	0	3	8	0	0	80	299	
16:00	16:15	0	137	0	0	3	4	0	0	102	988	
16:15	16:30	0	108	0	0	1	7	0	0	135	943	
16:30	16:45	0	124	0	0	5	6	0	0	102	935	
16:45	17:00	0	108	0	0	5	10	0	0	97	953	
17:00	17:15	0	122	0	0	4	6	0	0	102	970	Peak
17:15	17:30	0	117	0	0	3	10	0	0	113	946	
17:30	17:45	0	136	0	0	3	10	0	0	107	889	
17:45	18:00	0	102	0	0	2	11	0	0	122	850	
18:00	18:15	0	93	0	0	3	16	0	0	96	791	
18:15	18:30	0	87	0	0	4	13	0	0	82	690	
18:30	18:45	0	86	0	0	5	8	0	0	70	689	
18:45	19:00	0	86	0	0	5	14	0	0	79	627	
19:00	19:15	0	78	0	0	5	10	0	0	39	362	
19:15	19:30	0	89	0	0	3	14	0	0	63		
19:30	19:45	0	74	0	0	5	9	0	0	53		
19:45	20:00	0	82	0	0	3	9	0	0	36		

Peak Time		North Approach Church St			Approach KFC Access (So South) Approach Church St						Peak Total
Period Start	Period End	U	SR	L	U	R	L	U	R	NR	
11:00	12:00	0	449	0	0	14	29	0	0	436	930
17:00	18:00	0	477	0	0	12	37	0	0	443	970

Note: Site sketch is for illustrating traffic flows. Direction is indicative only, drawing is not to scale and not an exact speed/cross location.

Graphic

Total
Light
Heavy



Light Vehicles

Time		North Approach Church St			Approach KFC Access (So South) Approach Church St						
Period Start	Period End	U	SR	L	U	R	L	U	R	NR	
11:00	11:15	0	102	0	0	2	2	0	0	96	
11:15	11:30	0	125	0	0	2	6	0	0	111	
11:30	11:45	0	101	0	0	3	9	0	0	111	
11:45	12:00	0	117	0	0	7	12	0	0	113	
12:00	12:15	0	101	0	0	4	15	0	0	107	
12:15	12:30	0	98	0	0	2	10	0	0	111	
12:30	12:45	0	100	0	0	4	13	0	0	97	
12:45	13:00	0	107	0	0	4	13	0	0	105	
13:00	13:15	0	113	0	0	3	20	0	0	95	
13:15	13:30	0	97	0	0	11	11	0	0	95	
13:30	13:45	0	105	0	0	2	12	0	0	102	
13:45	14:00	0	117	0	0	3	8	0	0	80	
16:00	16:15	0	134	0	0	3	4	0	0	102	
16:15	16:30	0	107	0	0	1	7	0	0	135	
16:30	16:45	0	123	0	0	5	6	0	0	102	
16:45	17:00	0	105	0	0	5	10	0	0	97	
17:00	17:15	0	122	0	0	4	6	0	0	101	
17:15	17:30	0	117	0	0	3	10	0	0	113	
17:30	17:45	0	136	0	0	3	10	0	0	107	
17:45	18:00	0	101	0	0	2	11	0	0	122	
18:00	18:15	0	93	0	0	3	16	0	0	96	
18:15	18:30	0	87	0	0	4	13	0	0	82	
18:30	18:45	0	86	0	0	5	8	0	0	70	
18:45	19:00	0	84	0	0	5	14	0	0	79	
19:00	19:15	0	77	0	0	5	10	0	0	39	
19:15	19:30	0	88	0	0	3	14	0	0	63	
19:30	19:45	0	73	0	0	5	9	0	0	53	
19:45	20:00	0	81	0	0	3	9	0	0	36	

Peak Time		North Approach Church St			Approach KFC Access (So South) Approach Church St						Peak Total
Period Start	Period End	U	SR	L	U	R	L	U	R	NR	
11:00	12:00	0	444	0	0	14	29	0	0	431	918
17:00	18:00	0	476	0	0	12	37	0	0	443	968

Heavy Vehicles

Time		North Approach Church St			Approach KFC Access (So South) Approach Church St						
Period Start	Period End	U	SR	L	U	R	L	U	R	NR	
11:00	11:15	0	0	0	0	0	0	0	0	2	
11:15	11:30	0	1	0	0	0	0	0	0	0	
11:30	11:45	0	0	0	0	0	0	0	0	1	
11:45	12:00	0	4	0	0	0	0	0	0	4	
12:00	12:15	0	0	0	0	0	0	0	0	1	
12:15	12:30	0	3	0	0	0	0	0	0	2	
12:30	12:45	0	4	0	0	0	0	0	0	1	
12:45	13:00	0	1	0	0	0	0	0	0	2	
13:00	13:15	0	1	0	0	0	0	0	0	1	
13:15	13:30	0	2	0	0	0	0	0	0	2	
13:30	13:45	0	2	0	0	0	0	0	0	5	
13:45	14:00	0	1	0	0	0	0	0	0	0	
16:00	16:15	0	3	0	0	0	0	0	0	0	
16:15	16:30	0	1	0	0	0	0	0	0	0	
16:30	16:45	0	1	0	0	0	0	0	0	1	
16:45	17:00	0	3	0	0	0	0	0	0	0	
17:00	17:15	0	0	0	0	0	0	0	0	1	
17:15	17:30	0	0	0	0	0	0	0	0	0	
17:30	17:45	0	0	0	0	0	0	0	0	0	
17:45	18:00	0	1	0	0	0	0	0	0	0	
18:00	18:15	0	0	0	0	0	0	0	0	0	
18:15	18:30	0	0	0	0	0	0	0	0	0	
18:30	18:45	0	0	0	0	0	0	0	0	1	
18:45	19:00	0	2	0	0	0	0	0	0	0	
19:00	19:15	0	1	0	0	0	0	0	0	0	
19:15	19:30	0	1	0	0	0	0	0	0	2	
19:30	19:45	0	1	0	0	0	0	0	0	0	
19:45	20:00	0	1	0	0	0	0	0	0	0	

Peak Time		North Approach Church St			Approach KFC Access (So South) Approach Church St						Peak Total
Period Start	Period End	U	SR	L	U	R	L	U	R	NR	
11:00	12:00	0	5	0	0	0	0	0	0	7	12
17:00	18:00	0	1	0	0	0	0	0	0	1	2

TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY

Intersection of Church St and KFC Access (North), Mudgee

GPS	-32.5979 14, 149.587961	North	Church St	Survey	AM	11:00 AM-12:00 PM
Date	Sat 10/12/22	East	KFC Access (North)	Period	PM	4:00 PM-5:00 PM
Weather	Fine	South	Church St	Traffic	AM	11:00 AM-12:00 PM
Suburb/	Mudgee	West	NR	Peak	PM	12:00 PM-1:00 PM
Customer	MCL2001					

All Vehicles

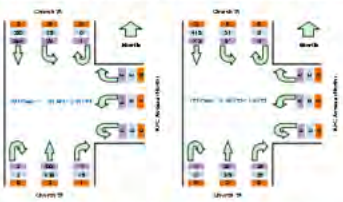
Time		North Approach Church St						South Approach Church St				Hourly Total	
Period Start	Period End	U	SB	L	U	R	L	U	R	NB		Hour	Peak
11:00	11:15	0	119	2	0	1	3	1	4	115		390	Peak
11:15	11:30	0	119	6	0	0	2	1	3	96			
11:30	11:45	0	84	12	0	0	3	0	4	110			
11:45	12:00	0	83	7	0	2	2	0	4	101			
12:00	12:15	0	120	6	0	0	4	0	5	110		357	Peak
12:15	12:30	0	107	15	0	1	3	0	5	102		344	
12:30	12:45	0	92	10	0	1	1	0	6	99		292	
12:45	13:00	0	99	15	0	1	1	0	6	74		282	
13:00	13:15	0	106	11	0	1	5	0	3	79		257	
13:15	13:30	0	83	13	0	1	6	0	9	72		300	
13:30	13:45	0	91	6	0	2	1	0	9	86		276	
13:45	14:00	0	78	7	0	2	1	0	7	86		251	
16:00	16:15	0	77	8	0	2	0	0	5	78		264	
16:15	16:30	0	77	3	0	3	1	0	7	91		279	
16:30	16:45	0	85	11	0	4	2	0	8	74		244	
16:45	17:00	0	86	11	0	0	6	0	3	79		211	
17:00	17:15	0	76	9	0	2	4	0	5	96		286	
17:15	17:30	0	81	7	0	0	3	0	4	102		297	
17:30	17:45	0	83	6	0	4	1	0	3	79		262	
17:45	18:00	0	88	13	0	0	1	0	5	103		298	
18:00	18:15	0	91	11	0	2	1	2	1	69		266	
18:15	18:30	0	76	14	0	0	1	0	4	65		220	
18:30	18:45	0	66	6	0	2	0	0	9	72		200	
18:45	19:00	0	67	11	0	1	1	0	5	59		181	
19:00	19:15	0	76	12	0	0	1	0	3	47		158	
19:15	19:30	1	70	8	0	1	0	0	10	52			
19:30	19:45	0	76	17	0	2	2	0	7	42			
19:45	20:00	0	66	7	0	4	3	0	3	42			

Peak Time		North Approach Church St						South Approach Church St				Peak Total
Period Start	Period End	U	SB	L	U	R	L	U	R	NB		
11:00	12:00	0	396	29	0	3	10	2	17	433		890
12:00	13:00	0	418	51	0	2	4	0	23	351		850

Note: Site sketch is for illustrating traffic flows. Direction is indicative only, drawing is not to scale and not an exact representation

Graphic

Total
Light
Heavy



Light Vehicles

Time		North Approach Church St						South Approach Church St				
Period Start	Period End	U	SB	L	U	R	L	U	R	NB		
11:00	11:15	0	109	2	0	1	3	1	4	115		
11:15	11:30	0	119	6	0	0	2	1	4	97		
11:30	11:45	0	83	12	0	0	2	0	4	117		
11:45	12:00	0	82	7	0	2	2	0	4	101		
12:00	12:15	0	120	6	0	0	4	0	5	110		
12:15	12:30	0	106	15	0	1	3	0	5	101		
12:30	12:45	0	91	10	0	1	1	0	6	98		
12:45	13:00	0	98	15	0	1	1	0	6	73		
13:00	13:15	0	107	11	0	1	5	0	3	79		
13:15	13:30	0	82	13	0	1	6	0	9	71		
13:30	13:45	0	89	6	0	2	1	0	9	86		
13:45	14:00	0	76	7	0	2	1	0	7	86		
16:00	16:15	0	75	8	0	2	0	0	5	78		
16:15	16:30	0	77	3	0	3	1	0	7	91		
16:30	16:45	0	85	11	0	4	2	0	8	74		
16:45	17:00	0	86	11	0	0	6	0	3	78		
17:00	17:15	0	76	9	0	2	4	0	5	96		
17:15	17:30	0	81	7	0	0	3	0	4	102		
17:30	17:45	0	83	6	0	4	1	0	3	79		
17:45	18:00	0	88	13	0	0	1	0	5	103		
18:00	18:15	0	91	11	0	2	1	2	1	69		
18:15	18:30	0	77	14	0	0	1	0	4	64		
18:30	18:45	0	66	6	0	2	0	0	9	72		
18:45	19:00	0	67	11	0	1	1	0	5	58		
19:00	19:15	0	76	12	0	0	1	0	3	47		
19:15	19:30	1	70	8	0	1	0	0	10	51		
19:30	19:45	0	76	17	0	2	2	0	7	42		
19:45	20:00	0	66	6	0	4	3	0	3	42		

Peak Time		North Approach Church St						South Approach Church St				Peak Total
Period Start	Period End	U	SB	L	U	R	L	U	R	NB		
11:00	12:00	0	393	29	0	3	9	2	16	430		882
12:00	13:00	0	418	51	0	2	6	0	23	329		829

Heavy Vehicles

Time		North Approach Church St						South Approach Church St				
Period Start	Period End	U	SB	L	U	R	L	U	R	NB		
11:00	11:15	0	1	0	0	0	0	0	0	1		
11:15	11:30	0	0	0	0	0	0	0	1	1		
11:30	11:45	0	1	0	0	0	1	0	0	1		
11:45	12:00	0	1	0	0	0	0	0	0	0		
12:00	12:15	0	0	0	0	0	0	0	0	0		
12:15	12:30	0	1	0	0	0	0	0	0	1		
12:30	12:45	0	1	0	0	0	0	0	0	0		
12:45	13:00	0	1	0	0	0	0	0	0	1		
13:00	13:15	0	1	0	0	0	0	0	0	0		
13:15	13:30	0	1	0	0	0	0	0	0	1		
13:30	13:45	0	2	0	0	0	0	0	0	0		
13:45	14:00	0	0	0	0	0	0	0	0	0		
16:00	16:15	0	2	0	0	0	0	0	0	0		
16:15	16:30	0	0	0	0	0	0	0	0	0		
16:30	16:45	0	1	0	0	0	0	0	0	0		
16:45	17:00	0	0	0	0	0	0	0	0	1		
17:00	17:15	0	0	0	0	0	0	0	0	1		
17:15	17:30	0	0	0	0	0	0	0	0	0		
17:30	17:45	0	0	0	0	0	0	0	0	0		
17:45	18:00	0	0	0	0	0	0	0	0	1		
18:00	18:15	0	0	0	0	0	0	0	0	0		
18:15	18:30	0	1	0	0	0	0	0	0	1		
18:30	18:45	0	0	0	0	0	0	0	0	0		
18:45	19:00	0	0	0	0	0	0	0	0	1		
19:00	19:15	0	0	0	0	0	0	0	0	0		
19:15	19:30	0	0	0	0	0	0	0	0	1		
19:30	19:45	0	1	0	0	0	0	0	0	0		
19:45	20:00	0	0	1	0	0	0	0	0	0		

Peak Time		North Approach Church St						South Approach Church St				Peak Total
Period Start	Period End	U	SB	L	U	R	L	U	R	NB		
11:00	12:00	0	3	0	0	0	1	0	1	1		8
12:00	13:00	0	3	0	0	0	0	0	0	2		5

TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY

Intersection of Church St and KFC Access (South), Mudgee

GPS	-32.597906, 149.587357	North	Church St	Survey	AM	11:00 AM-12:00 PM	
Date	Sat 10/12/22	East	KFC Access (South)	Period	PM	4:00 PM-5:00 PM	
Weather	Fine	South	Church St	Traffic	AM	11:00 AM-12:00 PM	
Suburban	Mudgee	West	NA	Peak	PM	12:00 PM-1:00 PM	
Customer	MCL2001						

All Vehicles

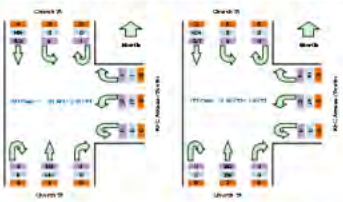
Time		North Approach Church St			Approach KFC Access (S) South Approach Church St						Hourly Total	
Period Start	Period End	U	SR	L	U	R	L	U	R	NB	Hour	Peak
11:00	11:15	0	114	0	0	1	4	0	0	120	467	Peak
11:15	11:30	0	122	0	0	2	6	0	0	102		
11:30	11:45	0	87	0	0	1	12	0	0	121		
11:45	12:00	0	83	0	0	3	3	0	0	102		
12:00	12:15	0	124	0	0	3	11	0	0	113	559	Peak
12:15	12:30	0	110	0	0	4	15	0	0	102	531	
12:30	12:45	0	95	0	0	2	10	0	0	99	779	
12:45	13:00	0	100	0	0	5	11	0	0	75	759	
13:00	13:15	0	113	0	0	3	9	0	0	79	751	
13:15	13:30	0	89	0	0	5	10	0	0	76	697	
13:30	13:45	0	92	0	0	4	7	0	0	91	677	
13:45	14:00	0	77	0	0	2	11	0	0	93	653	
16:00	16:15	0	83	0	0	4	4	0	0	79	690	
16:15	16:30	0	78	0	0	5	3	0	0	93	710	
16:30	16:45	0	88	0	0	4	9	0	0	78	729	
16:45	17:00	0	74	0	0	1	6	0	0	81	696	
17:00	17:15	0	82	0	0	3	6	0	0	99	743	
17:15	17:30	0	84	0	0	1	8	0	0	108	735	
17:30	17:45	0	84	0	0	2	4	0	0	78	652	
17:45	18:00	0	89	0	0	7	11	0	0	102	593	
18:00	18:15	0	94	0	0	3	7	0	0	69	649	
18:15	18:30	0	79	0	0	5	6	0	0	80	611	
18:30	18:45	0	88	0	0	4	10	0	0	77	632	
18:45	19:00	0	85	0	0	1	13	0	0	63	585	
19:00	19:15	0	77	0	0	3	8	0	0	47	542	
19:15	19:30	0	70	0	0	3	13	0	0	39		
19:30	19:45	0	78	0	0	3	13	0	0	46		
19:45	20:00	0	69	0	0	2	6	0	0	45		

Peak Time		North Approach Church St			Approach KFC Access (S) South Approach Church St						Peak total
Period Start	Period End	U	SR	L	U	R	L	U	R	NB	
11:00	12:00	0	408	0	0	7	27	0	0	443	885
12:00	13:00	0	427	0	0	14	47	0	0	392	880

Note: Site sketch is for illustrating traffic flows. Direction is indicative only, drawing is not to scale and not an exact speech on location.

Graphic

Total
Light
Heavy



Light Vehicles

Time		North Approach Church St			Approach KFC Access (S) South Approach Church St						
Period Start	Period End	U	SR	L	U	R	L	U	R	NB	
11:00	11:15	0	113	0	0	1	4	0	0	119	
11:15	11:30	0	122	0	0	2	6	0	0	100	
11:30	11:45	0	83	0	0	1	12	0	0	120	
11:45	12:00	0	84	0	0	3	3	0	0	102	
12:00	12:15	0	124	0	0	3	11	0	0	113	
12:15	12:30	0	109	0	0	4	15	0	0	102	
12:30	12:45	0	92	0	0	2	10	0	0	99	
12:45	13:00	0	99	0	0	5	11	0	0	74	
13:00	13:15	0	112	0	0	3	9	0	0	79	
13:15	13:30	0	88	0	0	5	10	0	0	75	
13:30	13:45	0	90	0	0	4	7	0	0	91	
13:45	14:00	0	77	0	0	2	11	0	0	93	
16:00	16:15	0	81	0	0	4	4	0	0	79	
16:15	16:30	0	78	0	0	5	3	0	0	93	
16:30	16:45	0	87	0	0	4	9	0	0	78	
16:45	17:00	0	74	0	0	1	6	0	0	80	
17:00	17:15	0	82	0	0	3	6	0	0	98	
17:15	17:30	0	84	0	0	1	8	0	0	108	
17:30	17:45	0	84	0	0	2	4	0	0	78	
17:45	18:00	0	89	0	0	7	11	0	0	101	
18:00	18:15	0	94	0	0	3	7	0	0	69	
18:15	18:30	0	78	0	0	5	6	0	0	80	
18:30	18:45	0	88	0	0	4	10	0	0	77	
18:45	19:00	0	85	0	0	1	13	0	0	62	
19:00	19:15	0	77	0	0	3	8	0	0	47	
19:15	19:30	0	70	0	0	3	13	0	0	38	
19:30	19:45	0	77	0	0	3	13	0	0	46	
19:45	20:00	0	69	0	0	2	6	0	0	45	

Peak Time		North Approach Church St			Approach KFC Access (S) South Approach Church St						Peak total
Period Start	Period End	U	SR	L	U	R	L	U	R	NB	
11:00	12:00	0	404	0	0	7	27	0	0	441	879
12:00	13:00	0	424	0	0	14	47	0	0	390	875

Heavy Vehicles

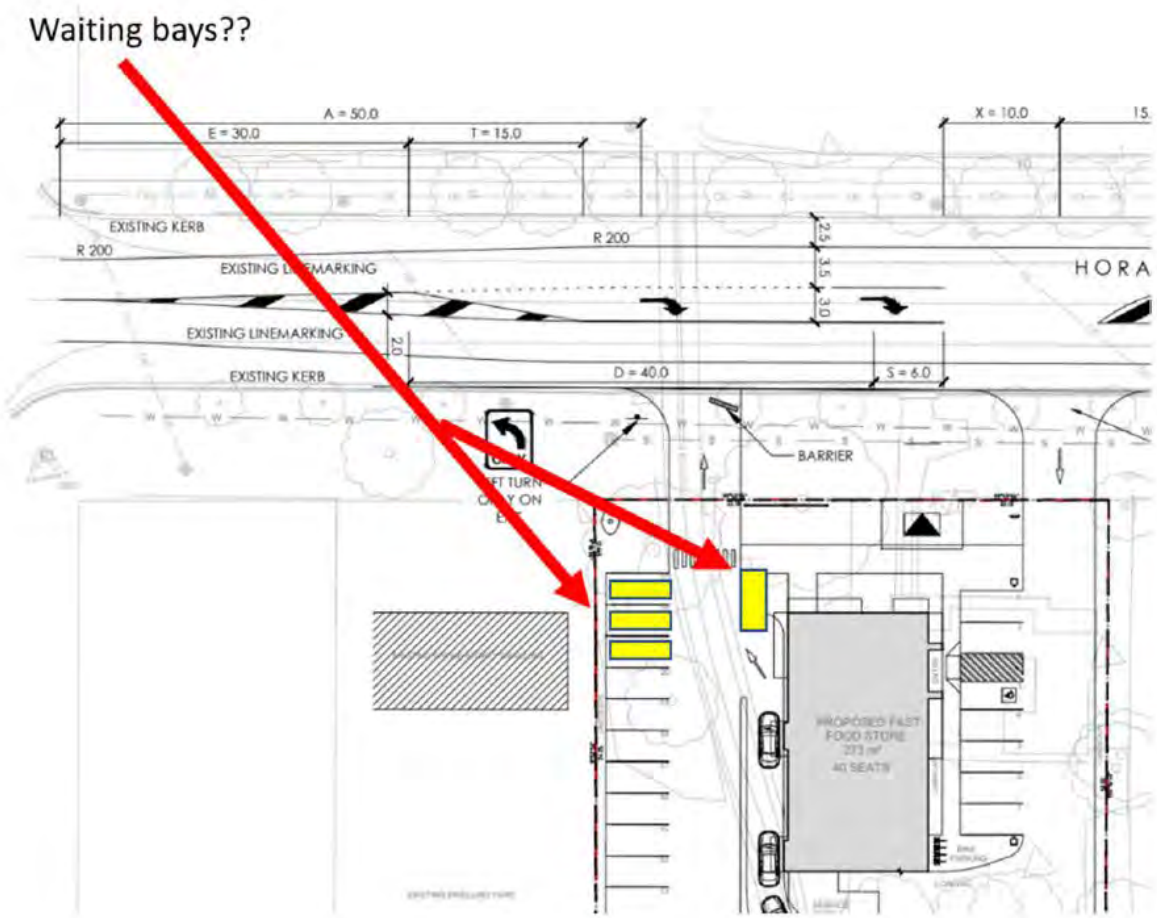
Time		North Approach Church St			Approach KFC Access (S) South Approach Church St						
Period Start	Period End	U	SR	L	U	R	L	U	R	NB	
11:00	11:15	0	1	0	0	0	0	0	0	1	
11:15	11:30	0	0	0	0	0	0	0	0	2	
11:30	11:45	0	2	0	0	0	0	0	0	1	
11:45	12:00	0	1	0	0	0	0	0	0	0	
12:00	12:15	0	0	0	0	0	0	0	0	0	
12:15	12:30	0	1	0	0	0	0	0	0	1	
12:30	12:45	0	1	0	0	0	0	0	0	0	
12:45	13:00	0	1	0	0	0	0	0	0	1	
13:00	13:15	0	1	0	0	0	0	0	0	0	
13:15	13:30	0	1	0	0	0	0	0	0	1	
13:30	13:45	0	2	0	0	0	0	0	0	0	
13:45	14:00	0	0	0	0	0	0	0	0	0	
16:00	16:15	0	2	0	0	0	0	0	0	0	
16:15	16:30	0	0	0	0	0	0	0	0	0	
16:30	16:45	0	1	0	0	0	0	0	0	0	
16:45	17:00	0	0	0	0	0	0	0	0	1	
17:00	17:15	0	0	0	0	0	0	0	0	1	
17:15	17:30	0	0	0	0	0	0	0	0	0	
17:30	17:45	0	0	0	0	0	0	0	0	0	
17:45	18:00	0	0	0	0	0	0	0	0	1	
18:00	18:15	0	0	0	0	0	0	0	0	0	
18:15	18:30	0	1	0	0	0	0	0	0	1	
18:30	18:45	0	0	0	0	0	0	0	0	0	
18:45	19:00	0	0	0	0	0	0	0	0	1	
19:00	19:15	0	0	0	0	0	0	0	0	0	
19:15	19:30	0	0	0	0	0	0	0	0	1	
19:30	19:45	0	1	0	0	0	0	0	0	0	
19:45	20:00	0	0	0	0	0	0	0	0	0	

Peak Time		North Approach Church St			Approach KFC Access (S) South Approach Church St						Peak total
Period Start	Period End	U	SR	L	U	R	L	U	R	NB	
11:00	12:00	0	4	0	0	0	0	0	0	4	8
12:00	13:00	0	3	0	0	0	0	0	0	2	5

McLaren
Traffic Engineering &
Road Safety Consultants

ANNEXURE E: GENERAL CONCEPT FOR POSSIBLE WAITING BAY LOCATIONS

(1 SHEET)


Waiting bays??
A = 50.0
E = 30.0
T = 15.0
X = 10.0
EXISTING KERB
R 200
R 200
EXISTING LINEMARKING
EXISTING LINEMARKING
EXISTING KERB
2.5
3.5
3.0
2.0
D = 40.0
S = 6.0
HORA
BARRIER
PROPOSED FAST FOOD STORE
273 m²
40 SEATS

TRIAXIAL
CONSULTING
Suite 12, Level 14, 327 Pitt St
Sydney NSW 2000
triaxial.com.au
1300 874 294

MUDGEE KFC
33 HORATIO ST, MUDGEE, NSW

FLOOD MODELLING REPORT

6 JULY 2023
REFERENCE: TX15361.00-01.RPT.JD-REV4

Document Control:

Client	Mudgee KFC		
Prepared By:	Triaxial Consulting Ltd		
Report Author	Jim Disher BE(Civil), ME (Civil & Structural), MIE Aust		
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Current Revision:	**4**		
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3	JD	MD	05/06/23
4	**JD**	**MD**	**06/07/23**

INDEX

1 INTRODUCTION AND PROJECT DESCRIPTION

1.1 PROJECT OVERVIEW

Triaxial have been engaged by Mudgee KFC to review the potential impact of potential flooding through the proposed development site located at 33 Horatio Street, Mudgee.

The site and proposed development of a new KFC is shown in the image below. The site currently has an open concrete stormwater channel traversing through the site from South East to North West. It is proposed that this culvert be extended through the site to connect with an existing twin cell 1.5m x 0.6m high culvert under Horatio Street.

The purpose of this report is to develop an overland flow path model to determine the impact of the proposed culvert extension.

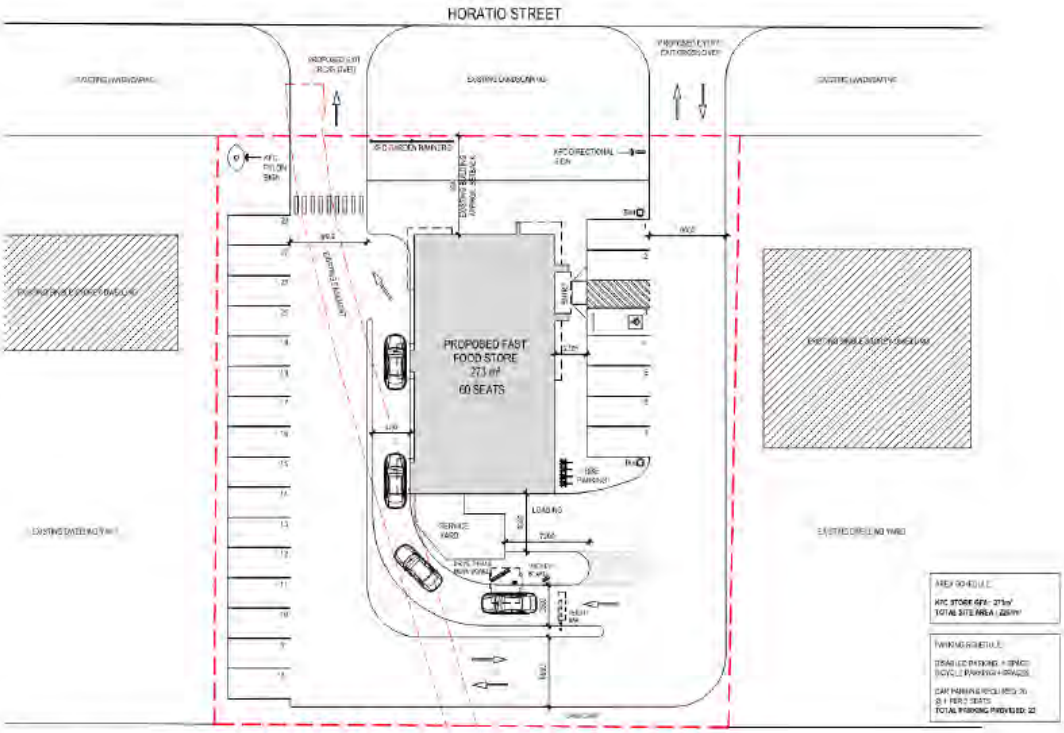


Figure 1: Site location and proposed site plan

2 FLOOD MODELLING

2.1 MODEL SETUP

A TULFOW 2-Dimensional flood model was constructed in order to detail the overland flow paths throughout the property and gauge any impact of the proposed works. All GIS layers were compiled in QGIS software.

As requested by Mid Western Regional Council, the site was modelled using the predicted 1%, 5% and 20% AEP flow rates. These were obtained from the Mudgee Local Creeks Flood study.

A pre-developed (existing condition) model was compiled to determine the existing flooding extents by using the surveyed surface data provided by consulting surveyors Dewitt Consulting.

The model was then re-run with the proposed future finished surface data for the site, including the surface data generated from the 3-Dimensional site model, as shown in the image below output from Civil3D software.

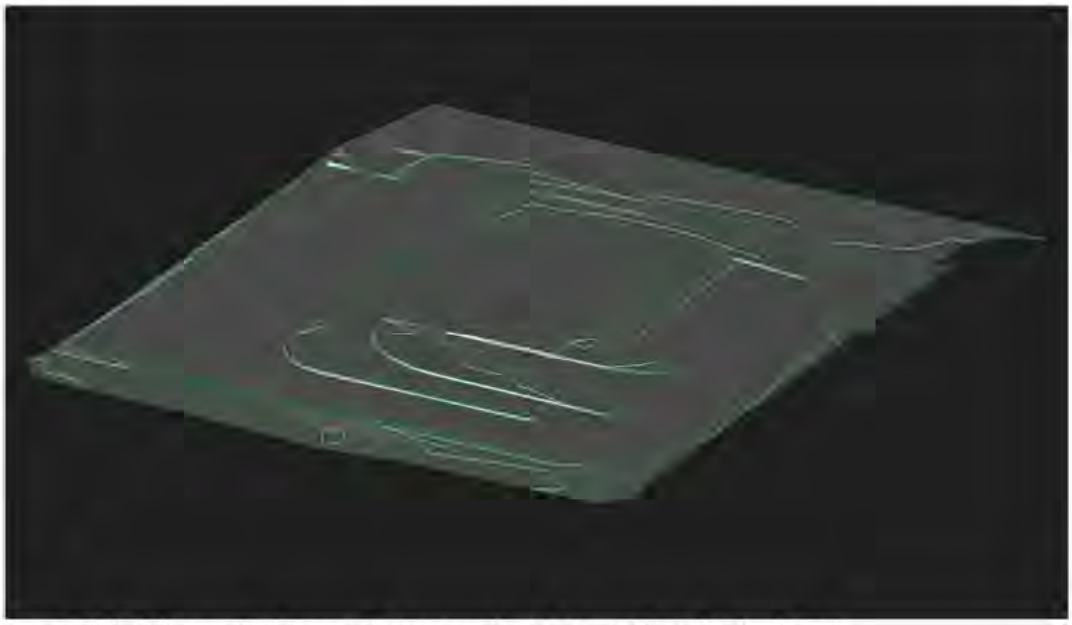


Figure 2: Site 3-D isometric image with proposed levels viewed from the South East.

A copy of the proposed finished levels plan is included in Appendix A.

Refer Appendix A

The model was constructed with the following parameters and assumptions for the existing and proposed development of the site:

2.1.1. Existing Condition Model

- Existing surface data obtained from DeWitt Consulting Surveyors recorded to AHD in MGA co-ordinates.
- Existing surface data not obtained from DeWitt Consulting Surveyors (outside of immediate site area and road) modelled from Lidar information sourced from E.L.V.I.S. website: www.elevation.fsdf.org.au (ANZLIC Committee on surveying and mapping). The lidar data obtained was a 1m grid. Specific files used in the model are listed below:
    - Mudgee201407-LID1-AHD_7426388_55_0002_0002_1m.asc
    - Mudgee201407-LID1-AHD_7426390_55_0002_0002_1m.asc
- Model boundaries were extended a minimum of 100m upstream of proposed works and a minimum of 100m downstream in order to determine any upstream or downstream effects.
- Inflow locations were included to reflect the Mudgee Local Creeks Flood Study and Mudgee Flood Study inflow locations of existing outflow culvert upstream of the property.
- Inflow magnitude was adopted from the Mudgee Local Creeks Flood Study and determined to be as follows:
    - 1% AEP event with flow rate of 3.6m³/s.
    - 5% AEP event with flow rate of 2.46m³/s.
    - 20% AEP event with flow rate of 1.68m³/s.
- The existing culvert through the site was modelled as a 1.5m wide, 0.6m high, 2 cell culvert to reflect the survey plans produced by DeWitt Consulting.
- Typical grassed areas were input with a manning's n value of 0.04 to reflect the established vegetation. Roads were input sealed road roughness of 0.02, the base of the open concrete channel was assumed to be 0.018 to reflect a decrease in roughness.
- The model was initially run at 1m grid to give a detailed resolution for the output. Further modelling was conducted at a 0.4m grid resolution to provide more detailed result output.
- The TUFLOW solver used in the computation of the model was TUFLOW 2023-03-AA version with HPC solution scheme.
- Results from the model were output in 5-minute intervals.

2.1.2. Future / Proposed Condition Model

In addition to these elements listed above, the design culvert was input into the model and re-run with the following inclusions:

- Site grading included to the levels plan shown below and attached in Appendix A.
- An extension of the existing culvert through the site was included, with the new culvert accepting flow from the rear laneway junction with the concrete open channel. The new culvert was proposed to be a twin cell, 1500mm x 600mm concrete box culvert.
- Two separate overflow routes were provided with the site finished levels plan, the main overflow route to the Western side of the building and another overflow route to the Eastern side of the building to allow water to pass through the site and exit along Horatio Street.

- An underground OSD storage area was modelled at the front (Horatio Street) entrance to the property to act as site storage. It is proposed that this underground storage tank will accept inflow from the site and discharge at the pre-developed rate into the new pit and culvert.
- 150mm high kerbs were included in the model to realistically determine the flow paths and prevent water from entering neighbouring properties.
- New proposed culverts and inlet pits were modelled with a 50% blockage factor.

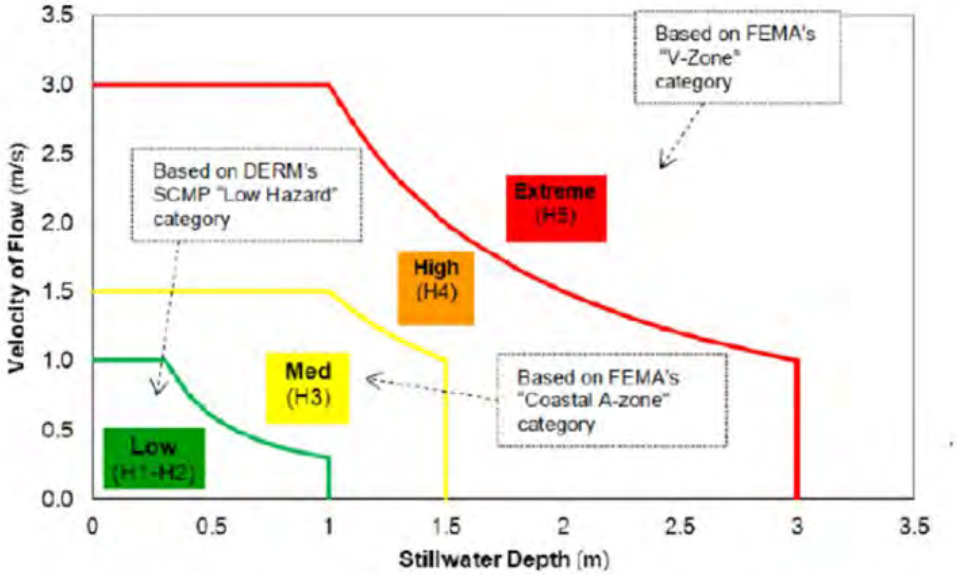
Note: the future/proposed condition model used the same inflow data as the existing condition model.

For both existing and proposed site condition, the model outputs obtained included:

- Depth (m)
- Velocity (m/s)
- Velocity vectors (to determine flow direction)
- Water Level (m AHD)
- Hazard Level

The flood hazard level criteria adopted for the modelling was the hydraulic hazard categorisation method developed for Moreton Bay Council by GHD in 2011. This method was chosen as it relates hazard categories to risk to life and property in a comprehensive way that relates well to the development. Hazard levels are listed from H1 (low) to H5 (high).

A summary of the criteria and a description of each hazard category is shown in Figure 3 below:



Low Risk to Life and property		*High Risk to Life and property*		
H1	***H2***	***H3***	***H4***	***H5***
Insignificant [1]	***Minor*** [1]	***Moderate*** [1]	***Major*** [1]	***Catastrophic*** [1]
No significant life risk *Property risk only to items which come in direct contact with floodwaters such as building contents*	*Low life risk. Able bodied adults can walk safely.* *Cars can float and precautions must be followed to keep them out of floodwaters*	*Moderate life risk.* *Able bodied adults cannot safely walk* *Only large vehicles (trucks) can safely travel.*	*Major life risk* *Light frame buildings (e.g. houses) can fail structurally*	*Extreme life risk* *Majority of buildings could fail*

Figure 3: Flood Hazard mapping criteria.

2.2 FLOOD MODEL MAPPING

The flood model was run with the existing condition and then re-run with the proposed changes in order to determine any effect on the flood conditions due to the development.

Model result files were then input to GIS mapping software and comparison mapping for existing and proposed depths and velocities was undertaken to quantify the differences. Comparison mapping of the two model scenarios was developed using the TUFLOW "asc to asc" utility.

Maps outlining existing and proposed future works and the differences between each are listed in Appendix B.

Refer Appendix B

3 FLOOD MODELLING RESULTS

3.1 FLOOD INFORMATION

The flood mapping generated in the modelling is included in Appendix B. In summary, the mapping shows the following outcomes:

- With the inclusion of an underground OSD tank and box culvert extension within the proposed site the flood depth post – development is no greater than the pre – developed depth for the 1%, 5% and 20% flood events.
- The flood inundation of all neighbouring properties is unchanged upstream and downstream from the site during all events.
- Minimum site flooding occurs during the 20% event, with only very small depth of overland flow occurring through the site.
- The flood depths across the site vary to be split around the proposed new building. The flooding is contained on the site by the proposed grading and inclusion of concrete kerbs. Flood levels through the site during the 1% event are generally below 100mm.
- Flood levels around the building are at RL463.70m near the front of the building. It is proposed that the building floor level be set at RL464.20m to ensure a minimum of 500mm of freeboard from the floodwater.
- In order to facilitate overland flow through the site from the upstream catchment, it is proposed that a flush kerb be constructed along the Southern boundary of the site (with the laneway). This in combination with a 300mm gap at the base of the site fence along that boundary will provide the ability for excess flood water to flow through the site as modelled. Refer Triaxial consulting plans TX15361.00-C1.00 for details.

An image of the pre vs post flood depth through the site is shown in the image below. Purple data is pre-developed site depths, blue is post-developed site depths. As can be seen from the image, the flood extent is not increased by the development.

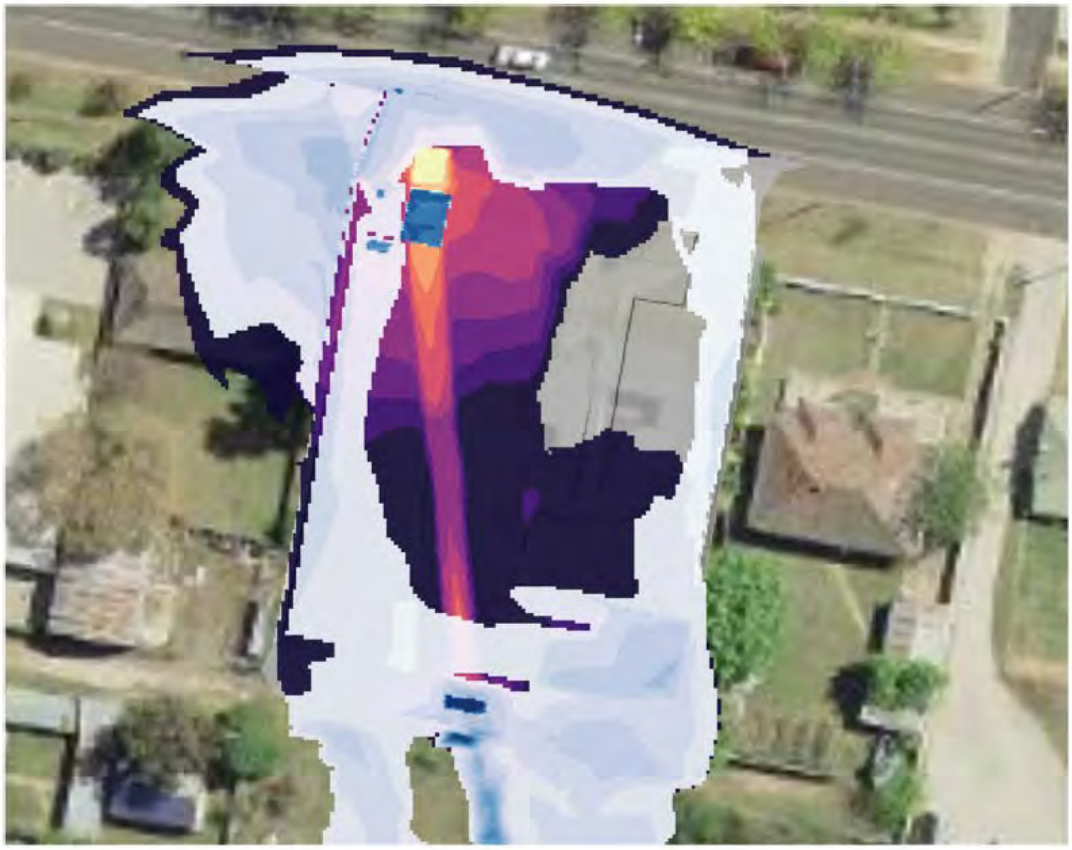


Figure 4: Pre vs Post site flood extents – 1% event

The site downstream and upstream effects were also monitored, with no increase in either the downstream or upstream flood extent as can be seen from Figures 5 and 6 below showing the 1% AEP event unchanged upstream and downstream.

Figure 5: Pre vs Post site flood extents – downstream (extents match exactly)

Figure 6: Pre vs Post site flood extents – upstream (extents match exactly)

4 FLOOD PLANNING ASSESSMENT

According to the Mudgee Flood Study 2021, a portion of the site is listed as high flood risk. This is due to the presence of a concrete lined stormwater drainage channel that crosses the site from the Southern boundary to the North Western corner where it is conveyed under Sydney Road via a concrete box culvert system.

The presence of this open channel through the site and the open flow of water through the channel in the 1% event triggers the high risk flood status.

4.1 DCP REQUIREMENTS

The following is an extract from the Mid-Western Regional Council Development Control Plan 2013, Appendix A – Matrix 1 – Urban Floodplains.

MATRIX 1 URBAN FLOODPLAINS

Urban Floodplains

Planning & Development Controls

	Flood Risk Precincts (FRP's)																							
	Low Flood Risk								Medium Flood Risk								High Flood Risk							
Planning Consideration	Essential Community Facilities	Critical Facilities	Subdivision	Residential	Commercial & Industrial	Tourist Related Development	Recreation& Agriculture	Minor Development	Essential Community Facilities	Critical Facilities	Subdivision	Residential	Commercial & Industrial	Tourist Related Development	Recreation& Agriculture	Minor Development	Essential Community Facilities	Critical Facilities	Subdivision	Residential	Commercial & Industrial	Tourist Related Development	Recreation& Agriculture	Minor Development
Floor Level		3		2	2	2						2	2	2	1	2,4							1	2,4
Building Components		2		1	1	1						1	1	1	1	1							1	1
Structural Soundness		2										2	2	2	2	2							1	1
FloodAffectation		2	2		2	2					1	2	2	2	2	2							1	1
Evacuation		2									1	1	1	1	1	1							1	1
Management & Design		4,5									1		2,3,5	2,3,5	2,3,5	2,3,5							2,3,5	2,3,5

Not Relevant Unsuitable LandUse

Note: reference to freeboard refers to an increased height of 0.5 metres

Figure 7: Mid-Western Regional Council Planning and Development Controls – Urban Floodplains

The commercial KFC proposed development would be listed as an unsuitable. There is insufficient detail in the mapping provided in the Mudgee Flood study to determine the high-risk portion of the site, the previous study produced in 2008 included the following flood inundation map:

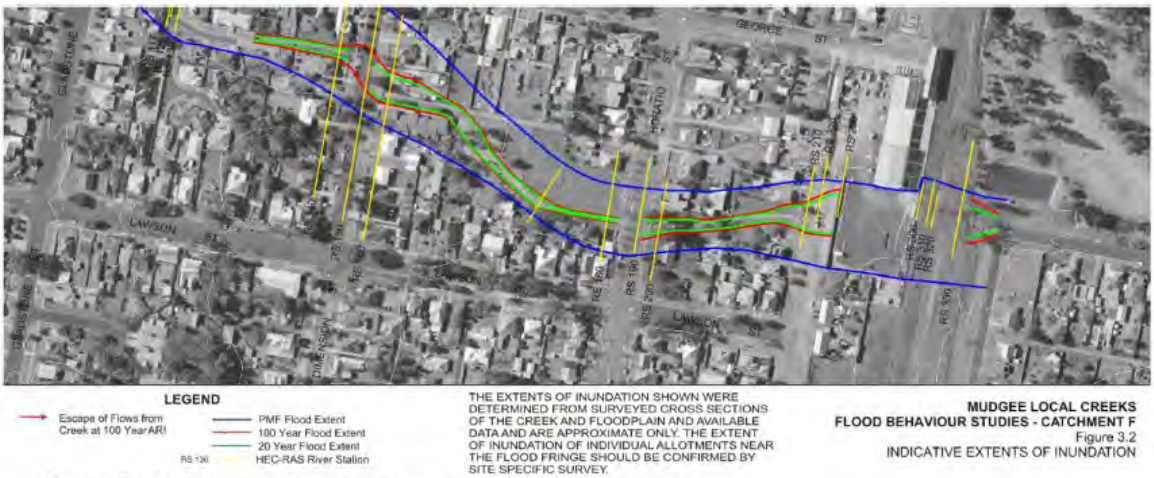


Figure 8: Site flood inundation map from local creeks flood study

4.2 MERITS BASED ASSESSMENT

As the development proposes to alter the existing site levels and drainage infrastructure, and as the site is not completely inundated during the 1% event, we believe that a merits-based approach is appropriate.

The development proposes to alter the existing flood inundation in the following ways:

- Changes to existing stormwater infrastructure.
  - The existing channel is proposed to be reconstructed as a covered box culvert. The existing concrete based open channel will be constructed as a closed box culvert, with a carpark constructed above it. Stormwater will be conveyed through the site by this culvert.
  - Upstream flood water will be captured by the new culvert with a new inlet proposed further to the South and conveyed to the existing discharge location on the Northern side of Sydney Road.
- Site level change.
  - The site level will change with the proposed new building. Triaxial have prepared a concept finished levels plan for the site in order to determine the effects of the new levels on the flood flow through the site.
  - The proposed site level plan includes the ability for flood water to pass through the site without inundation of neighbouring properties or the proposed new building. This is achieved using kerbing along the edges of the carpark and driveway areas, along with raised medians through the site as part of the drive through area.
- On site detention storage
  - A new on-site detention system will be constructed to allow slow release of stormwater from the site. The site will also introduce a piped stormwater network that will convey water to the existing culvert and under Horatio Street. The on-site detention system will be oversized to cater for additional flow from the upstream catchment as well as the developed site in order to reduce the extent of the flood water on Horatio Street.

4.3 DEVELOPMENT CONTROLS

The proposed development meets the requirements of the Mid Western Regional Council Urban Floodplain Planning and Development Control Matrix:

a) *Floor Level*

i. Habitable floor level is to be set at RL 464.20m (AHD). This level satisfies the requirement for 500mm freeboard above the 1% flood level (average 463.70m).

b) *Building Components*

i. Components of the building will be constructed of flood compatible material including the following (to be confirmed on construction plans by structural engineer) in accordance with MWRC DCP Appendix A – Flood Schedules:

1. Floors – Concrete slab on ground
2. Wall Structure – brickwork or blockwork
3. Electrical and Mechanical – all metering, connections and wiring, equipment to be located above the 1% flood level plus 500mm freeboard.
4. Heating and Air Conditioning – Fuel, installation and ducting all located above the 1% flood level plus freeboard.

c) *Structural Soundness - Be able to withstand the forces of floodwater, debris and buoyancy up to the flood planning level.*

1. With the 100yr ARI flood level below the existing ground level the building will not be required to resist the applied force of flood water.

d) *Flood Affectation - Not increase the flood affectation elsewhere upstream and downstream.*

1. The proposed building will not increase flood affectation elsewhere as shown in the attached mapping in Appendix B.

e) *Evacuation - Have reliable access for pedestrians and vehicles from the development, at a minimum level equal to the lowest habitable floor level of the development, to a safe refuge.*

1. As shown in the post-development hazard mapping in Appendix B, access will be available for people from the

building to Horatio Street with a maximum hazard rating of 2 – able bodied people able to walk through flood waters. Other small pockets of higher hazard areas relating to pit inflow locations will be able to be easily avoided.

f) *Management and Design -*

Have driveways between car parking spaces and the connecting roadway that will not be inundated by a depth of water greater than 0.3m during a 100-year ARI event.

Goods to be stored above design flood level plus freeboard and external storage of goods with the potential to cause damage or hazard during the design flood event.

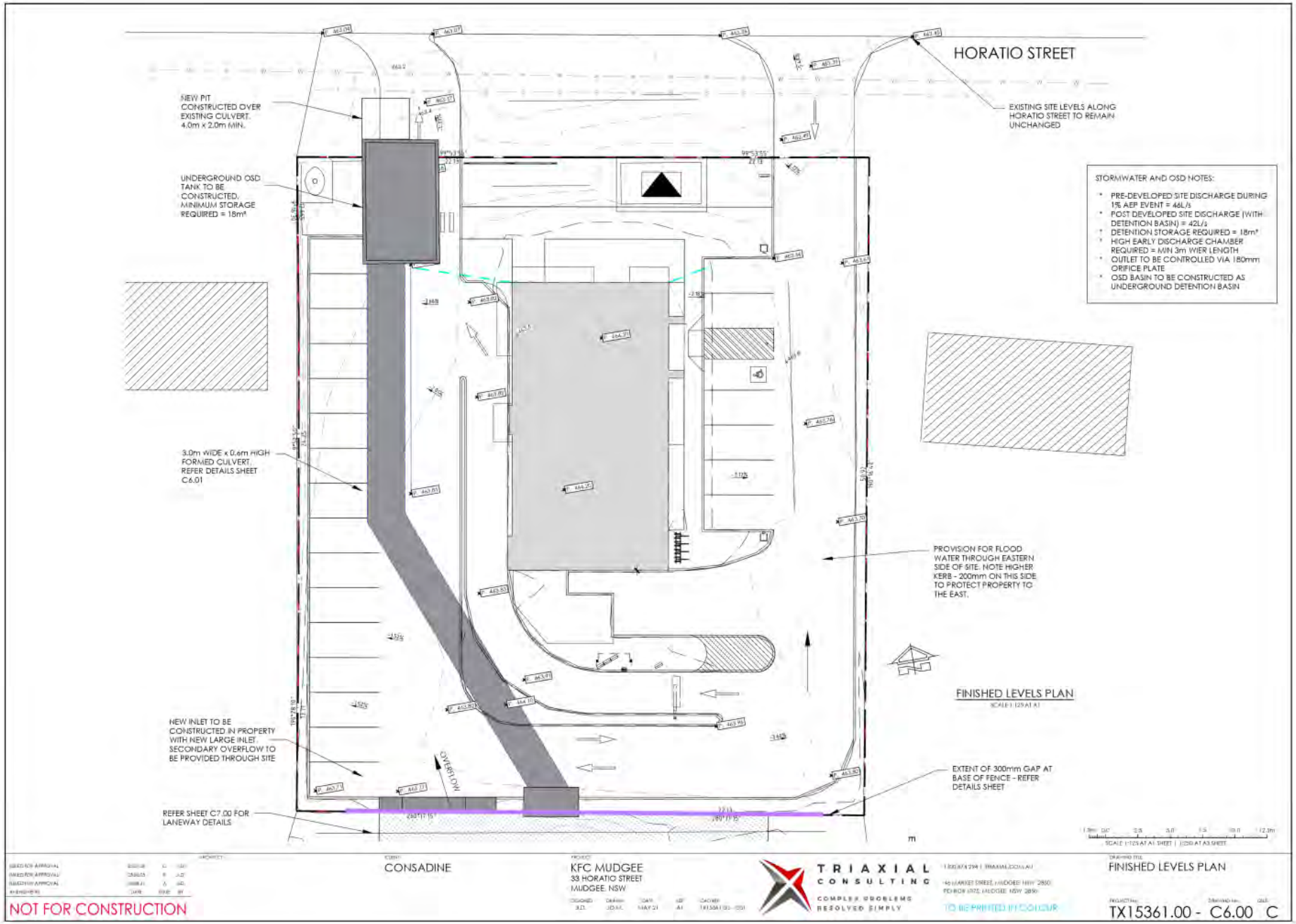
1. Open car spaces will have a maximum inundation depth of 110mm in parking areas.
2. Driveways will have a maximum inundation depth of 240mm before exiting on to Horatio Street, but only for a short length.
3. No external storage of goods is proposed.
4. Internal storage of goods will be above the finished floor level, which is above the 1% flood level plus freeboard.

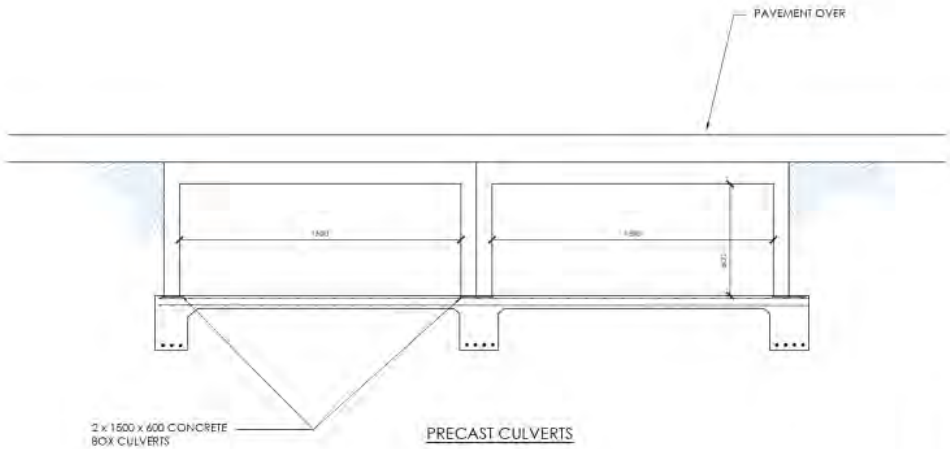
5 CONCLUSION

After review of the model results and mapping output, we confirm that the extension of the existing culvert to the Southern boundary of the site will have minimal impact on the site flooding. Any potential effects can be offset by managing the site levels and inclusion of an underground OSD tank.

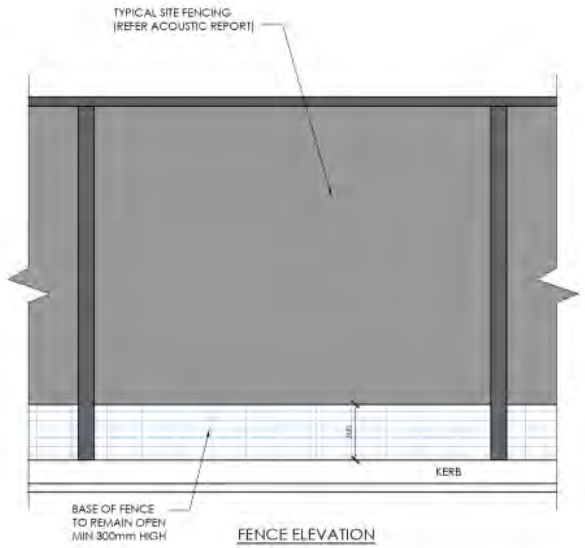
Although the site is listed as "high risk" and contains a concrete lined channel conveying the 1% flow through the site, the inclusion of a new underground box culvert and careful management of the site finished levels as shown on Triaxial engineering plans will ensure that the criteria listed in the Mid Western Regional Council Urban Floodplain Planning and Development Control Matrix will be complied with.

APPENDIX A – PROPOSED FINISHED LEVELS PLAN


HORATIO STREET
NEW PIT CONSTRUCTED OVER EXISTING CULVERT. 4.0m x 2.0m MIN.
UNDERGROUND OSD TANK TO BE CONSTRUCTED. MINIMUM STORAGE REQUIRED = 18m³
3.0m WIDE x 0.6m HIGH FORMED CULVERT. REFER DETAILS SHEET C6.01
NEW INLET TO BE CONSTRUCTED IN PROPERTY WITH NEW LARGE INLET. SECONDARY OVERFLOW TO BE PROVIDED THROUGH SITE
REFER SHEET C7.00 FOR LANEWAY DETAILS
OVERFLOW
EXISTING SITE LEVELS ALONG HORATIO STREET TO REMAIN UNCHANGED
STORMWATER AND OSD NOTES:
* PRE-DEVELOPED SITE DISCHARGE DURING 1% AEP EVENT = 46L/s
* POST DEVELOPED SITE DISCHARGE (WITH DETENTION BASIN) = 42L/s
* DETENTION STORAGE REQUIRED = 18m³
* HIGH EARLY DISCHARGE CHAMBER REQUIRED = MIN 3m WIER LENGTH
* OUTLET TO BE CONTROLLED VIA 180mm ORIFICE PLATE
* OSD BASIN TO BE CONSTRUCTED AS UNDERGROUND DETENTION BASIN
PROVISION FOR FLOOD WATER THROUGH EASTERN SIDE OF SITE. NOTE HIGHER KERB - 200mm ON THIS SIDE TO PROTECT PROPERTY TO THE EAST.
FINISHED LEVELS PLAN
EXTENT OF 300mm GAP AT BASE OF FENCE - REFER DETAILS SHEET
CONSADINE
KFC MUDGEE
33 HORATIO STREET
MUDGEE, NSW
TRIAXIAL CONSULTING
COMPLEX PROBLEMS RESOLVED SIMPLY
TO BE PRINTED IN COLOUR
FINISHED LEVELS PLAN
TX15361.00 - C6.00 C
NOT FOR CONSTRUCTION



PRECAST CULVERTS



FENCE ELEVATION

NOT FOR CONSTRUCTION

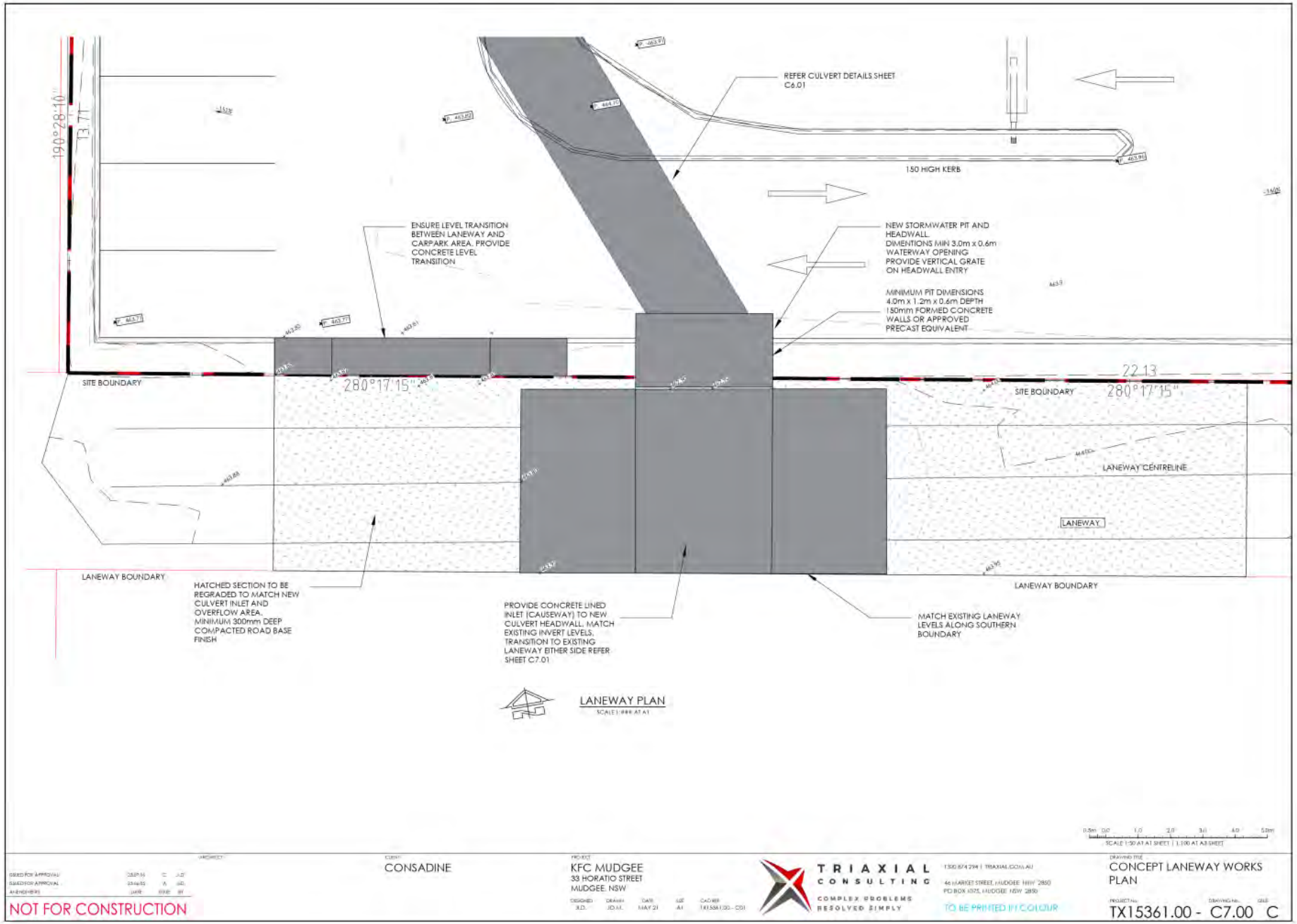
CONSADINE

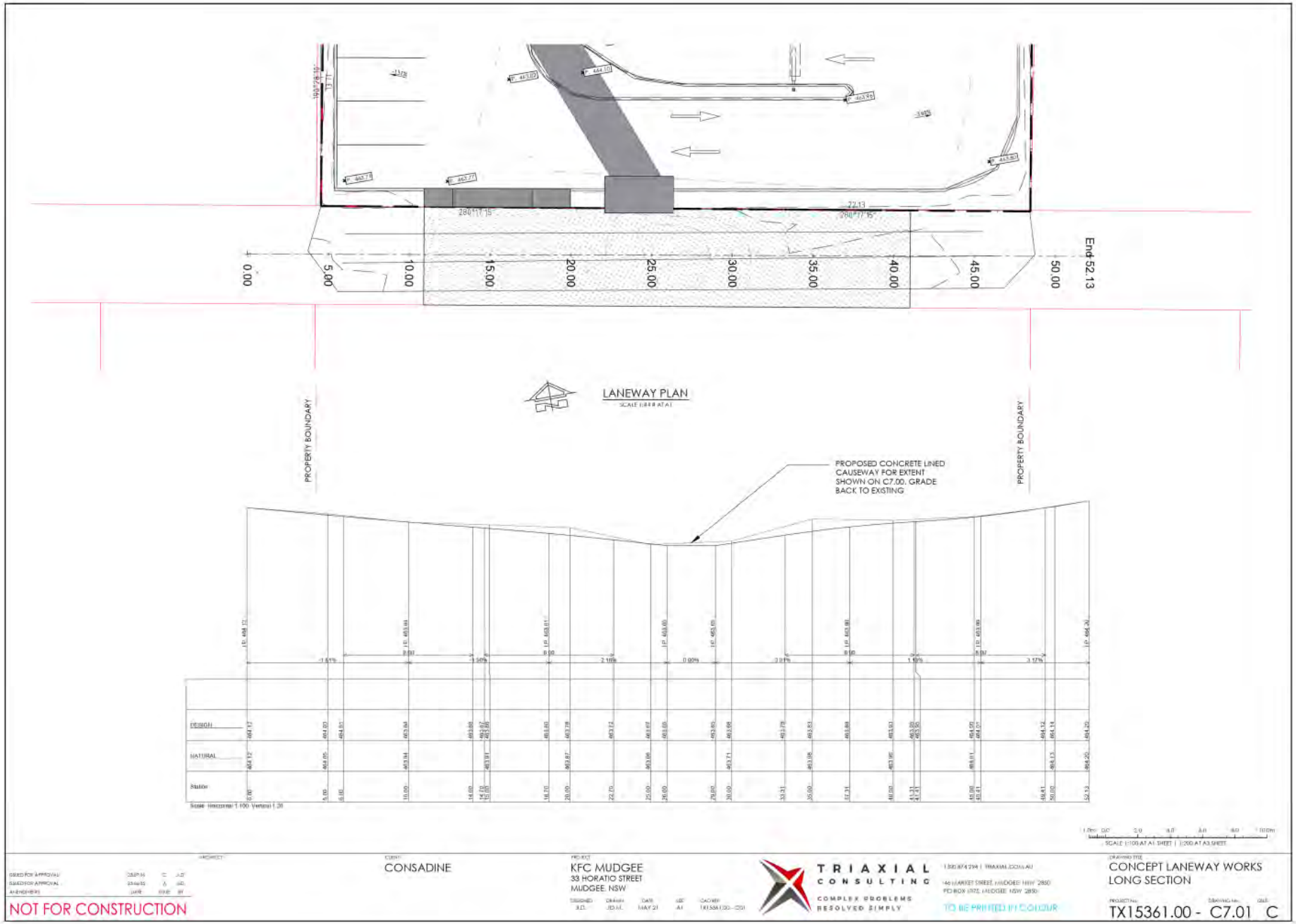
KFC MUDGEE
33 HORATIO STREET
MUDGEE NSW

TRIAXIAL CONSULTING
COMPLEX PROBLEMS RESOLVED SIMPLY

CONCEPT STORMWATER DETAILS

TX15361.00 - C6.01 C


REFER CULVERT DETAILS SHEET C6.01
150 HIGH KERB
ENSURE LEVEL TRANSITION BETWEEN LANEWAY AND CARPARK AREA. PROVIDE CONCRETE LEVEL TRANSITION
NEW STORMWATER PIT AND HEADWALL. DIMENTIONS MIN 3.0m x 0.6m WATERWAY OPENING PROVIDE VERTICAL GRATE ON HEADWALL ENTRY
MINIMUM PIT DIMENSIONS 4.0m x 1.2m x 0.6m DEPTH 150mm FORMED CONCRETE WALLS OR APPROVED PRECAST EQUIVALENT
190°28'10"
13.77
SITE BOUNDARY
280°17'15"
22.13
SITE BOUNDARY
280°17'15"
LANEWAY CENTRELINE
LANEWAY
LANEWAY BOUNDARY
LANEWAY BOUNDARY
HATCHED SECTION TO BE REGRADED TO MATCH NEW CULVERT INLET AND OVERFLOW AREA. MINIMUM 300mm DEEP COMPACTED ROAD BASE FINISH
PROVIDE CONCRETE LINED INLET (CAUSEWAY) TO NEW CULVERT HEADWALL. MATCH EXISTING INVERT LEVELS. TRANSITION TO EXISTING LANEWAY EITHER SIDE REFER SHEET C7.01
MATCH EXISTING LANEWAY LEVELS ALONG SOUTHERN BOUNDARY
LANEWAY PLAN
SCALE 1:100 AT A1
SCALE 1:50 AT A1 SHEET | 1:100 AT A3 SHEET
CONSADINE
KFC MUDGEE
33 HORATIO STREET
MUDGEE, NSW
TRIAXIAL CONSULTING
COMPLEX PROBLEMS RESOLVED SIMPLY
TO BE PRINTED IN COLOUR
CONCEPT LANEWAY WORKS PLAN
NOT FOR CONSTRUCTION
TX15361.00 - C7.00 C

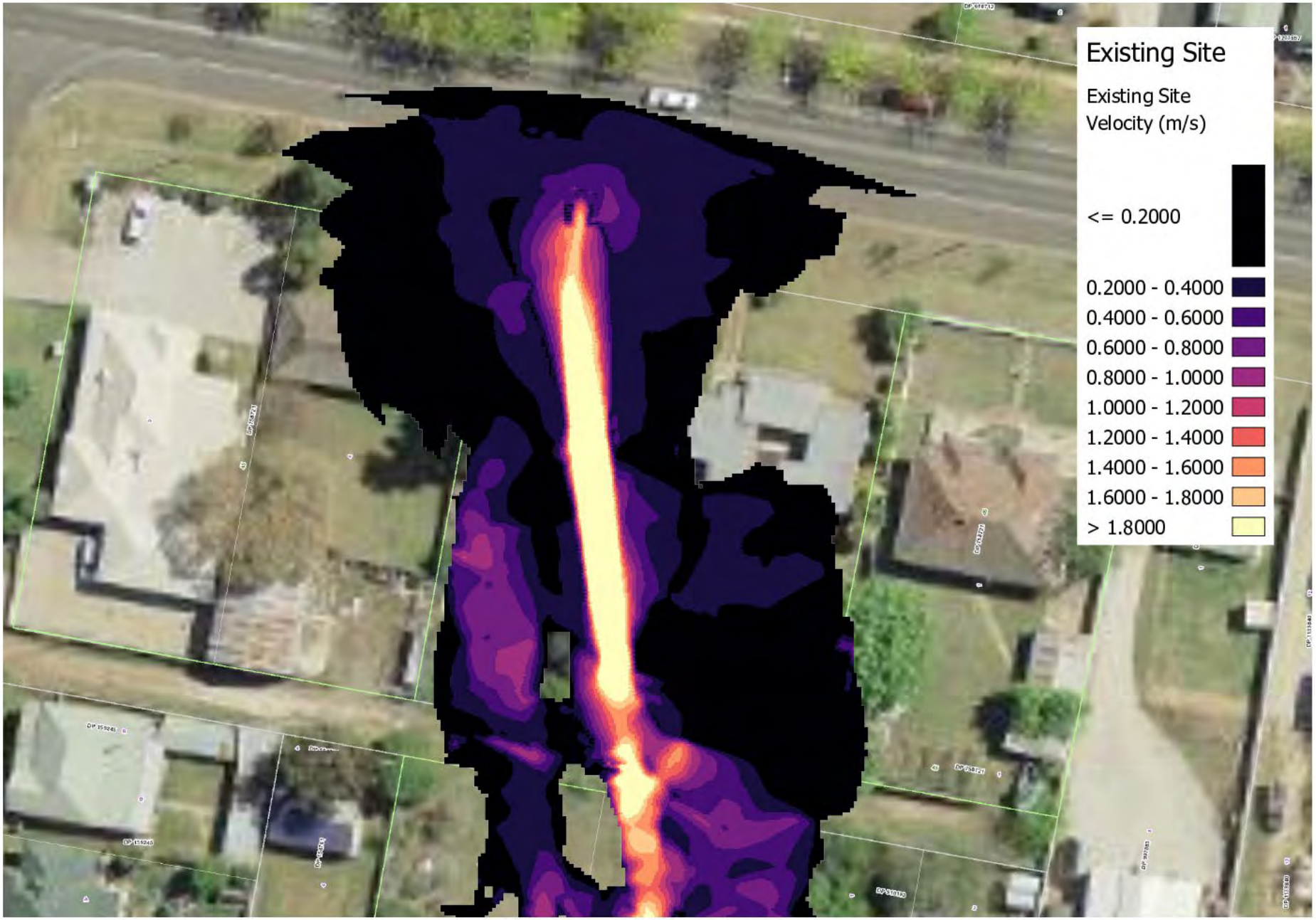

LANEWAY PLAN
PROPERTY BOUNDARY
PROPERTY BOUNDARY
PROPOSED CONCRETE LINED CAUSEWAY FOR EXTENT SHOWN ON C7.00. GRADE BACK TO EXISTING
0.00
5.00
10.00
15.00
20.00
25.00
30.00
35.00
40.00
45.00
50.00
End 52.13
DESIGN
NATURAL
Station
CONSADINE
KFC MUDGEE
33 HORATIO STREET
MUDGEE NSW
TRIAXIAL CONSULTING
COMPLEX PROBLEMS RESOLVED SIMPLY
CONCEPT LANEWAY WORKS
LONG SECTION
NOT FOR CONSTRUCTION
TO BE PRINTED IN COLOUR
TX15361.00 - C7.01 C

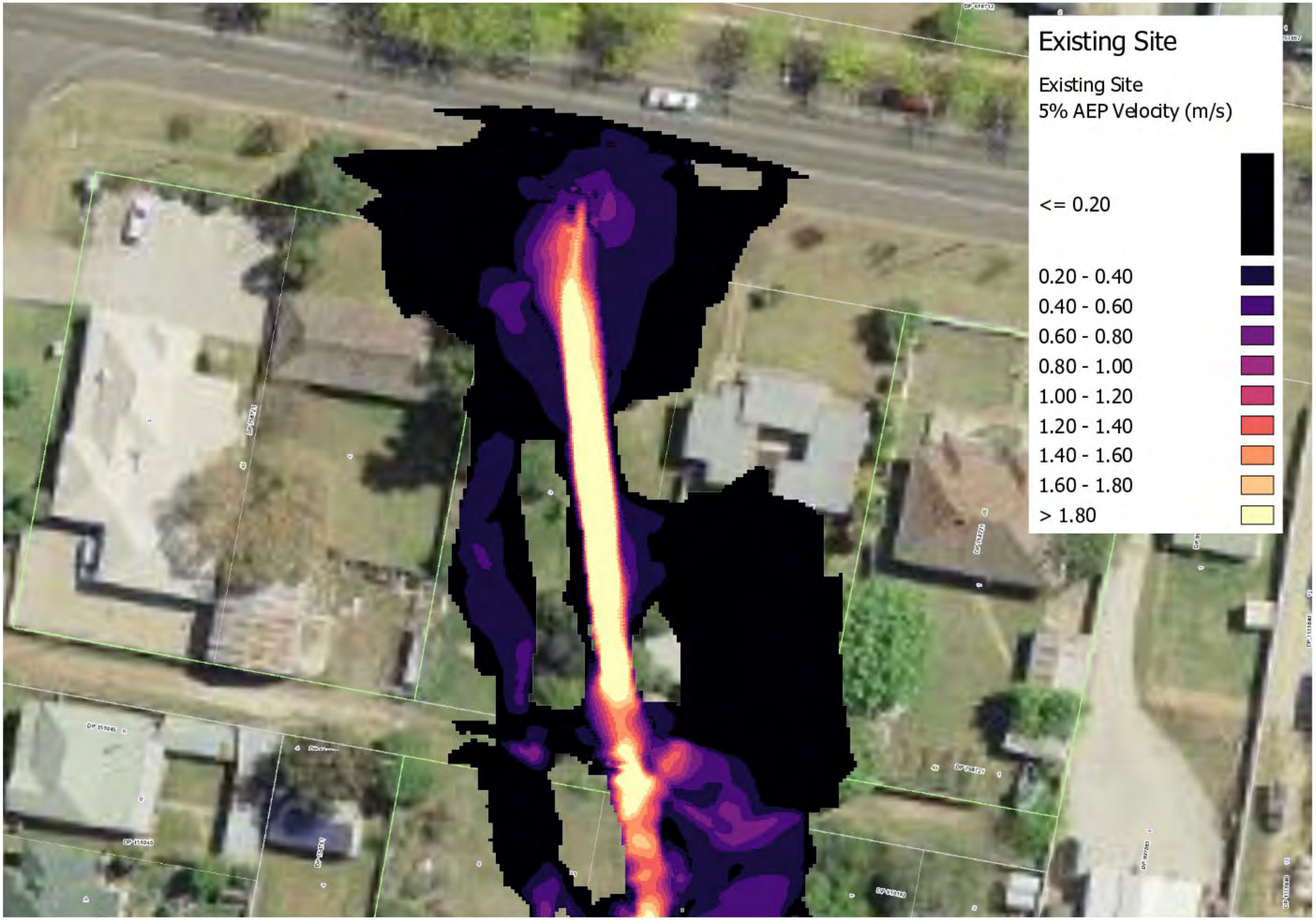
APPENDIX B – SITE FLOOD MAPPING


Existing Site
Existing Site
1% AEP Depths (m)
<= 0.10
0.10 - 0.20
0.20 - 0.30
0.30 - 0.40
0.40 - 0.50
0.50 - 0.60
0.60 - 0.70
0.70 - 0.80
0.80 - 0.90
> 0.90


Existing Site
Existing Site
5% AEP Depths (m)
<= 0.10
0.10 - 0.20
0.20 - 0.30
0.30 - 0.40
0.40 - 0.50
0.50 - 0.60
0.60 - 0.70
0.70 - 0.80
0.80 - 0.90
> 0.90


Existing Site
Existing Site
20% AEP Depths (m)
<= 0.10
0.10 - 0.20
0.20 - 0.30
0.30 - 0.40
0.40 - 0.50
0.50 - 0.60
0.60 - 0.70
0.70 - 0.80
0.80 - 0.90
> 0.90


Existing Site
Existing Site
Velocity (m/s)
<= 0.2000
0.2000 - 0.4000
0.4000 - 0.6000
0.6000 - 0.8000
0.8000 - 1.0000
1.0000 - 1.2000
1.2000 - 1.4000
1.4000 - 1.6000
1.6000 - 1.8000
> 1.8000


Existing Site
Existing Site
5% AEP Velocity (m/s)
<= 0.20
0.20 - 0.40
0.40 - 0.60
0.60 - 0.80
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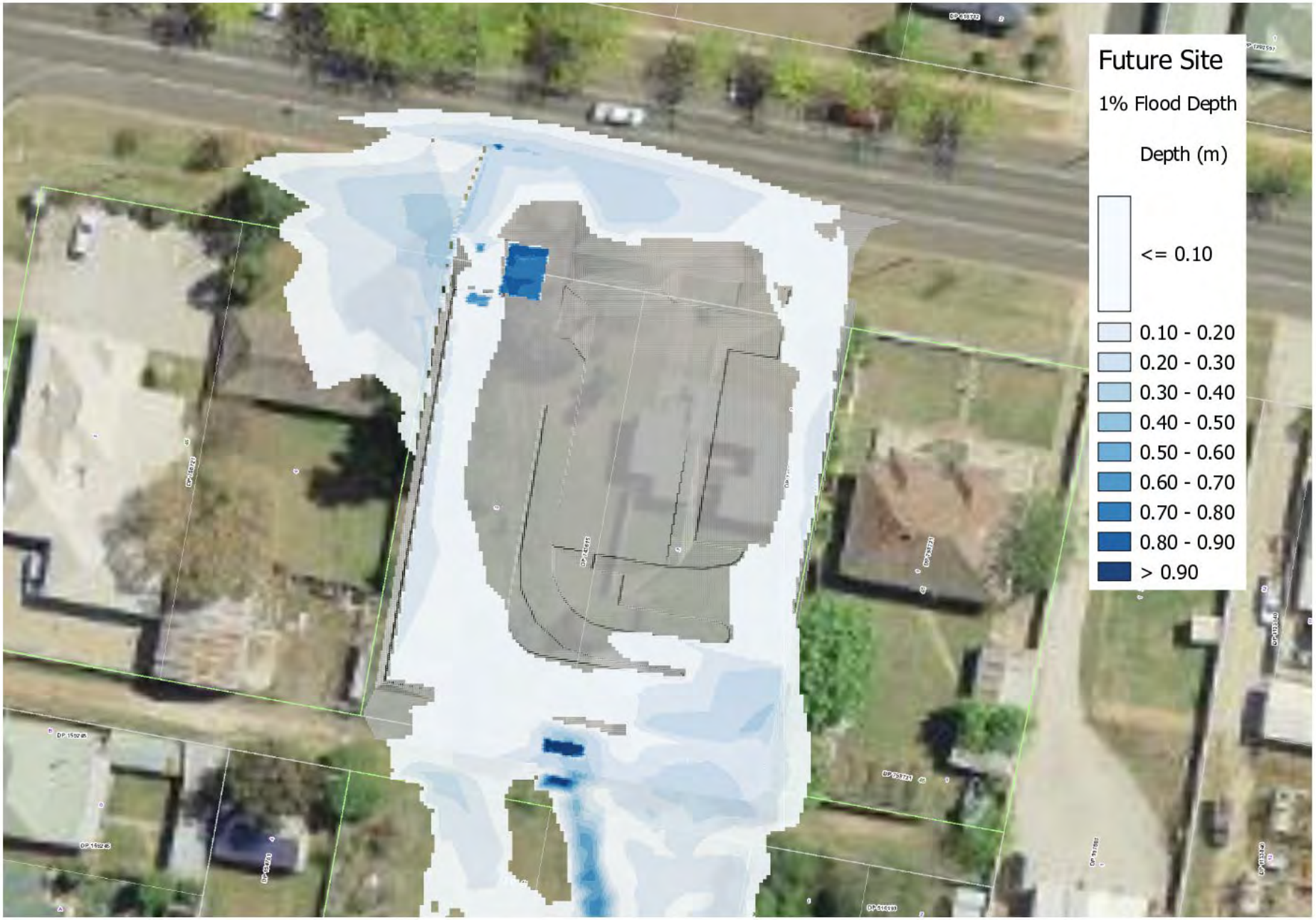
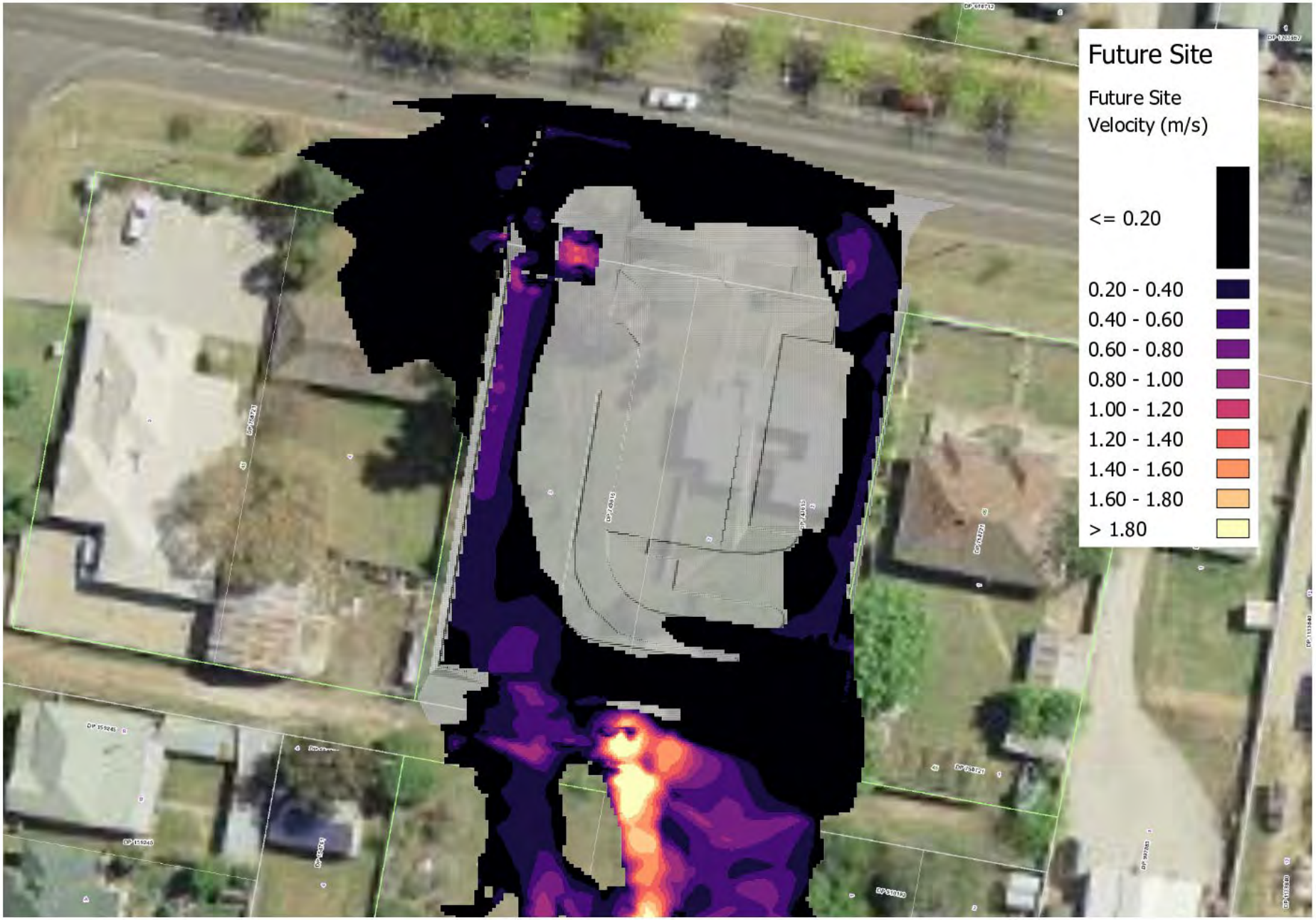
1.00 - 1.20
1.20 - 1.40
1.40 - 1.60
1.60 - 1.80
> 1.80


Existing Site
Existing Site
20% AEP Velocity (m/s)
<= 0.20
0.20 - 0.40
0.40 - 0.60
0.60 - 0.80
0.80 - 1.00
1.00 - 1.20
1.20 - 1.40
1.40 - 1.60
1.60 - 1.80
> 1.80

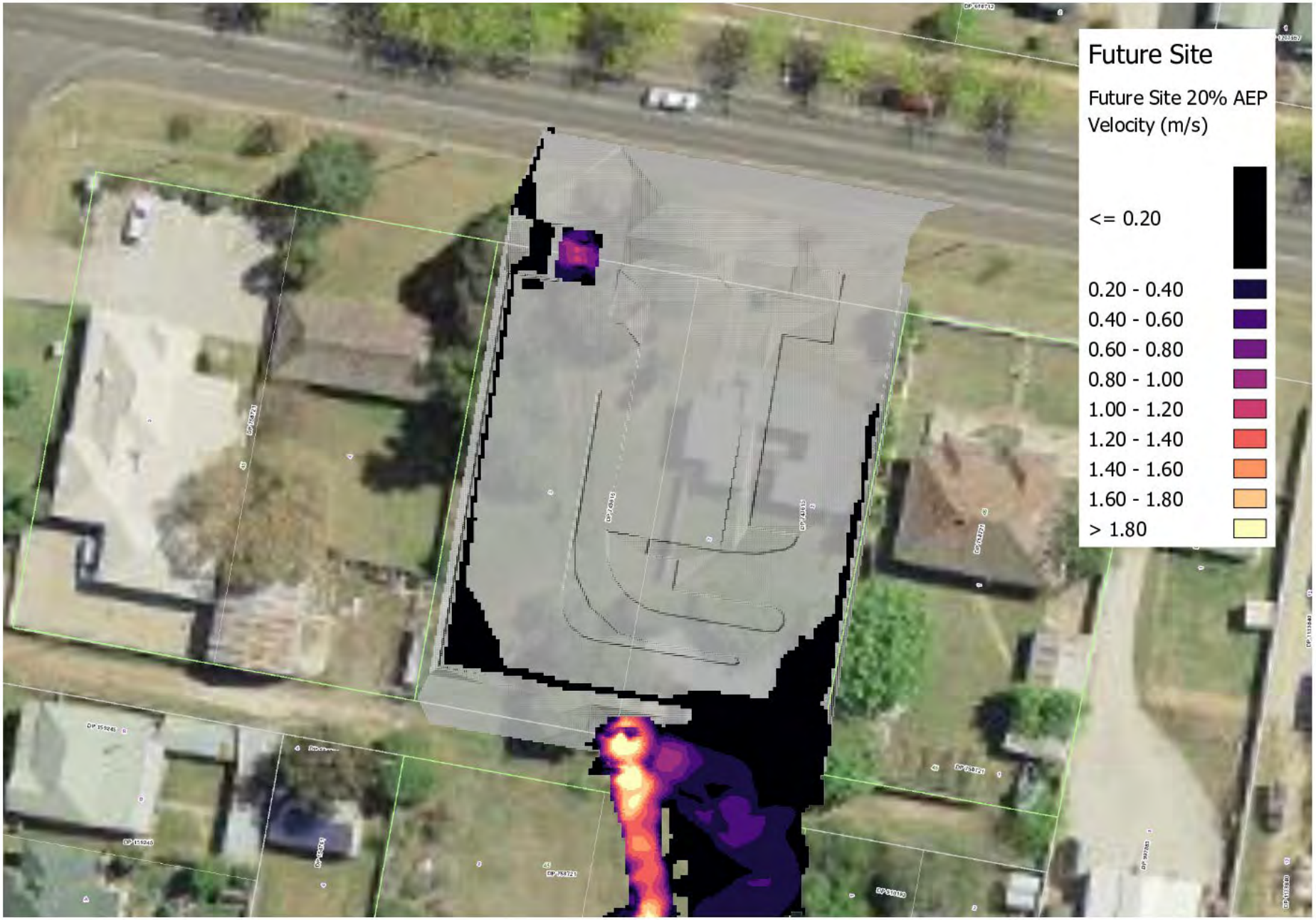

Future Site
1% Flood Depth
Depth (m)
<= 0.10
0.10 - 0.20
0.20 - 0.30
0.30 - 0.40
0.40 - 0.50
0.50 - 0.60
0.60 - 0.70
0.70 - 0.80
0.80 - 0.90
> 0.90

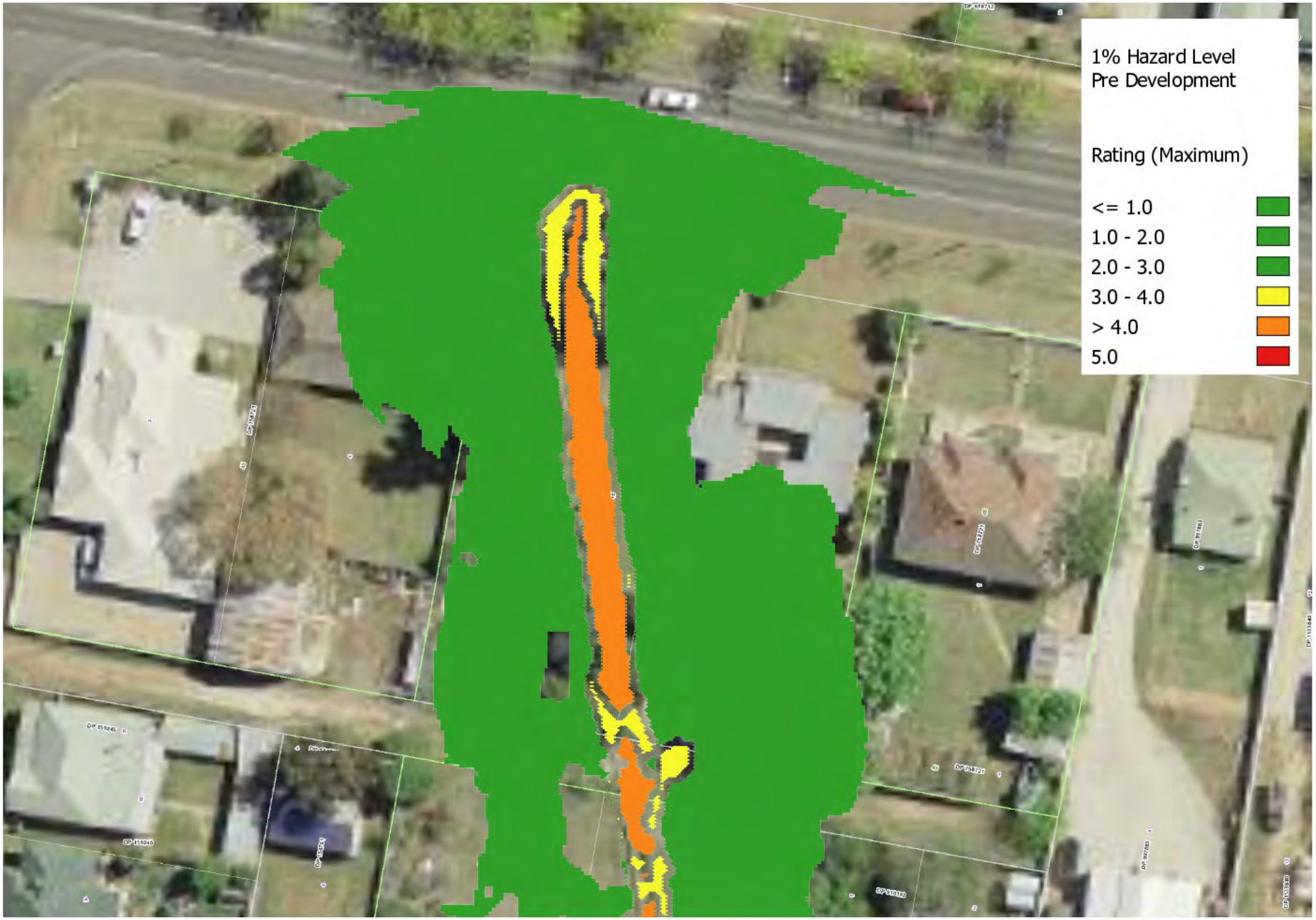

Future Site
5% Flood Depth
Depth (m)
<= 0.10
0.10 - 0.20
0.20 - 0.30
0.30 - 0.40
0.40 - 0.50
0.50 - 0.60
0.60 - 0.70
0.70 - 0.80
0.80 - 0.90
> 0.90


Future Site
20% Flood Depth
Depth (m)
<= 0.10
0.10 - 0.20
0.20 - 0.30
0.30 - 0.40
0.40 - 0.50
0.50 - 0.60
0.60 - 0.70
0.70 - 0.80
0.80 - 0.90
> 0.90


Future Site
Future Site
Velocity (m/s)
<= 0.20
0.20 - 0.40
0.40 - 0.60
0.60 - 0.80
0.80 - 1.00
1.00 - 1.20
1.20 - 1.40
1.40 - 1.60
1.60 - 1.80
> 1.80

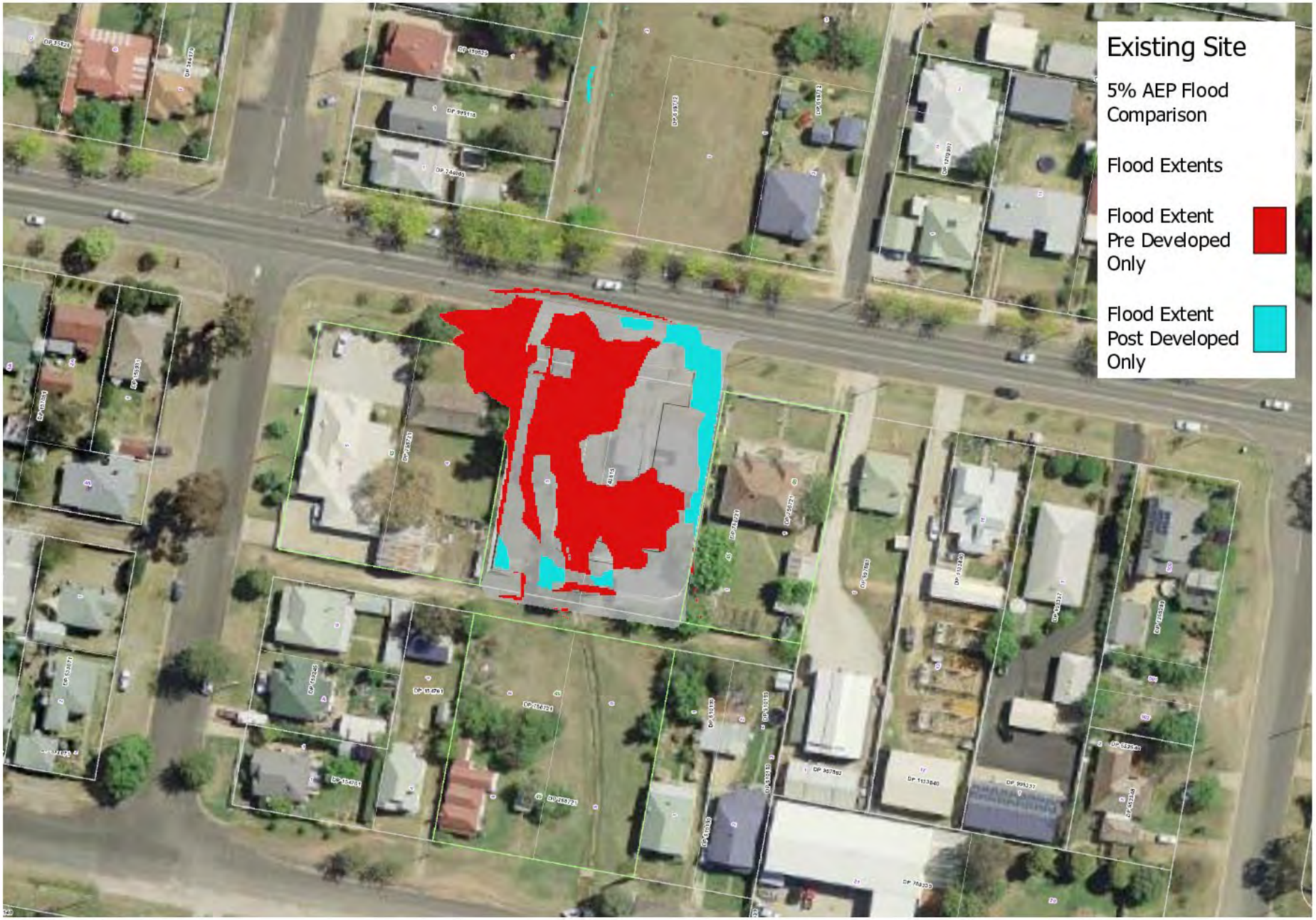

Future Site
Future Site 5% AEP
Velocity (m/s)
<= 0.20
0.20 - 0.40
0.40 - 0.60
0.60 - 0.80
0.80 - 1.00
1.00 - 1.20
1.20 - 1.40
1.40 - 1.60
1.60 - 1.80
> 1.80


Future Site
Future Site 20% AEP
Velocity (m/s)
<= 0.20
0.20 - 0.40
0.40 - 0.60
0.60 - 0.80
0.80 - 1.00
1.00 - 1.20
1.20 - 1.40
1.40 - 1.60
1.60 - 1.80
> 1.80


1% Hazard Level
Pre Development
Rating (Maximum)
<= 1.0
1.0 - 2.0
2.0 - 3.0
3.0 - 4.0
> 4.0
5.0


1% Hazard Level
Post Development
Rating (Maximum)
<= 1.0
1.0 - 2.0
2.0 - 3.0
3.0 - 4.0
> 4.0
5.0


Existing Site
1% AEP Flood Comparison
Flood Extents
Flood Extent Pre Developed Only
Flood Extent Post Developed Only


Existing Site
5% AEP Flood Comparison
Flood Extents
Flood Extent Pre Developed Only
Flood Extent Post Developed Only


Existing Site
20% AEP Flood Comparison
Flood Extents
Flood Extent Pre Developed Only
Flood Extent Post Developed Only

Kayla Robson

From: council@midwestern.nsw.gov.au
Sent: Wednesday, 29 September 2021 4:56 PM
To: Council
Subject: Have your say - online submission

First_name : David
Surname : Atkin
Your_street : [redacted]
Town : Mudgee
State : Nsw
Postcode : 2850
Phone_number : [redacted]
Email_address [redacted]
Your_say : Re KFC proposal 33-35 Horacio st Mudgee I find the very idea of this even being considered ridiculous as soon Mudgee will see the normal busy traffic in and out of town and this is almost impossible to cross the road let alone enter and exit KFC .I appreciate McDonald's is further up the road on a very busy roundabout so I feel enough is enough and as for tourism having a franchise like this is Not .Nice cafes like the Corner store or Althea is what tourists want .As for the residents this is a complete disaster for any body in the vicinity and is totally out of character with this part of our beautiful little town How about exploring options to the south Asian near service stations and industrial area Much safer and low impact on us Thank you for reading this David Atkin

Kayla Robson

From: Argyll Parkins [redacted]
Sent: Thursday, 30 September 2021 8:25 PM
To: Council
Cc: [redacted]
Subject: In Response to DA0087/2022 Proposed Demo and Construction of Food and Drink Premises

The General Manager,

Mid-Western Regional Council

86 Market Street, Mudgee 2850

30 September 2021,

To the General Manager,

On behalf of our father Bruce Parkins of [redacted] Mudgee, we are writing in response to the DA00887/2022 – Proposed Demolition and Construction of Food and Drink Premises at 33-35 Horatio St. Mudgee, NSW 2850.

We would like to raise some concerns that Bruce has with the proposal, such as the change this will have on his quality of life. Bruce has stated that his life will be negatively affected by this proposal in that there will be increases to the level of noise in the environment during construction, and once the restaurant is in operation. Bruce has stated that he also has concerns about the smell that will be produced from the restaurant, as well as the by-products that will enter the shared drainage system his property utilises.

Bruce is disabled with limited mobility and spends large portions of his time inside or around his dwelling. Bruce states that the activities he engages in daily, such as tending to his garden and sitting on his back porch, will be negatively affected. He believes that he will no longer be able to engage in his daily routine with pleasure and without being affected by the structure.

Bruce also has concerns about the affect this will have on his privacy. The construction of the new quick service restaurant will, no doubt, bring with it an increase in traffic, which will in turn, disrupt the natural state of peace and quiet this area currently possesses. Bruce lives alone and has resided in his dwelling for 14 years and so he is extremely concerned about the impact to his privacy.

Considering all the points mentioned above, we his family are very concerned that this will have an adverse impact on his mental and physical health.

As Bruce has every intention of spending the remainder of his life in his current home, he would like to formally object to this proposal and would like to have the right to have his concerns addressed in the community in which he has lived for his entire life.

Could you please respond at your earliest convenience to discuss any actions that can be taken to address our father's concerns?

Kind Regards,

Argyll and Justin Parkins

Kayla Robson

From: Sam & Amanda Lynch [redacted]
Sent: Friday, 1 October 2021 10:18 AM
To: Council
Subject: DA0087/2022 - Proposed Demolition and Construction Of Food and Drink Premises

The General Manager

MWRC

86 Market St

Mudgee NSW 2850.

RE: DA0087/2022 - Proposed Demolition and Construction Of Food and Drink Premises

I am writing this to express my concern of the proposed demolition and construction of fast food outlet at 33-35 Horatio St Mudgee. There are many reasons why this location for a fast food outlet are not appropriate and an alternate location should be sought.

Despite this being the main thoroughfare to our beautiful town, its proposed location is among many houses of Mudgee residents, homes that do not need to be marred by the unsightly erection of a fast food outlet, the smell that will ensue or the traffic congestion that will result.

It is already a busy street, where residents need to navigate traffic in both directions to access or exit their driveways, it has a constant stream of traffic to and from the busy industrial area. The location and proposed exit and entry to the outlet will cause disruption to the traffic congestion that already exists on this and surrounding streets.

This proposal will detract from the market value of the houses and proposed villas in this location of Mudgee.

These are just a small number of many reasons that the fast food outlet should not be approved and I am just one of many concerned ratepayers opposing the DA 0087/2022.

Regards

Amanda and Sam Lynch.

Kayla Robson

From:	kyleep1234 kyleep1234 [redacted]
Sent:	Thursday, 30 September 2021 4:40 PM
To:	Council
Subject:	Response to Development Application DA0087/2022
Attachments:	FW: .eml

Hi,

Please forward to the Senior Town Planner- Kayla Robson,-: Response to Development Application DA0087/2022

Please acknowledge receipt.

Regards

Kylee Parmenter

Ms Amanda E Burgess & K A Parmenter
[redacted]

September 30, 2021

MID Western Regional Council
General Manager
86 Market Street
Mudgee NSW 2850

Dear MID Western Regional Council:

I am writing in response to your notice Development Application **DA 0087/2022** Proposed demolition and construction of food and drink premises - 33-35 Horatio Street Mudgee 2850 Applicant Diamond 7 Pty Ltd..

Some specific concerns by us are;

- Proximity of proposed dwellings to OUR property [redacted] Particularly North and West boundary.
- Operating hours
- Illumination form billboards and advertising
- Construction materials and design not defined i.e. Brick Veneer, Weatherboard Etc
- No elevation diagrams, single, or multi storey to review impact and response.
- Traffic management and flow for proposed residents from and to Horatio St aka (Castlereagh Highway)

In consultation the requirement to build such consolidated residential cluster is not keeping with the streetscape and alignment for the main entry to Mudgee such construction will devalue my property and limit future plans for the site.

I ask that MID-Western council review the design and evaluate the need for such development in situ

Sincerely,

Ms Amanda Burgess and Kylee Parmenter

Kayla Robson

From: Anne Maclean [redacted]
Sent: Friday, 1 October 2021 4:12 PM
To: Council
Subject: DA0087/2022 - Proposed Demolition and Construction of Premises

Attention:
The General Manager, Mid-Western Regional Council

Re:
DA0087/2022 - Proposed Demolition and Construction Of Food and Drink Premises

PROPERTY: Lots 2 & 3 DP 743615

PROPOSED DEVELOPMENT: Proposed Demolition and Construction of Food and Drink Premises at 33-35 Horatio Street MUDGEE NSW 2850

Dear Brad

I'm taking a moment to comment on the proposed demolition and construction of the above.

As a fellow business and property owners in Mudgee we respect and understand the KFC owners need to expand their facilities and continue operating a business meeting their customers increasing demands. Having said that, I have a lot of concerns about the proposed location being within what is essentially a residential area. Surrounded on all sides by homes and on a road that is already busy and with no obvious plans to address the traffic management risks.

To outline my concerns:

1) Risk of increase in vehicle and pedestrian accidents potentially caused by people trying to do U turns (whether illegal or legal) to get back to the site when heading east or if no restrictions from turning across traffic, then holding up traffic to get into the site from the opposite side of the road; Taking extra risks to cross traffic to continue to head east when exiting the site and potential low visibility when leaving to head west.
2) Late night noise of the carpark in a residential area (based on the experience recounted to us from people living close to the current location)
3) The zoning not being properly aligned with the development proposal (considering an application to run a business from the neighbouring location has been previously rejected) and fast food doesn't really fall under the ethos of "tourism"
4) The unsightly signage and lighting required to make the site notable to visitors is not in keeping with the residential area or with our regions overall aesthetic

My hope would be that the developers find a more suitable location within the industrial entry to town on the eastern side with more consideration to traffic risk mitigation and regard to residents.

Yours sincerely
Anne Maclean
[redacted]
MUDGEE NSW 2850
[redacted]

Kayla Robson

From: council@midwestern.nsw.gov.au
Sent: Monday, 27 September 2021 7:34 PM
To: Council
Subject: Submission E-Form

todaysdate : 27/09/2021
developmentapplicationnumber : 0087/2022
proposeddevelopment : KFC at 24 Horacio Street Mudgee 2850
Emailaddress : [redacted]
Yourname : Karen Heij
Address : [redacted]
phonenumber : [redacted]
reasonsforsubmission : Not appropriate for such an industry to be so close to residential homes that will have to put up with extra traffic and smells from cooking of products
politicaldonationsrequirements : Yes

Kayla Robson

From: council@midwestern.nsw.gov.au
Sent: Monday, 27 September 2021 7:41 PM
To: Council
Subject: Submission E-Form

todaysdate : 27/09/2021
developmentapplicationnumber : DA0087/2022
proposeddevelopment : KFC being built at 33-35 Horatio street Mudgee
Emailaddress : [redacted]
Yourname : Axel Heij
Address : [redacted]
phonenumber : [redacted]
reasonsforsubmission : Not appropriate to have a commercial food business in an are set for tourism. More traffic to the area, noise and pollution
politicaldonationsrequirements : Yes

Kayla Robson

From: council@midwestern.nsw.gov.au
Sent: Wednesday, 29 September 2021 9:12 PM
To: Council
Subject: Submission E-Form

todaysdate : 29/09/2021
developmentapplicationnumber : DA0087/2022
proposeddevelopment : KFC on 33-35 horatio street
Emailaddress : [redacted]
Yourname : Douglas
Address : [redacted]
phonenumber : [redacted]
reasonsforsubmission : Objection to proposed DA
politicaldonationsrequirements : Yes

Kayla Robson

From:	Luke Lisa Ethan Imogen kaitlyn Sophie Dale [redacted]
Sent:	Wednesday, 29 September 2021 9:29 PM
To:	Council
Subject:	Attention: The General manager, Mid-Western regional council
Attachments:	KFC Objection letter.docx

Attention: The General manager, Mid-Western regional council.

Please find attached my objections to the proposed KFC DA.
Thanks Lisa Dale.

Sent from my iPhone

Lisa Dale
[redacted]
Mudgee N.S.W
2850
27-9-21

For the attention of Mid- Western Regional Council General Manager,

I would like to submit a Strong objection to Development Application DA0087/2022-Proposed Demolition and Construction of Food and Drink Premises -33-35 Horatio street Mudgee N.S.W 2850. Lot 2 DP 743615 Lot 3 DP 743615 Application: DIAMOND 7 PTY LTD.

I write in connection with the above planning application. I have examined the plans and I know the site well. I wish to object strongly to the demolition of house and construction of KFC and carpark for the following reasons:

1. Commercial food business in a Tourism zone- KFC is not tourism

2. Will add to Traffic congestion on Horatio Street which is already a busy rd.

3. Added accident hazards with no turning lanes or overtaking lanes for cars entering and leaving premises near an already very busy intersection and lane Junction.

4. Disruption to a heavily residential area.

5. Noise pollution from traffic entering and exiting the drive through and parking.

6. Residential street disruption with daily garbage and delivery trucks.

7. Obnoxious light signage in residential area.

8. Increased rubbish, anti-social behavior from clients attracted to the area and offensive odor for surrounding premises.

9. Effect on our house and land value and those in our area.

For the attention of
27-9-21
Page 2

Expanding on my objections and giving further explanation as followed

1.Commercial food business in a Tourism zone- KFC is not tourism

The area in which this DA application is zoned as Tourism and backs onto residential. KFC does not fall under any of these zones there for I feel the residence around it have great reason to decline the application.

2 & 3. Will add to Traffic congestion on Horatio Street which is already a busy rd. and Added accident hazards with no turning lanes or overtaking lanes for cars entering and leaving premises near an already very busy intersection and lane Junction.

As I am sure you are aware Horatio Street is the main access paths through Mudgee. This road provides route daily for many busses, trucks, caravans, travelers and the general public to enter and exit the town and from the industrial area of Mudgee. The position in which this proposed KFC building is to be placed will make this section of road a much higher risk than it already is for vehicles and pedestrian accidents. The intersection where Lawson and Horatio street cross is one I use daily and I have personally witnessed and been involved in many near misses as vehicles already have long wait times to enter and exist traffic often causing backed up trucks or passing traffic in this small busy interaction. To add to this we have entering and existing traffic using Gundy's lane, residential houses and the George and Horatio Street intersection. There is no turning lanes in this section of the street, this already causes issues with people becoming inpatient with the congestion and often using street car parking to overtake waiting vehicles. To add to this I feel this business will attached pedestrians trying to cross this busy section of road and cause much risk to themselves and oncoming traffic along with the added trucks, busses and caravans blocking streets and driveways to park on side of streets to access the premises. This all poses great risk to our high residential area.

4 & 5. Disruption to a heavily residential area and
Noise pollution from traffic entering and exiting the drive through and parking.

The proposed position for the construction of KFC will cause much disruption to our high residential area. The noise that will be generated will be unbearable for the neighboring residence ranging from idling cars as they make their way around the drive through, noise pollution of braking trucks having to slowing down for cars entering and leaving the premises, vehicles loud exhaust to speed up to enter traffic on Horatio street along with the constant humming of vehicles and their guests up until at least 10pm. I feel that KFC is not a great fit to be placed right near the professional funeral house on the corner of this street situated just one house away from this proposed build. This constant traffic noise would be very disrespectful for a funeral service.

For the attention of
27-9-21
Page 3

6. & 7. Residential street disruption with daily garbage and delivery trucks.
Obnoxious light signage in residential area.

To add to the Traffic noise explained in the 4&5 our local residence would also have the disruption of the morning daily visit from the garbage truck to empty bins and regular delivery trucks dropping off to the busy business. Increased obnoxious lights from not only the business running but also the constant vehicle headlights flicking into their houses up until at least 10pm and bright signs to advertise the business. This will be of great disruption to all houses in our local area.

8. Increased rubbish, anti-social behavior from clients attracted to the area and offensive odor for surrounding premises.

Our local area does not wish to be littered with KFC rubbish in our yards and gutters this is not something I want to be picking up daily. I feel the business will attract people from the community walking from pubs, parties and just the general population wanting to get their fast food fix, our area will quickly become the access to their treat with some bringing along their anti-social loud behavior and leaving the rubbish behind for us to clean up. KFC may be a quick snack for some but the offensive odor it leaves for the few blocks radius is not something we want to be smelling on a daily basis.

9. Effect on our house and land value and those in our area.

Taking into consideration all I have explained above and I am sure I have missed much more. Would you personally want to live in close proximity to this proposed business? I personally would not choose to buy a property as close as my residence will be if you approve this application. Its approval will have great effect and reduction to our property value.

Overall I feel the development that would allow KFC to be built in this high residential area is not in the best interest of any of our neighboring citizens or in the safety of any traffic and pedestrians traveling along Horatio Street.

Sincerely,

Lisa Dale

Kayla Robson

From: council@midwestern.nsw.gov.au
Sent: Wednesday, 29 September 2021 8:09 PM
To: Council
Subject: Submission E-Form

todaysdate : 29/09/2021
developmentapplicationnumber : DA0087/2022
proposeddevelopment : KFC food and drink premises 33-35 Horatio street, Mudgee
Emailaddress : [redacted]
Yourname : Sarah Heij
Address : [redacted] Mudgee 2850
phonenumber : [redacted]
reasonsforsubmission : Young couple. Country dream. Work hard. Buy a house. Renovate. Start a family. Live the dream. A couples dream of starting a family in their newly renovated house is crushed by the news that the Council is proposing to build a KFC across the road from their house. We are that couple. They are our dreams you are crushing. If this was you, how would you feel? I will tell you... You would feel shocked that you weren't even notified and only found out through a concerned resident who put a letter in your mailbox. Then you would feel angry that all your hard work and money to renovate your first house has been an absolute waste of time, as a big corporate company selfishly rips away the lifestyle you have worked so hard for. Next comes bafflement. How can the Council possibly think this is a good idea?!?! There are so many obvious reasons as to why this proposal is ludicrous. Has no one thought this through properly? The amount of people this will upset and inconvenient is immeasurable. This decision will not only impact the residents that live on Horatio and surrounding streets, but the entire Mudgee community, as well as the plethora of travellers and tourists that come through our beautiful town. This decision should not be taken lightly! It will; - Increase traffic congestion on an already busy street. Residents are already concerned about the ridiculous volume of traffic that Horatio Street is expected to support. Travellers, trucks drivers, tourists and Mudgee residents all rely on Horatio Street to flow smoothly and efficiently. Traffic congestion will increase as a result of no overtaking or merging lanes for cars entering and exiting the premises. This will cause the traffic to come to a standstill and promote unsafe driving behaviours. The likelihood of car accidents will increase dramatically, and people will become highly frustrated. Furthermore, large vehicles including trucks, semi-trailers and caravans will be forced to park on the side of the road to access the premises. This will not only obstruct views when entering and exiting the road but will block access to resident's driveways. This will ultimately be a high-risk area for pedestrians as the street is consistently flowing with traffic. - Increase the noise pollution on a street that is already struggling with consistent car and truck disturbances at all hours! There has been a significant increase in vehicle noise pollution over the last few years (especially trucks), thus increasing the stress levels of residents that live on Horatio Street. The construction of a KCF on Horatio Street will enhance this issue because of trucks slowing down for cars entering, trucks accessing the premises, consistent garbage collections, loud exhausts from cars entering and exiting the premises (particularly late at night when residents are trying to sleep), as well as interruptions from intoxicated individuals late at night. This will in turn further disrupt the daily lives of residents that live on Horatio and surrounding Streets. - Negatively impact the stunning aesthetics and atmosphere of the street. Mudgee is known for its beautiful streetscapes and country vibe. Horatio street is full of unique, well-presented houses that reflect the town's heritage and values. A large KFC complex will damage the charming and inviting atmosphere that Mudgee is renowned for and strives to portray. In addition to this, an increase in litter on Horatio Street and surrounding areas will be inevitable. This litter will be detrimental to the environment and the ambiance of the street. Not to mention the offensive odour that KFC food and drink premises' emit. - Block the stormwater floodway that is currently lies directly in the middle of the proposed construction site. When it rains, the floodway is often at full capacity. A KFC placed in this area will disrupt the floodway and cause the water to divert to surrounding houses. This damage will be detrimental to residents and their homes. - Impact house prices for all that live on Horatio and surrounding streets. Residents have worked hard to maintain and improve the value of their homes

which will be negated when a KFC is erected near their house. - Increase light pollution on the street. This will not only be increased by the KFC itself with its large impractical lighting and signage, but also the increase of car and truck headlights of people driving up and down the street. The lighting from the cars and trucks turning into, exiting and parking out of the front will shine into and disturb nearby residents. These are only some of the reasons as to why a KFC on Horatio Street is NOT a practical option. It is not in the best interest of not only the residents that live on Horatio and surrounding streets but the wider Mudgee community as well. The CONGESTION will cause chaos and infuriate the public, travellers and tourists who visit. It is not in the best interest of the members in the community who are the heart and soul of this beautiful town. We would like to think that the Council would look after and stand up for the residents that make up and support our community. Where is our support?! Why were we not consulted?! Our opinion matters! Young couple. Country dream. Work hard. Buy a house. Renovate. Start a family. Live the dream. THIS IS WHAT WE WANT AND DESERVE!
politicaldonationsrequirements : Yes

Kayla Robson

From: Brenden Dunn [redacted]
Sent: Thursday, 30 September 2021 1:58 PM
To: Council
Cc: [redacted]
Subject: DA0087/2022

To The General Manager,

We are writing to submit our objection to the development application- DA0087/2022. We are residents of Horatio st, [redacted], and have two primary aged children.
We are yet to be formally notfied of this proposal. Our neighbour has informed us and we would therefore like to request formal notification and given further time to access and read the proposal.

Firstly, we strongly object to a KFC meeting the criteria of a food and beverages business within the tourism zoning. KFC is a large scale commercial drive through and sit in fast food chain. It is not condusive to Mudgee tourism and the already established local businesses on the street.
We would like additional consideration to be given to the residential aspect of Horatio St. This includes the social and physical impacts on the residents. We would like the following addressed:

- The impact on the social and community environment in our neighbourhood, Including personal and property safety.
- The residential impact of an increase in traffic on an already busy street.
- The resiedential impact of an increase in noise pollution with heavy vehicle engines and braking as well as the servicing and running the fast food chain.
- The residential impact of an increase in people loitering in particular late at night around residential homes.
- The impact of loss of on street car parking for residents with proposed road changes.
- The lack of planning for trucks and large vehicles parking.
- The residential impact of an increase in commercial lighting late into the night on the resident's homes.

We would appreciate written confirmation of my objection.

Kind regards,
Brenden Dunn and Jackie Hattam

Brenden Dunn

Kayla Robson

From: council@midwestern.nsw.gov.au
Sent: Thursday, 30 September 2021 11:30 AM
To: Council
Subject: Submission E-Form

todaysdate : 30/09/2021
developmentapplicationnumber : DA0087/2022
proposeddevelopment : KFC being built at 33-35 Horatio St
Emailaddress : [redacted]
Yourname : Callum Tyrrell
Address : [redacted]
phonenumber : [redacted]
reasonsforsubmission : Callum John Tyrrell Tyrrell Family Trust [redacted] Mudgee NSW 2850 M. [redacted] 29th September 2021 To whom it may concern, Re: Development Application DA0087/2022- Proposed demolition and construction of an international commercial take away food and drink premises on 33-35 Horatio Street Mudgee NSW 2850. LOT 2 DP 743615 and LOT 3 DP 743615 CONSENT AUTHORIT: MIDWESTERN REGIONAL COUNCIL APPLICANT : DIAMOND 7 PTY LTD I am part owners in [redacted] which is a family owned local business. 3 of our Properties will be affected by this proposal. Properties affected are Situated at; [redacted] I strongly object to this development being approved by Midwestern council. The application needs further information to be added to the DA application before it can even be considered. An independent acoustic report. RTA Traffic engineers report as it is a NSW state Highway. Major issues concerning the application here alone. An Independent vehicle simulation report showing evidence that it's even possible. Independent environmental report. An independent house and land valuations for surrounding residents if this DA is approved for before, after and potential growth. Major concerns: 1.Added traffic congestion (access to and from my properties as well as car parking spaces for their visitors) 2.Noise pollution, (we offer a quiet boutique accommodation. Noise pollution from drive through communications, traffic drive through, traffic brakes till late plus trucks delivering goods) 3.Air pollution. (the smell) 4.Bright commercial lights from signage impacting our accommodations. 5.The increase in rubbish and vermin. 6.Anti-social behaviour till late hours and excess foot traffic around accommodation. 7.Loss in capital growth and loss of instant income. Yours Sincerely Callum Tyrrell
politicaldonationsrequirements : Yes

Kayla Robson

From:	Eastaugh and Carroll (Office) [redacted]
Sent:	Thursday, 30 September 2021 10:28 AM
To:	Council
Cc:	'Peter Hannigan [redacted]
Subject:	URGENT - Att Kayla Robson Planning Office MWRC
Attachments:	Objection Letter re KFC Horatio St_290921.pdf
Importance:	High

Att Kayla Robson
Planning Office – MWRC

Letter attached re proposed KFC on Horatio Street

Please reply to acknowledge receipt.

Kind regards,
Eastaugh & Carroll Funeral Directors
[redacted], [redacted]
Phone: [redacted]
Email: [redacted]

Eastaugh & Carroll
FUNERAL DIRECTORS
Since 1895

Wednesday, 29th September 2021

The Planning Officer
Att: Kayla Robson
Mid Western Regional Council
By email: council@midwestern.nsw.gov.au

Re: Pre-lodgement Application 33 Horatio Street, Mudgee

We wish to lodge our strong objection to the proposed development.

1. The current fast food outlets (McDonalds and KFC) have considerable vehicle overflows which impede traffic flow on Church and Horatio Streets. The new development (33 Horatio Street) will add greatly to the traffic on an already very busy, principle access road to the township. Traffic to and from the current McDonalds travelling east along Horatio street currently effect a u-turn immediately after the concrete barrier from the Church and Horatio Streets roundabout. This is a dangerous and congestive feature which the new development will actively encourage.
   The suggestion to realign the roadway will also add to traffic blockage, given the size of the "Turn Lane" traffic backing up from the entrance will adversely impact thru traffic travelling east (and possibly west) along the Castlereagh Highway. In addition, if the suggested concrete centre isle to prohibit east bound traffic from entering the site were to be instituted the traffic flow would be forced to u-turn somewhere east of the development site. This would cause additional and dangerous traffic flow.

2. There is **no** reference in the documentation to odour amelioration. Both current fast food outlets cause an unpleasant and continuous odour during operating hours. This will adversely affect the surrounding residential and commercial residents.
   There is likely to be a significant capital cost to surrounding residents from the decline in house/office values.

3. There is a suggestion in the documentation that the development will NOT utilise Lyons Lane for access or egress. Can the Council guarantee that the Lane will NOT be used at any time in the future to mitigate traffic congestion on Horatio Street. That is, will the council commit to a permanent prohibition even if a subsequent Development Application is lodged with laneway road surface upgrade paid for by the developers.

4. The developer's current operating hours are limited to 10.30am to 10.00pm. Will council agree to permanently restrict those hours, even if a second application for extension to the hours of operation is lodged. McDonalds hours of operation have been extensively extended from its original operation schedule, over time. We expect that the developer will apply for extensions once the development is complete.

5. The vacant site directly opposite the development site may in the future be developed for medium density housing, in which case the traffic flows to and from both sites will intersect on Horatio Street. Adding greatly to the already heavily traffic laden Horatio Street.

6. The pylon signage to be erected on the western boundary is to be some 6.5 metres taller than existing signage two properties west. The signage is clearly far larger than the area requires. It is clearly out of character and size for the existing area.

7. The Heritage Impact report states that the sign has been designed to;
   > "minimise its bulkiness and resultant impacts on primary view lines to the abutting the heritage items from Inglis Street"….

   There is no consideration of the impact of an 8.5 metre sign on the amenity of Horatio Street and the surrounding neighbourhood. In addition, the colour scheme of the proposed development is not sympathetic to the surrounding built environment.

8. When our submission for the building of the Eastaugh & Carroll building ([redacted]) was originally rejected it was on the basis that the building was too large, the scale and size was not suitable for the surrounding built landscape. That required a costly redraw and resubmission. We submit that the size, style and above all, the colour scheme and signage of the proposed development is not suitable for the surrounding built environment.

We look forward to your response.

[redacted]

John Hopkins and Peter Hannigan
Eastaugh & Carroll
[redacted]

Ref: Z:\LETTERS

Kayla Robson

From: Hop & Clover Brewing Co [redacted]
Sent: Thursday, 30 September 2021 2:36 PM
To: Council
Subject: Objection to DA 0087/2022 33-35 Horatio Street Mudgee
Attachments: KFC Letter.pdf

To the General Manager,

Please find attached our objection to DA 0087/2022 33-35 Horatio St, Mudgee.

Please send a receipt of receivership of email.

On behalf of Peter & Barry Phillips of [redacted] Mudgee

Dave Henderson
Director | Brewer | Sales
[redacted]

Shiree Phillips
Owner | General Manager | Marketing
[redacted]

[redacted]

Peter Phillips & Barry Phillips
[redacted]
Mudgee, NSW 2850

The General Manager,
Mid-Western Regional Council
86 Market Street, Mudgee 2850

Re: Development Application DA0087/2022 - PROPOSED DEMOLITION AND CONSTRUCTION OF FOOD AND DRINK PREMISES - 33-35 HORATIO STREET MUDGEE NSW 2850
LOT 2 DP 743615 LOT 3 DP 743615
CONSENT AUTHORITY: MIDWESTERN REGIONAL COUNCIL
APPLICANT: DIAMOND 7 PTY LTD

We are the owners of [redacted], Mudgee [redacted]. We are 85 and 77 years old, with our parents building our home in the 1940's. We are long term residents and active members of the Mudgee community and this proposal is very distressing.

We strongly oppose and object to the DA proposal on the following grounds:

- KFC is not a genuine Tourism business and does not contribute to the unique character or aesthetics of the Mudgee region
- It will affect the quality of life for residents due to noise & light pollution as well as increased traffic congestion
- The proposal has failed to address garbage disposal on the streets and subsequent attraction to vermin for residents of the area
- The offensive odour that wafts from the business to homes
- Detrimental affect on property values
- Anti-social behavior from those coming and going
- Have failed to provide a place for staff to smoke cigarettes and eat food on their break (KFC policy states that staff are not able to do either of these activities on site and anecdotally do this in a laneway currently)
- Co-mingling of pedestrians crossing the road causes traffic hazards & potential for serious harm

The current area is very residential, with the existing professional businesses complimenting the area. The staff and owners are very courteous, co-operative and contribute positively to the community of the area. The residential demographic of the area surrounding the proposal are independent older population (70-90+) and families with young children. It is a vibrant, interactive community that know each other well with many original and long term homeowners. The introduction of a commercial and industrial food multi-national food business will not contribute positively to the area.

KFC is not a genuine or unique Tourism Business and therefore should be considered a commercial & industrial food business that is inappropriate for the zoning.

- The DA proposal has failed to make a case that it is a genuine Tourism Business that is "unique" and has "high aesthetic appeal & local character (that) fosters pride within the community." This statement is taken from the Mid-Western Regional Council Local Strategic Planning Statement 2020 Priority 3. KFC is neither unique to Mudgee or any other community as it is a mass producing, industrial food chain that is a multi-national corporate business with over 680+ outlets across Australia.
- The design fails to "respect & enhance the historic character of our region (Mid Western Regional Council Local Strategic Planning Statement 2020 Priority 1) with large bright signage next to homes and fails community expectations of entry to the town. It has not shown in their current location a "positive experience for visitors and a good quality of life for residents" and will exacerbate this in its proposed location.
- The current McDonalds restaurant that is mentioned in the DA proposal is zoned on commercial land not Tourism Zoning or heavy residential zoning.
- KFC are not current members of Mudgee Region Tourism. If they were a genuine Tourism Business of the Mudgee Region Community (as opposed to a commercial and industrial food business), then membership would be a high priority.
- Council has a community obligation to "apply appropriate building & development controls to protect & **enhance the natural & built environment in the Region**" for visitors and the community (MWRC Local Strategic Planning Statement 2020)

"ensure that current zoning permissibility and land supply allows for future expansion." Should this development be granted, it would have a detrimental effect to other potential genuine tourism businesses developing along the entry to town ie boutique hotels, holiday apartments and other more unique food and drink offerings that are more appropriate.

Affect the quality of life for residents due noise & light pollution as well as increased traffic congestion

- An Acoustic Engineers Report was not undertaken in the DA proposal. The traffic noise is already very high and the DA proposal will add congestion from more cars & trucks in the area. This has flow on affect as large semi-trailers that *must* use this main thoroughfare through town will need to brake heavily, causing brake noise & exhaust when slowing down for cars & trucks entering and exiting onto Horatio Street
- The Australian Academy of Science report in 2020 states there is "overwhelming evidence that exposure to the environment noise has adverse effects on health population" and that traffic noise pollution is second only to air pollution. To grant approval for this application, it would go against the MWRC Strategic Planning of a "good quality of life for residents"
- Delivery trucks at early hours of the morning and the extended hours means a high level of noise from cars, trucks and those walking past, making it difficult to sleep particularly for older people who live on the street and those with young families.
- The proposal has failed to mention the approved development of eight (8) 2 and 3 bedroom units that will be built at the end of Gundy's Lane with entry and exit across from proposal, contributing to traffic hazards and potential for serious accidents
- Parking in front of residents homes from caravans and semi-trailers will prevent safe egress from drive-ways and prevents privacy of residents
- The DA proposal makes mention of a large lit up sign that will obnoxiously shine into the homes of residents in the area. The light will be on until 10pm at night, making if difficult to sleep
- KFC have failed to address the snaking of cars from its drive-thru onto Horatio Street/Castlereagh Hwy that currently occurs in its current location onto Church Street in the DA Proposal, causing traffic hazards and congestion
- MWRC Strategic Planning Report 2020 states that Council will "maintain & beautify civic open space and **street access within towns & villages in the Region"** This will create more traffic hazards and add traffic congestion to Horatio Street and side streets and goes against Councils statement.

The proposal has failed to address garbage disposal on the streets and subsequent attraction to vermin for residents of the area

- The DA proposal has failed to make measures for effective garbage disposal of packaging & leftover food (including chicken bones and unfinished food) and preventing garbage from being disposed in front yards of residents and surrounding streets – how will KFC prevent and proactively stop this?
- Subsequently, this will attract vermin including rats and mice to residents homes which was not evident previously
- Snakes have been reported in the causeway adjacent to the property. With the introduction of a commercial and industrial food business to the area, it will only attract more deadly wildlife to residents as mice are more likely

The offensive odour that wafts from the business

The proposal does not address how it will manage the offensive and strong odour that wafts from KFC outlets, as it does in its current location. This is not in line with MWRC efforts to create a "good quality of life for residents" – How will KFC prevent the smell from leaving its premises?

Detrimental affect on property values

According to local real estate agents and statistics on property values of KFC in its current location, the value of properties surrounding the KFC lost value of up to 40% and takes 4 times longer to sell. Real estate agents have reported that when showing clients through open houses that the smell and noise are the main reasons for not buying a house near KFC.

Anti-social behavior from those coming and going

With extended opening hours to 10pm and KFC's high demographic of younger people without car licences that frequent the current location, many of them would be walking through dark side streets and onto Horatio Street. This could affect sleep again due to loud voices from people coming and

do now) will also be detrimental to the "good quality of life for residents" currently enjoyed by those living in the area.

Have failed to provide a place for staff to smoke cigarettes and eat food on their break (KFC policy states that staff are not able to do either of these activities on site and anecdotally do this in a laneway currently) – where will their staff do these activities?

Co-mingling of pedestrians crossing the road causes traffic hazards & potential for serious harm
The DA proposal does not address how pedestrians will cross the road *safely* from the Town side of Horatio Street to where KFC is proposed. The increased traffic congestion mixed with large semi-trailers and blind driveways & laneways has the potential for increased serious harm of pedestrians.

MWRC has an obligation to "investigate, interpret & document the unique combination of qualities & characteristics which shape the urban settlements & create a sense of place (MWRC Local Strategic Planning Statement 2020)." The KFC proposed is not unique, with the exact generic outlet available in any other town. It fails to "maintain & promote the aesthetic appeal of the towns & villages" or provide "a positive experience for visitors and a good quality of life for residents" due to noise, traffic congestion and light pollution. It would be insulting to place it on par with current genuine tourism businesses, often run by families and on a smaller scale. Visitors do not come to Mudgee for KFC and is not a genuine tourism business as it is a commercial and industrial food business and therefore not appropriate for tourism zoning. It is an inappropriate location as it is a very residential area. The residents of the area do not want to live next to a KFC – would you?

Kind regards,

Peter Phillips
Barry Phillips

Kayla Robson

From: council@midwestern.nsw.gov.au
Sent: Monday, 27 September 2021 9:17 PM
To: Council
Subject: Submission E-Form

todaysdate : 27/09/2021
developmentapplicationnumber : DA0087/2022
proposeddevelopment : KFC proposed site on Horatio Street, Mudgee.
Emailaddress : [redacted]
Yourname : Janice Wallace
Address : [redacted], Mudgee.
phonenumber : [redacted]
reasonsforsubmission : I am writing to object to the proposed new KFC site on Horatio Street Mudgee. When we think of Mudgee, what do we think of? I am going to take the introductory passage from the 'Mudgee Flavours' website as it summarises it beautifully… I quote "You'll find an ideal foodies escape at the charming Mudgee Region. Our Winemakers, local producers and hospitable hosts are extraordinarily passionate about impressing your palate. With over 40 family-owned cellar doors producing a variety of wines and produce, the hardest choice will be which cellar door to visit first." It then goes on to say… 'Also offering stunning heritage streetscapes and museums, boutique and chic shopping precincts, an array of galleries and studios, and stunning natural beauty, the Mudgee Region invites you to indulge in and explore everything else we offer'. Mudgee's impeccable image is not going to be represented very well to drive along the main road into Mudgee and see a KFC and a McDonalds before you've even turned off the main road into Mudgee. What an absolute embarrassment! What are you thinking Midwestern Regional Council? I fear that having two major fast-food outlets on Horatio Street will definitely damage the wonderful image that the people of Mudgee have worked so hard for. That Mudgee Tourism portrays. Other vital factors that also to be taken into careful consideration are; Not only will the values of the surrounding homes all along Horatio Street be very adversely affected, but the homes geographically within 0.5km to 1km radius of this commercial site will be detrimentally affected. People's most valuable assets will be severely affected by this decision. Who would want to purchase a home within close proximity to a major food chain? Would you? I would not. Mudgee prides itself on being a tidy, country town but having an additional big corp food chain such as KFC will increase the rubbish all along Horatio Street, which again puts the image of Mudgee in to the garbage! There will be a major increase with respect to traffic on an already very congested main road, which will no doubt put a strain on the smooth flow of traffic into and out of Mudgee. Parking on Horatio Street itself will be inevitable due to overspill from excess customers. The parking of long vehicles such as trucks and vehicles towing caravans. This will lead to additional hazards for residents pulling into and out of surrounding homes and nearby crossroads, resulting in vehicle accidents. Not only that, but due to traffic pouring steadily into Mudgee, traffic waiting to turn into KFC from the other side of the road, will cause a back-up of traffic choas all the way back to the McDonalds roundabout. In turn, causing additional strain on crossroads entering and exiting Horatio Street. What a disaster. Additional noise pollution from traffic all along Horatio Street, but particularly to those homes within close proximity to KFC as vehicles directly enter and exit the premises from early until very late every evening. Additional foot traffic means higher incidents of crime particularly to surrounding homes. Increased air pollution and decreased air quality from this particular type of food establishment, which will adversely affect surrounding homes. Also, this is not a good look as you drive into Mudgee. Cooking fried chicken and chips all day and night makes for a lot of smoke, grease and looks disgusting. What an image. Not to mention the health risks to residents in nearby homes. This kind of commercial building will definitely produce a lot of waste/garbage. The offensive smell from garbage especially in warmer weather, will have a major impact to neighbouring and surrounding homes from the bins alone. Not to mention the pests and vermin it will also attract. Cockroaches, mice and rats will no doubt accompany that kind of waste. Light pollution will also cause additional problems and stress to neighbouring homes from the type of signage used by this kind of food chain. Higher traffic flow means higher risk for pedestrians on an already very busy road. Have any of you

actually tried to cross the road at the point where the KFC is suggested? It is just about impossible. I would like to now bring your attention to the opening statement on the 'Visit Mudgee Region; website. It quotes… "Reset Your Senses. It's time to reconnect with loved ones, wide open spaces + fresh country air. FEEL THE LOVE in the Mudgee Region with our range of unique experiences + packages. This is what Mudgee is all about! Do what is right for the people of Mudgee and keep KFC where it currently is, or somewhere that is away from residential homes! Please do what is right for the community as a whole. Let us keep the fabulous image that Mudgee has worked hard for.
politicaldonationsrequirements : Yes

Kayla Robson

From: [redacted]
Sent: Thursday, 30 September 2021 2:21 PM
To: Council
Subject: DA: 33-35 Horatio Street, Mudgee

To whom it may concern,

We are writing to vehemently oppose any commercial development, especially a KFC, at 33-35 Horatio Street.

We live at [redacted] and we believe such a development will adversely impact the character of this street which is predominantly residential even though the zoning is tourism.

You can see the adverse impact the existing KFC has had on adjoining residences and properties in Church Street.

We wish to strongly object to this proposed development in our lovely residential neighbourhood.

Yours faithfully,

Pat and Peter Lang
[redacted]
Mudgee NSW 2850
[redacted]

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Kayla Robson

From: council@midwestern.nsw.gov.au
Sent: Thursday, 30 September 2021 11:29 AM
To: Council
Subject: Submission E-Form

todaysdate : 30/09/2021
developmentapplicationnumber : DA0087/2022
proposeddevelopment : Development application DA0087/2022- Proposed demolition & Construction of 33-35 Horatio St To a commercial take away business. KFC.
Emailaddress : [redacted]
Yourname : John Tyrrell
Address : [redacted] Mudgee Nsw 2850
phonenumber : [redacted]
reasonsforsubmission : John Tyrrell [redacted] Mudgee NSW 2850 M. [redacted] 28th September 2021 To whom it may concern, Re: Development Application DA0087/2022- Proposed demolition and construction of an international commercial take away food and drink premises on 33-35 Horatio Street Mudgee NSW 2850. LOT 2 DP 743615 and LOT 3 DP 743615 CONSENT AUTHORIT: MIDWESTERN REGIONAL COUNCIL APPLICANT : DIAMOND 7 PTY LTD I own and live at [redacted] Mudgee [redacted]. I have lived here for 18 years and have brought my family up here where we all live still. I am also part owners in Mudgee Apartments which is a family local business with my 2 sons. 3 of our Properties will be affected by this proposal. Properties affected are Situated at; [redacted] I strongly object to this development being approved by Midwestern council. Our developments have had minimal impact on the Street landscape and complied with the site Zoned SP3 Tourist under the midwestern Local environment plan (LEP) 2012 where residential developments standards apply. The application needs further information to be added to the DA application before it can even be considered. 1. An independent acoustic report. 2. RTA Traffic engineers report as it is a NSW state Highway. Major issues concerning the application here alone. 3. An Independent vehicle simulation report showing evidence that it's even possible. The vehicle simulation provided is bias and doesn't comply with the existing practises at present. Evidence of delivery vehicle's used over past 5 years to existing KFC will show clarification. If vehicle's are used other than what's used in simulation what are the fines associated if premises are built and simulation plan was only to get DA through. 4. An independent house and land valuations for surrounding residents if this DA is approved for before, after and potential growth. 5. Council needs to provide more letters and information to surrounding streets as this is a major intrusion to the local community and our family homes. 6. An independent Environmental report. 33-35 Horatio Street Mudgee NSW 2850 is situated on a Site Zoned SP3 Tourist under the Midwestern Local Environment pan (LEP) 2012. Residential developments standards still apply on this site. The proposed development greatly impacts other residents not only on Horatio Street Mudgee which has 2 Zones. SP3 on the southern side and residential on the Northern side but surrounding streets George St, Lawson Street, Inglis Street that back up behind and to the sides. We did not receive any letters from council informing us nor did many of the surrounding streets of the proposed DA. We heard rumours and read DA in local paper. Major concerns: 1.Added traffic congestion (access to and from my properties as well as car parking spaces for their visitors) 2.Noise pollution, (we offer a quiet boutique accommodation. Noise pollution from drive through communications, traffic drive through, traffic brakes till late plus trucks delivering goods) 3.Air pollution. (the smell) 4.Bright commercial lights from signage impacting our accommodations. 5.The increase in rubbish and vermin. 6.Anti-social behaviour till late hours and excess foot traffic around accommodation. 7.Loss in capital growth and loss of instant income. Mudgee Apartments has another property which 115 Church St Mudgee NSW. Lot 1 DP 506954. It is severely affected by the existing KFC facility. Car parking issues from trucks and vehicles with trailers, traffic noise, traffic congestion getting into KFC, excess rubbish, no on site staff amenities so staff breaks consists of eating and smoking in our private car park directly outside of 2 apartments, we vermin control monthly around our facility because of

excess food and rubbish. We have never objected to this premises as we bought knowing the existing KFC had issues. This is expected and arise when in close proximity to commercial take away facility. We do though strongly object to the potential movement of this commercial take away business into a tourist / residential area where we have invested large amounts of money into a business that will be greatly affected. The council has obligations of the whole surrounding community and residents to consider here not just one business. Please consider better locations for commercial take away businesses. Sydney road is zoned commercial with no residential houses or close to the current location because minimal impact to residential dwellings and is in approved appropriate industrial areas. SP3 land is minimal in Mudgee and surrounding towns. Other business DA have been turned down as not deemed tourism. KFC is not tourism. People do not come to Mudgee for KFC. Please use this land as was originally allocated for. Regards John Tyrrell [redacted]
politicaldonationsrequirements : Yes

Kayla Robson

From: Ryan Tyrrell [redacted]
Sent: Thursday, 30 September 2021 11:32 AM
To: Council
Subject: KFC ON HORATIO

Ryan Peter Tyrrell

Tyrrell Family Trust

[redacted]

Mudgee NSW 2850

[redacted]

28th September 2021

To whom it may concern,

Re:

Development Application DA0087/2022- Proposed demolition and construction of an international commercial take away food and drink premises on 33-35 Horatio Street Mudgee NSW 2850.

LOT 2 DP 743615 and LOT 3 DP 743615

CONSENT AUTHORIT: MIDWESTERN REGIONAL COUNCIL

APPLICANT : DIAMOND 7 PTY LTD

I am part owners in Mudgee Apartments which is a family owned local business. 3 of our Properties will be affected by this proposal. Properties affected are Situated at;

[redacted]

I strongly object to this development being approved by Midwestern council. Our developments have had minimal impact on the Street landscape and complied with the site Zoned SP3 Tourist under the midwestern Local environment plan (LEP) 2012 where residential developments standards apply.

We did not receive any letters from council informing us nor did many of the surrounding streets of the proposed DA. We heard rumours and read DA in local paper. The proposed development greatly impacts other residents not only on Horatio Street Mudgee which has 2 Zones. SP3 on the southern side and residential on the Northern side but surrounding Streets. Streets impacted directly are George Street, Lawson Street, Inglis Street, Denison Street and Lewis Street. More information and more community feed back needs to be given.

The application needs further information to be added to the DA application before it can even be considered.

1. An independent acoustic report.
2. RTA Traffic engineers report as it is a NSW state Highway. Major issues concerning the application here alone.
3. An Independent vehicle simulation report showing evidence that it's even possible.
4. Independent environmental report.
5. An independent house and land valuations for surrounding residents if this DA is approved for before, after and potential growth.

Major concerns:

1.Added traffic congestion (access to and from my properties as well as car parking spaces for their visitors)

2.Noise pollution, (we offer a quiet boutique accommodation. Noise pollution from drive through communications, traffic drive through, traffic brakes till late plus trucks delivering goods)

3.Air pollution. (the smell)

4.Bright commercial lights from signage impacting our accommodations.

5.The increase in rubbish and vermin.

6.Anti-social behaviour till late hours and excess foot traffic around accommodation.

7.Loss in capital growth and loss of instant income.

Yours Sincerely

Ryan Tyrrell

Kayla Robson

From: Shane Foley [redacted]
Sent: Thursday, 30 September 2021 1:43 PM
To: Council
Subject: Objection to DA0087/2022

To whom it may concern,

My name is Shane Michael Foley, I own and live at [redacted] Mudgee NSW 2850. I do not wish for this to go forward as it will affect our property value as well as cause unneeded stress and dangers. Turning right into Horatio Street towards Sydney road from Lawson Street is now already a nightmare and with the added traffic this business will cause it will not only make it more dangerous but will make it more time consuming to turn into Horatio, if you walk or drive anywhere near the current KFC you can smell it long before you see it, This will mean because it is so close to my house and will only be separated by a laneway (Lions Lane) we will not only have extra foot traffic past my residence but the smell will be constant. I'm sure no one wants their house to smell like a KFC year round. Having a restaurant in a residential area is not only silly, it's not practical. In summer for as long as I can remember we have opened windows and doors during summer to let breeze through but now that breeze will be tainted with the smell of KFC. We will also have added dangers of big trucks in our neighbourhood coming to the restaurant and if they decide to use Lions Lane it will be deadly for not only the local animals but some of the children.

Please do not let this go forward, I understand there needs to be evolution and growth in business but it needs to be in an area suitable for it. This being said, I do not wish for any fast food restaurant to move into this residential area. It will cause the same issues as the KFC regardless of brand.

There must be other areas for this business to move into that are not directly in the middle of a residential area.

Thank you for your time,
Shane Michael Foley.

Kayla Robson

From: council@midwestern.nsw.gov.au
Sent: Thursday, 30 September 2021 11:18 AM
To: Council
Subject: Submission E-Form

todaysdate : 30/09/2021
developmentapplicationnumber : DA0087/2022
proposeddevelopment : KFC being built at 33-35 Horatio St
Emailaddress : [redacted]
Yourname : Ryan Tyrrell
Address : [redacted]
phonenumber : [redacted]
reasonsforsubmission : Ryan Peter Tyrrell Tyrrell Family Trust [redacted] Mudgee NSW 2850 M. [redacted] 28th September 2021 To whom it may concern, Re: Development Application DA0087/2022- Proposed demolition and construction of an international commercial take away food and drink premises on 33-35 Horatio Street Mudgee NSW 2850. LOT 2 DP 743615 and LOT 3 DP 743615 CONSENT AUTHORIT: MIDWESTERN REGIONAL COUNCIL APPLICANT : DIAMOND 7 PTY LTD I am part owners in Mudgee Apartments which is a family owned local business. 3 of our Properties will be affected by this proposal. Properties affected are Situated at; [redacted] I strongly object to this development being approved by Midwestern council. Our developments have had minimal impact on the Street landscape and complied with the site Zoned SP3 Tourist under the midwestern Local environment plan (LEP) 2012 where residential developments standards apply. We did not receive any letters from council informing us nor did many of the surrounding streets of the proposed DA. We heard rumours and read DA in local paper. The proposed development greatly impacts other residents not only on Horatio Street Mudgee which has 2 Zones. SP3 on the southern side and residential on the Northern side but surrounding Streets. Streets impacted directly are George Street, Lawson Street, Inglis Street, Denison Street and Lewis Street. More information and more community feed back needs to be given. The application needs further information to be added to the DA application before it can even be considered. An independent acoustic report. RTA Traffic engineers report as it is a NSW state Highway. Major issues concerning the application here alone. An Independent vehicle simulation report showing evidence that it's even possible. Independent environmental report. An independent house and land valuations for surrounding residents if this DA is approved for before, after and potential growth. Major concerns: 1.Added traffic congestion (access to and from my properties as well as car parking spaces for their visitors) 2.Noise pollution, (we offer a quiet boutique accommodation. Noise pollution from drive through communications, traffic drive through, traffic brakes till late plus trucks delivering goods) 3.Air pollution. (the smell) 4.Bright commercial lights from signage impacting our accommodations. 5.The increase in rubbish and vermin. 6.Anti-social behaviour till late hours and excess foot traffic around accommodation. 7.Loss in capital growth and loss of instant income. Yours Sincerely Ryan Tyrrell
politicaldonationsrequirements : Yes

Kayla Robson

From: Douglas Mitchell [redacted]
Sent: Wednesday, 29 September 2021 9:06 PM
To: Council
Subject: DA0087/2022

To the General Manager, Mid-West regional council,

I would like to formally submit my objection to the KFC planned for 33-35 Horacio Street.

Kind regards,

Residents of [redacted] Mudgee

Sent from my iPhone

Kayla Robson

From: Barbara Lawry [redacted]
Sent: Wednesday, 29 September 2021 3:35 PM
To: Council
Subject: Objection re Proposed DA0087/2022

The General Manager
Midwestern Regional Council
Mudgee

Good afternoon,

We would like to lodge an objection to the proposed DA0087/2022, planned for the redevelopment of 33-35 Horatio St Mudgee (relocation of KFC outlet).

We reside in Lawson St within close proximity of the potential development site, and have several concerns regarding the proposal:

1) The area on both sides of the street are predominately residential and the proposed building will be an eyesore and aesthetically displeasing in amongst the local housing.

2) Concern regarding a significant increase in traffic that the development will bring. Horatio St is already the main thoroughfare in to Mudgee from the South, and is an exceptionally busy street. It is already difficult to cross both as a pedestrian or a vehicle from any of the adjoining streets (George, Lawson, and Lewis) due to the volume of traffic. This development will exponentially increase the amount of traffic, making it impossible to cross Horatio St.

3) The knock - on effect of extra traffic 'rat-running' through the residential streets (George, Lawson and Lewis) due to congestion and traffic flow on Horatio St, particularly around popular meal times and weekends.

4). The potential pedestrian hazard on Horatio St from cars parking along the northern side of Horatio St and customers trying to cross the road to get to the premises.

5) The potential blocking of residential driveways by oversized vehicles which are unable to enter the retail outlet due to size. This would be an issue on both sides of Horatio St.

6) Traffic flow along Horatio St - the road is not wide enough to accomodate parked cars on both sides of the street, along with the allowance for traffic turning in to the premises. This will lead to local and tourist traffic congestion and frustration, on an already busy street.

7) The increased risk of traffic accidents/injuries caused by traffic leaving the premises and trying to turn across Horatio St to continue heading south.

8) The potential negative effect on the value of our house due to the proximity to this business.

9) Offensive neighbourhood odours due to serving, preparation of food and existence of grease traps, 7 days a week, and with the hours extending in to the night.

10) Noise concerns generated from the increased garbage service that the premises will require.

11) General unsightly waste dumped along the footpaths and roadsides from customers.

Thankyou for your consideration of our objection to this proposed development.

Kind regards

Baz and Barb Lawry
[redacted]
Mudgee NSW 2850
[redacted]

Kayla Robson

From: council@midwestern.nsw.gov.au
Sent: Thursday, 30 September 2021 7:13 PM
To: Council
Subject: Submission E-Form

todaysdate : 30/09/2021
developmentapplicationnumber : DA0087/2022
proposeddevelopment : Demolition and construction of food and drink premises 33-35 Horatio Street Mudgee
Emailaddress : [redacted]
Yourname : Jack Nash
Address : [redacted], Mudgee NSW 2850
phonenumber : [redacted]
reasonsforsubmission : We all know that Mudgee's motto is 'love where you live' and putting a KFC in a high residential area will upset a lot of people. They will NOT love where they live! I have invested a lot of money in my property over the last 4 years with the intention to live on Horatio Street and "LOVE WHERE I LIVE". Mudgee is already facing issues with high traffic and congestion due to large volumes of people moving to our beautiful regional town. So, a KFC placed in its main thoroughfare would only make the already concerning issue worse. In addition to this, there are a lot of other contributing factors as to why a KFC on Horatio Street is a bad idea. These include: - Noise pollution - Eye sore - At least 25 or more delivery trucks per week accessing the premises - Light pollution - Hazard area for pedestrians as it is in the middle of a residential area - Decrease in housing prices - Interruptions to services to residents during construction (electrical, water, sewerage) - KFC is not tourism (people do not come to Mudgee for KFC) These are only a few of the many that I could list. NO KFC ON HORATIO! "Love where you live." Live next to a KFC, I think not!
politicaldonationsrequirements : Yes

Kayla Robson

From: [redacted]
Sent: Friday, 1 October 2021 9:25 AM
To: Council
Subject: DA0087/2022

The General Manager
Mid Western Regional Council
Market Street
MUDGEE NSW 2850

Dear Sir

It has only recently come to my attention that there is currently a Development Application DA0087/2022 with Council to build a KFC on the block 33 – 35 Horatio Street, Mudgee.

I feel that this is not a suitable site for such a business and therefore would like to express my objection to this development.

. First, and I feel foremost, Mudgee is advertised through, in particular the Mudgee Region Tourism Inc as a destination for locally sourced food of excellent quality, local wine of an equally high quality both of which are available in a beautiful rural to semi rural environment. These are some of the qualities which I would imagine Mudgee residents and business owners are proud to be associated with. With this in mind, it doesn't appear fitting that visitors to our beautiful region would be first greeted by a large KFC Restaurant followed shortly by a McDonalds Restaurant, neither of which are locally sourced nor quality foods with at night the large colourful signage. With KFC putting in a larger Restaurant, I'm sure McDonalds in order to compete will also be looking to expand their Restaurant also in the short future.
. A large KFC as visitors enter the township of Mudgee may have a very large negative impact on the local Restaurants, Cafes and Hotels just a little closer to the main Mudgee CBD with visitors stopping there rather than driving further into the CBD to discover more of what Mudgee has to offer other than fried greasy chicken.
Large chain Restaurants are NOT the way to be greeted to a region boasting Food and Wine of quality and may put a negative slant on visitors when first arriving in Mudgee.
. As Mudgee has been classified by many as a Tourist destination, it is NOT fitting that tourists first real sighting of the Mudgee township is KFC which is NOT a tourists true insight to the REAL Mudgee. KFC is like McDonalds everywhere!
. While the house currently on the site of 33 – 35 Horatio Street is not occupied, and is not of heritage importance, there are a number of homes within the immediate area which would be greatly impacted by the development of this block for a commercial Restaurant chain. Imagine living next door to or across the road to a premises that has a large red sign lighting up the evening, an increase in traffic at all hours from prior to opening for the delivery vehicles with noisy brakes to late evenings for last minute take out meals, let alone the emissions from the vehicles and the restaurant itself which at times can be rather nauseating (based on the current size the Restaurant is).
. I would imagine that Horatio Street would have to be modified to accommodate a turning lane into the proposed KFC which would not only mean delays along that stretch of Horatio Street until the lanes were put in place, but also increased traffic along the alternate streets to the CBD such as George and Lawson Streets, which I as a resident of one of these streets does not want, nor through my Rates would like to fund.
. Would it also become Council's responsibility to pick up the additional rubbish created by having a larger KFC available on Horatio Street? Some of the current KFC and McDonalds customers already leave behind unsightly litter which would only increase with a larger KFC Restaurant being open on the approaches to the Mudgee township. Another agenda I would rather my rates did not cover.
. Residents along that stretch of Horatio Street may suffer from a decline in the value of their properties having a large KFC nearby. These residents would also be impacted by additional noise levels not only from the delivery vehicles and customer vehicles, but also from the customers themselves who often choose such places to meet and

have a chat, which particularly late at night isn't pleasant nor tolerable. Lit signage is also a very negative impact on the lives of those residents.

Council please consider carefully the impact this development will have on our lovely town which at present has a lovely blend of history mixed with subtle modern in a lovely rural environment. Why would you wish to change this feel of Mudgee by approving a large commercial Restaurant chain to greet visitors entering our town?

Kind regards

Jennifer Lewis
[redacted]
MUDGEE NSW 2850

Kayla Robson

From: witheriff[redacted]
Sent: Thursday, 30 September 2021 1:30 AM
To: Council
Subject: KFC objection

The manager Mid-western Council.
Dear Brad, I would like to lodge an objection to development application DA0087/2022
As I understand there is a new KFC to be built on the site of 33-35 Horatio street.
While I do not live in Horatio Street, I live on the [redacted], just a block away.
I feel it is a bad fit for the current residential area notwithstanding the total disruption to the long term residents lives.
I urge the Council to consider the traffic already using this road as a main entry/exit to Mudgee and the potential for vehicular and pedestrian traffic to be involved in accidents of those entering and leaving this potential site.
The rubbish generated by users of an existing fast food outlet in Horatio street can be found in any of the surrounding streets,
as I can attest in 38 years of living in this location, and there will surely be an increase in this dumping.
I can only sympathise with the residents in that development area as the signage, lighting and noise levels will increase, as they did with the other outlet and
add more disruption to an already busy area, let alone the trauma to the older residents of a disrupted lifestyle.

Yours Sincerely John and Sandra Witheriff
[redacted].

Kayla Robson

From:	Kezza Wright [redacted]
Sent:	Wednesday, 29 September 2021 12:41 PM
To:	Council
Subject:	OBJECTION TO POTENTIAL KFC RELOCATION TO HORATIO STREET SITE DA0087/2022
Attachments:	20210929_124002.jpg

Good afternoon,

As a recent purchaser of property on Horatio Street I am formally objecting to this site potientially being used for a large commercial restaurant/fast food business.
The impacts to Traffic on an already very busy stretch of road, Noise pollution, Excess Litter, Tourism providers loosing business, Street parking will be impacted by trucks as already happens with the McDonald's, Strong odours and aesthetic features that this pretty Street currently has.
We are not a big city and should limit impact on those residents living on this section of Horatio Street also.

Kind regards
Kerry Wright

Kayla Robson

From: Peter Brough [redacted]
Sent: Wednesday, 29 September 2021 2:41 PM
To: Council
Subject: PROPOSED DEVELOPMENT: Proposed Demolition and Construction of Food and Drink Premises at 33-35 Horatio Street MUDGEE NSW 2850

[redacted]
Dear Sir or Madam,

I wish to lodge an objection against this proposed development, reasons include :

1) Added traffic congestion on an already busy street.
2) Risk of potential pedestrian injury.
3) Noise pollution from trucks brakes having to slow down from vehicles entering & leaving the premises.

Regards,
Peter Brough
[redacted]
Mudgee NSW 2850

Kayla Robson

From: council@midwestern.nsw.gov.au
Sent: Thursday, 30 September 2021 7:23 PM
To: Council
Subject: Submission E-Form

todaysdate : 30/09/2021
developmentapplicationnumber : DA0087/2022
proposeddevelopment : Demolition and construction of food and drink premises 33-35 Horatio street Mudgee
Emailaddress : [redacted]
Yourname : Simone Heij
Address : [redacted] NSW 2580
phonenumber : [redacted]
reasonsforsubmission : To whom it may concern and who cares to listen, My niece and her family have recently renovated a property on Horatio Street. It has been a dream of theirs to live in a regional community. They short-listed Mudgee because of its natural beauty, surrounds and Cafe culture. I believe they made a great choice in choosing Mudgee from the numerous visits I have made. The homes in Horatio street and surrounding streets in the vicinity are unique in character and well-maintained. It is a pleasure to walk/drive around such beautiful streetscapes in the area. Therefore, I oppose the capitalistic monstrosity of corporative greed. I don't think a KFC in a residential area upon entering the town represents Mudgee's vision for the future as a tourist destination. I'm not going into the detailed reasons why this proposal is ludicrous as I am sure councillors faced with KFC opening two doors down from their home would soon surmise a long list of reasons against the proposal.
politicaldonationsrequirements : Yes

Kayla Robson

From: Yasmin Crockett [redacted]
Sent: Tuesday, 28 September 2021 10:07 PM
To: Council
Subject: RE DA0087/2022 33-35 horatio street

To Whom It May Concern,

RE DA0087/2022

I am writing to express my complete objection to the proposal of KFC Mudgee being built at the site mentioned above.

We reside and own [redacted] and have done since 2007.
We have not been notified by way of any correspondence in regard to such a significant proposal on the street that is currently residential and tourist accomodation.

As residents 4 houses down I have major concerns some being listed below

1. Traffic, proposed mention of on street parking being removed, blocking of my residential driveway at peak times.

2. Air pollution…. The continued smell of KFC that is evident when you are residing next to or in close vicinity of . (This is evident as I worked at Banardos next to the current KFC and the stench all day is hideous)

3. Trucks turning in and parking in George st to walk to KFC.

4. Lights facing residential homes late in the evening.

5. Friday and Saturday night noise by people intoxicated walking to KFC in our residential area.

6. Night time noise from the drive through speakers.

7. Excessive traffic on this already busy street.

8. The De valuing of the residential land here in the street.

The list goes on and these are non negotiable factors that can not be minimised or wiped out.

We have complete objection to any such franchise being built amongst the residential, tourist accomodations and home businesses that are currently in the street.

KFC IS NOT A SMALL TAKE AWAY COFFEE SHOP AND SHOULD BE BUILT ELSE WHERE

Yasmin Crockett and Ben Marskell

[redacted], Mudgee NSW 2850

[redacted]

Kayla Robson

From: council@midwestern.nsw.gov.au
Sent: Tuesday, 28 September 2021 5:58 PM
To: Council
Subject: Submission E-Form

todaysdate : 28/09/2021
developmentapplicationnumber : DA0087/2022
proposeddevelopment : KFC building on Horatio Street Mudgee
Emailaddress : [redacted]
Yourname : Ryan Clarson
Address : [redacted] Mudgee NSW 2850
phonenumber : [redacted]
reasonsforsubmission : Against building KFC on Horatio Street due to offensive smells, increase of rubbish in the surrounding area, Its a bad fit for the area as it is heavily residential, Light pollution from signage and possible accident prone zone with turning vehicles.
politicaldonationsrequirements : Yes

Kayla Robson

From: council@midwestern.nsw.gov.au
Sent: Tuesday, 28 September 2021 6:04 PM
To: Council
Subject: Submission E-Form

todaysdate : 28/09/2021
developmentapplicationnumber : DA0087/2022
proposeddevelopment : KFC building on Horatio Street Mudgee
Emailaddress : [redacted]
Yourname : Jon Nash
Address : [redacted] Mudgee NSW 2850
phonenumber : [redacted]
reasonsforsubmission : Against building KFC on Horatio Street due to offensive smells, increase of rubbish in the surrounding area, Its a bad fit for the area as it is heavily residential, Light pollution from signage and possible accident prone zone with turning vehicles.
politicaldonationsrequirements : Yes

Kayla Robson

From: council@midwestern.nsw.gov.au
Sent: Tuesday, 28 September 2021 5:45 PM
To: Council
Subject: Submission E-Form

todaysdate : 28/09/2021
developmentapplicationnumber : DA0087/2022
proposeddevelopment : KFC building on Horatio Street Mudgee
Emailaddress : [redacted]
Yourname : Lorna Nash
Address : [redacted] Mudgee NSW 2850
phonenumber : [redacted]
reasonsforsubmission : Against building KFC on Horatio Street due to offensive smells, increase of rubbish in the surrounding area, Its a bad fit for the area as it is heavily residential, Light pollution from signage and possible accident prone zone with turning vehicles.
politicaldonationsrequirements : Yes

Kayla Robson

From: council@midwestern.nsw.gov.au
Sent: Tuesday, 28 September 2021 5:59 PM
To: Council
Subject: Submission E-Form

todaysdate : 28/09/2021
developmentapplicationnumber : DA0087/2022
proposeddevelopment : KFC building on Horatio Street Mudgee
Emailaddress : [redacted]
Yourname : Michelle Nash
Address : [redacted] Mudgee NSW 2850
phonenumber : [redacted]
reasonsforsubmission : Against building KFC on Horatio Street due to offensive smells, increase of rubbish in the surrounding area, Its a bad fit for the area as it is heavily residential, Light pollution from signage and possible accident prone zone with turning vehicles.
politicaldonationsrequirements : Yes

Kayla Robson

From: Allen Greer [redacted]
Sent: Friday, 1 October 2021 4:59 PM
To: Council
Subject: KFC on Horatio St

I am writing to strongly oppose the development of a KFC on Horatio St. It is not fair to subject local residents to the nauseating smell of hot fat that comes from all KFC outlets.

The area is all residential at the moment with no commercial development and it should be kept that way.

Allen Greer
[redacted]
Mudgee

[redacted]

Kayla Robson

From: hamish bryant [redacted]
Sent: Friday, 1 October 2021 6:00 PM
To: Council
Subject: DA0087/2022

To The General Manager, Mid-Western regional council, I object to the commercial business of KFC relocating to a residential street. I believe having it on a residential street does not meet criteria for tourism especially Mudgee local tourism and the already established small businesses on the street.

Regards
Harriet and Hamish

[redacted] Mudgee
[redacted]

26th September 2021

The General Manager
Mid-Western Regional Council
86 Market Street
Mudgee
NSW 2850

Dear Sir

Re: Development Application DA0087/2022, 33-35 Horatio Street, Mudgee - Diamond 7 Pty. Ltd.

Relating to the above, my neighbours on both sides have shown me your letter to them dated 15th September. Oddly, I have never received a copy of this important letter??

Well, we residents, were very aware that this derelict house was bought in the last 12-18 months. However, how could any of us have imagined it had been bought for the land alone, with full intention to demolish the house and erect a KFC fast food outlet? This significant financial outlay showed tremendous confidence this could occur? So much so, that we see clearly right now, coloured stakes in the ground marking out proposed work AHEAD OF PLANNING PERMISSION BEING GRANTED? Again, this shows enormous confidence ahead-of-time that this development will go ahead? This type of 'arrangement' is not anything your Council would be a party to...is it?

You would also be aware that Horatio Street is already a **major** road in and out of town, with **VERY** significant noise and pollution from the constant stream of vehicles that only diminishes for short periods in a day/mostly overnight. This new, large, busy, glitzy/prominent fast food franchise will obviously attract very large numbers of extra foot and car traffic around the clock, noxious/greasy cooking fumes, more noise, pollution, and littering of the street. I already find McDonalds food wrappers and drink cartons in my front garden and on the footpath, and they are a long way down the other end of the street!

You would already be aware that side of Horatio Street is very low level commercial, with a couple of A-Frame and small, unobtrusive signage being the only clues that a small business exists nearby. The opposite side of the road is residential. And, as you well know, properties anywhere near this kind of development would suffer large losses in property values because no-one would choose to live near a KFC unless they were desperate or absolutely forced to, as residents will be if this eye-sore development goes ahead, unless they rapidly sell up and flee the area before that happens. I believe as a responsible Council real people need to be considered here, not just multinationals.

The streetscape will be changed forever, and in a low level, gaudy way. This organisation is not known to be understated or classy...far from it. Not like say a small boutique hotel or decent café/restaurant would be? Althea by Zin for instance. Your Council really got this change of use 100% right! And because you did, they attract a VERY different client base, one with integrity and low impact. KFC won't. KFC will not add anything better to Horatio Street. The minute anyone turns or drives along it...BOOM - HIGH VIZ RECOGNISABLE, STAND OUT 24/7 KITZCH, ANOTHER AMERICAN FAST FOOD OUTLET! **AND OF COURSE, IT'S ALL ABOUT THE MONEY, MAKING MORE AND MORE OF IT.** This being the case, all we can expect from Broadview Aust. Pty. Ltd. and KFC is...100% self-interest.

If Council made such a wonderful and appropriate decision with Althea by Zin, please do it again! That showed a real desire to add value to this street, and it has. And not just the street...Mudgee in general. Is there really absolutely nowhere else in Mudgee, where this standout, adverse, environmentally impacting development can be operated from, other than facing residences that already put up with **massive** noise and environmental pollution? By their deliberate, cunning steps, the developers believe there isn't? It's as though they know something we don't, and I don't want to believe this is true.

Yours faithfully

[redacted]

Anna Cavendish
BA (Psych), MA, PhD(c)

Barbara Wall

[redacted] Mudgee 2850

28 September, 2021

Your Ref: Kayla Robson:ah:DA0087/2022

Kayla Robson, Senior Town Planner – Development
Midwestern Regional Council
86 Market Street
MUDGEE NSW 2850

Dear Ms Robson

RE: DEVELOPMENT APPLICATION DA0087/20
LOT 2 DP 743615 LOT 3 DP 743615

I am aware of this Development Application and wish to lodge an objection.

Gundys Lane, where I live, branches off Horatio Street almost opposite the proposed development, and my property is a short distance down the lane.

I object to the development because of the increased traffic it will generate along Horatio Street, an already busy highway. It can be difficult to exit the lane in a vehicle now, and I expect the proposed develop to make the situation much worse, even dangerous. There is no other exit to Gundys Lane.

Yours faithfully

[redacted]

Barbara Wall

Pirie Investments
[redacted]
Mudgee NSW 2850
M: 0408 496 099

28th September, 2021

To Whom It May Concern,

Re:
Development Application DA0087/2022 – PROPOSED DEMOLITION AND CONSTRUCTION OF FOOD AND DRINK PREMISES – 33-35 HORATIO STREET MUDGEE NSW 2850
LOT 2 DP 743615 LOT 3 DP 743615
CONSENT AUTHORITY: MIDWESTERD REGIONAL COUNCIL
APPLICANT: DIAMOND 7 PTY LTD

We are the owners of [redacted] Mudgee, which neighbours the above property.

We strongly oppose and object to this development being approved by Midwestern Regional Council and request that each of our following concerns are addressed when considering the DA.

- We note there is no independent acoustic report included with the DA. Noise is a major concern with such a significant development that will be opening extended hours and we request that a report be obtained and a plan to address and minimise any potential noise to adjoining residential premises be obtained.

- We have significant concerns about the road and traffic plan for this site. We request that a Traffic Engineer's report be obtained before this development be progressed further.
    - The road is already very narrow and very busy. Hindering traffic further has significant potential to increase risk of traffic and pedestrian accidents. It is not uncommon at the existing premises to see vehicles snaking out onto Church Street whilst awaiting the Drive Thru services.
    - The proposed eastbound turning lane accommodates a maximum of 3 cars. Given that this lane will be crossing a busy, classified road this is insufficient and in its current proposed state will without doubt reduce eastbound traffic flow. However, extending this turning lane will significantly reduce access to adjacent properties and create additional safety concerns.
    - The proposed plan abolishes any shoulder on the east bound road. Not only does this reduce access for residents to their properties but this road is also frequently utilised by cyclists. The proposed design is unsafe.
    - There is no Pedestrian crossing in the proposed traffic management plan. It is not uncommon to see Pedestrians running across the road at the existing

site to access the premises. This is high risk at the proposed address given that it is a busy, classified road.

- Caravans, cars with trailers, larger vehicles and semi-trailers will need to park on the kerb as there is no provision for them to enter the proposed site. This will hinder access to existing properties and decrease the safety of nearby residents.
- The exit from the site is a one-way only turn into the westbound lane. This will lead to increased traffic movements in nearby side streets as vehicles attempt to perform u-turns to return to their direction of travel when heading east.
- We do not believe that the proposed Vehicle Simulation plan is accurate. The current plan suggests that only SU Trucks are utilised for deliveries. Larger vehicles and semi-trailers have been seen delivering to the existing site frequently.
- The proposed plan for the Horatio Street site already identifies risks to parked vehicles in carpark spaces 11 to 15 with the turning plan for the SU Trucks.

- It is unclear how the planned development will address its inevitable garbage. How will this be managed and removed in a timely manner? There is currently an issue with littering around the existing KFC site. How is this to be addressed at the new site which borders residential homes on each side? We hold additional concerns regarding vermin management in the current environment.

- We note that there is a permanent, unpleasant odour associated with the existing site of this business. We request that a plan is obtained regarding the applicant's plan to address and minimise this at the proposed new site.

- It is well known that late-opening fast food chains can be associated with anti-social behaviour. Is there a plan in place to address this and the safety of adjoining residents?

- The illuminated KFC sign is currently located in the north-west corner of the site. This will illuminate all bedrooms of our residential property and is unacceptable and needs to be addressed.

We thank you for your consideration and timely reply to our concerns.

Yours sincerely,

[redacted]

Mr Ben Pirie & Dr Philippa Bunting

[redacted]

Mudgee.

1st October, 2021

Mr Brad Cam

General Manager

Mid Western Regional Council

Mudgee 2850

MID-WESTERN REGIONAL COUNCIL
Customer Services
RECEIVED
01 OCT 2021
☐ SCANNED

Dear Mr Cam,

This is a letter of **objection** to the proposal to allow Kentucky Fried Chicken to move to Horatio Street. That is not the proper place for a business long criticised for selling fat-saturated 'fast food' that is recognised as a health hazard. If it is considered necessary to open a larger outlet than the one already thriving, it should go to the industrial area further along Sydney Road and NOT placed in a suburban part of Mudgee many streets of which are recognised for their heritage value The traffic along Horatio Street is very heavy and will cause congestion and delay – not to mention the loss of liveability to nearby residents. This will downgrade the value of their houses.

I hope you will reconsider this proposal, open the subject for public discussion, present a list of what dubious benefits the proposal will confer on the mass of the public – and stop the development immediately.

Yours faithfully

[redacted]

A.K. Macdougall

MID-WESTERN REGIONAL COUNCIL
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01 OCT 2021
☐ SCANNED
☐ REGISTERED

MID-WESTERN REGIONAL COUNCIL
Customer Services
RECEIVED
01 OCT 2021
☐ SCANNED

The General Manager,
Mid-Western Regional Council
86 Market Street, Mudgee 2850

To Whom It May Concern:

This letter is inform you of my strong objection to the DA Proposal **DA0087/2022 - Proposed Demolition and Construction of Premises at 33-35 Horatio St Mudgee** to build a KFC adjacent to my property.

I object on these grounds:

- COMMERCIAL FOOD BUSINESS IN A TOURISM ZONE - KFC is not Tourism
- bad fit for area in a heavily residential and professional businesses that complement each other
- added traffic congestion on an already busy street
- noise pollution from truck brakes having to slow down with cars entering and leaving the premises, delivery trucks in the early mornings, daily garbage collection and loud exhaust from cars entering and leaving air pollution from traffic increase from trucks and cars
- light pollution from obnoxious signage
- accident hazard with no turning lanes or overtaking lanes for cars entering and leaving, particularly at the Horatio St and Gundy's Lane Junction
- offensive odour increase in rubbish surrounding the premises increase in vermin (rats and mice) & pests such as cockroches due to industrial garbage disposal
- co-mingling of pedestrians crossing the road causes traffic hazards & potential for harm
- anti-social behavior from clientel until 10pm at night
- The use of Lyon Lane for staff to eat and smoke
- semi-trailers & caravans parking in front of houses blocking egress from driveways affect on house prices as much as 70% in one instance
- detriment to existing businesses that will reduce income

Name: ANNE L ROTHE

Address: [redacted]

Signature [redacted] Date: 29-9-21

MID-WESTERN REGIONAL COUNCIL
RECORDS
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01 OCT 2021
☐ SCANNED
☐ REGISTERED

MID-WESTERN REGIONAL COUNCIL
Customer Services
RECEIVED
01 OCT 2021
☐ SCANNED

The General Manager,
Mid-Western Regional Council
86 Market Street, Mudgee 2850

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- The use of Lyon Lane for staff to eat and smoke
- semi-trailers & caravans parking in front of houses blocking egress from driveways affect on house prices as much as 70% in one instance
- detriment to existing businesses that will reduce income

Name: BARBARA WALL

Address: [redacted] MUDGEE

Signature [redacted] Date: 29.9.21

MID-WESTERN REGIONAL COUNCIL
RECORDS
RECEIVED
01 OCT 2021
☐ SCANNED
☐ REGISTERED

MID-WESTERN REGIONAL COUNCIL
Customer Services
RECEIVED
01 OCT 2021
☐ SCANNED

The General Manager,
Mid-Western Regional Council
86 Market Street, Mudgee 2850

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Name: Bryan Arabia

Address: [redacted] Mudgee

Signature [redacted] Date:

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Mid-Western Regional Council
86 Market Street, Mudgee 2850

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Name: Carissa Mack

Address: [redacted]

Signature [redacted] Date: 29/09/21

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Name: Courtney Johnston

Address: [redacted]

Signature [redacted] Date: 1-10-21

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Name: Courtney Richards

Address: [redacted]

Signature [redacted] Date: 30.9.21

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Name: Damien Beard.

Address: [redacted]

Signature [redacted] Date: 30/9/21

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Name: DARRYL HONEYSETT

Address: [redacted] MUDGEE

Signature [redacted] Date: 29-9-21

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Name: DAVID ATKIN

Address: [redacted] MUDGEE

Signature [redacted] Date: 30-9-21

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Name: ELSIE ATKINS

Address: [redacted]

Signature [redacted] Date: 30-9-2021.

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Name: HELEN EVANS

Address: [redacted], Mudgee.

Signature [redacted] Date: 29/9/21

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Name: INGRID RIDGE

Address: [redacted]

Signature [redacted] Date: 1/10/21

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Name: J. Tiper

Address: [redacted] Mudgee

Signature [redacted] Date:

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Name: Jack Nash

Address: [redacted] Mudgee 2850 NSW

Signature [redacted] Date: 30/9/21

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Name: Jan Gunther

Address: [redacted] Mudgee

Signature [redacted] Date: 30-9-21

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Name: Jim Browning

Address: [redacted] Mudgee

Signature [redacted] Date: 30/9/21

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Name: K STAWMORE.

Address: [redacted] MUDGEE

Signature [redacted] Date: 29/9/21

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Name: Kieran B Mahon

Address: [redacted]

Signature [redacted] Date: 30/9/21

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Name: Lynne Rhodes

Address: [redacted] Mudgee

Signature [redacted] Date: 29/9/21

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- detriment to existing businesses that will reduce income

Name: Mick Westcott

Address: [redacted]

Signature: [redacted] Date: 30·9·21

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The General Manager,
Mid-Western Regional Council
86 Market Street, Mudgee 2850

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Name: [redacted]

Address: [redacted]

Signature [redacted] Date: 30 9 21

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Name: PAM WILLIAMS

Address: [redacted] MUDGEE

Signature [redacted] Date: 30/9/21

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Name: R. Seis

Address: [redacted]

Signature [redacted] Date:

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Name: Rebecca Quinn

Address: [redacted] Street

Signature [redacted] Date: 30/9/21

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Name: Sarah Baume

Address: [redacted], Mudgee

Signature [redacted] Date: 1/10/21

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Name: Sarah Hey

Address: [redacted], Mudgee

Signature [redacted] Date: 30/9/21

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Name: Shannon Sunderland

Address: [redacted]

Signature [redacted] Date: 30-9-21

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Name: SIMONE HEY

Address: [redacted] MUDGEE

Signature [redacted] Date: 30/9/21

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Mudgee. 2850

1st October, 2021

The General Manager

Mr. Brad Cam

Mid Western Regional Council

MUDGEE.

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Dear Mr. Cam,

This letter is to state my strongest possible objection to Kentucky Fried Chicken moving to Horatio Street. That is no place for a business of that nature. Obviously there has been no consideration for the residents close by who will have to endure the smells, the traffic, the noise and inconvenience of that sort of operation. Horatio Street takes all the traffic coming into Mudgee from Sydney and all other areas to the east, including huge Big W trucks, delivery trucks from Sydney, trucks loaded with coal, trucks passing through Mudgee to go further west, Mudgee suburban cars. The traffic congestion will be horrific and will lead to accidents and bad tempered drivers. It's a lunatic and ill-thought out idea.

We live in a Heritage Area and I can't imagine why such a proposal was even considered. KFC should be moved to the industrial area along Sydney Road near Bunnings and other businesses.

I hope you will stop this proposal. To be given such short notice to object is not good enough. I only found out from a neighbour and by reading the Mudgee Guardian that the deadline is 4 pm today.

Yours faithfully

[redacted]

Veronica Burns

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Kayla Robson

From: Trevor Cork [redacted]
Sent: Friday, 1 October 2021 4:22 PM
To: Council
Cc: [redacted]
Subject: Development at 33-35 Horatio Street Mudgee (MPK 147456)
Attachments: ltr to Mr Brad Cam of MWRC.pdf

Development at 33-35 Horatio Street Mudgee
Development Application DA0087/2022

1 October 2021

Our Ref: TC:MK:147456
Your Ref:

Dear Mr Cam

Please find attached our letter of today's date.

Regards,
Trevor Cork
McPhee Kelshaw Solicitors and Conveyancers

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McPHEE KELSHAW
CONVEYANCERS

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DX 26729 SPRINGWOOD • EMAIL: info@mcpheekelshaw.com.au • WEBSITE: www.mcpheekelshaw.com.au

McPhee Kelshaw Solicitors and Conveyancers
[redacted] Springwood NSW 2777
[redacted]
E-mail : [redacted]

IMPORTANT NOTICE RE CORONAVIRUS:
In response to Government recommendations, we are limiting face-to-face conferences. To protect the health and wellbeing of both yourself and our staff, please do not attend at our offices without a prior appointment.

We remain fully operational and you are able to reach us by telephone or email using the contacts you have for us or at [redacted] If your matter is urgent, Paul McPhee can be emailed on [redacted] Trevor Cork on [redacted] and Steven Nicholson on [redacted]

We would appreciate your forwarding correspondence by email wherever possible to ensure a timely response.

In these challenging circumstances, we are committed to delivering the same high level of service you have come to expect, and extend to you best wishes for good health during this Coronavirus crisis.

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CONVEYANCERS

PAUL McPHEE
TREVOR CORK
STEVEN NICHOLSON
ANN SCHRALE
JUSTINE COLE
ANASTASIA DALITZ
ASHLEY DEWELL
DEANNE COLE

Our Ref: TC:DC:147456

Your Ref: DA87/2022

1 October 2021

Mr Brad Cam
General Manager
Mid-Western Regional Council
86 Market Street
Mudgee NSW 2850

By email: council@midwestern.nsw.gov.au

Dear Mr Cam,

Development at 33-35 Horatio Street Mudgee (Development Site)
Development Application DA87/2022 (DA87/2022)

1. We act for Mr Brian Murdoch, the owner of the residential property known as [redacted] Mudgee.

2. Our client's property adjoins the site of the proposed development identified in the heading to this letter (site).

3. We are instructed by our client to lodge an objection on his behalf in relation to the proposed demolition of the existing dwelling house on the site and the subsequent construction and operation of a Kentucky Fried Chicken (KFC) outlet. That proposed development would bring an intensive and intrusive retail use, operating for very long hours, into the immediate proximity of our client's dwelling house.

4. Our client's objections to DA87/2022 are as follows.

Zoning and Land Use

5. The site is zoned of SP3 – Tourist. Within that zone, development for the purpose of food and drink premises is permissible with consent. The premises proposed in DA87/2022 are takeaway food premises, with impacts that are noted below.

6. Although our client's property and the site, and many adjoining properties, are zoned SP3 – Tourist, that zoning does not reflect the current use of the site or the current use of the surrounding precinct. The dominant character of the Horatio Street precinct, and surrounding areas, is residential.

7. A complementary use of premises in Horatio Street, in this residential area, is that of low-impact professional offices, with restricted hours of operation and relatively low visitor numbers. The proposed use under DA87/2022 is not consistent with these established low-impact uses in the area.

8. The objective of the SP3 – Tourist zone is "to provide for a variety of tourist-oriented development and related uses". That objective requires the Council to consider the meaning of the phrase "tourist-oriented development".

9. One accepted definition of that phrase is a development that attracts more than 50% of its patronage from tourists or visitors to the area in which it is located. In fact, the proposed development is the relocation of an existing KFC outlet, operated by the proponent of the development on a site within the Mudgee township. The relocation of the business is proposed for the commercial convenience of the operator of the KFC outlet. In that regard, our client notes the reference to the opportunity provided by the site for the business to be located in owner-occupied premises.

10. The proposed KFC development on the site is therefore not a new business and it is not tourist oriented. The existing KFC outlet operates to serve the residents of Mudgee and adjoining areas and that will continue to be the case. While visitors to the Mudgee area may stop at a takeaway food outlet, the applicant faces the task of persuading the Council that the development does fall within the sole objective of the SP zone.

11. In that regard, we note the Council's obligation under clause 2.3(2) of Mid-Western Regional Local Environmental Plan 2021, which requires that the Council "must have regard to the objectives for development in a zone when determining a development application in respect of land within the zone". The Council is therefore required, when assessing and determining DA87/2022, to determine whether the relocation of the existing Mudgee KFC outlet to the site, and the operation of that outlet from the site, is development for the purpose of a tourist-oriented development.

12. In our client's submission, if the Council is not satisfied that the majority of revenue derived by the KFC outlet is derived from tourists, then the proposed development does not satisfy the sole zone objective. In that circumstance, having regard to the objective, the Council would determine the development application by refusal.

MID-WESTERN REGIONAL COUNCIL DEVELOPMENT CONTROL PLAN (DCP)

Insufficient onsite car parking

13. The proposed development includes a 40 seat dine-in premises and a drive-through facility. The required number of parking spaces under the DCP are as follows:

    (a) 10 spaces to cater for the drive-through facility; and

    (b) The greater of either: 11 car spaces for every 7m2 or 1 space per 3 seats.

14. The SEE states that the development will have a total of 23 car parking spaces provided. The SEE states that the relevant floor area to determine this number is 92m2. However, the SEE does not give any details as to how that area was calculated.

15. Given that the total floor area of the proposed building is 273m2, it is highly likely that the relevant area for the purpose of the calculated car parking (being the total excluding stairs, amenities and corridors) would be significantly greater than 92m2.

16. Our client submits that the Council must require the applicant to transparently disclose the calculations and assumptions that underpin the conclusion that the total applicable floor area for the building is 92m2. Once that information is available to the Council, the information concerned should be notified to our client and to all other parties who received the original notification of DA87/2022.

17. Our client submits that there needs to be more detail given on this issue as traffic congestion and car parking availability will likely have a significant noise impact on the occupants of the adjoining and adjacent dwelling houses. Our client's home at [redacted] is likely to be the property most significantly affected by those noise impacts.

18. Even on the numbers provided in the SEE, there should be 24 spaces on the site, calculated as 10 spaces for the drive through plus 14 spaces based on the 1 space per 3 seats for 40 seats. Yet in the proposal there is only 23.

Signs

19. **Above awning signs**: Architectural drawing TP302, Proposed 3D views, shows multiple examples of above awning signs. However as per the section 4.4 Signs, General Requirements, at page 31 of the DCP, signs mounted above the awning of a building are prohibited.

20. **Post supported (pylon) sign**: Architectural drawing TP400, External Signage Details, states that the 'KFC bucket' pylon sign is to be a total of 8.5 metres tall, with the KFC bucket proposed dimensions of 2.25m x 2.25m creating an advertising area in excess of 5m2. The maximum height allowed for tourist signage, under the DCP, is 3 metres, with an advertising area of 3m2. The proposed pylon sign is not in accordance with the DCP.

21. **Tourist signage**: The DCP clearly states that signs 'should not include the use of bright or fluorescent colours or highly reflective or illuminated materials' (DCP, 4.4 Signs, page 36). Architectural drawing TP400, External Signage Details provides details of extensive use of the KFC 'bright red' colour, along with multiple uses of illuminated signs on the S01 'KFC bucket' post supported (pylon) sign, S02 drive through signs with the words 'C'mon thru', S04 digital menu board, S05 digital preview board, S08 'Colonels sign', S10 stripe set, S12 'Kentucky Fried Chicken' sign, and S17 delivery area sign, all of which are not in accordance with the DCP.

22. The dwelling house located on our client's property has been the family home of the Murdoch family for many decades. Our client is very concerned that the illuminated signs proposed for the development will generate very significant light pollution. Our client has been unable to identify, from a review of the available documents supporting DA87/2022, the impacts of the signage lighting and light pollution on his property. Further, our client does not know whether the signs will be illuminated 24 hours a day, 7 days per week.

23. In our client's submission, if the Council does approve the development, which it should not, then the hours of operation of the KFC must be significantly restricted and all signage must be turned off when the KFC outlet is not in operation. However, we repeat our client's primary submission that the proposed development should not be approved.

IMPACT ON NATURAL AND BUILT ENVIRONMENTS

Amenity/streetscape

24. As referred to above, the Horatio Street precinct is dominated by residential buildings. The building proposed in DA87/2022 is not in keeping with the existing streetscape of the area, including period housing, the development would be located directly opposite an area mapped as Conservation Area - General. This type of development is entirely inappropriate in the precinct given the existing amenity and streetscape, and is not consistent with the existing heritage character of the area.

Stormwater management:

25. The proposed development would result in a total impervious area of 90% of the site, compared to the existing (pre-development) impervious area of the site of 25%. The Stormwater Management Plan submitted with DA 87/2022 does not adequately address the issue of stormwater flows from the site. The application also fails to address the adequacy of the Council's existing stormwater drainage infrastructure to accommodate the increased flows of stormwater off the site.

Impact on neighbouring residential properties including noise impacts

26. The visual and noise impacts of the development on neighbouring properties have not been adequately addressed in the development application. The U-shaped driveway is located in close proximity to neighbouring properties to the east and south of the development site, and the carpark is located in close proximity to the western boundary. Fencing and vegetation screening has been proposed however it appears insufficient to address the volume of proposed traffic or the use of the U-shaped driveway for delivery trucks to access the loading dock at the rear of the premises.

27. Our client's property at [redacted] will be directly and adversely affected by the conduct of the proposed development. Multiple motor vehicle movements, within metres of the windows of our client's home, will take place. Delivery trucks will move through the site and past our client's home. In the case of delivery trucks, the noise of those trucks will be compounded by the emission of diesel fumes.

28. These impacts will not be mitigated to any significant extent by fencing or by landscaping. Landscaping, if it was to be effective, would take years to establish. However, there is simply insufficient room within the site to accommodate deep landscaping between the boundary of the proposed driveway and our client's home.

29. DA 87/2022 is not supported by an acoustic report. It is difficult to understand that this omission, given the proximity of our client's home, and other adjoining and adjacent residential properties to the site. The noise impacts on our client's home and other properties, arising from the passing of motor vehicles through the site, including parking and manoeuvring of vehicles, is a critical element in the Council's assessment of the application.

30. The drawings available to our client do not provide precise dimensions for the development, including the driveway and associated car spaces and the area available for landscaping. However, it is apparent that every vehicle which moves through the site will do so within metres of our client's home.

31. This is an application in which the applicant seeks to bring to our client's home unacceptable impacts, to secure a commercial benefit. At the very least, the applicant should have prepared and made available for inspection rigorous noise and pollution assessment reports, to allow our client, and the owners of other properties that may be similarly affected, to evaluate the impacts of the development.

32. The impacts will be exacerbated by the very long proposed operating hours. Those hours are 10.30am to 10.00pm. Those hours of operation may be suitable in a built up, well established commercial area. They are totally unacceptable in close proximity to our client's hours and to other dwelling houses and in an established residential precinct.

33. The extended operating hours for the development, as proposed by the applicant, will have very severe adverse impacts on our client and on other property owners. On this ground alone, the development should be refused. The development application does not appropriately balance the interests of the applicant and the interests of the owners of adjoining and adjacent residential properties.

Traffic

34. Increased traffic flows along Horatio Street, with potential hazards as cars and trucks stop the flow of traffic as they wait to enter the site.

35. The development application proposes the provision of traffic calming road markings and the introduction of a right turn lane from Horatio Street into the site. As a result, the very broad street that is now a feature of the entry to Mudgee will be line-marked, to slow traffic and to direct traffic for the benefit of the proposed development. In our client's submission, that dislocation of the entry to Mudgee, and the interference with the traditional and well-known road pattern within Mudgee and its approaches, is not justified. The interruption of traffic flow will also have adverse impacts on the occupants of residential properties adjoining and

adjacent site, should the flow of traffic along Horatio Street be interrupted by vehicles attempting to stop and to turn to enter the new KFC outlet.

Noise Pollution: Delivery Vehicles

36. Page 10 of the SEE states that a 12.5m long truck will make deliveries twice a week and a 4.2m truck at least 15 times a week. These vehicles are likely to be diesel powered. Their movements within the site will cause significant disturbance and noise for the immediate neighbours, including our client.

37. The site plan does not accurately show the size and location of the neighbouring dwellings and where they sit in relation to the driveway and specifically the loading bay.

38. The development application is not, as already noted, supported by an acoustic report. The noise impacts to be generated by large delivery vehicles, and the pollution to be generated by the emission of diesel fumes of those vehicles, should be subject of expert advice and assessment to the allow the Council to undertake its own assessment.

Air pollution / offensive odour

39. The preparation of take-away food in large quantities has the potential to create adverse effects on the amenity of the area. No odour impact assessment report has been provided, in support of DA 87/2022.

40. From our client's perspective, this is a most important matter. The occupants of our client's home face the prospect of being affected by food odours emanating from the proposed KFC outlet for approximately 12 hours every day, seven days a week. An odour impact assessment should also be provided to allow the Council to fully and appropriate assess the development application.

Potential for increased rubbish litter in area

41. Based on the operation of other similar high-volume take away food outlets it is realistic to anticipate that patrons of the KFC may dispose of their rubbish by way of littering, resulting in pollution of the surrounding areas. Where bins are provided, those bins may overflow if not emptied frequently. This would in turn create adverse environmental impacts including pollution and act as a food source for vermin.

SOCIAL AND ECONOMIC IMPACTS

Economic impacts on existing food and drink premises in Mudgee

42. The Council, as one of the major promoters of tourism in the Mudgee district, will be aware that tourists do not come to Mudgee for the purpose of visiting a KFC outlet. Takeaway food outlets such as KFC cater predominately for the permanent residents of an area, with some limited use by visitors.

43. DA 87/2022 acknowledges that the existing KFC outlet in Mudgee, which is owned by the proponent of development, will be relocated to the site, if DA 87/2022 is approved. The submissions concerning employment at the site, if the development proceeds, must be assessed in light of that reality.

44. If the existing KFC business is simply relocated to the site, then there will be no net increase in local employment. The jobs at the existing outlet will simply transfer to the new outlet. The development therefore proposes no significant community benefit. The only benefit proposed is to the proponent, at a cost of very significant adverse impacts on our client and on the occupants of dwelling houses adjoining the adjacent to the site.

PUBLIC INTEREST

This development is not in the public interest

45. The proposed development does not provide a "socially desirable good", in the same way that development for the purpose of medical professional rooms or some other service profession would provide. The proposed development seeks to relocate an existing retail outlet. The services that the proposed development will provide are already provided to residents of the Mudgee district.

46. In summary, in our client's submission, the adverse impacts of the development significantly exceed any benefits that the development may generate. In fact, it is difficult to identify any benefits flowing to the Mudgee community from the proposed development given the existence of the KFC outlet that is owned and operated by the proponent elsewhere within the Mudgee township.

47. Should you wish to discuss the above please contact either Trevor Cork or Deanne Cole of this office on [redacted].

Yours faithfully

[redacted]

McPhee Kelshaw

Kayla Robson

From: Sophia Louison[redacted]
Sent: Friday, 1 October 2021 4:30 PM
To: Council
Subject: DA0087/2022 PROPERTY: Lots 2 & 3 DP 743615

Application number: DA0087/2022
PROPERTY: Lots 2 & 3 DP 743615
PROPOSED DEVELOPMENT: Proposed Demolition and Construction of Food and Drink Premises at 33-35 Horatio Street MUDGEE NSW 2850

I am writing to object to the abovementioned DA for the following reasons:

Approval for this development may set a precedence for a similar development to occur at 67 Horatio Street and thus create a fast-food chain along the street. Also, it could attract anti- social behaviour in the neighbourhood and reduce close proximity property prices.

Traffic and Congestion and Street:

- Throughout the related information supporting the DA, Horatio Street is repeatedly referred to as a highway.
- Horatio Street is already a busy road. Within the vicinity of the proposed development the intersections of Lawson & Horatio could experience further congestion and build-up of traffic of vehicles heading East turning into the proposed development car park and traffic coming out of it.
- Noise and extra traffic and congestion.
- There is an allowance for 6 vehicles in the drive through, during the peak times the cars could bank up flowing onto Horatio Street, creating a traffic hazard and traffic congestion.
- Larger and towing vehicles will park on Horatio blocking houses driveways and again possibly and creating a traffic hazard and traffic congestion. This is commonly seen on Horatio near McDonalds and on Church Street near the currently located KFC.
- Removal of the kerbside parking and pushing the eastbound travel lane closer to the kerb will prove detrimental and dangerous to bike riders that commute in area.
- Added noise and pollution from traffic slowing down.

Visual Impact and Streetscape

- Environmental Effects 7.3 Visual Amenity and 7.5 Social and Economic Impacts. I don't agree that the proposed development would not dominate the local streetscape. I can't envisage how a big red and white lit up bucket would be considered sympathetic to the local streetscape. Also, I do not agree with the statement nor consider it relevant, regarding how the proposed development would attract community to the area and would facilitate ongoing community engagement with the Mudgee Heritage Conservation Area.
- The SOHI paragraph 5 states "This is a commercial area on a highway and is unlikely to attract new low-level housing of the type suitable for in-fill development…. "This is not a commercial area and it is not a

highway. It is a street with homes in a "Tourist" zone. The proposed development does not fit the streetscape, add to it, or benefit. Also, the vacant land opposite is Zoned R3 Medium Density.

Sophia Louison
[redacted]
Mudgee NSW 2850

[redacted]

Kayla Robson

From: council@midwestern.nsw.gov.au
Sent: Sunday, 26 September 2021 12:36 PM
To: Council
Subject: Submission E-Form

todaysdate : 26/09/2021
developmentapplicationnumber : DA0087/2022
proposeddevelopment : Demolition and building of a KFC at 33-35 Horatio Street, Mudgee.
Emailaddress : [redacted]
Yourname : James Browning
Address : [redacted], Mudgee, 2850
phonenumber : [redacted]
reasonsforsubmission : Horatio Street is an extremely busy street and highway. The entrance to my lane (Gundys Lane) is directly opposite the proposed KFC. The increased traffic flow in Horatio Street in recent years has made it extremely difficult to turn right out of my lane and often I have to turn left and head down town via George Street. There is also construction due soon on 8 units next to 30 Horatio Street which will also have an entrance via Gundys Lane causing even more congestion in this exact area. The site for the development will require entry and exit to and from Horatio Street on what is a very busy one lane Street/Highway. A corner location would make a lot more sense rather than mid-block. The KFC in George Street Bathurst often has cars queued up in the drive-through that extend out on to the road causing disruption to traffic and this street is not one lane. More and more people are using takeaway food outlets and the traffic is only going to get worse. The area around the development is residential, with many aged residents, and delivery trucks at all hours and early and late customers is not conducive to a pleasant environment to live. There is also the issue of rubbish storage and removal and litter in the street. Noise and light pollution will also be an issue and parking of truck customers at all hours on the street will exacerbate this. Your consideration of these concerns would be greatly appreciated.
politicaldonationsrequirements : Yes

Kayla Robson

From: council@midwestern.nsw.gov.au
Sent: Monday, 27 September 2021 6:08 PM
To: Council
Subject: Submission E-Form

todaysdate : 27/09/2021
developmentapplicationnumber : DA0087/2022
proposeddevelopment : Move of KFC in Mudgee
Emailaddress : [redacted]
Yourname : Alison Heij
Address : [redacted], Mudgee 2850
phonenumber : [redacted]
reasonsforsubmission : I would like to express my concerns to the proposed move of KFC to Horatio Street. Reasons I think this should not go ahead. - It will increase traffic making it even harder for residents to get out of their driveways every day. The street is busy enough as it is. - increased noise pollution from traffic and customers until eod trading. 10pm - Increased air pollution from traffic and the fast food chain itself. - increase in rubbish affecting the area - it may negatively affect the value of properties nearby - customers parking where residents park their vehicles and blocking council rubbish collection services. It's a residential zone and should stay that way.
politicaldonationsrequirements : Yes

STATEMENT OF HERITAGE IMPACT

Proposed Development at

33-35 Horatio Street

Mudgee

Job No. 9188
August 2021

Heritage 21
CULTURAL BUILT HERITAGE IN THE 21ST CENTURY

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CONSERVATION ARCHITECTS AND HERITAGE CONSULTANTS
Suite 48, 20-28 Maddox Street, Alexandria, NSW 2015
(02) 9519 2521
reception@Heritage 21.com.au

Heritage Impact Statements	Conservation Management Plans	On-site Conservation Architects
Photographic Archival Recordings	Interpretation Strategies	Expert Heritage Advice
Fabric Analyses	Heritage Approvals & Reports	Schedules of Conservation Work

TABLE OF CONTENTS

Acknowledgement of Country

Heritage 21 wishes to acknowledge the Traditional Owners of country throughout Australia and recognise their continuing connection to land, waters and community. We pay our respects to them and their cultures; and to elders both past and present.

Cover page: Subject site at 33-35 Horatio Street, Mudgee, from the south side of Horatio Street, looking towards the front façade. (Source: James Consadine, 31.05.21)

The following Table forms part of the quality management control undertaken by Heritage 21 regarding the monitoring of its intellectual property as issued.

Issue	Description	Date	Written by	Reviewed by	Issued by
1	Draft report (D1) issued for comment.	20.08.2021	KT	SDA	KT
2	Draft report (D2) issued for comment.	23.08.2021	KT	-	KT
3	Report issued for DA.	24.08.2021	KT	-	KT

1.0 INTRODUCTION

1.1 Background

This Statement of Heritage Impact ('SOHI' or 'report') has been prepared on behalf of the owner of the subject site in the context of a development application for a new development at the site.

1.2 Site Identification

The subject site is located at 33-35 Horatio Street, Mudgee, which falls within the boundaries of the Mid-Western Regional Local Government Area (LGA) and comprises Lots 2 and 3, DP 743615. As depicted in Figure 1 below, the site is located on the south side of Horatio Street, between Lawson and George Streets. The site is located in proximity to the State Listed Mudgee Train Station and comprises a vacant lot as well as a Post-War, single-storey residence.

Figure 1. Contemporary aerial view of the site highlighted in yellow and surrounding urban environment (Source: NSW Land and Property Information, 'SIX Maps', n.d., http://maps.six.nsw.gov.au/).

1.3 Heritage Context

1.3.1 Heritage Listings

The subject site **is not** listed as an item of environmental heritage under Schedule 5 of the Mid-Western Regional Local Environmental Plan 2012 ('MWRLEP'). It also **is not** listed on the NSW State Heritage Register, the National Heritage List, the Commonwealth Heritage List, the National Trust Register (NSW), or the former Register of the National Estate.[1]

1.3.2 Heritage Conservation Areas

As depicted in Figure 2 and Figure 3 below, the site is situated within the boundaries of the Mudgee Heritage Conservation Area ('the HCA'), listed under Schedule 5 of the MWRLEP 2012.

Statutory List – Legislative Requirements				
List	**Item Name**	**Address**	**Significance**	**Item No.**
MWR Local Environmental Plan 2012	Mudgee Heritage Conservation Area	-	Local	C1

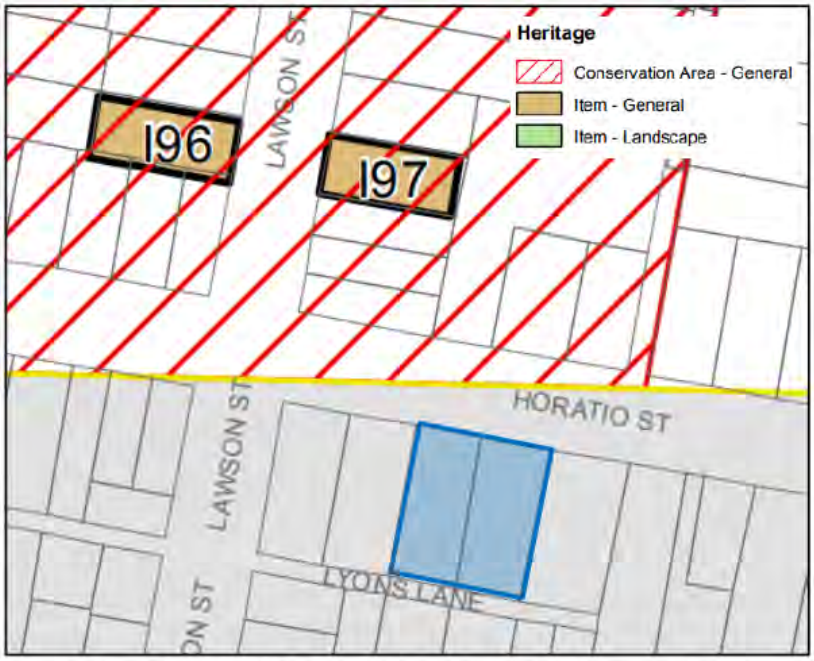

Figure 2. Detail from Heritage Map HER_006G; the subject site is highlighted in blue and heritage items, some of which are within the vicinity of the site, are marked brown. The Mudgee HCA is cross hatched red (Source NSW Legislation Online, https://eplanningdlprod.blob.core.windows.net/pdfmaps/5270_COM_HER_006G_010_20120618.pdf, annotated by heritage 21).

[1] The Register of the National Estate ceased as a statutory heritage list in 2007; however it continues to exist as an inventory of Australian heritage places.

Figure 3. Detail from Heritage Map HER_006H; the subject site is highlighted in blue and heritage items, some of which are within the vicinity of the site, are marked brown. The Mudgee HCA is cross hatched red (Source: NSW Legislation Online, https://eplanningdlprod.blob.core.windows.net/pdfmaps/5270_COM_HER_006H_010_20120618.pdf, annotated by Heritage 21).

Properties located within a HCA in NSW typically fall into one of the three following classifications:

- Contributory Item – the property makes a positive contribution to the character and heritage significance of the HCA;
- Neutral Item – the property does not contribute nor detract from the character and heritage significance of the HCA; or
- Non-Contributory Item – the property detracts from the character and heritage significance of the HCA.

Heritage 21 is of the opinion that as a Post-War era dwelling constructed in the late 20th century, the subject is a **non-contributory** item within the HCA.

1.3.3 Heritage Items in the Vicinity

As depicted in Figure 2 and Figure 3 above, the subject site is situated within the general vicinity of the following heritage items listed under Schedule 5 of the MWRLEP 2012. The details of the listings are as follows:

Items Listed in the Mid-Western Regional LEP 2012			
Item/HCA Name	**Address**	**Significance**	**Item Number**
Mudgee Railway Station, yard and locomotive yard	Wallerawang-Gwabegar railway	State	I83
House	6-8 Inglis Street, Mudgee	Local	I81
Terrace Houses	9–11 and 13–15 Inglis Street, Mudgee	Local	I82
House	64 Lawson Street, Mudgee	Local	I96
House	65 Lawson Street, Mudgee	Local	I97
Items Listed in the NSW State Heritage Register			
Item/HCA Name	**Address**	**Significance**	**Item Number**
Mudgee Railway Station, yard and locomotive yard	Wallerawang-Gwabegar railway, Mudgee	State	5012115

Among the heritage items in the vicinity listed above, the subject site is adjacent to or within the visual catchment of Item I81 (6-8 Inglis Street, Mudgee). Accordingly, the impact of the proposal on this item is discussed in Section 6.0 of this report.

1.4 Purpose

The subject site is located within the Mudgee Heritage Conservation Area and is located in the vicinity of a heritage item, both of which are listed under Schedule 5 of the MWRLEP 2012. Sections 5.10(4) and 5.10(5) of the MWRLEP 2012 require Mid-Western Regional Council to assess the potential heritage impact of non-exempt development, such as the proposed works (refer to Section 5.0), on the heritage significance of the abovementioned heritage item and heritage conservation area and, also, to assess the extent (whether negative, neutral or positive) to which the proposal would impact the heritage significance of that heritage item and heritage conservation area. This assessment is carried out in Section 6.0 below.

Accordingly, this SOHI provides the necessary information for Council to make an assessment of the proposal on heritage grounds.

1.5 Methodology

The methodology used in this SOHI is consistent with *Statements of Heritage Impact* (1996) and *Assessing Heritage Significance* (2001) published by the Heritage Division of the NSW Office of Environment and Heritage and has been prepared in accordance with the principles contained in the most recent edition of *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance* 2013 ('Burra Charter').

1.6 Authors

This Statement of Heritage Impact ('SOHI' or 'report') has been prepared by Kieran Moss, reviewed by Siena Di Giovanni-Arundell and overseen by Paul Rappoport, of Heritage 21, Heritage Consultants.

1.7 Limitations

- This SOHI is based upon an assessment of the heritage issues only and does not purport to have reviewed or in any way endorsed decisions or proposals of a planning or compliance nature. It is assumed that compliance with non-heritage aspects of Council's planning instruments, the BCA and any issues related to services, contamination, structural integrity, legal matters or any other non-heritage matter is assessed by others.
- This SOHI essentially relies on secondary sources. Primary research has not necessarily been included in this report, other than the general assessment of the physical evidence on site.
- It is beyond the scope of this report to address Indigenous associations with the subject site.
- It is beyond the scope of this report to locate or assess potential or known archaeological sub-surface deposits on the subject site or elsewhere.
- It is beyond the scope of this report to assess items of movable heritage.
- Heritage 21 has only assessed aspects of the subject site that were visually apparent and not blocked or closed or to which access was not given or was barred, obstructed or unsafe on the day of the arranged inspection.

1.8 Copyright

2.0 HISTORICAL CONTEXT

2.1 Local History

The following historical information has been sourced from the Heritage Inventory Sheet for the Mudgee Railway Precinct:[2]

"The official opening of the Mudgee line in September 1884 was the culmination of over twenty years effort on the part of the Mudgee community to secure a rail line to Mudgee and surrounding districts. Agitation for a railway service to Mudgee was led by a committee of local residents which was formed in 1870 and later became the Mudgee Railway League (Sheedy, 1988). A line from Bathurst to Mudgee and Walgett was proposed in 1873 but never constructed, with a later survey (in 1876) confirming the eventual route via Wallerawang and Capertee.

By 1879 the NSW Government confirmed that the line to Mudgee would be built and on 15 May 1881 the line opened as far as Capertee. In the same year a contract was awarded for construction of the remaining section of the line (from Capertee to Mudgee) and in 1883 a contract let for construction of the passenger station, Station Master's house, two gatekeepers' cottages, accommodation for guards, engine drivers and porters, a goods shed, engine house, coal stage, water tank and a 50-foot turntable (Sheedy, 1988).

The arrival of the mail train on 10 September 1884 marked the opening of the line and the beginning of two days of festivities, including a large picnic at Market Square (now Robertson Park) which was attended by most of the population of Mudgee. Six trains arrived from Sydney with dignitaries including the Premier, Edmund Barton, the Railway Commissioner, and local members of Parliament. On the next day, 11 September, despite heavy rain there was a procession, outdoor feast, banquet and ball to celebrate the opening of the railway line (Sheedy, 1988; Cottee, 2004).The station building was, at the time of its opening, regarded as one of a select group of significant railway structures in NSW, surpassed only by regional stations in Newcastle, Albury and Hay and categorised as one of approximately twenty 'first class' stations built between 1870 and 1890 (Sheedy, 1988).

Between 1884 and 1987, various buildings and other structures were erected, and numerous changes made to the original station and yard. These included the addition of a loco store and engine shed in 1891, installation of a 60 foot turntable and picket fence in 1903, a truck weighbridge in 1909, railway refreshment rooms and a parcels office in 1911, a foot warming furnace in 1912, railway refreshment room in 1917, conversion of the 'Out of' room into a bar and provision of a new 'Out of' room and lamp room in 1917, and the construction of a Railway Institute building and telegraph office in 1920. Electric power and lighting were switched on in 1924 (Sheedy, 1988; Cottee, 2004). The line was extended to Gulgong and Dunedoo in 1910

[2] NSW Environment and Heritage, Mudgee Railway Precinct, https://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=3150064

and to Coonabarabran in 1917. By the late 20th century several structures were demolished, including the Station Master's residence in 1973, but as late as 1987 a new barracks building was erected. Mudgee Station was classified by the National Trust (NSW) in 1977 and listed on the Register of the National Estate in 1978. Passenger train services ceased in 1985 but in subsequent years the station building has been used as accommodation for Freightcorp and Pacific National and has been leased by community groups. In 2005, much of the station building was repaired and the main part of the station building converted into a restaurant, café, and bar which opened in February 2006.

Although, initial research did not bring to light the exact date when the subject lot was subdivided and removed from the state significant Mudgee Railway Station precinct, it is plausible that the existing train crew facility would have been moved from the main Railway Station Building when the redevelopment and reuse to the restaurant and bar was undertaken in the 1990s."

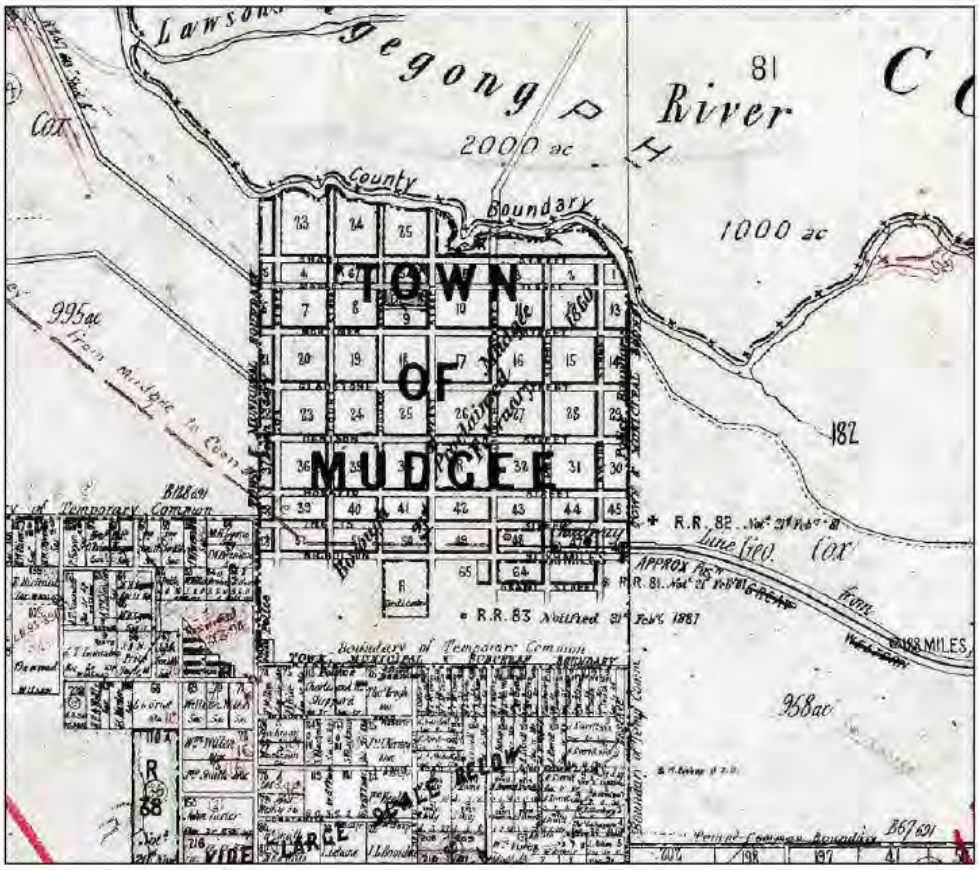

Figure 4. Excerpt from an 1884 Parish Map of Mudgee (Source: NSW Historic Land Records Viewer, https://hlrv.nswlrs.com.au/).

Figure 5. An excerpt from an 1896 Parish Map of Mudgee (Source: NSW Historic Land Records Viewer, https://hlrv.nswlrs.com.au/).

2.2 Site Specific History

The lands surrounding the subject site were originally reserved as part of a town plan for a government settlement at Mudgee, NSW. The lots reserved in this original plan were progressively sold off as the population of the town grew (see Figure 6 below). By 1875, Mudgee had grown to the extent that the Lot containing the subject site was advertised for auction.[3]

[3] NSW Land Registry Services, Historic Land Records Viewer, Vol. 206 Fol. 145, https://hlrv.nswlrs.com.au/

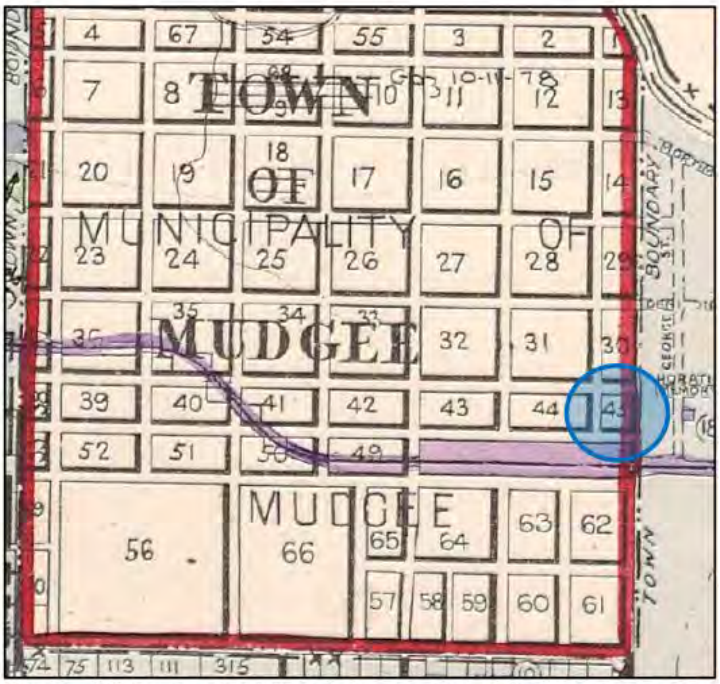

Figure 6. Excerpt from the 1971 Mudgee Parish Map, showing the original allotments reserved for the "Town of Mudgee". Number 45 – circled in blue – indicates the approximate location of the subject site within this original plan (Source: NSW Historic Land Record Viewer, https://hlrv.nswlrs.com.au/, annotated by Heritage 21).

The land containing the subject site was sold to Elizabeth Garbut at upset price after a failed auction (see Figure 7). Elizabeth Aldridge Innes and Henry Frost would manage the property in trust for Elizabeth Garbut following its purchase in 1875.[4] In 1876, the Lot was transferred to Elizabeth Garbut of Mudgee, Widow, who remained sole owner of the site until 1886, where it was sold to George Cadill of Mudgee.

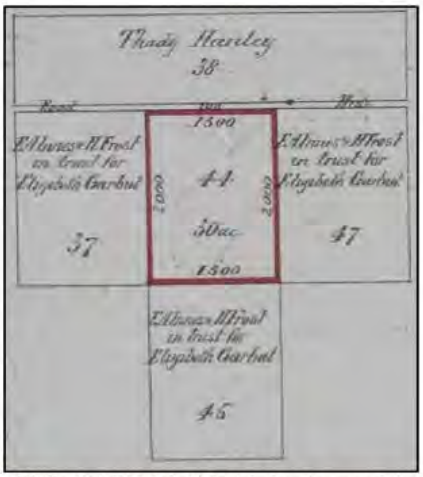

Figure 7. Excerpt from Certificate of Title, Vol. 206 Fol. 145, showing the approximate boundaries of the subject site (Source: NSW Historic Land Records Viewer, https://hlrv.nswlrs.com.au/).

[4] *Ibid.*

Cadill would inhabit the site from 1886 to 1915, where he would then lease the property to a James Welsh of near Mudgee, Farmer. This lease would continue until 1939, following the transfer of the site from Cadill to Thomas Wyatt Cox in 1938. Thomas Wyatt Cox would remain owner of the site until 1946, where it was sold to Harold James Murkins of Spring Flat, Farmer and Grazier.[5]

Figure 8. Excerpt from Certificate of Title, Vol. 206 Fol. 145, showing the date of transfer of the property from Elizabeth Garbut to George Cadill of Mudgee (Source: NSW Historic Land Records Viewer, https://hlrv.nswlrs.com.au/).

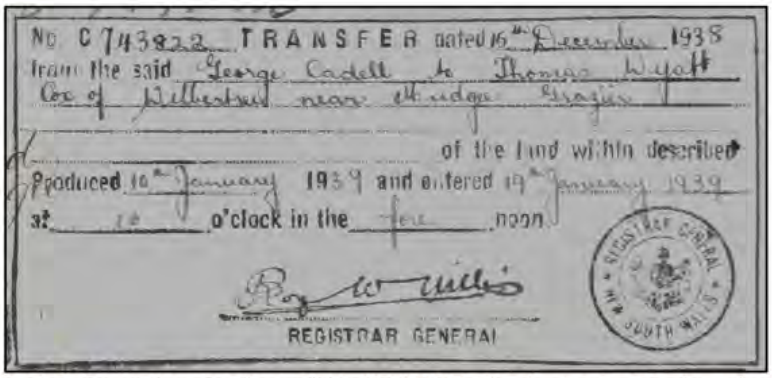

Figure 9. Excerpt from Excerpt from Certificate of Title, Vol. 206 Fol. 145, showing the date of transfer of the property from George Cadill to Thomas Wyatt Cox of Wilberstead, near Mudgee, Grazier (Source NSW Historic Land Records Viewer, https://hlrv.nswlrs.com.au/).

Murkins would own the site until 1972. Following the repayment of the mortgage, the site was purchased by Mervyn John Consadine.[6] Following this, Heritage 21 has not been able to find further Certificates of Title or historical records to further indicate the history of the subject site.

[5] NSWLRS, HLRV, Vol. 206 Fol. 145.
[6] NSWLRS, HLRV, Vol. 206 Fol. 145.

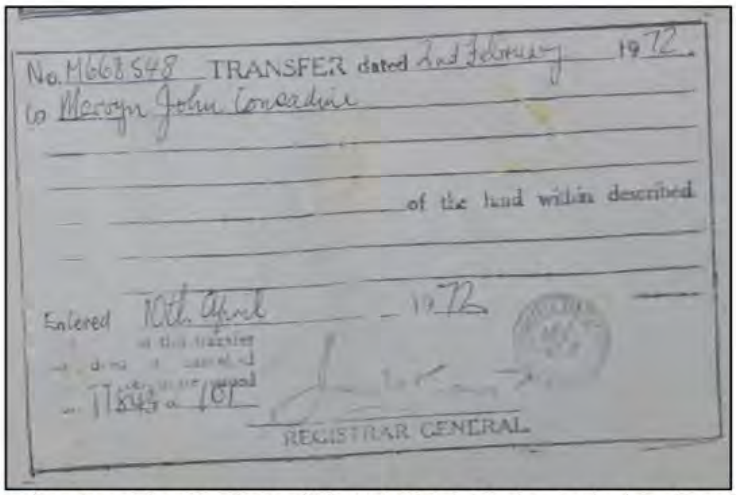
No. M668548 TRANSFER dated 2nd February 1972
to Mervyn John Consadine
of the land within described
Entered 10th April 1972
REGISTRAR GENERAL

Figure 10. Excerpt from Excerpt from Certificate of Title, Vol. 206 Fol. 145, showing the date of transfer of the property to Mervyn John Consadine in 1972 (Source NSW Historic Land Records Viewer, https://hlrv.nswlrs.com.au/).

3.0 PHYSICAL EVIDENCE

3.1 The Setting

The site is located at 33-35 Horatio Street, Mudgee. The town of Mudgee is located 261 kilometres north-west of Sydney, within the Cudgegong River valley.

The subject site fronts Horatio Street along its north boundary. Hotatio Street is the primary thoroughfare passing through Mudgee and runs east to west. It features green verges on both sides and is lined with mature trees. The north side of the street features a concrete footpath while the south side does not. The road itself is realtively flat, featuring a shallow basin where the subject site is located. A small creek runs through the subject site and underneath Horatio Street at this section.

The side garden space extends south past the property boundary and continues until it reaches Inglis Street to the south. This green space features a small creek, which is shared with the heritage listed property located at 6-8 Inglis Street, Mudgee. This heritage item is also situated wihtin the Mudgee Heritage Conservation Area and abuts to the southern boundary of the subject site.

3.2 Physical Description

The existing single storey residence located on the subject site is of a Post-War architectural style, featuring a flat roof with exposed rafters and pale face brick differentiated by a three-step setback from Horatio Street. There is a garage structure at the rear of the subject site. Heritage 21 however, did not observe the garage structure or garden at rear of the property. The site features a prominent setback from Horatio Street, with expansive garden spaces at its front and rear.

The front entrance to the site features a timber slab door, with sidelights. The door is simple in design, with minimal ornamentation except for a doorknob and knocker. The doorframe and each of the front facing windows are timber framed and there is a short concrete verandah extending from the front façade. This verandah ends with a ramp that leads toward the residence's driveway access.

A carport is attached to the west side of the residence and also contains a side access to the subject site. The carport is supported by a low brick fence which is accompanied by metal poles that extend to the flat roof.

3.3 Condition and Integrity

The current form of the building has retained legibility of the original scale and character of the house. The images received from James Consadine on 31 May 2021 do not portray the condition and integrity of the site's internal fabric. However, the images provided indicate that the front façade of the subject site remains largely intact and in good condition.

3.4 Views

The subject site is a readily visible item within the context of the Mudgee HCA. As depicted Figure 2 and Figure 3 above, the primary view lines to the primary elevation of the site are made from within the Mudgee HCA and Horatio Street. The proposed works would be visible from this perspective and would alter views from the site to those places.

The secondary view lines into the rear and side elevations of the site are made from within the HCA, Horatio Street, parts of Inglis Street and from Item I81. These secondary view lines would be affected by the proposal. Item I81 abuts the rear boundary of the subject site and would resultantly be most affected by the proposed demolition and commercial construction.

Accordingly, the impact of the proposal on item I81 and the Mudgee HCA are discussed in the Heritage Impact Assessment below.

3.5 Images

The following photographs have been taken by James Consadine and received by Heritage 21 on 31 May 2021, unless stated otherwise.

Note: Access was not gained inside the site during the site visit conducted by James Consadine. As such, no photographs are available of the rear garden space, rear garage structure or internal features of the existing residence.

Figure 11. External view of the site and the adjacent residence abutting its eastern boundary, facing south-west from Horatio Street. The subject site is indicated by the red arrow. (Source: Google Maps, 2018, https://www.google.com/maps, annotated by Heritage 21).

Figure 12. External view of the subject site and adjacent property abutting the garden on the western boundary of the subject site, facing south-east from the corner of Horatio and Lawson Streets. The subject site is indicated by the red arrow. (Source: Google Maps, 2018, https://www.google.com/maps, annotated by Heritage 21).

Figure 13. External view of the residence abutting the western boundary of the subject site. Taken from 2018 Google Street View photography, facing south-west from Horatio Street.

Figure 14. External view of the surrounding streetscape, facing north-west from Horatio Street. (Source: Google Maps, 2018, https://www.google.com/maps).

Figure 15. External view of Horatio Street and the Lot opposite the subject site. Taken from the subject site, facing north towards Horatio Street.

Figure 16. External view of Horatio Street and residences in visible range of the subject site. Taken from the south side of Horatio Street, facing north-east.

Figure 17. External view of the subject site and the Horatio Street streetscape. Taken from the south side of Horatio Street, facing east.

Figure 18. External view of the primary (northern) façade of the dwelling on the subject site (Post-War residence). Taken facing south from the north side of Horatio Street.

Figure 19. External view of the primary façade of the dwelling on the subject site. Taken from the southern side of Horatio Street, facing south-east.

Figure 20. External view of the garden space on the eastern side of the subject residence. Taken from the south side of Horatio Street, facing south.

Figure 21. External view of the rear of the subject site from Inglis Street, facing north from Inglis Street (indicated by the red arrow).

Figure 22. External view of the heritage item I81 located at the rear of the subject site, facing north from Inglis Street.

Figure 23. External view of the primary (southern) façade of heritage item I81 located at 6-8 Inglis Street, Mudgee, as viewed facing north from Inglis Street.

4.0 HERITAGE SIGNIFICANCE

In order to assess the impact of the proposed works on the heritage significance of the subject site, the Mudgee HCA (in which the subject site is located) and the heritage item in the vicinity of the site, it is necessary to first ascertain the heritage significance of these places. Accordingly, Statements of Significance for the subject site (refer to Section 4.2.2), the Mudgee HCA (refer to Section 4.1.1), and Item I81 (refer to Section 4.1.2) are provided below. The significance of these places, will form part of our considerations in the assessment of heritage impact, undertaken in Section 6.0 below.

4.1 Established Significance

4.1.1 The Mudgee HCA

The following Statement of Significance is available for the heritage conservation area on the State Heritage Inventory:[7]

> *"The settlement of Mudgee, located along the banks of the Cudgegong River, demonstrates the principal characteristic of early government town layout in NSW. Designated land uses include the Anglican and Catholic churches in key central positions, with reserved land for law and order, education and recreation, following government practice of the day.*
>
> *Initial settlement occurred in 1822 with many pioneer families still represented in the town today.*
>
> *The Heritage Conservation Area of Mudgee closely follows the 1884 parish map of the town and retains many key heritage buildings especially in the central business area of Church and Market Streets. Historically significant buildings on corners include the Post Office, the Anglican and Catholic churches, hotels and banks, all of which help frame the central shopping area. Many impressive commercial, civic and religious buildings of similar late Victorian style and scale, such as the former Town Hall, banks, hotels and churches, form the core of the Conservation Area, creating an aesthetically significant NSW country town. Remnants of early road works, stone kerbs and gutters, are extant and contribute to the setting.*
>
> *Two excellent parks, Robertson Park and Lawson Park, set aside in the initial surveys of the town, provide partial boundaries to the commercial core. The town setting is also framed by the backdrop of the hills, reminding residents of the original meaning of Mudgee: the 'nest in the hills'.*
>
> *Mudgee also has a good stock of heritage listed houses beyond the central business area. In a special category are those buildings designed by Mudgee architect Harold Hardwick in the 1890s to 1920s because of their quality (Ref : Snapshot MWRC)."*

[7] Mid-Western Regional Council, n.d., "Mudgee Heritage Conservation Area", *NSW State Heritage Inventory*, https://www.hms.heritage.nsw.gov.au/App/Item/ViewItem?itemId=2070402

4.1.2 House (Item I81)

The following Statement of Significance is available for the site on the State Heritage Inventory:[8]

> *"A modest mid-Victorian brick residence and built in circa 1870s which is a good example of a worker's house. It is a Victorian cottage displaying typical attributes that include symmetrical aspect, with single double-hung windows each side of entry doors and a side chimney. It has a steep hipped roof and separately supported veranda across the front supported on timber posts.*
>
> *The house contributes strongly to the heritage streetscape of Inglis street and the railway precinct (Ref Snapshot MWRC)."*

4.2 The Subject Site

4.2.1 Assessment of Significance

In order to make an assessment of whether or not the proposed development to the subject site would have either a negative, neutral or positive impact upon the significance of the subject place, it is necessary first to ascertain the significance of the subject site. The assessment is based upon criteria specified by the NSW Office of Environment and Heritage.[9]

Criterion	Assessment
A. Historical Significance *An item is important in the course, or pattern, of NSW's (or the local area's) cultural or natural history.*	Although the residence does not indicate connections with historically important activities or processes, the lot it is contained within is associated with the historical subdivision and planning of the 'Town of Mudgee' in the mid-to late nineteenth century. The dimensions of the existing lot is representative of the historical subdivision pattern present within the lands originally reserved for the foundation of the 'Town of Mudgee'. This historic pattern remains intact within the subject site's allotment and indicates the continuity of this historical process throughout the town's history. As such, the site **does** meet the criterion for historical significance at the local level.
B. Associative Significance *An item has strong or special association with the life or works of a person, or group of persons, of importance in NSW's (or the local area's) cultural or natural history.*	There is no known significant human occupation or any event, person or group of importance which lived in the house or was associated with it since its construction. As such, the site **does not** meet the criterion for associative significance at the state or local level.

[8] Mid-Western Regional Council, n.d., "House", *NSW State Heritage Inventory*, https://www.hms.heritage.nsw.gov.au/App/Item/ViewItem?itemId=2070081
[9] NSW Office of Environment and Heritage, 'Statements of Heritage Impact' (Heritage Office and Department of Urban Affairs & Planning, 1996), NSW Heritage Manual, http://www.environment.nsw.gov.au/resources/heritagebranch/heritage/hmstatementsofhi.pdf.

Criterion	Assessment
C. Aesthetic Significance *An item is important in demonstrating aesthetic characteristics and/or high degree of creative or technical achievement in NSW (or the local area).*	The subject site does not demonstrate aesthetic or landmark qualities, it is a single-storey, Post War residence that is not associated with or is listed as a major work by an important designer or architect. The site does not provide any significant aesthetic characteristics and does not demonstrate creative or technical achievement. As such, the site **does not** meet the criterion for aesthetic significance at the state or local level.
D. Social Significance *An item has a strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons.*	To our knowledge, the subject site has no known association with an identifiable group in the area or was used by a particular community for social, cultural or spiritual purposes. As such, it **does not** meet the criterion for social significance at the state or local level.
E. Technical/Research Significance *An item has potential to yield information that will contribute to an understanding of NSW's (or the local area's) cultural or natural history.*	There is no evidence to suggest that the building demonstrates construction techniques other than those commonly employed at the time. The site contains information that is readily available from other resources. As such, the site **does not** meet the criterion for technical or research significance at the state or local level.
F. Rarity *An item possesses uncommon, rare or endangered aspects of NSW's (or the local area's) cultural or natural history.*	Dwellings built in the Post-War architectural style are not currently rare in Mudgee and there are numerous examples in the area. The site does not represent a unique or rare aspects of NSW's or the local area's cultural history. As such, the site **does not** meet the criterion for rarity at the state or local level.
G. Representativeness *An item is important in demonstrating the principal characteristics of a class of NSW's (or the local area's) cultural or natural places or cultural or natural environments.*	The lot sizing is associated with the original planning and subdivision of the 'Town of Mudgee'. However, the residence evident on site is a recent addition and is of Post-War construction. The landscape and setting of the subject site does not indicate a strong association with the architectural development of Mudgee. As such, the site **does not** meet the criterion for representative significance at the state or local level.

4.2.2 Statement of Cultural Significance

The site at 33-35 Horatio Street, Mudgee demonstrates historical significance at the local level. Although the residence does not indicate connections with historically important activities or processes, the lot it is contained within is shares dimensions that are associated with the historical subdivision and planning of the 'Town of Mudgee'. This historic pattern remains intact within the subject site's allotment and indicates the continuity of this pattern of development throughout the locality.

5.0 WORKS PROPOSED

5.1 Proposal Description

The proposed demolition and new commercial build in the Mudgee HCA would require the following:

- Demolition of the existing single storey residence and rear garage structure;
- Demolition of the driveway access to the subject site;
- Construction of a commercial structure in the centre of the site;
- Construction of on-site parking towards the western boundary and the eastern side of the site;
- Construction of ingress and egress areas for the proposed commercial development;
- Construction of drive-thru facilities towards the southern and western boundaries of the proposed commercial building;
- Construction of new landscaping, including plantings along each boundary of the site and tall plantings towards the rear; and
- Construction of new signage on the north boundary and Horatio Street frontage.

5.2 Drawings

Our assessment of the proposal is based on the following drawings by Baldasso Cortese dated 09 August 2021 and received by Heritage 21 on 12 August 2021. These are reproduced below for reference only; the full set of drawings accompanying the development application should be referred to for any details.

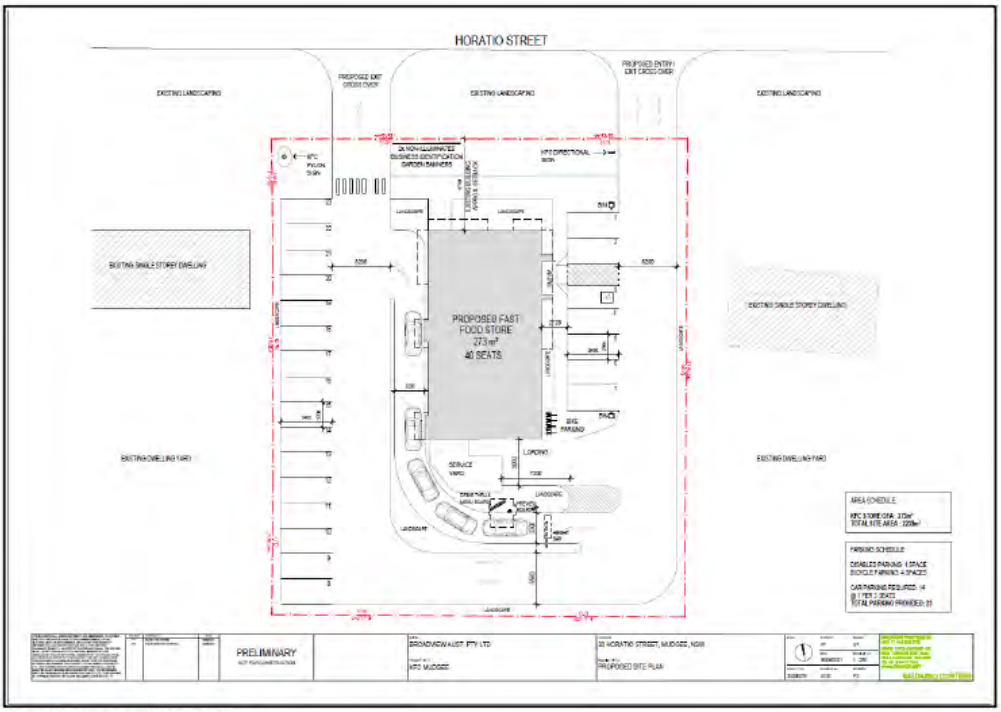

Figure 24. Proposed Site Plan.

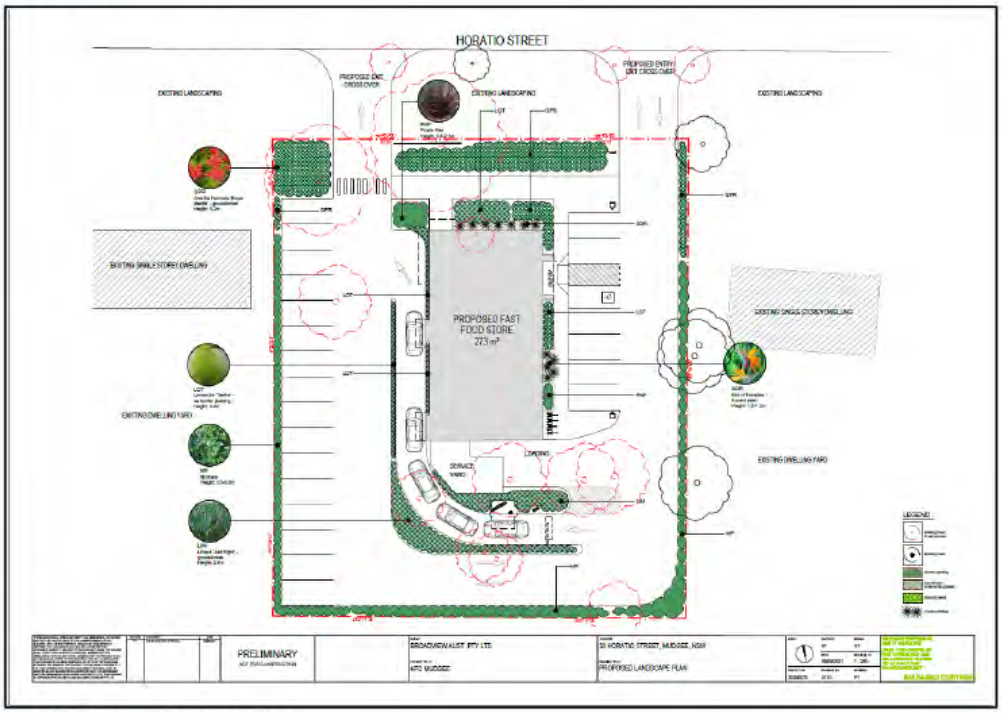

Figure 25. Proposed Landscape Plan.

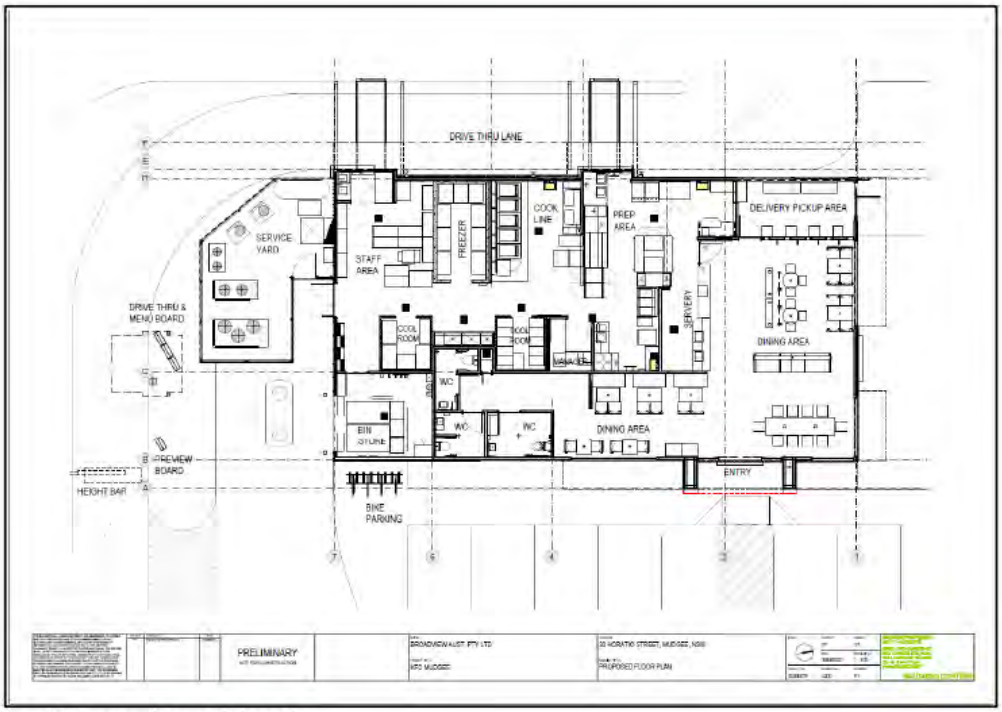

Figure 26. Proposed Ground Floor Plan.

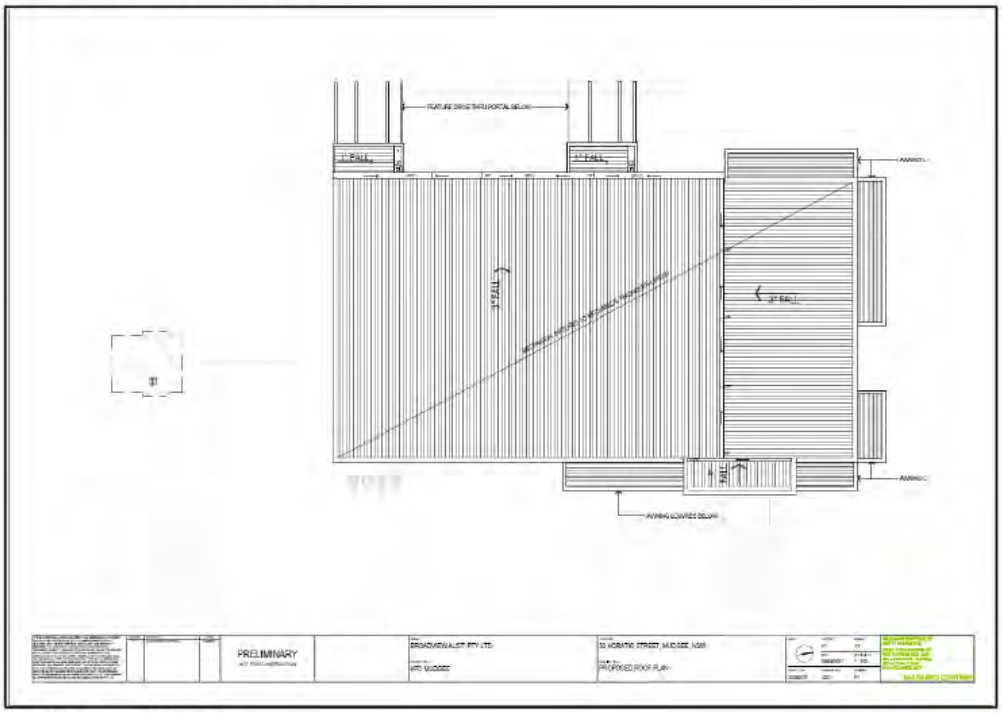

Figure 27. Proposed Roof Plan.

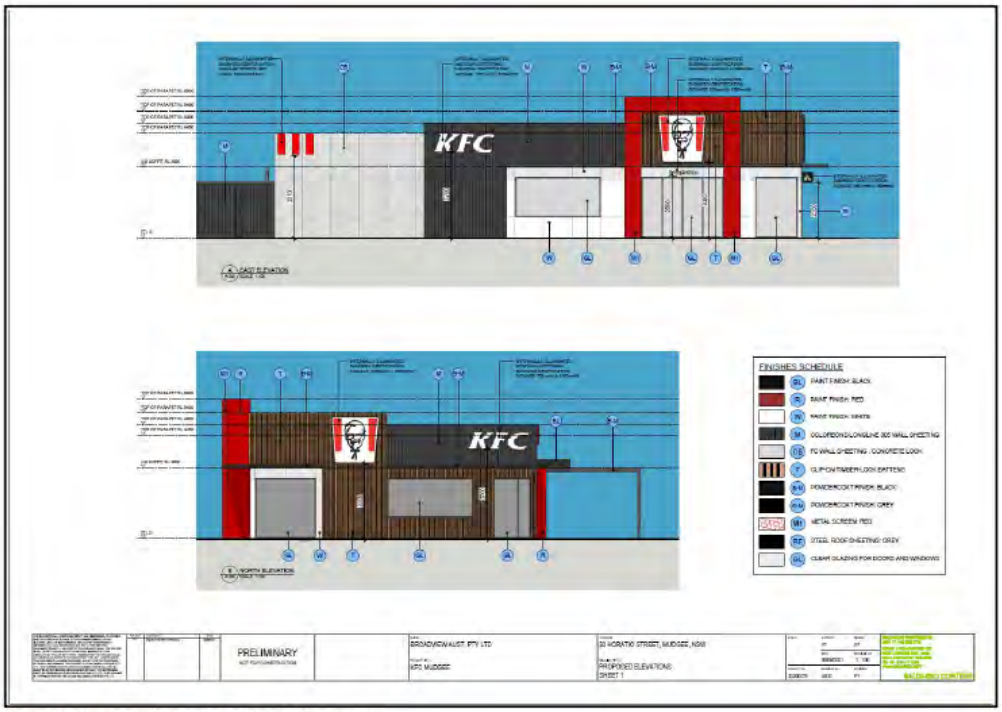

Figure 28. Proposed North and East Elevations.

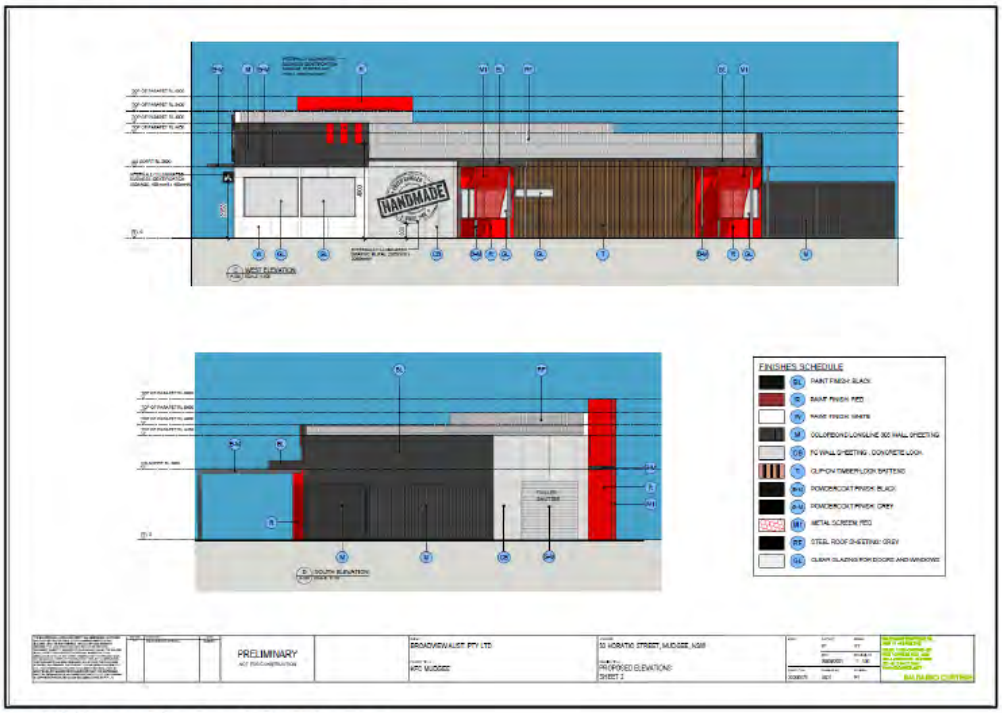

Figure 29. Proposed South and West Elevations.

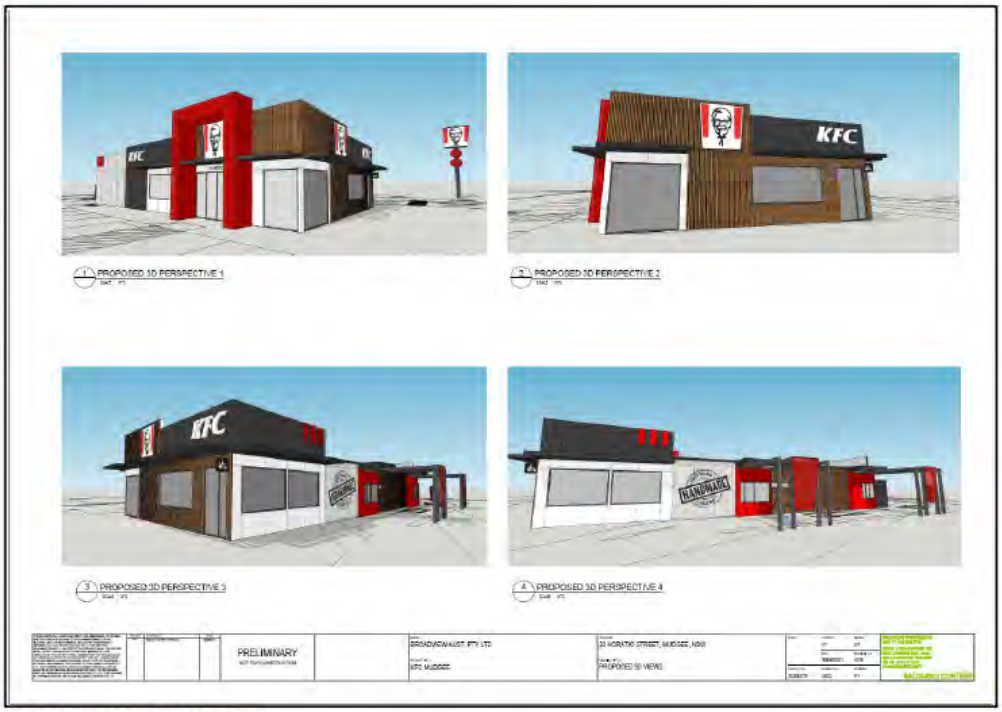

Figure 30. Proposed 3D Renders.

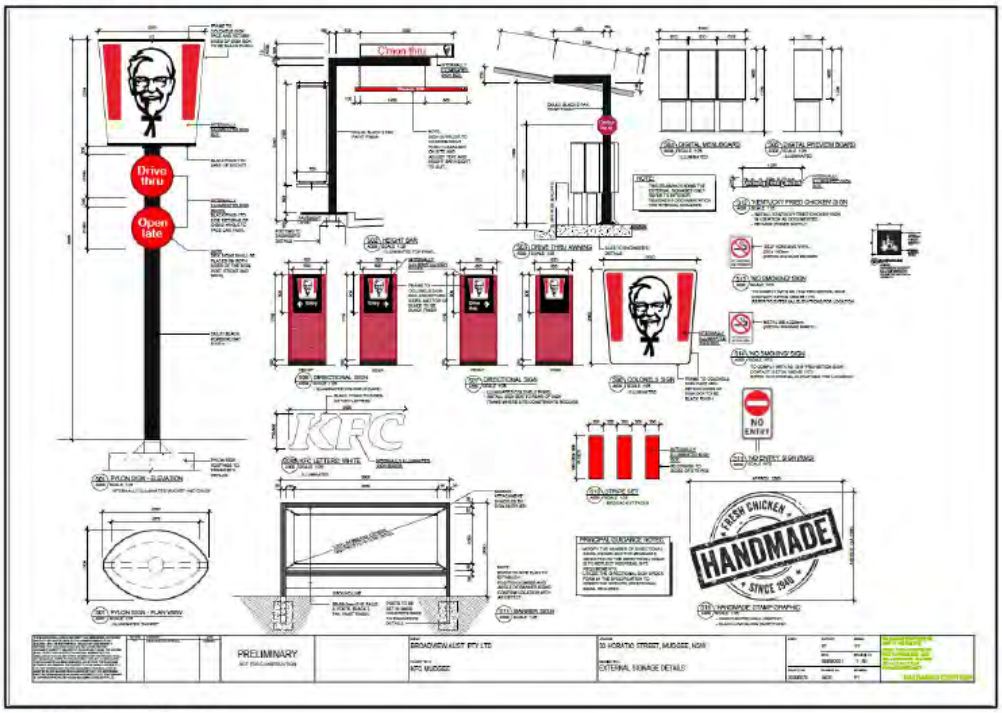

Figure 31. Proposed Signage.

6.0 ASSESSMENT OF HERITAGE IMPACT

6.1 Heritage Management Framework

Below we outline the heritage-related statutory and non-statutory constraints applicable to the subject site including the objectives, controls and considerations which are relevant to the proposed development as described in Section 5.0 above. These constraints and requirements form the basis of this Heritage Impact Assessment.

6.1.1 Mid-Western Regional Local Environmental Plan 2012

The statutory heritage conservation requirements contained in Section 5.10 of the Mid-Western Regional Local Environmental Plan (MWRLEP) 2012 are pertinent to any heritage impact assessment for future development on the subject site. The relevant clauses for the site and proposal are outlined below:

(1) Objectives
(2) Requirement for consent
(4) Effect of proposed development on heritage significance
(5) Heritage assessment

6.1.2 Mid-Western Regional Development Control Plan 2013

Our assessment of heritage impact also considers the heritage-related sections of the Mid-Western Regional Development Control Plan (MWRDCP) 2013 that are pertinent to the subject site and proposed development. These include:

Section 4.5 – Commercial Development

Design

6.1.3 NSW Office of Environment & Heritage guidelines

In its guidelines for the preparation of Statements of Heritage Impact, the NSW Office of Environment & Heritage provides a list of considerations in the form of questions aiming at directing and triggering heritage impact assessments. These are divided in sections to match the different types of proposal that may occur on a heritage item, item in a heritage conservation area or in the vicinity of heritage. Below are listed the considerations which are most relevant to the proposed development as outlined in Section 5.0 of this report.

Demolition of a building or structure

- *Have all options for retention and adaptive re-use been explored?*
- *Can all of the significant elements of the heritage item be kept and any new development be located elsewhere on the site?*
- *Is demolition essential at this time or can it be postponed in case future circumstances make its retention and conservation more feasible?*
- *Has the advice of a heritage consultant been sought? Have the consultant's recommendations been implemented? If not, why not?*

Change of use

- *Has the advice of a heritage consultant or structural engineer been sought? Has the consultant's advice been implemented? If not, why not?*
- *Does the existing use contribute to the significance of the heritage item?*
- *Why does the use need to be changed?*
- *What changes to the fabric are required as a result of the change of use?*
- *What changes to the site are required as a result of the change of use?*

New development adjacent to a heritage item (including additional buildings and dual occupancies)

- *How is the impact of the new development on the heritage significance of the item or area to be minimised?*
- *Why is the new development required to be adjacent to a heritage item?*
- *How does the curtilage allowed around the heritage item contribute to the retention of its heritage significance?*
- *How does the new development affect views to, and from, the heritage item? What has been done to minimise negative effects?*
- *Is the development sited on any known, or potentially significant archaeological deposits? If so, have alternative sites been considered? Why were they rejected?*
- *Is the new development sympathetic to the heritage item? In what way (e.g. form, siting, proportions, design)?*
- *Will the additions visually dominate the heritage item? How has this been minimised?*
- *Will the public, and users of the item, still be able to view and appreciate its significance?*

New landscape works and features (including carparks and fences)

- *How has the impact of the new work on the heritage significance of the existing landscape been minimised?*
- *Has evidence (archival and physical) of previous landscape work been investigated? Are previous works being reinstated?*
- *Has the advice of a consultant skilled in the conservation of heritage landscapes been sought? If so, have their recommendations been implemented?*
- *Are any known or potential archaeological deposits affected by the landscape works? If so, what alternatives have been considered?*
- *How does the work impact on views to, and from, adjacent heritage items?*

Tree removal or replacement

- *Does the tree contribute to the heritage significance of the item or landscape?*
- *Why is the tree being removed?*
- *Has the advice of a tree surgeon or horticultural specialist been obtained?*
- *Is the tree being replaced? Why? With the same or a different species?*

New signage

- *How has the impact of the new signage on the heritage significance of the item been minimised?*
- *Have alternative signage forms been considered (e.g. free standing or shingle signs). Why were they rejected?*
- *Is the signage in accordance with section 6, 'Areas of Heritage Significance', in Outdoor Advertising: An Urban Design-Based Approach? How?*
- *Will the signage visually dominate the heritage item/heritage conservation area or heritage streetscape?*
- *Can the sign be remotely illuminated rather than internally illuminated?*

6.2 Heritage Impact Assessment

Below we assess the impact that the proposed development would have upon the subject site, the Mudgee heritage conservation area in which it is located, and the heritage item in the vicinity. This assessment is based upon the Historical Context (refer to Section 2.0), the Physical Evidence (refer to Section 3.0), Heritage Significance (refer to Section 4.0) the Proposal (refer to Section 5.0), a review of the Heritage Management Framework (refer to Section 6.1) and the impact of the proposal on the relevant heritage item and heritage conservation area situated in the vicinity of the site (refer to Sections 1.3 and 3.4).

6.2.1 Summary

The proposed development includes the demolition of existing landscaping and the Post-War residence to facilitate a commercial development located centrally within the site. The subject site is situated in the Mudgee HCA and in the vicinity of a heritage item, both of which are listed under Schedule 5 of the MWRLEP 2012. It would involve the construction of a structure with a large setback from Horatio Street as well as each boundary of the site. This would facilitate the construction of a carpark within the open space as well as landscaping along the borders of the subject site. The landscaping has been designed so that it incorporates plantings of between 2.0 to 3.0 metres along the southern, eastern and western boundaries of the subject site, while also incorporating low shrubbery along the Horatio Street frontage.

This would minimise potential impacts on significant views to the subject site granted from Horatio Street as well as the nearby heritage item. The short plantings along Horatio Street would reflect the plantings seen in adjacent properties along Horatio Street and would not obstruct existing view lines to the proposed development. Alternatively, the tall plantings towards the rear and sides of the subject site would provide a visual buffer between the proposed development and the abutting heritage item. The profile of the proposed pylon sign has also been designed to minimise its bulkiness and resultant impacts on primary view lines to the abutting heritage item from Inglis Street. Similarly, the proposed directional signs, colonel's sign and stamp graphic have each been designed so that their height and scale would result in minimal impact of primary and secondary view lines. These elements would minimise the potential disruption of primary view lines to the heritage item granted from Inglis Street.

Further, the inclusion of a sympathetic colour palette, that reflects the cream colour scheme used within the Mudgee HCA and muted red tones of the nearby heritage item would reduce the overall visual impact of the proposed works. The pattern of built form within the Mudgee HCA and Horatio Street locality consists of face brick or off-white painted, single storey residences centrally located within a garden setting and with large setbacks from the Horatio Street frontage. Timber detailing is also evident in the eaves and window frames of houses contained within the Mudgee HCA. The proposed commercial development adopts a design that would be sympathetic to the established built forms.

6.2.2 Impact Assessment against the MWRLEP 2012

The statutory heritage conservation requirements contained in Section 5.10 of the Mid-Western Regional LEP 2012 are pertinent to any heritage impact assessment for future development on the subject site. We assess the proposal against the relevant clauses below.

CLAUSE	ASSESSMENT
(1) Objectives	The proposal entails the demolition and a new development to a property situated within a HCA listed under Schedule 5 of the Mid-Western Regional LEP 2012. The site is also located in the vicinity of a heritage item listed on the MWRLEP 2012. It is our general assessment that the proposed height, scale, massing and materials proposed (as detailed in Section 5.0 above) would not engender a negative impact on the heritage significance of the HCA in which it is located or the heritage item located in the vicinity of the site.
(2) Requirement for consent	This Development Application is lodged to Council to gain consent for the works proposed in the vicinity of a heritage item and located within a HCA listed under Schedule 5 of the Mid-Western Regional LEP 2012.
(4) Effect of proposed development on heritage significance	This Statement of Heritage Impact accompanies the Development Application in order to enable the Mid-Western Regional Council, as the consent authority, to ascertain the extent to which the proposal would affect the heritage significance of the Mudgee HCA and the heritage items located in the vicinity of the site.
(5) Heritage assessment	

6.2.3 Impact Assessment Against the MWRDCP 2013

PART 4 SPECIFIC TYPES OF DEVELOPMENT	
4.4 Signs **Signs in Towns and Villages – Heritage Conservation Areas**	
Objectives	**Assessment**
(c) Generally signs on individual buildings or within areas of special significance should be discreet and should complement the building or area. An important element of Council's planning policies involves the careful control of all advertisements, and external building colours in the main business areas.	The profile of the proposed pylon sign has been designed to minimise its bulkiness and resultant impacts on primary view lines to the abutting heritage item from Inglis Street. Similarly, the proposed directional signs, colonel's sign and stamp graphic have each been designed so that their height and scale would result in minimal impact of primary and secondary view lines. Heritage 21 recommends that the proposed pylon sign be of a reduced height so as to further minimise potential impacts on views from within the Mudgee HCA as well as heritage item I81.
4.5 Commercial development **Design**	
Objectives	**Assessment**
(d) Consider elements within established heritage buildings and how its application may be applied to new development	The proposed works would incorporate a sympathetic colour palette, that reflects the cream colour scheme used within the Mudgee HCA and muted red tones of the nearby heritage item. These colours would reduce the overall visual impact of the proposed works and would result in a proposed development that aligns with the established character and built form of the Mudgee HCA. The garden settings of sites within the Mudgee HCA would also be reflected in the design of the proposed commercial development, which would incorporate large setbacks from Horatio Street as well as from the boundaries of the subject site. Further, the height of the proposal has also been reduced to minimise potential impacts on significant views within the Mudgee HCA, as well as to mitigate potential impacts on primary views afforded to Heritage Item I81. The result is a proposal that would reflect the established heritage character of the Horatio Street locality, as well as provide a sympathetic addition that has minimal impact on primary views to nearby heritage items.

(e) Consider the pattern of built form, scale, use of verandahs, fenestration, colour and materials	The pattern of built form within the Mudgee HCA and Horatio Street locality consists of face brick or off-white painted, single storey residences centrally located within a garden setting and with large setbacks from the Horatio Street frontage. Timber detailing is also evident in the eaves and window frames of houses contained within the Mudgee HCA. The proposed commercial development adopts a design that would be sympathetic to the established built form of the surrounding area. It would include a muted colour palette, large setbacks from Horatio Street and includes native landscaping that would establish a sympathetic garden setting within the subject site. Additionally, the proposed commercial development includes a stepped design that would reduce the height of the structure in increments away from Horatio Street. This would reduce the profile of the proposed development and result in a form and scale that minimises potential impacts on heritage significant view lines afforded to the subject site, Mudgee HCA and Heritage Item I81.
(f) Design of new development should seek to be sympathetic to heritage items, not reproduce them.	The proposal would adopt a contemporary design that incorporates traditional colours which would have a hue and tonal relationship with the colour scheme established within the locality. The materiality and selected colours that would be used as part of the proposal would reflect the cream colour scheme used within the Mudgee HCA and muted red tones of the adjacent heritage item. These colours would reduce the overall visual impact of the proposed works and result in a sympathetic addition to the Horatio Street streetscape and HCA. The proposal would therefore incorporate a combination of traditional and contemporary materials and colours that would ensure that while the proposal would be sympathetic to the heritage significance of the area, it would not mimic or detract from it. The low height of the proposed commercial development would also ensure that the subject site presents itself as a sympathetic addition to the Horatio Street streetscape and Mudgee HCA. The height of the proposed works would adhere to the established height within the HCA. Resultantly, the proposed works would be sympathetic to the

	Mudgee HCA and would not attempt to replicate nearby heritage items.

6.2.4 Impact Assessment Against the NSW Office of Environment & Heritage guidelines

As acknowledged in Section 6.1.3, the NSW Office of Environment & Heritage has identified a list of considerations in the form of questions aiming at directing and triggering heritage impact assessment. Below, we assess the proposal against the most pertinent of these questions.

Question	Assessment
Demolition of a building or structure	
Have all options for retention and adaptive re-use been explored?	As indicated in Section 2.2, the Post-War residence located towards the eastern extent of the subject site does not contribute to the site's heritage significance. As such, it's proposed demolition would not negatively impact the heritage significance of the site.
Can all of the significant elements of the heritage item be kept and any new development be located elsewhere on the site?	As the Post-War residence does not constitute heritage significant fabric, it would not be necessary to retain parts of the structure. The proposed commercial development would provide a sympathetic addition to the setting of the site.
Is demolition essential at this time or can it be postponed in case future circumstances make its retention and conservation more feasible?	The demolition of the existing landscaping and residence would be necessary for the proposed commercial development to take place. The existing landscaping and residence have not been assessed by Heritage 21 to contain heritage value and as such, it would not be necessary to conserve these elements as part of the proposal.
Has the advice of a heritage consultant been sought? Have the consultant's recommendations been implemented? If not, why not?	Heritage 21 has been consulted during the design process of the proposed commercial development and landscaping. We are of the opinion that the current residence is a non-contributory item within the subject site and that its replacement with a sympathetically designed commercial development would result in a development that reflects the established character of the Mudgee HCA.
Change of use	
Has the advice of a heritage consultant or structural engineer been sought? Has the consultant's advice been implemented? If not, why not?	Heritage 21 has been consulted and has provided design advice regarding the proposed commercial development at the subject site. Heritage 21 has provided recommendations which have been implemented into the proposal's design, including the use of sympathetic colours and materials, the height of the commercial development and introduction of sympathetic landscaping that each serve to reduce the overall visual impact of the proposed works on the Mudgee HCA and nearby heritage item.

Does the existing use contribute to the significance of the heritage item?	While the subject site has within recent decades, been used for residential purposes, we do not believe that this contributes to the heritage significance of the site or the HCA in which it is located. As such, Heritage 21 is of the opinion that the existing use of the subject site as a residence does not contribute to the site's heritage significance.
Why does the use need to be changed?	The change of use would be necessary to facilitate the proposed commercial development at the site. This would include the demolition of existing fabric at the site and construction of a sympathetic commercial development that reflects the established materiality, colours and scale of structures located within the Horatio Street streetscape and Mudgee HCA.
What changes to the fabric are required as a result of the change of use?	The entirety of the site would be demolished as a result of this proposal, including the existing landscaping and residence. However, these elements have been assessed by Heritage 21 as being of limited heritage significance and as such, their demolition would pose minimal impact to the heritage fabric of the Mudgee HCA and nearby heritage item.
What changes to the site are required as a result of the change of use?	The proposal includes the demolition of the existing non-contributory residence and landscaping located within the subject site. This would be necessary to facilitate the construction of a sympathetic commercial development that reflects the established built forms of the Mudgee HCA. This includes a single storey, low height commercial structure centred within a landscaped setting with large setbacks from the Horatio Street frontage and boundaries of the site. The materials would reflect the materiality of adjacent structures within the HCA and the colour scheme would correspond to the hue and tonal relationships established in the area. This includes the use of off-white and red colours.
New development adjacent to a heritage item (including additional buildings and dual occupancies)	
How is the impact of the new development on the heritage significance of the item or area to be minimised?	The materials, colours and forms of the proposal have been designed to ensure minimal impact on the heritage significance of the Mudgee HCA and the heritage item in the vicinity. The proposal would include a low height for the commercial structure that would reduce the potential for the proposed works to visually dominate the Horatio Street locality and detract from view lines to heritage item I81. Further measures to ensure the minimisation of impacts would include the use of materials and colours that reflect the established pattern of development along Horatio Street, as well as a stepped design that would reduce the height of the structure in increments away from Horatio Street. Large setbacks from the Horatio Street frontage and boundaries of the site would also serve to reduce the overall impact of the

	proposed development and results in a form and scale that reduces potential impacts on heritage significant view lines afforded to the subject site, Mudgee HCA and Heritage Item I81.
Why is the new development required to be adjacent to a heritage item?	The proposed new development would be located within the Mudgee HCA and adjacent to heritage item I81 listed under Schedule 5 of the MWRLEP 2012. The subject site provides an opportunity for a development while ensuring that the proposal would respond sympathetically to the heritage significance of the HCA and heritage item in the vicinity while facilitating the development of the site for commercial purposes.
How does the curtilage allowed around the heritage item contribute to the retention of its heritage significance?	The houses contained within the Mudgee HCA each were originally designed to incorporate large setbacks from their street frontage and include a garden setting. As such, the proposal replicates this garden setting into its own landscaping, with open spaces and plantings surrounding the proposed development. Further, the proposal would incorporate an appropriate setback as a buffer between the proposed development and the Horatio Street streetscape and heritage item I81 which abuts the rear of the site. As such, the proposal would not impede on the established heritage curtilage of the heritage item in the vicinity or the Mudgee HCA and would allow for its retention of its heritage significance.
How does the new development affect views to, and from, the heritage item? What has been done to minimise negative effects?	As shown in Section 5.2, the proposed development would include a flat parapet roof form that would minimise potential impacts on view lines between the subject site, the Mudgee HCA and nearby heritage item. The rear setback of the proposed works would also minimise potential visual obstruction of primary and secondary views afforded by contributory items within the Mudgee HCA. The low-scale, simple design and landscaped setting would limit its overall visual impact on the nearby heritage item. Further, the proposed development would not obscured views from the public domain to the heritage item in the vicinity.
Is the development sited on any known, or potentially significant archaeological deposits? If so, have alternative sites been considered? Why were they rejected?	An archaeological assessment is beyond the scope of this report.
Is the new development sympathetic to the heritage item? In what way (e.g. form, siting, proportions, design)?	The proposal would include a contemporary design as part of its construction. A mixture of traditional and contemporary materials within the proposal would respect the material palette used for the developments in its vicinity yet would also clearly differentiate the proposal as a contemporary addition to the HCA.

	The use of vertical timber-look battens would reflect the materiality of the items in the vicinity, The materiality and selected colours that would be used as part of the proposal would reflect the cream colour scheme used within the Mudgee HCA and muted red tones of the adjacent heritage item. These colours would reduce the overall visual impact of the proposed works and result in a sympathetic addition to the Horatio Street streetscape and HCA that adheres to the established built form and character. Further, the proposal would incorporate an appropriate setback as a buffer between the proposed development and the Horatio Street streetscape and heritage item I81 which abuts the rear of the site. Similarly, the proposal would respect the setback pattern of the surrounding area. The low height of the proposed commercial development would also ensure that the subject site presents itself as a sympathetic addition to the Horatio Street streetscape and Mudgee HCA. The height of the proposed works would adhere to the established height within the HCA. Resultantly, the proposed works would be sympathetic to the Mudgee HCA.
Will the additions visually dominate the heritage item? How has this been minimised?	The reduced height of the proposed works, achieved by the flat roof design, would minimise the visual impact of the proposed works on the Mudgee HCA and nearby heritage item. The rear setback of the proposal provides an adequate setback to reduce potential impacts on primary and secondary views between the subject site and adjacent properties within the Mudgee HCA. Similarly, the proposed landscaping along the Horatio street frontage would further reduce potential impacts to primary views afforded between the subject site, Mudgee HCA and nearby heritage items. By incorporating a muted colours scheme and simple design. The proposed development would be recessive in comparison to the contributory buildings in the vicinity, ensuring the proposed development would highlight rather than overwhelm them.
Will the public, and users of the item, still be able to view and appreciate its significance?	The proposed new development would be located as to ensure that it would not visually overwhelm the HCAs in the vicinity. Further, the proposed commercial development would not alter views from the public domain to the HCAs, nor would it alter views between contributory items within the HCA. This would be achieved through the siting, form and scale of the proposal which would respect the rhythm of the surrounding streetscape. As such, the proposal would ensure that the public and the Mudgee community are able to continue to interpret the heritage significance of the heritage item in the vicinity.

New landscape works and features (including carparks and fences)	
How has the impact of the new work on the heritage significance of the existing landscape been minimised?	The incorporation of landscaping into the proposal would minimise potential negative impacts on the heritage significance of the site resulting from the proposed carpark. The landscaping on the eastern, southern and western boundaries of the site is to a height of approximately 2.0 to 3.0 metres. This dense foliage would provide a visual buffer between the proposed carpark and adjacent items within the Mudgee HCA as well as the heritage item abutting the rear of the subject site. The proposed low height foliage for the Horatio Street frontage would also reflect the low height shrubs and plantings evident on sites fronting Horatio Street. As such, the proposed landscaping and carpark would minimise potential negative impacts associated with the construction of a carpark to facilitate the commercial development. It would reduce the visual impact of the proposed works on the Mudgee HCA and nearby Heritage items.
Has evidence (archival and physical) of previous landscape work been investigated? Are previous works being reinstated?	There is limited historical evidence regarding the original landscaping of the site as evidenced in Section 2.2 of this report. Further, the site has minimal heritage significance. As such, the proposal would not seek to restore the original landscaping of the site as part of this proposal.
Has the advice of a consultant skilled in the conservation of heritage landscapes been sought? If so, have their recommendations been implemented?	While Heritage 21 does not purport to be an expert in heritage landscapes, we have reviewed the proposed plans and believe the design would be sympathetic to the Mudgee HCA and nearby heritage item and would retain the landscaped setting, consisted with the surrounding area.
Are any known or potential archaeological deposits affected by the landscape works? If so, what alternatives have been considered?	An archaeological assessment is beyond the scope of this report.
How does the work impact on views to, and from, adjacent heritage items?	The proposal involves the demolition of trees and plantings located within the Horatio Street frontage as well as the garden setting of the subject site. We note that these plantings are visible within the Mudgee HCA as well as the heritage item abutting the rear of the site. The proposed car park would be visible from primary views to the subject site, however the proposed landscaping and plantings would serve to mitigate these negative impacts and provide a buffer between adjacent properties and the subject site. Heritage 21 recommends that the trees proposed for demolition be replaced with trees of the same species to mitigate potential heritage impacts that may arise as a result of their proposed demolition.
Tree removal or replacement	

Does the tree contribute to the heritage significance of the item or landscape?	The groups of trees propose for removal contribute to the garden setting of the HCA. However, the proposal has incorporated the addition of new plantings to minimise the impact of the tree removal.
Why is the tree being removed?	The trees would be removed as part of the proposed works to facilitate the location of the commercial development centrally within the subject site. It would also be necessary for the construction of the proposed carpark.
Has the advice of a tree surgeon or horticultural specialist been obtained?	Heritage 21 is not aware of an arborists report having been commissioned regarding the removal of the trees. The proposal would entail the introduction of new plantings in order to mitigate the loss of the existing trees.
Is the tree being replaced? Why? With the same or a different species?	The trees would be replaced with additional plantings that would mitigate the loss of the existing trees. Heritage 21 is not aware of the tree species of the existing trees. However, we believe the proposed plantings would be sympathetic to the HCA.
New signage	
How has the impact of the new signage on the heritage significance of the item been minimised? Have alternative signage forms been considered (e.g. free standing or shingle signs). Why were they rejected?	The profile of the proposed pylon sign has been designed to minimise its bulkiness and resultant impacts on primary view lines to the abutting heritage item from Inglis Street. Similarly, the proposed directional signs, colonel's sign and stamp graphic have each been designed so that their height and scale would result in minimal impact of primary and secondary view lines. Heritage 21 recommends that the proposed pylon sign be of a reduced height so as to further minimise potential impacts on views from within the Mudgee HCA as well as heritage item I81.
Will the signage visually dominate the heritage item/heritage conservation area or heritage streetscape?	The profile of the proposed pylon sign has been designed to minimise potential impacts on primary view lines to the abutting heritage item from Inglis Street. However, the height of the pylon sign would result in a negative heritage impact for the Mudgee HCA and nearby heritage item. As such, Heritage 21 recommends that the height of the pylon sign be lowered so that it minimises potential impacts on significant views.
Can the sign be remotely illuminated rather than internally illuminated?	The internal illumination of the proposed pylon sign would result in minimal impact on significant view lines to the subject site and Mudgee HCA. Additionally, the proposed illumination would not physically impact any significant or original fabric. As such, the proposal would ensure that the public and the Mudgee community are able to continue to interpret the heritage significance of the HCA and the heritage item in the vicinity.

7.0 CONCLUSION & RECOMMENDATIONS

7.1 Impact Summary

The NSW Office of Environment & Heritage's guidelines require the following aspects of the proposal to be summarised.[10]

7.1.1 Aspects of the proposal which respect or enhance heritage significance

In our view, the following aspects of the proposal would respect the heritage significance of the subject site, the Mudgee heritage conservation area and heritage item in the vicinity:

- The proposed setback of the development would be consistent with the setback of adjacent properties;
- It would not alter the historic subdivision pattern in the Mudgee locality;
- The proposal would have minimal impact on primary views to and from heritage items in its vicinity;
- The proposal would not result in the demolition of heritage significant fabric;
- The proposed colour scheme identified would result in a neutral heritage impact on the Mudgee HCA and heritage item in the vicinity;
- The design, bulk and form of the proposed commercial structure would not dominate the local streetscape and would be considered sympathetic within the context of the Mudgee HCA, nearby heritage items as well as the Horatio Street streetscape;
- Landscaping – including tall plantings – at the rear boundary of the site would reduce the potential visual impact of the proposed development on view lines to and from the heritage item at the rear of the site as well as from within the Mudgee HCA; and
- The proposal would attract the community to the area and would therefore facilitate the ongoing community engagement with the Mudgee HCA and nearby heritage items.

7.1.2 Aspects of the proposal which could have detrimental impact on heritage significance

Additionally, recommendations are provided below as supplementary mitigation measures to further limit heritage impact.

From a heritage perspective, the visual impact of the proposed 'KFC pylon sign' may result in a negative heritage impact on the Mudgee HCA and surrounding heritage items. Heritage 21 recommends that the proposed 'KFC Pylon Sign' at the front of the site should be reduced in height. This would reduce the visual impact of the proposed development on the Mudgee HCA and nearby heritage items.

[10] NSW Office of Environment and Heritage, 'Statements of Heritage Impact' (Heritage Office and Department of Urban Affairs & Planning, 1996), http://www.environment.nsw.gov.au/resources/heritagebranch/heritage/hmstatementsofhi.pdf.

7.1.3 Sympathetic alternative solutions which have been considered and discounted

Heritage 21 provided heritage advice to the applicant which has been incorporated in the final proposal as described in Section 5.0 and which includes:

- The use of sympathetic colours and materials would reduce potential visual impacts on the Mudgee HCA and nearby heritage items as part of the proposed works. It would also ensure that the proposal remains sympathetic to the established character of the HCA;
- The design, shape and bulk of the proposed works should be modified so that it would not result in a proposal that would be considered visually obtrusive within the Horatio Street Streetscape and Mudgee HCA;
- The proposed landscaping should be modified so that it provides a buffer between the subject site and nearby heritage items. This would reduce potential visual impacts as a result of the proposed works.

Heritage 21 provided heritage advice to the applicant which has not been incorporated in the final proposal as described in Section 5.0. This regarded:

- Heritage 21 recommends that the proposed 'KFC Pylon Sign' at the front of the site should be reduced in height. would reduce the visual impact of the proposed development on the Mudgee HCA and nearby heritage items. This was dismissed due to the desire to provide adequate signage for the commercial development; and
- An alternate pitched roof form that is sympathetic with nearby structures would reduce the obtrusiveness of the proposed development and would lessen the impact on the Mudgee HCA and nearby heritage items. This was dismissed due to a desire to ensure the commercial development adopts the designs used for KFC commercial developments.

7.2 General Conclusion

Heritage 21 is therefore confident that the proposed development complies with pertinent heritage controls and would engender minimal impact on the heritage significance of the subject site, the Mudgee heritage conservation area and the heritage item in the vicinity. We therefore recommend that Mid-Western Regional Council view the application favourably on heritage grounds.

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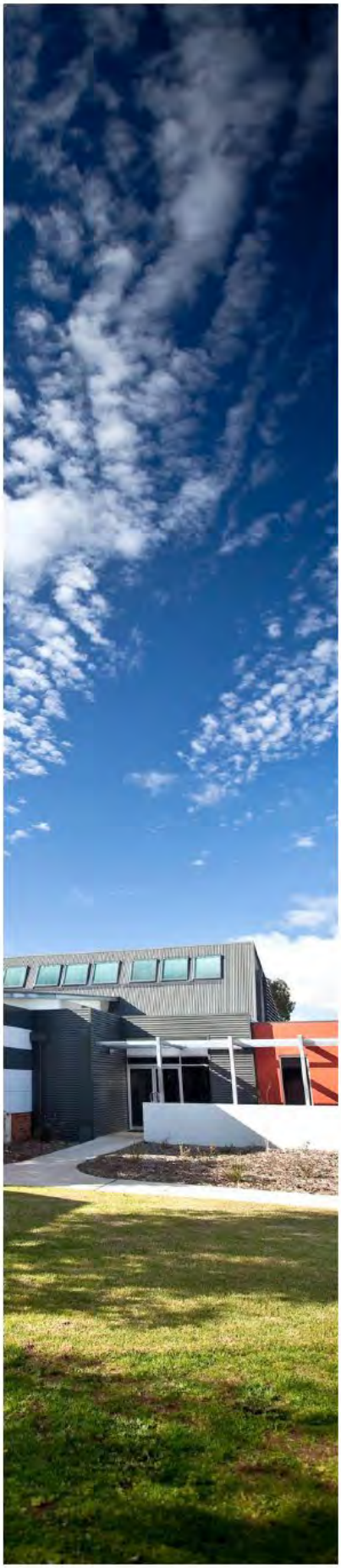

Planning Proposal

Rezoning and Reduction in Minimum Lot Size
148 Wyoming Road, Stubbo

(Our Reference: 38948-PR01_B)

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Disclaimer

This report has been prepared solely for Brian & Frances Munro (the client) in accordance with the scope provided by the client and for the purpose(s) as outlined throughout this report.
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Report Title:	Planning Proposal
Project Name:	Rezoning and Reduction in Minimum Lot Size
Client:	Brian & Frances Munro
Project No.	38948
Report Reference	38948-PR01_B
Date:	7/06/2023

Prepared by:	Reviewed by:
Luke Bonnell B. Social Science Grad Dip. Urb. & Reg. Planning Graduate Town Planner	Jack Massey *MPIA* B. Urb & Reg. Planning Senior Town Planner

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1 Introduction

1.1 Planning Proposal

Barnson Pty Ltd has been engaged by Brian & Frances Munro to prepare a Planning Proposal (PP) to support an amendment to the *Mid-Western Regional Local Environmental Plan 2012* (MWRLEP). The subject site is Lot 101 DP 1221461, known as 148 Wyoming Road, Stubbo.

This PP has been prepared in accordance with Section 3.33 of the *Environmental Planning and Assessment Act 1979* (EP&A Act), and *A Guide to Preparing Planning Proposals* prepared by the NSW Department of Planning and environment (now known as the NSW Department of Planning, Infrastructure and Environment).

The Planning Proposal seeks to undertake a review of the site that has a current land zoning of RU1 Primary Production under the MWRLEP. The Planning Proposal seeks to rezone the land to R5 Large Lot Residential and reduce the Minimum Lot Size to 12ha to facilitate the subdivision of the site. The objective of the PP is to provide rural lifestyle development opportunities on the property.

The Planning Proposal will amend both the *Mid-Western Regional Local Environmental Plan 2012* and associated Local Environmental Plan mapping. Plans associated with the Planning Proposal are provided in **Appendix A** of this report.

Consistent with the NSW Department of Planning, infrastructure and Environment's guidelines, this Planning Proposal has been prepared in the following format:

- Part 1 – Objectives or intended outcomes
- Part 2 – Explanation of Provisions
- Part 3 – Justification and strategic and site-specific merit
- Part 4 – Maps
- Part 5 – Community Consultation
- Part 6 – Project Timeline

1.2 Proponent

The proponent for this proposal is Brian & Frances Munro.

1.3 Consultant

Barnson Pty Ltd

Jack Massey

Unit 4, 108-110 Market Street

Mudgee NSW 2850

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2 Planning Proposal Context

2.1 Location and Title

The subject site of this Planning Proposal (PP) is legally described as Lot 101 in DP 1221461 and is known as 148 Wyoming Road, Stubbo.

The site is located just off Wyoming Road, which connects to Cope Road to the north west of the site. The Sandy Hollow Gulgong Railway runs along the south eastern boundary of the site.

The site is located approximately 9.5km north east of Gulgong and 39km north of Mudgee, as shown in the aerial image of the site in **Figure 1** below.

Figure 1: - The Site and the Planning Proposal Area
Source: ePlanning Spatial Viewer

2.2 Existing Land Use

The site is located within the Local Government Area (LGA) of Mid-Western Regional and is therefore subject to the provisions of the *Mid-Western Regional Local Environmental Plan* (MWRLEP). The MWRLEP establishes a policy framework for land use planning decisions and guides the community in terms of how land can and cannot be used within the LGA.

The site is located in an area characterised by primary production, managed grasslands and scattered residential development. The site has been used for primary production purposes, predominately grazing and cropping, for an extended period of time.

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The site is zoned RU1 Primary Production with adjoining R5 Large Lot Residential within proximity to the north and west. Refer to **Figure 2** below.

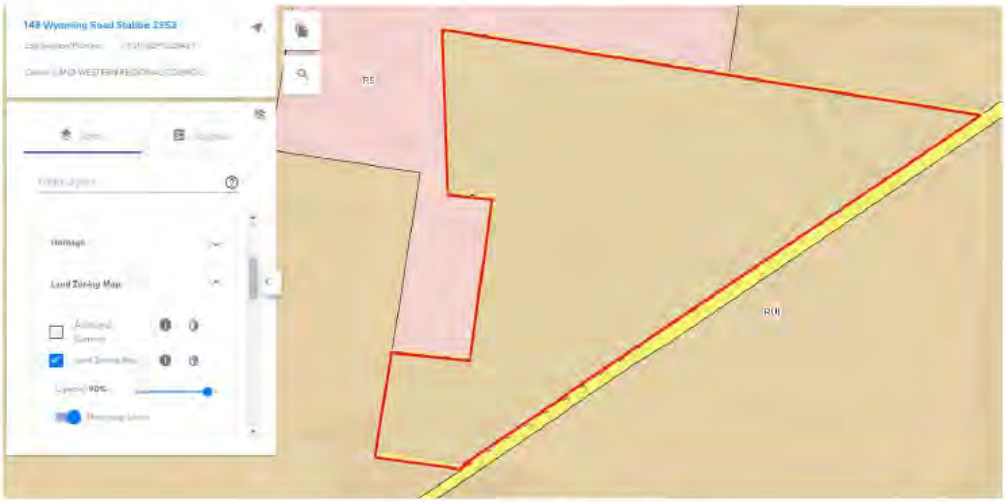

Figure 2: Existing Land Use Zones

Source: ePlanning Spatial Viewer

Tables 1 provides a summary of the lot subject to this Planning Proposal.

Table 1: Subject Land Details Summary	
Legal Description and Property Address	
Street Address:	148 Wyoming Road
Suburb:	Stubbo
Subject Land Property Description:	Lot 1 in DP 1221461
Land Zoning:	RU1: Primary Production
Names of Landowner:	Brian & Frances Munro
Local Government Area:	Mid-Western Regional Local Government Area.

A copy of the title and deposited plans has been provided at **Appendix B** of this report.

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2.3 Existing Minimum Lot Size

The subject site is mapped to have a Minimum Lot Size pursuant of MWRLEP of 100 hectares.

Figure 3 is an extract of MWRLEP Sheet LZN_005, with the site outlined in red.

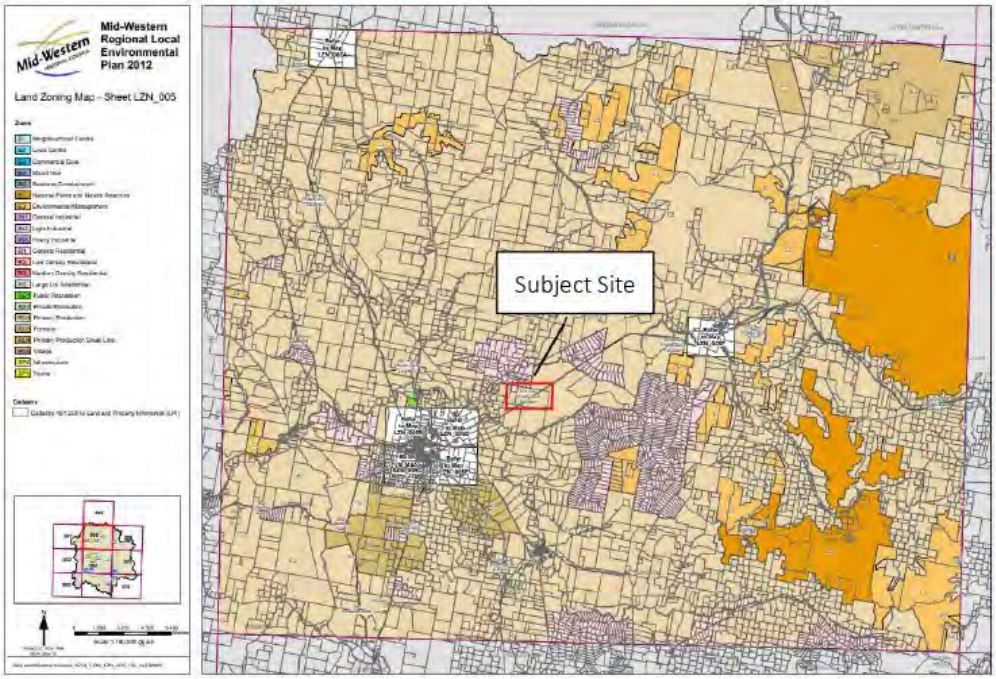

Figure 3: Existing Minimum Allotment Size – MWRLEP 2012

Source: NSW Legislation – Edited by Barnson Pty td

2.4 Topography and Soils

The subject site is generally flat throughout. The subject site includes multiple watercourses mainly along the north and west boundaries.

The site is classed as 5 Severe Limitation in accordance with SEED Mapping and is shown in **Figure 4** below.

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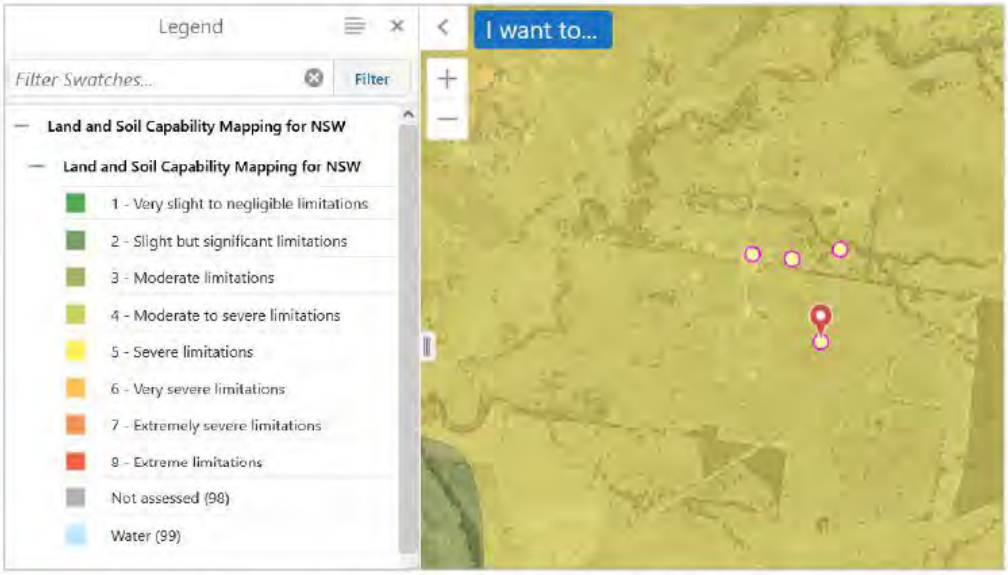

Figure 4 – SEED Land and Soil Capability Mapping

Source: Office of Environment & Heritage

2.5 Heritage

European Heritage

The site and immediate surrounding area have been identified on the existing *Mid-Western Regional Local Environmental Plan 2012* Heritage Map (sheet HER_005) in **Figure 5**.

Figure 5 illustrates that the site does not accommodate any Heritage Items (General or Archaeological), nor does it fall within a Conservation Area – General. In addition, the site does not sit adjacent or in close proximity to any heritage item or conservation area.

A review of Schedule 5 of the MWRELP does not locate any items within proximity to the subject site.

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Figure 5: Heritage Map

Source: NSW Legislation - Edited Barnson Pty Ltd

Aboriginal Cultural Heritage

An Aboriginal Heritage Information Management System search was conducted for the subject site and immediate surround (search extent shown in **Figure 6** below).

There are no known items or sites of significance or Aboriginal cultural heritage significance that have been identified as being recorded on or within the vicinity of the site. Refer to AHIMS Search provided in **Appendix C** of this report.

A walkover was conducted by Tony Lonsdale, CEO of Mudgee Local Aboriginal Lands Council (LALC). It was concluded that based on a review of previous Aboriginal Cultural Heritage Assessments conducted in the vicinity, the AHIMS database and a walkover of the site, that no aboriginal Cultural Heritage materials were identified as potentially being impacted by the proposal. The Mudgee LALC clearance letter has been provided in **Appendix E** of this report.

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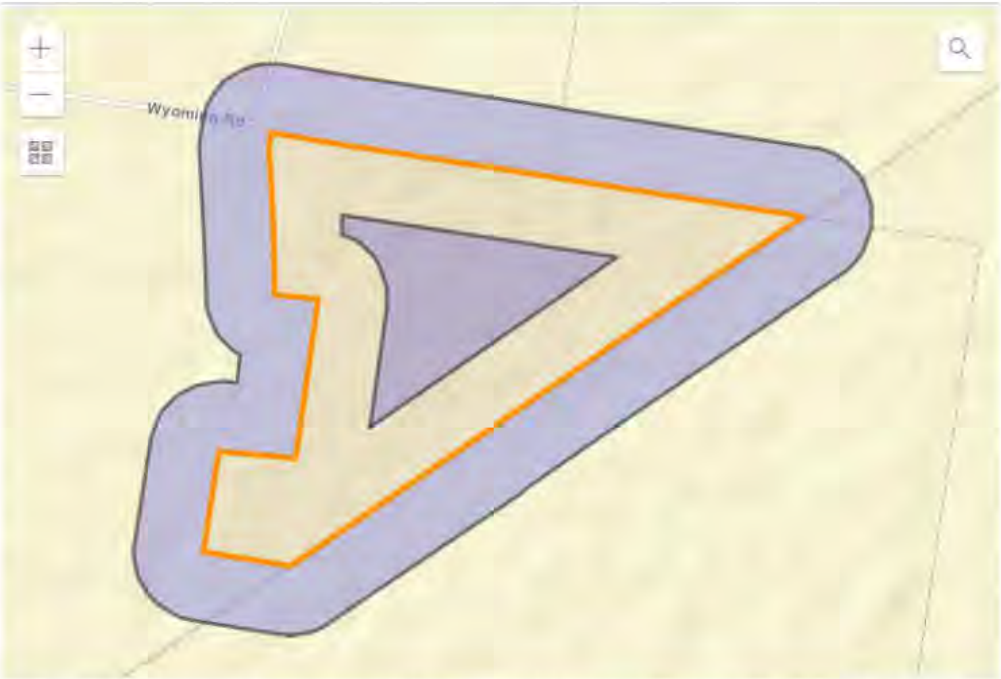

Figure 6: Aboriginal Heritage Information Management System Search Extent

Source: Heritage NSW (AHIMS)

2.6 Flora and Fauna

The site contains minimal Plant Community Types (PCT's) as shown in **Figure 7** below. The site is heavily disturbed as a result of previous activities on the site. It is predominately grassland with scattered trees along the northern boundary. The grassland is frequently mowed/slashed and well managed. No threatened species have been recorded on the site as shown in **Figure 8** below.

PCT ID 277 is partly positioned near the north east corner of the site and is summarised below:

PCT Name: Blakeley's Red Gum – Yellow Box grassy tall woodland of the NSW South Western Slope Bioregion
Vegetation Formation: Grassy Woodlands
Vegetation Class: Western Slopes Grassy Woodlands

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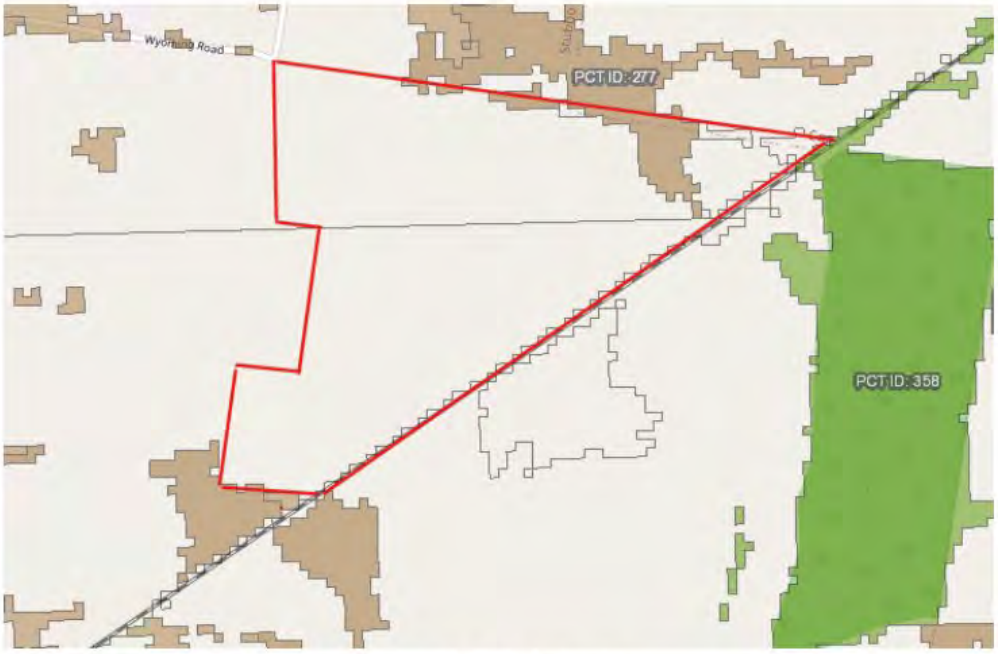

Figure 7: PCT Mapping

Source: Office of Environment & Heritage

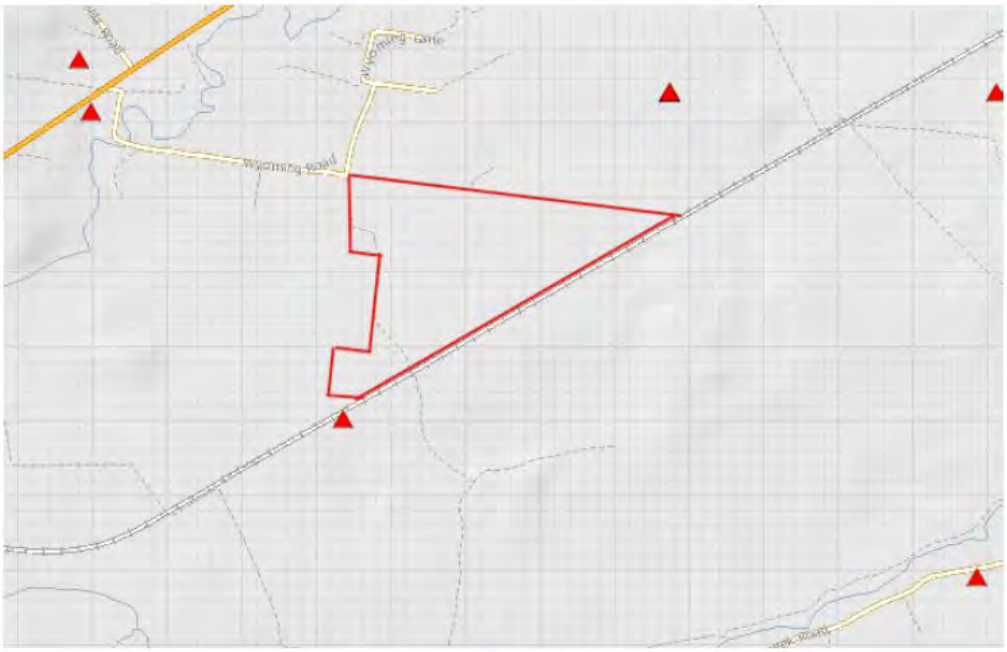

Figure 8: BioNet Atlas Search

Source: BioNet Atlas

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2.7 Noise Environment

A noise assessment has not been undertaken as part of this Planning Proposal. The site is located within an area characterised by primary production and scattered residential activities. Noise levels are consistent with these land uses.

There is a railway line located to the east of the site which adjoins the subject site. The railway line is known as the Sandy Hollow Gulgong Railway, pursuant to SIX maps. It is understood that the railway is used for transporting copper from Nyngan to the port of Newcastle within sealed containers and also for freight services to central west NSW. There are no coal mines nearby that utilise this section of the railway.

2.8 Natural Hazards

The site is not mapped as being bushfire prone or within a Flood Planning Area under the *Mid-Western Regional Local Environmental Plan 2012*, NSW Planning Portal or the RFS' Online Mapping Tool.

2.9 Contamination and Acid Sulphate Soils

The site is not known to have previously contained any of the land uses listed in Table 1 of the Contaminated Land Planning Guidelines that are likely to cause contamination. A Preliminary Site Infestation (PSI) has been undertaken and is provided in **Appendix D** of this report. The recommendations are summarised as follows:

- Based on the findings of the desktop review and site investigation it can be states with a reasonable level of confidence that the subject site is suitable for the intended rezoning and subdivision; and
- It is recommended that the elevated Arsenic concentration identified by investigated further, only in the event of this specific portion of the subject site having to be disturbed for further development. At that time, the level and extent of the elevated heavy metal concentration will determine if further remedial action is required.

Refer to PSI in **Appendix D** of this report for the findings.

2.10 Services

The subject site contains existing onsite services such as suitable road access, onsite effluent management, rainwater tanks for storage and reuse, stormwater management mechanisms, electricity and telecommunications.

2.11 Access and Traffic

Access is gained to the site off Wyoming Road, which is a gravel road. An internal driveway is established that provides access to the existing dwelling located on the site.

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3 Planning Proposal Particulars

3.1 General

This Planning Proposal seeks Mid-Western Regional Council's support to rezone approximately 100 hectares of land from RU1 Primary Production to R5 Large Lot Residential, with a corresponding reduction to the minimum lot size from 100 hectares to 12 hectares.

The intention of rezoning the land is to permit the future subdivision of the site and its development for rural residential purposes consistent with the objectives of the R5 Large Lot Residential zone within the MWRLEP.

The PP is generally consistent with the *Mid-Western Regional Comprehensive Land Use Strategy* (CLUS) and Council's Local Strategic Planning Statement, as outlined later in this report. The proposed will deliver a much needed supply of rural residence blocks in a suitable and accessible location within proximity to Gulgong and Mudgee.

3.2 Lot Yield

The Planning Proposal Area comprises a total area of approximately 100 hectares. Under the current RU1 Primary Production zoning, the minimum lots size is 100 hectares, and a compliant subdivision would not allow for further subdivision of land. The land is predominately cleared with scattered trees and vegetation within the southeast and north extremities of the Planning Proposal area.

Barnson have provided an indicative subdivision layout. This layout should be considered to determine the maximum yield for the site based on the proposed rezoning and any potential constraints. A copy of the concept subdivision has been provided in **Appendix A** of this report. The plan demonstrates a maximum yield of eight (8) R5 Large Lot Residential Lots consistent with MWLEP provisions. The purpose of the concept subdivision plan is to show an ideal scenario for subdividing the site and providing a maximum yield for the proposed zoning and corresponding minimum lot size. The final arrangement would be subject to a detailed Development Application.

The opportunity area met specific criteria in the *Mid-Western Regional Comprehensive Land Use Strategy* and was identified as suitable land for future development. The opportunity is to specifically create small rural lots/large residential lots which consist of a minimum of 12 hectares where reticulated water and sewer is not available to ensure more sustainable use of local groundwater and surface water resources with regard to the Rural SEPP Principles. The Planning Proposal will provide an additional residential opportunity area that will add diversity to the market and facilitate the delivery of new lots.

The concept Subdivision Plan shown in **Figure 8** below and **Appendix A** of this report.

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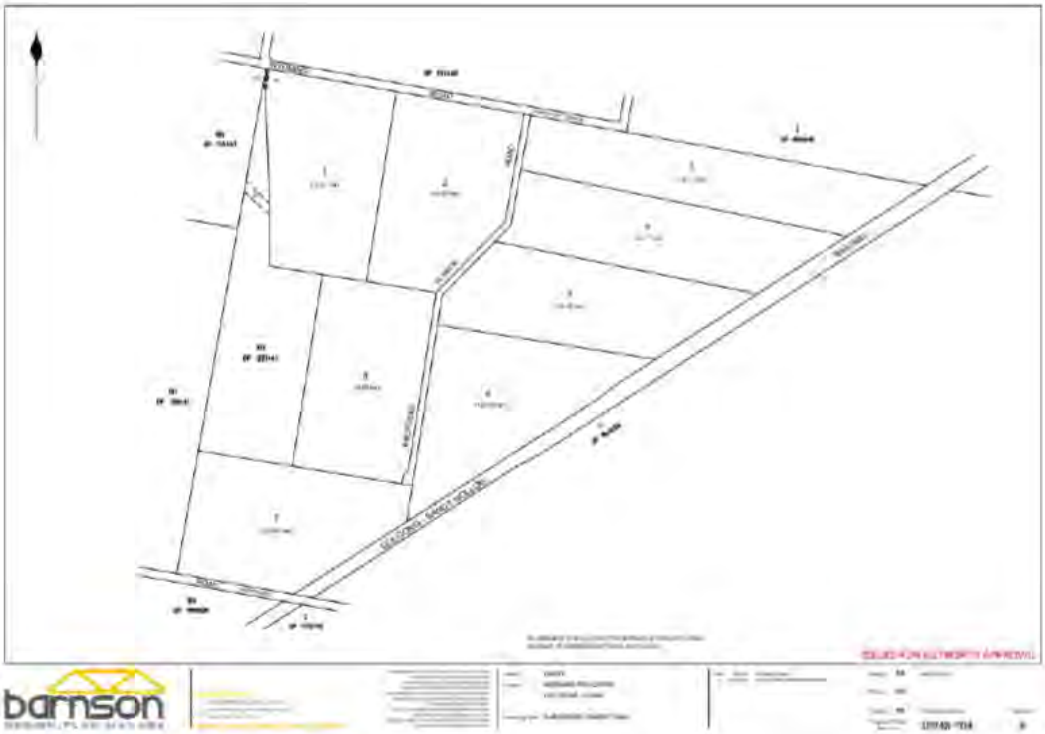

Figure 9: concept Subdivision Plan

Source: Barnson Pty Ltd

3.3 Water Supply and Effluent Management

The Mudgee and Gulgong Urban Release Strategy recommends that Council undertake further analysis into costs of providing reticulated water and sewer to service future subdivisions in the LGA.

Given the semi-rural location, existing development patterns of the site and high costs that would be involved with reticulating this area, it is considered that enforcing this infrastructure would be uneconomic and would not achieve a reasonable return on the costs of installation. Accordingly, it is proposed to provide onsite effluent management systems and water supply via rainwater tanks, as follows.

3.3.1 Onsite Effluent Management

Onsite effluent systems shall be installed for new Lots established on the site and would be subject to assessment as part of the subdivision stage. For sites that may be subject to groundwater vulnerability, alternative systems such as Aerated Wastewater Treatment Systems shall be considered. As part of the future subdivision application, a

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Water Cycle Management Report shall be prepared for each Lot within the subdivision to determine that there is suitable area capable of the disposal of onsite wastewater.

A 4,000m² Lot is widely cited throughout Australia as a minimum lot size for unsewered residential properties (i.e. dwellings), which can adequately manage effluent with appropriate setback buffers. With a lot size of 120,000m² (12 hectares), it is considered that each new Lot would have adequate area to manage effluent.

3.3.2 Water Supply

Onsite rainwater collection tanks will be established as part of future residential developments to service each dwelling on the 12 hectare Lots. Based on data from the Bureau of Meteorology, Gulgong has a recorded mean average of 692mm a year. The highest month for rainfall is January at an average of 86mm and the lowest is in June at an average of 44mm. The amount of rainfall collected would depend on the roof catchment area of dwellings and outbuildings on future Lots. The rainwater harvesting requirements for each household would be dependent on occupancy capacity. Sufficient rainwater would also need to be provided for landscaping and general maintenance.

Given the yearly variation of rainfall in this area, it is recommended that water tanks be specified for future dwellings with a capacity to support those dwellings. The size of collection tanks would be subject to development assessment as part of future applications.

If feasible and allowable by Council and WaterNSW, a bore could be established with associated Water Scheme for non-potable water for each Lot (i.e. landscaping). An assessment of the groundwater availability should be undertaken prior to investigating this option. However, given the proposed size of the Lots, it is not considered necessary as each Lot would be self-sufficient.

3.4 Electricity and Telecommunications

There is existing electricity infrastructure in the locality that supports existing dwellings. The design of additional substations in order to service the proposed Lots would form part of a future subdivision application of the site. There are no known complications on servicing the proposed Lots with electricity in future. Should reticulated electricity not be possible to any of the Lots, solar and battery systems can be investigated, which is quickly becoming popular in rural locations throughout NSW.

It is not proposed to connect the new Lots to reticulated telecommunications infrastructure. This is due to the fact that wireless NBN technology allows for sites to be connected to the NBN via the wireless network, which accommodates both telecommunications and the internet. As such, physical infrastructure is considered unnecessary for this type of subdivision. Nevertheless, should telecommunication lines be required to each proposed Lot, investigations can be undertaken as part of a future

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subdivision application. There are no known complications on servicing the proposed Lots with telecommunications in future.

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4 Existing Legislative Framework

4.1 Introduction

The *Mid-Western Regional Local Environmental Plan 2012* commenced on the 10th August 2012. MWRLEP 2012 adopts the Standard Instrument LEP Template required by the NSW Government.

4.2 RU1 Primary Production Land Zone

The Planning Proposal area subject to the proposed rezoning is existing RU1 – Primary Production zoned land.

A copy of the Landuse Table relating to RU1 – Primary Production from Mid-Western Regional Local Environmental Plan 2012 has been included below:

Zone RU1 Primary Production

1 Objectives of zone

· To enable sustainable primary industry production by maintaining and enhancing the natural resource base.

· To encourage diversity in primary industry enterprises and systems appropriate to the area

· To minimise the fragmentation and alienation of resource lands

· To minimise conflict between land uses within this zone and land uses within adjoining zones.

· To maintain the visual amenity and landscape quality of Mid-Western Regional by preserving the area's open rural landscape and environmental and cultural heritage values

· To promote the unique rural character of Mid-Western Regional and facilitate a variety of tourist land uses

2 Permitted without consent

Environmental protection works; Extensive agriculture; Home businesses;; Home occupations; Intensive plant agriculture; Roads; Water reticulation systems

3 Permitted with consent

Aquaculture; Building identification signs; Business identification signs; Cellar door premises; Dwelling houses; Extractive industries; Farm buildings; Home industries; Intensive livestock agriculture; Landscaping material supplies; Markets; Open cut mining; Plant nurseries; Restaurants or cafes; Roadside stalls; Any development not specified in item 2 or 4

4 Prohibited

Amusement centres; Attached dwellings; Backpackers' accommodation; Boarding houses; Boat building and repair facilities; Car parks; Centre-based child care facilities; Commercial Premise; Correctional centres; Crematoria; Educational

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establishments; Exhibition homes; Exhibition villages; Freight transport facilities; Group homes; Health service facility; Heavy industrial storage establishments; Hostels; Industrial retail outlets; Industries; Local distribution premise; Marinas; Mortuaries; Multi-dwelling housing; Passenger transport facilities; Places of public worship; Public administration buildings; Pubs; Recreation facilities (indoor); Registered clubs; Residential flat buildings; Respite day care centres; Restricted premises; Semi-detached dwellings; Seniors housing; Service stations; Sex services premises; Shops; Shop-top housing; Signage; Storage premises; Transport depots; Truck depots; Vehicle body repair workshops; Vehicle repair stations; Warehouse or distribution centres; Wholesale supplies.

It is noted that the site is currently being managed however no significant sustainable primary industry is currently operating on the site.

4.3 Existing Minimum Allotment Size.

The subject site is mapped to have a Minimum Allotment Size of 100 hectares.

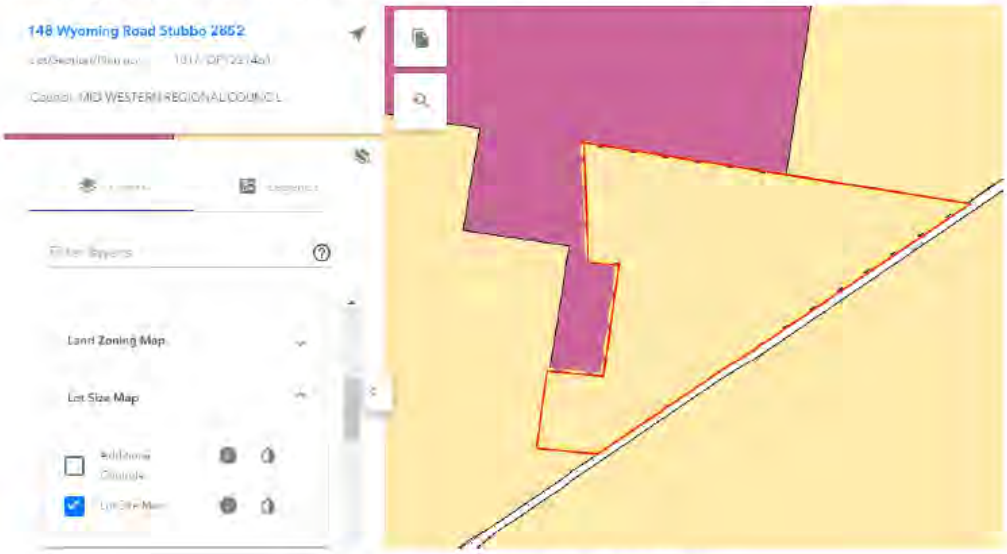

Figure 10: Minimum Lot Size Mapping

Source: ePlanning Spatial Viewer

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5 Proposed Legislative Framework

5.1 Introduction

The Planning Proposal is seeking to rezone the subject site from RU1 Primary Production to R5 Large Lot Residential under the *Mid-Western Regional Local Environmental 2012*. The Planning Proposal also seeks to amend the minimum lot size from 100 hectares to 12 hectares.

5.2 Land Zoning R5 Large Lot Residential

The Planning Proposal is seeking to rezone land to R5 – Large Lot Residential land. The proposed land zoning has been included below:

The objectives of the R5 zone are:

- *To provide residential housing in a rural setting while preserving, and minimising impacts on, environmentally sensitive locations and scenic quality.*
- *To ensure that large residential lots do not hinder the proper and orderly development of urban areas in the future.*
- *To ensure that development in the area does not unreasonably increase the demand for public services or public facilities.*
- *To minimise conflict between land uses within this zone and land uses within adjoining zones.*

The land use table for the R5 zone is as follows:

2 Permitted without consent

Extensive agriculture; Home-based child care; Home businesses; Home occupations; Roads; Water reticulation systems

3 Permitted with consent

Bed and breakfast accommodation; Cellar door premises; Dual occupancies; Dwelling houses; Garden centres; Home industries; Intensive plant agriculture; Landscaping material supplies; Markets; Neighbourhood shops; Oyster aquaculture; Plant nurseries; Pond-based aquaculture; Roadside stalls; Secondary dwellings; Serviced apartments; Tank-based aquaculture; Waste or resource transfer stations; Water recycling facilities; Any other development not specified in item 2 or 4

4 Prohibited

Advertising structures; Agriculture; Air transport facilities; Airstrips; Amusement centres; Animal boarding or training establishments; Boarding houses; Boat building and repair facilities; Boat launching ramps; Boat sheds; Car parks; Cemeteries; Charter and tourism boating facilities; Commercial premises; Correctional centres; Crematoria; Dairies (pasture-based); Electricity generating works; Entertainment facilities; Environmental facilities; Exhibition homes; Exhibition villages; Forestry; Freight transport facilities; Function centres; Heavy industrial storage establishments; Helipads; Highway service centres; Home occupations (sex services); Industrial retail outlets; Industrial training

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facilities; Industries; Jetties; Marinas; Mooring pens; Moorings; Mortuaries; Passenger transport facilities; Public administration buildings; Recreation facilities (indoor); Recreation facilities (major); Registered clubs; Research stations; Residential accommodation; Restricted premises; Rural industries; Service stations; Sex services premises; Storage premises; Tourist and visitor accommodation; Transport depots; Truck depots; Vehicle body repair workshops; Vehicle repair stations; Veterinary hospitals; Warehouse or distribution centres; Waste or resource management facilities; Water recreation structures; Water supply systems; Water treatment facilities; Wharf or boating facilities

The Planning Proposal will require the revisions of the Land Zoning Maps of the Mid-Western Regional Local Environmental Plan 2012.

5.3 Minimum Allotment Size

No changes are proposed to Clause 4.1 of the LEP.

The Planning Proposal is seeking to reduce the Minimum Subdivision Size to 12ha to correlate with the land zoning changes. Therefore, the Planning proposal will require modification to the Minimum Subdivision Lot Size Map.

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6 Planning Proposal

6.1 Part 1 – Objectives or Intended Outcomes

The Intention of this Planning Proposal is:

To amend the *Mid-Western Regional Local Environmental Plan 2012* to enable Large Lot Residential development.

The key outcomes of the site investigation carried out for this Planning Proposal are:

- Mapping and rezoning of the subject site which is zoned R5 Large Lot Residential Land.
- Providing additional land to support the continuous growth of the area within proximity to Gulgong and the larger Mid-Western region.
- Provisions for alternative housing and land supply.

The Planning Proposal includes comprehensive supporting information to:

- Describe the subject land, its locality, the current zoning and justification to provide for additional large lot residential development on the subject land.
- Request an amendment to the LEP to permit large lot residential development.
- Address the 'Gateway Determination Assessment' Criteria under Part 3 of the EP&A Act 1979.
- Provide justification for the LEP amendment and demonstrate the net community benefits which follow.
- Demonstrate that the Planning Proposal is consistent with NSW Department of Planning, Industry and Environment and Council broad strategic direction for the locality.

6.2 Part 2 – Explanation of Provisions

The Principal Planning Instrument is the *Mid-Western Regional Local Environmental Plan 2012*.

Amendment applies to	Explanation of Provision
The land zoning of the subject site	Amending land governed by the Mid-Western Regional Local Environmental Plan 2012 that is zoned RU1 Primary Production to R5 Large Lot Residential. Refer to **Figures 11 & 12**
The Minimum Lot Size of the subject site.	Amending land governed by the Mid-Western Regional Local Environmental Plan 2012 that has a Minimum Lot Size of 100ha to 12ha to correlate with the land

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	proposed to be zoned R5 Large Lot Residential.

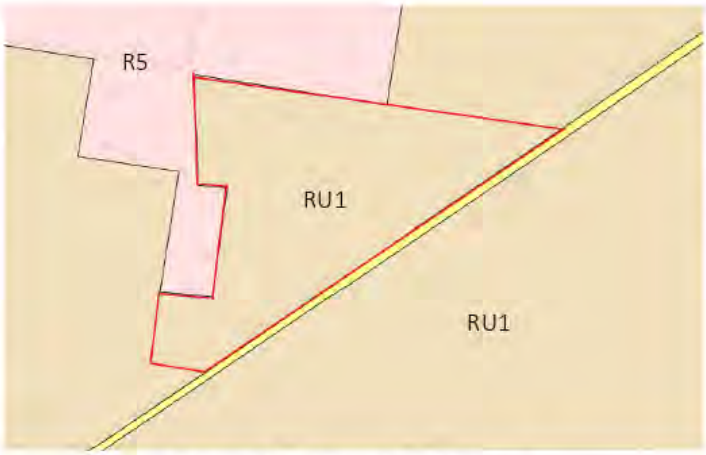

Figure 11: Existing Land Zoning

Existing Land Zoning

All land within the Planning Proposal Area is currently zoned RU1 – Primary Production

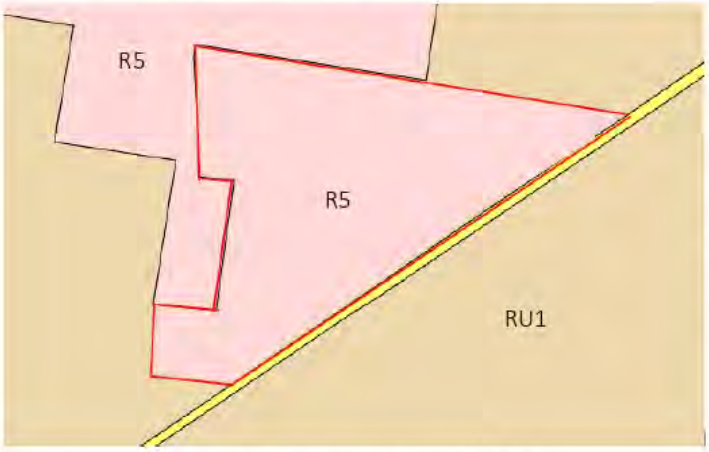

Figure 12: Proposed Land Zoning

Proposed Land Zoning

The Planning Proposal seeks to make amendments to the current land zoning by altering the existing land zoning to R5 – Large Lot Residential.

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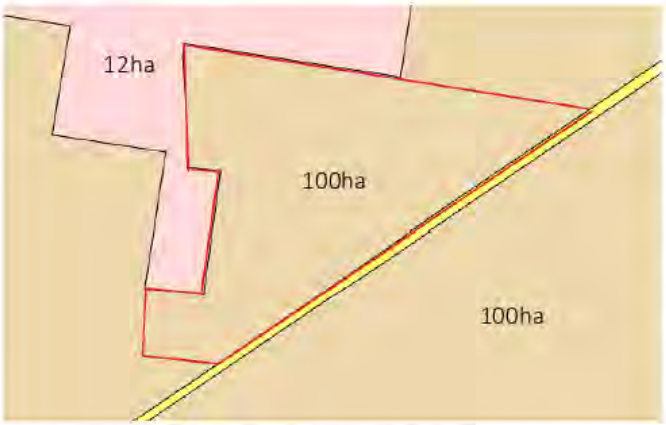

Figure 13: Existing Minimum Allotment Size

Existing Minimum Allotment Size

All land zoned RU1 and land within the Planning Proposal Area has a Minimum Allotment Size of 100ha.

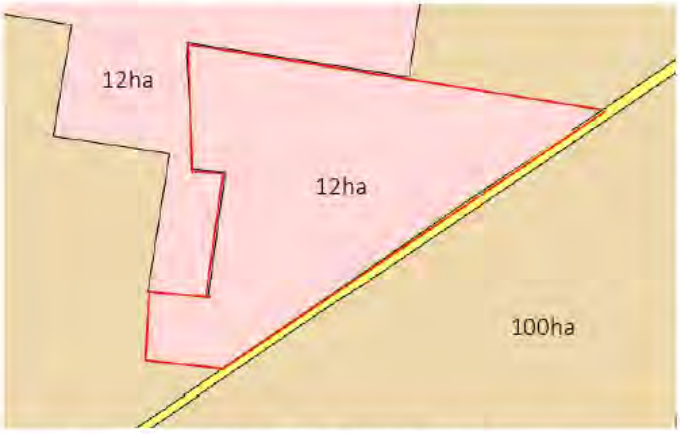

Figure 14: Proposed Minimum Allotment Size.

Proposed Minimum Allotment Size

The Planning Proposal seeks to make amendments to the current Minimum Allotment Size by altering the current lot size map to correspond with the proposed R5 Land Zone (12ha) amendment and to facilitate future subdivision of land.

If the land was to retain its existing zone provisions, the result would be:

- Retention of land zoned RU1 with little agriculture potential.
- Inconsistency with Council adopted strategic document, including Growth Management Strategies; and,
- A potential shortfall in projected large lot residential housing stock in the LGA.

The proposed outcome for the PP will be achieved by:

- Rezoning of land would facilitate the use of land to be used for residential purposes and ultimately support the housing needs for the community of Gulgong/Stubbo and the Mid-Western Regional Local Government Area.
- Supporting the rezoning of land that will facilitate the release of additional large lot residential land in an appropriate location near Gulgong.

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6.3 Part 3 – Justification

6.3.1 Section A – Need for the Planning Proposals

Is the planning proposal a result of an endorsed LSPS, strategic study or report?

Yes. The Planning Proposal will deliver additional R5 Large Lot Residential lands as anticipated under the *Mid-Western Comprehensive Land Use Strategy* (and shall support the planning priorities stipulated within the *Mid-Western Regional Local Strategic Planning Statement (LSPS)*.

Local Strategic Planning Statement

Council's LSPS was prepared in accordance with Section 3.9 of the *Environmental Planning and Assessment Act 1979*. The objective of the LSPS is to provide a strategic framework for land use planning in the Mid-Western LGA. The LSPS included the following planning priorities that a relevant to the subject Planning Proposal.

Planning Priority 2 *"make available diverse, sustainable, adaptable, and affordable housing options through effective land use planning"*.

The proposal is consistent with Planning Priority 2 as it shall increase the number of large lot residential land in the LGA. The need for increased supply for large lot residential blocks is noted in the LSPS, with the focus on identifying additional opportunity areas within the next 20 years. The subject Planning Proposal will assist Council in achieving Planning Priority 2 and assist with stabilising demand for large lot residential blocks in the LGA. This would ensure that affordability in the market can be maintained.

Section 3 (page 10) of the LSPS states "Council will continue to ensure a range of residential housing options are available including varying lot sizes and rural lifestyle opportunities. Council will strive to improve the build outcomes of housing stock". The proposal is consistent with this part in that it shall provide additional rural lifestyle blocks for the LGA, where the is a significant shortfall.

Comprehensive Land Use Strategy

Council's Comprehensive Land Use Strategy (CLUS) is a strategic policy for land use within the Mid-Western Regional LGA. Council adopted the CLUS in 2010 with the purpose to:

- *Provide a decision making toll based on clarity, certainty and accurate data to assist Council in the decisions making process; and*
- *Determine the optimal location for development.*

The CLUS acknowledges the need for additional rural lifestyle blocks in the LGA by identifying more suitable areas for lifestyle development. The criteria provided three scales of delivery, being Short (2010-2015 – Areas C and E), Medium (2015-2025 – Area F) and Long (2025-2035 – Areas A, B and D) Term Opportunity Areas. The subject site is located within the Long Term Area B area. An extract of the mapped areas is shown in **Figure 15** below.

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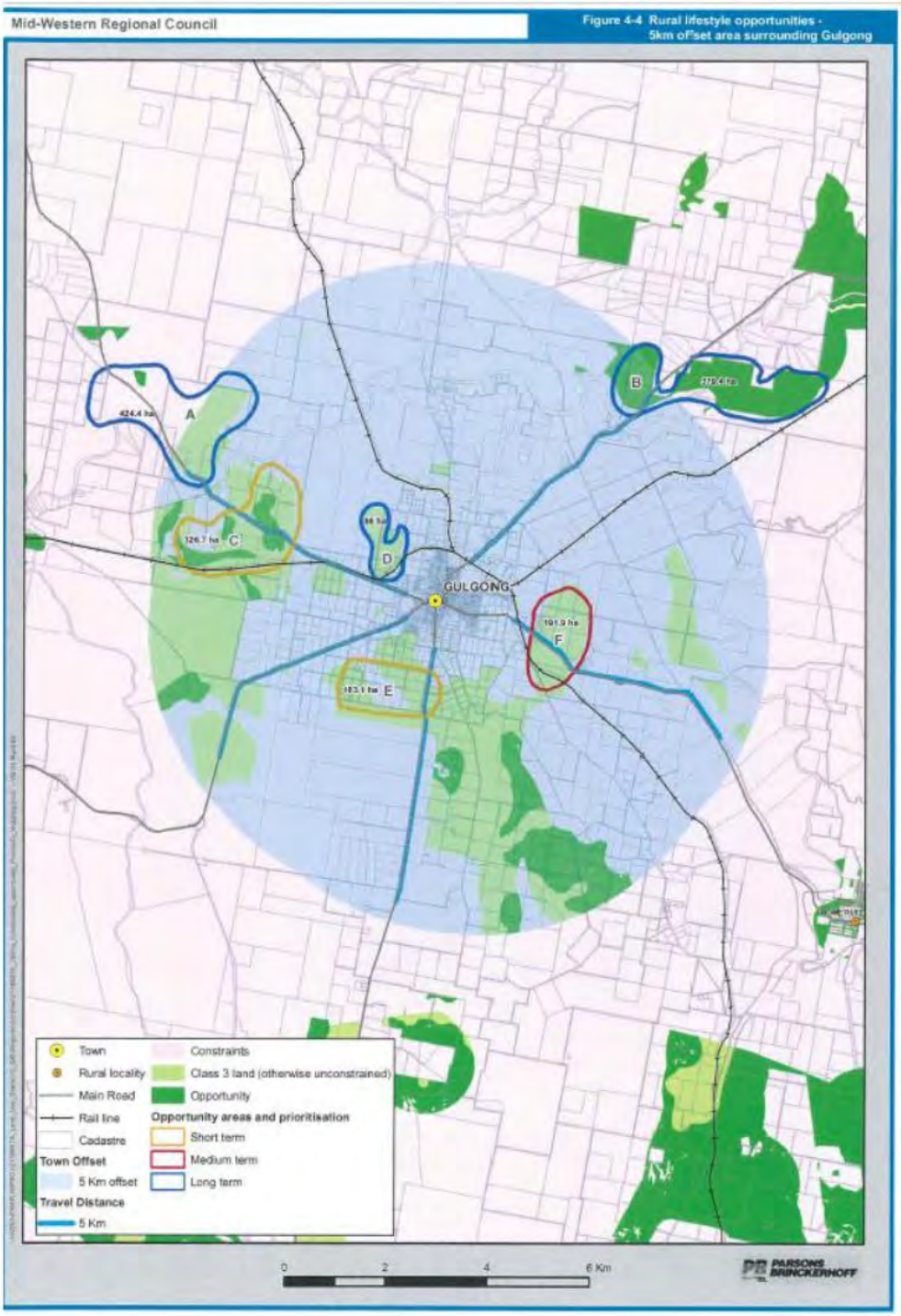

Figure 15 – CLUS Mapping

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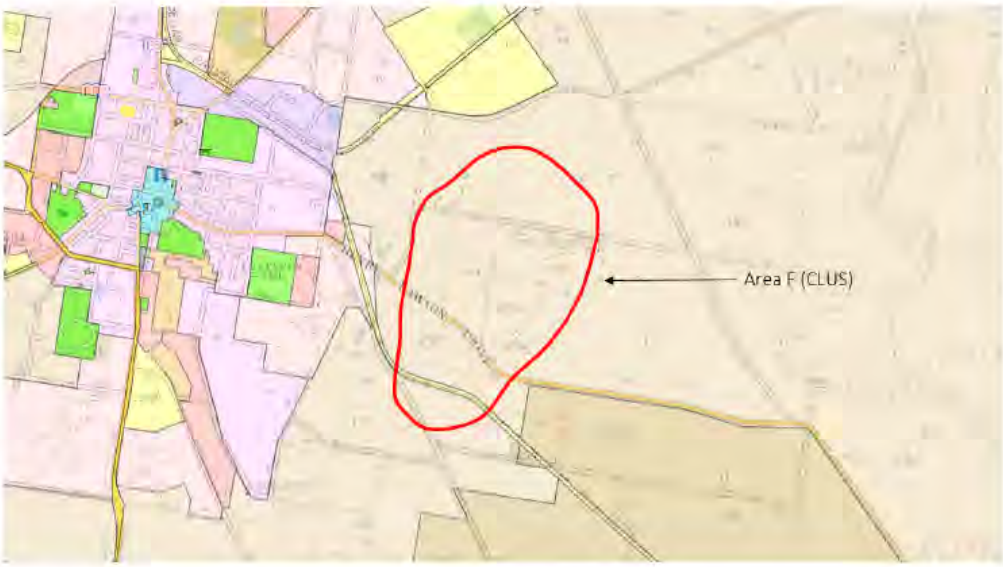
The CLUS stipulated that the release of these lands would be subject to a Rural Release Strategy, however Barnson is yet to locate the strategy within Council's files, therefore it is assumed that the strategy was never prepared.

It is understood that the Short Terms opportunity areas (Area C and E) have been taken up and that there has been zero take up of the Medium Term Area (Area F).

Prelodgement discussions were undertaken prior to the submission of this PP. The relevant Council officer provided the following advice via email:

> *"Figure 4-4 Rural lifestyle opportunities – 5km offset area surrounding Gulgong (CLUS Part C Strategy) identifies opportunity areas. We specifically spoke about the supply remaining in opportunity F. The CLUS states a lot yield of 11, 12 hectare lots. Council acknowledges the lots within this area have not been rezoned, however after the consideration of the established dwelling pattern and the size of lots, it is unlikely this opportunity area will deliver the yield of 11 lots. Accordingly, Council will consider Planning Proposals for rezoning in the long term opportunity areas. These Planning Proposals would attract the consistent fee.*
>
> *The Planning Proposal should provide at least this level of detail regarding the supply available in Area F."*

As shown in the image below, Area F is situated in a rural area zoned RU1 Primary Production. There are R5 lands to the west and RU4 lands to the south east of this mapped area.



As mentioned above, Area F provides a potential Lot yield of 11 Lots across the mapped area, being 191 hectares. As shown in the figure below, there are approximately nine (9) existing dwellings located within the mapped Area F. Therefore, it is difficult to determine where the additional 11 Lots that would accommodate new dwellings would come from in this area, given the presence of existing dwellings and dwellings patterns in this area. Therefore it is highly unlikely that the Area F opportunity area would deliver the eleven (11) lots as stipulated within the CLUS.

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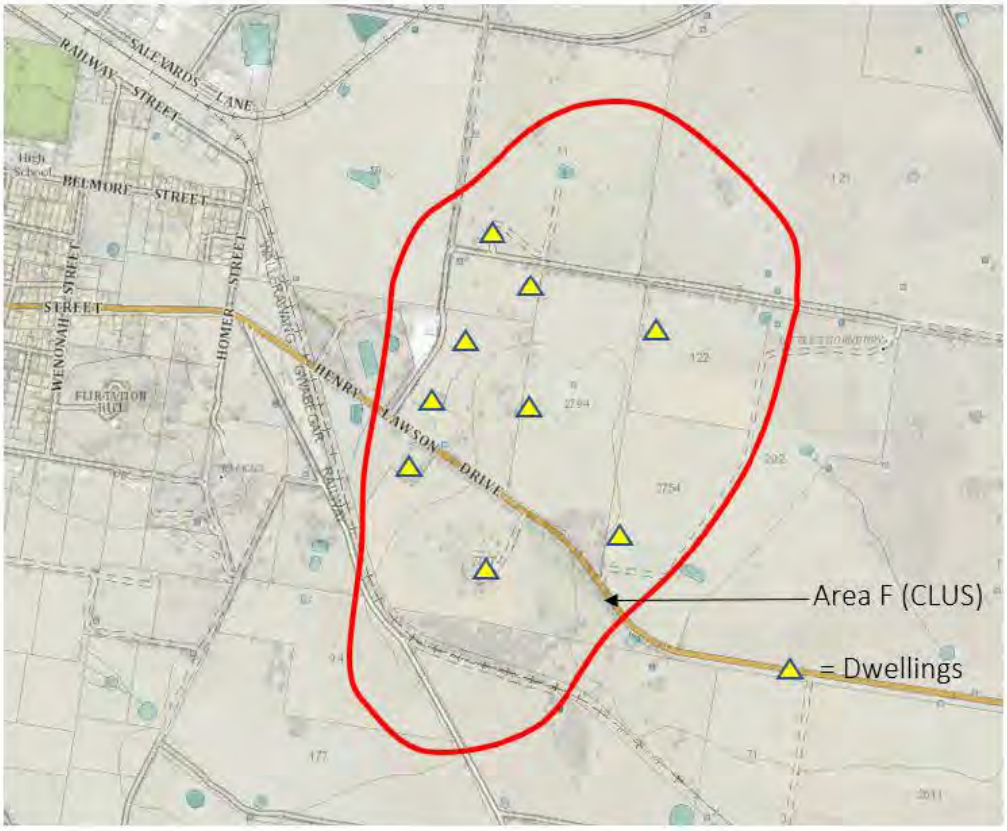

The subject site, being approximately 100 hectares in size, shall accommodate for the shortfall that Area F presents. Noting that there is only one (1) dwelling positioned on the subject site, and that the potential yield discussed earlier in this report is demonstrated as highly achievable.

The CLUS is broken up into three (3) parts, and each part is discussed below.

Part A – Introduction and Background

This section of the CLUS provides the general context of the strategy. It focuses on addressing rural settlement and addresses the demand for rural lifestyle development in the LGA. In particular, Section 10.9 of Part A deals with addressing the demand for rural lifestyle development, and an extract is provided below.

> *10.9 Addressing the demand for rural lifestyle*
>
> *Living in the rural landscape is increasingly a popular lifestyle choice across the Mid-Western Regional local government area. One of the aims of rural settlement planning is to address the demand for the rural lifestyle, while minimising impacts upon agricultural land. It aims to curb unnecessary subdivision of agricultural land in less desirable locations. Council recognises and supports the need to provide a range and choice of dwelling opportunities, both urban and rural. By the same token, we need to recognise that land is a finite resource both in terms of providing for rural lifestyle and maintaining an agricultural base.*
>
> *There are approximately 2,066 lots within the Mid-Western Regional local government area and of these lots it is estimated that about 90 per cent have an existing dwelling. There is limited evidence to suggest that many of the more*

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isolated lots are used as temporary accommodation with a shed, electricity but no permanent dwelling. Anecdotal evidence suggests that the demand is strong for rural lifestyle lots within close proximity to Mudgee.
As discussed, reports from local real estate agents suggest that there is an increasing demand for rural lifestyle. This is supported by the projected gross allotment demands produced by Ratio Consultants (2007), as summarised in Table 10-12, which indicated growth in the rural areas surrounding Mudgee and Rylstone 20 2031.

The CLUS discusses the demand for tree changers. This demand has grown significantly since the CLUS was published in 2010. This is predominately due to a change in people working remotely and moving away from metropolitan areas. The COVID pandemic has played a big part in this change, allowing people to work from home more regularly. This has allowed people to explore their options in terms of living and look to more affordable housing options outside of the metropolitan areas.
The CLUS acknowledged that there is insufficient land zoned to satisfy the anticipated demand for future rural lifestyle development. This leads us into Part B, where a constraints and opportunity analysis has been undertaken to determine the suited areas for future rural lifestyle accommodation.

Part B – Constraints and Opportunities
Part B of the CLUS provides an in depth understanding of the environmental, social and economic issues to determine the most suitable locations for additional rural lifestyle development within the LGA.
Chapter 2.2 outlines the relevant constraints for rural land use conflicts as a result of additional rural lifestyle development. The proposal is consistent with all constraints listed within this chapter.
The CLUS also discussed the suitability of the land in terms of infrastructure, services, value of agricultural land etc. The site is located in a suitable location for rural residential development.

Part C – Strategy
Part C of the strategy consolidates the information and analysis in Parts A and B, and provides recommendations moving forward. Section 4.8 (Page 63) states:

> *"Evidence suggests that the demand is strong for rural lifestyle lots within close proximity to Mudgee, ideally within a commuting distance of 10-15 minutes from the town centre. The area surrounding Mudgee is picturesque and desirable for those seeking a 'treechange' and proximity to the higher order services of Mudgee. This is consistent with the direction of the Strategy, which focuses future rural lifestyle opportunities around the main settlements in the local government area".*

The subject site is located approximately 9.5km north east of Gulgong, which is a 10-12 minute drive.
This section of the Strategy talks about the release of lifestyle Lots, being approximately 40- 50 Lots per annum, and the location of those lots in relation to townships. A desktop review of the LGA has revealed that there is a significant shortfall in lifestyle blocks in the area. If Council are delivering 40-50 lots per annum, in accordance with the strategy, it is difficult to determine where these lots are being delivered. This PP has been prepared having regard to the aims and objectives of the CLUS, and is deemed necessary in order to assist with the delivery of additional lifestyle blocks for the LGA.

Is the planning proposal the best means of achieving the objectives or intended outcomes, or is there a better way?

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Proposed Option 1: Planning Proposal seeking to rezone land from RU1 – Primary Production to R5 – Large Lot Residential and adjust the Minimum Allotment Size accordingly.

Option 1 is this planning proposal and is found to be the most appropriate options as the Planning Proposal is not inconsistent with the objectives of several strategic planning policies that pertain to the region.

Retaining the zoning and reducing the lot size would result in the lot sizes not being conducive with the zone objectives which is why the rezone was determined most suitable in order to subdivide the subject site to produce the in demand R5 lots.

6.3.2 Section B – Relationship to the strategic planning framework

Will the planning proposal give effect to the objectives and actions of the applicable regional or district plan or strategy (including any exhibited draft plans or strategies?

Central West and Orana Regional Plan 2041

The Central West and Orana Regional Plan 2041 is a 20-year blueprint for the future of the Central West and includes five (5) overarching goals. The goals and the Planning Proposals consistency have been addressed below

Part 1 – Region-Shaping Investment

Objective 1: Deliver the Parkes Special Activation Precinct and share its benefits

The Planning Proposal will not impact on the intention of the Parkers Special Activation precinct.

Objective 2: Support the State's transition to Net Zero by 2050 and deliver the Central-West Orana Renewable Energy Zone

The Planning Proposal is believed to be consistent with Objective 2 as the subject land has been identified as most suitable for rural lifestyle opportunities, not a location for renewable energy generation.

Objective 3: Sustainability manage extractive resource land and grow the critical minerals sector

The Planning Proposal is believed to be consistent with Objective 3 as the proposal is not located on land identified suitable for mineral and energy resource extraction. The proposed rezoning will also contribute to the development of the township of Gulgong increasing its resilience for potential mining transitions experienced by the community.

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Objective 4: Leverage inter-regional transport connections

The planning proposal does not produce incompatible land uses for the surrounding road network and does not adversely impact on the connections or efficiency of freight transport in the locality.

Part 2 – A Sustainable and Resilient Place

Objective 5: identify, protect and connect important environmental assets

The planning proposal site is not considered to have adverse impacts on any high environmental value assets and does not contain heritage or aboriginal heritage sites or items. Refer to Mudgee LALC clearance Letter In **Appendix E** of this report.

As shown below, proposed Lots 3 and 4 are subject to Plant community Types under the SEED portal. These mapped lands may contain High Environmental Value Lands. However, considering the proposed Lot layout and large 12 hectares sites, future dwellings/developments on the land can remain clear of these mapped lands. By providing building envelopes as part of future subdivision applications, the lands can be avoided and therefore no impact to these potentially HEV lands are triggered.

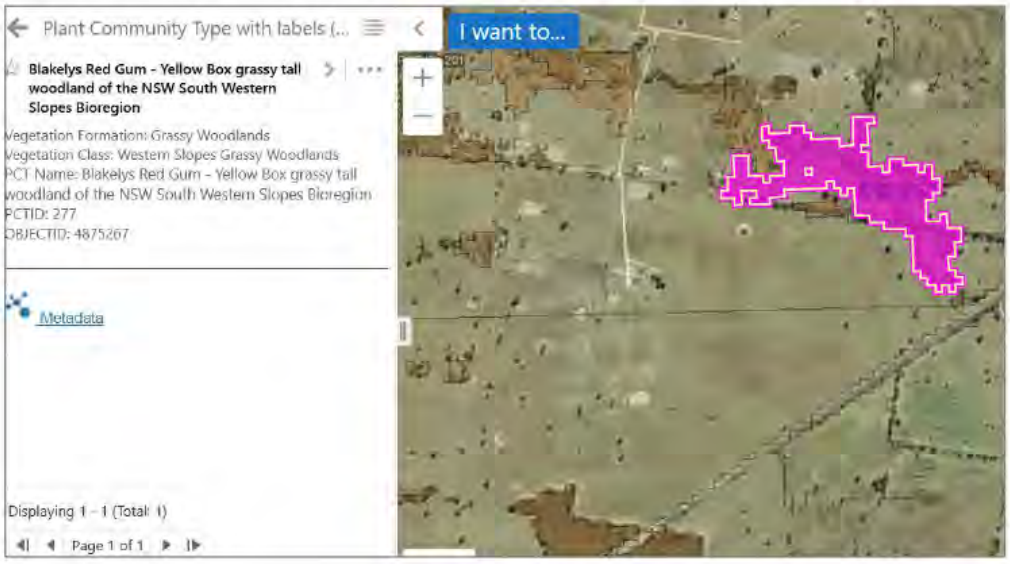

Figure 16 – PCT Mapping

There are some Biodiversity Values mapped areas located to the rear of proposed Lots 3 and 4 and form part of the watercourse traversing through that portion of the site. Future dwellings and associated outbuildings shall be kept clear of these areas, which can be formalised by nominating buildings envelopes as part of future subdivision applications.

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Therefore the Planning Proposal is consistent with the strategies under this part as retaining those potentially High Environmental Value Lands can be achieved.

Objective 6: Support connected and healthy communities

The Planning Proposal does not impact upon parks, open spaces, bushland and waterways in the locality.

Objective 7: Plan for resilient places and communities

There are no major natural hazards applicable to the land. Future dwellings on the subject site would have the option of exploring energy efficient and resilient dwellings, thereby ensuring consistency with this objective. In addition, adequate water storage shall be implemented for future dwellings to ensure that the dwellings can be fully serviced with water during drought events. There is no vulnerability or major risks with regard to this site that would trigger an inconsistency with the objective.

Objective 8: Secure resilient regional water resources

The Planning Proposal is believed to be consistent with Objective 8 as the proposal does not adversely impact on the implementation of the *Murray-Darling Basin Plan*, or any other known water resource plan. Future dwellings on the site shall be provided with rainwater tanks for storage and reuse, and as such, there shall be no impact on any regional water sources in the locality, therefore the proposal is consistent with this objective.

Objective 9: Ensure site selection and design embraces and respects the region's landscapes, character and cultural heritage

The Planning Proposal is consistent with this objective as it will provide housing opportunities in a scenic location. Future dwellings on the site shall consider the regions landscape, character and cultural heritage.

Objective 10:- Protect Australia's Sark Sky Park

The subject site is located on the periphery of the 200km radius from Siding Spring Observatory. Future dwellings will emit minimal light, and considering the site is approximately 197km from the observatory, it is considered that no impact of artificial light will occur.

Part 3: People, Centres, Housing and Communities

Objective 11: Strengthen Bathurst, Dubbo and Orange as innovative and progressive regional cities

The planning proposal is consistent with Objective 11 as it supports future investment, increases housing choices, diversifies the housing stock in the Gulgong area and is

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strategically located to support rural lifestyle whilst being located within proximity to the abovementioned regional cities to allow access and an attractive lifestyle.

Objective 12: Sustain a network of healthy and prosperous centres

The Planning Proposal is consistent with this objective as it shall provide an increase and more diverse housing choice for the LGA.

Objective 13: Provide well located housing options to meet demand

The planning proposal is consistent with Objective 13 as it will produce and increase in housing stock (from further development), especially the highly demanded rural lifestyle residential opportunities which contributes to a greater mix of housing options in the greater Gulgong township.

The subject site is identified in Council's Comprehensive Land Use Strategy and Urban Release Strategy as suitable for future R5 Large Lot Residential zoning and development. Therefore the proposal is consistent with this objective as it provides for additional housing to meet the demand and supply needs for the LGA.

Objective 14: Plan for diverse, affordable, resilient and inclusive housing

The Planning Proposal is consistent with this objective as it shall provide additional diverse housing with the LGA. This shall assist in improving housing affordability for the region, especially given that Mid-Western Regional experiences the highest average house sale price increase.

Objective 15: Manage rural residential development

Objective 15 provides the following objective:

"Enable new rural residential development only where it has been identified in a local strategy prepared by the relevant council and endorsed by the department."

The subject site is mapped under Council's comprehensive Land Use Strategy as suitable for rural residential development. Therefore, the Planning Proposal is consistent with this objective. The planning proposal is also consistent with all objectives under Strategy 15.1 of this objective.

Objective 16: Provide accommodation options for seasonal, temporary and key workers

The Planning Proposal does not impact upon temporary workers accommodation in the LGA.

Objective 17: Coordinate smart and resilient utility infrastructure

The planning proposal site has been identified in the CLUS as land with rural residential potential consisting of minimum 12ha lots where reticulated water and sewer is not

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available. Onsite sewage management and rainwater collection shall be provided to future dwellings, thereby having no impact on utility infrastructure in the area.

Part 4 – Prosperity, Productivity and Innovation

Objective 18: Leverage existing industries and employment areas and support new and innovative economic enterprises

Not applicable.

Objectives 19: Protect agricultural production values and promote agricultural innovation, sustainability and value-add opportunities

The Planning Proposal is believed to be consistent with Objective 19 as the proposal seeks to rezone underutilised primary production land to R5 – Large Lot residential land (rural lifestyle opportunity).

The subject site is not mapped as important agricultural land and is identified as an emerging opportunity for R5 large lot residential land that enables rural lifestyle residential opportunities. It does not conflict with the adjoining properties land uses, nor does it impact on the primary production land use of the locality and does not impede on any buffers in the locality.

The PP contributes to the wellbeing and prosperity of the region promoting a diverse range of rural lifestyle residential opportunities and further development opportunities in the Gulgong township.

Objective 20: Protect and leverage the existing and future road, rail and air transport networks and infrastructure

The planning proposal will have no adverse impacts on air travel or public transport within the locality and has been identified as rural lifestyle opportunity land due to its close proximity to the Gulgong CBD and Gulgong services.

Objective 21: Implement a precinct-based approach to planning for higher education and health facilities

Not applicable.

Objective 22: Support a diverse visitor economy

There are short term/tourist accommodation opportunities for the proposed land zone. As such, the Planning Proposal is capable of contributing to a diverse visitor economy for the LGA.

Objective 23: Support Aboriginal aspirations through land use planning

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Engagement with Mudgee's LALC was undertaken as part of this Planning Proposal to undertake a walk over of the site to determine if any Aboriginal heritage items or relics are present. No items of significance were found as shown in **Appendix E** of this report.

Part 5 – Mid-Western Regional

The Planning Proposal is consistent with the Mid-Western Regional objectives under Part 5 in that the Planning Proposal shall provide diverse, sustainable, adaptive and affordable housing opportunities by rezoning the subject site for large lot residential purposes. This is consistent with the first dot point under Council's priorities list.

Is the planning proposal consistent with a council LSPS that has been endorsed by the Planning Secretary or GSC, or another endorsed local strategy or strategic plan?

Mid-Western Regional Local Strategic Planning Statement (Our Place 2040)

The Mid-Western Regional Local Strategic Planning Statement (Our Place 2040) provides the basis for, and the delivery of, strategic planning in the local area and is a link to the NSW Government's Central West and Orana Regional Plan 2036.

In particular, the Planning Proposal is consistent with *Planning Priority 1 – Make available diverse, sustainable, adaptable and affordable housing options through effective land use planning*

Planning Priority 2 highlights the need to identify suitable sites for future large lot residential opportunities should the region experience high levels of demand.

The CLUS identified the proposed planning site as large lot residential opportunity land and the migration from Sydney CBD and other city areas during the COVID-19 pandemic combined with the increase in flexible working arrangements has resulted in a higher demand for rural lifestyle (large lot residential) lots.

Therefore, the Planning Proposal for land zoning and map amendments is consistent with the LSPS as:

- It aligns with the strategic directions of the LSPS.
- Meets a specific need identified by the LSPS.

The proposed amendments will support the orderly and economic development of the land to meet the identified need in the LSPS.

Mid-Western Regional Comprehensive Land Use Strategy. (CLUS)

The CLUS is a plan to meet the long term urban and rural growth needs of the community. The Planning Proposal for land zoning and map amendments is consistent with the CLUS as:

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- The CLUS identifies a key approach to achieving its economic, environmental, and social objectives is creating opportunities for large lot residential lifestyles near existing towns and villages where existing road access and services are available.
- The CLUS specifically identifies the planning proposal site as opportunity land for large residential lots

Is the planning proposal consistent with any other applicable State and regional studies or strategies?

The Planning Proposal is found to be consistent with the following policies:

- Mid-Western Regional Local Strategic Planning Statement.
- Mid-Western Regional Comprehensive Land Use Strategy
- Mudgee and Gulgong Urban Release Strategy (Large Lot Residential Demand)

Is the planning proposal consistent with applicable SEPPS

State Environmental Planning Policies – Schedule of Consideration	
SEPP	Relevance/Comment
SEPP (Exempt and Complying Development Codes) 2008	Consistent with SEPP
SEPP (Planning Systems) 2021	Consistent with SEPP
SEPP (Biodiversity and Conservation) 2021	Consistent with SEPP The site is not considered to comprise potential koala habitat as defined by *State Environmental Planning Policy (Koala Habitat Protection) 2020*. The planning proposal does not include any clearing of vegetation and the future subdivision of the site shall be subject to a Development Application/assessment. The site is not identified in Schedule 5 of the *Mid-Western Regional Local Environmental Plan 2012* (LEP). An Aboriginal Heritage Information Management System (AHIMS) search was undertaken for the site and immediate surrounds. The AHIMS search revealed that there are no Aboriginal sites recorded within 200m of

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State Environmental Planning Policies – Schedule of Consideration	
SEPP	Relevance/Comment
	the subject site. Refer to AHIMS search in **Appendix C** of this report.
SEPP (Resilience and Hazards) 2021	**Consistent with SEPP** There are no known previous contaminating land uses on the subject site. The rezoning would not result in potentially hazardous or offensive land use or activities. The site is not located in a coastal area. A Preliminary Site Investigation (PSI) has been prepared and is provided in **Appendix D** of this report.
SEPP (Transport and Infrastructure) 2021	**Consistent with SEPP** The proposed rezoning would result in the potential for further subdivision of the subject site producing up to 8 resultant lots. The SEPP demonstrates that subdivisions producing 200 or more resultant lots need to be referred to TfNSW for traffic generating consideration, however the potential subdivision only results in 8 resultant lots, which is under the threshold for referral. The rezoning would result in residential lots adjacent to a rail corridor. Future residential development on the subject site adjacent to the railway corridor would require referral to the rail authority for the rail corridor, and consent authorities must consider if relevant LA levels are exceeded.
SEPP (Industry and Employment) 2021	**Consistent with SEPP**
SEPP (Resources and Energy) 2021	**Consistent with SEPP**
SEPP (Primary Production) 2021	**Consistent with SEPP** The SEPP includes an aim to reduce land use conflict and sterilization of rural land by balancing primary production, residential development and the protection of native vegetation, biodiversity, and water resources. The proposed rezoning from RU1 Primary Production to R5 Large Lot residential in this proposal is to utilize land that does not significantly contribute to agricultural production in the area and helps to meet the

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State Environmental Planning Policies – Schedule of Consideration	
SEPP	Relevance/Comment
	unmet demand for rural residential lots in the Gulgong area. It is considered to contribute to the balance of primary production and residential development in the Gulgong area.
SEPP (Precincts Regional) 2021	Consistent with SEPP

Is the planning proposal consistent with the applicable Ministerial Directions (Section 9.1)

Table 2:Section 9.1 Directions		
Direction	Applicable	Comment
1. Focus Area 1: Planning Systems		
1.1 Implementation of Regional Plans	Yes	The Planning Proposal is found to be consistent with the overall intent of the Central West and Orana Regional Plan 2036 and the direction and actions within. The PP will result in permitting the future developing of the land unconstrained which is currently being underutilised.
1.2 Development of Aboriginal Land Council Land	No	The site has not been identified within the Land Application Map of the State Environmental Planning Policy (Planning Systems) 2021.
1.3 Approval and Referral Requirements	Yes	Noted.
1.4 Site Specific Provisions	Yes	Noted
2. Focus Area 1: Planning System – Place based		
1.5 Parramatta Road Corridor Urban Transformation Strategy	No	N/A
1.6 Implementation of North West Priority Growth Area Land Use and Infrastructure	No	N/A

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Table 2:Section 9.1 Directions		
Implementation Plan		
1.7 Implementation of Greater Parramatta Priority Growth Area Interim Land Use and Infrastructure Implementation Plan	No	N/A
1.8 Implementation of Wilton Priority Growth Area Interim Land Use and Infrastructure Implementation Plan	No	N/A
1.9 Implementation of Glenfield to Macarthur Urban Renewal Corridor	No	N/A
1.10 Implementation of the Western Sydney Aerotropolis Plan	No	N/A
1.11 Implementation of Bayside West Precincts 2036 Plan	No	N/A
1.12 Implementation of Planning Principles for the Cooks Cove Precinct	No	N/A
1.13 Implementation of St Leonards and Crows Nest 2036 Plan	No	N/A
1.14 Implementation of	No	N/A

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Table 2:Section 9.1 Directions		
Greater Macarthur 2040		
1.15 Implementation of the Pyrmont Peninsula Place Strategy	No	N/A
1.16 North West Rail Link Corridor Strategy	No	N/A
3. Focus Area 2: Design and Place		
N/A	N/A	This focus area was blank when the Directions were made
4.Focus Area 3: Biodiversity and Conservation		
3.1 Conservation Zones	No	N/A
3.2 Heritage Conservation	No	An Aboriginal Heritage Information Management System search was conducted for the subject site and immediate surround. There are no known items or sites of significance or Aboriginal cultural heritage significance that have been identified as being recorded on or within the vicinity of the site. The site is not listed in **Schedule 5** of the LEP or on the State Heritage Register.
3.3 Sydney Drinking Water Catchments	No	N/A
3.4 Application of C3 and C3 Zones and Environmental Overlays in Far North Coast LEPs	No	N/A
3.5 Recreation Vehicle Area	No	N/A
3.6 Strategic Conservation Planning	No	N/A
5. Focus Area 4: Resilience and Hazards		
4.1 Flooding	No	The subject site is not mapped as being flood prone land under the Mid-Western Regional Local Environmental Plan 2012 or NSW Planning Portal.

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Table 2:Section 9.1 Directions		
4.2 Coastal Management	No	N/A
4.3 Planning for Bushfire Protection	No	The site is not mapped as being bushfire under the Mid-Western Regional Local Environmental Plan 2012, NSW Planning Portal or the RFS' Online Mapping Tool.
4.4 Remediation of contaminated land	No	The subject site has not had any known contaminating land uses. The site has previously been used for cropping and grazing and is considered to be consistent with this direction.
4.5 Acid Sulfate Soils	No	The subject site is not mapped as containing Acid Sulfate Soils under the NSW Planning Portal.
4.6 Mine Subsidence and unstable land	No	The subject site is not mapped as containing a Mine Subsidence District under the NSW Planning Portal.
6. focus Area 5 – Transport and Infrastructure		
5.1 Integrating land use and transport	Yes	This direction applies as the Planning Proposal creates additional R5 Large Lot Residential zoned land. Increasing Large Lot Residential development within an area served by an existing public road network will support the local school bus service and may potentially result in additional transport services in the area.
5.2 Reserving land for public purposes	Yes	The Planning Proposal is consistent with this direction.
5.3 Development near regulated airports and defence airfields	No	N/A
5.4 shooting ranges	No	N/A
6. Focus Area 6: Housing		
6.1 Residential Zones	Yes	The Planning Proposal seeks to modify the existing LEP by altering the Land Zoning from RU1 – Primary Production to R5 – Large Lot Residential and having a Minimum Allotment Size of 12ha, which will facilitate the further development/subdivision of land. This will potentially allow the Planning Proposal area to be subdivided into 12ha lots which will add to the existing large lot residential land within the area.
6.2 Caravan Parks and Manufactured Home Estates	No	The PP would not impact on any zonings or reservations of land for public purposes.

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Table 2:Section 9.1 Directions		
7. Focus Area 7: Industry and Employment		
7.1 Business and industrial Zones	No	N/A
7.2 Reduction in non-hosted short term rental accommodation period	No	N/A
7.3 Commercial and Retail Development along the Pacific Highway, North Coast	No	N/A – not within applicable LGAs.
8.Focus Area 8 Resources and Energy		
8.1 Mining, Petroleum Production and Extractive Industries	No	N/A – not within applicable precinct.
9. Focus Area 9: Primary Production		
9.1 Rural Zones	Yes	The planning proposal seeks to rezone lane from RU1 Primary Production to R5 Large Lot residential. The proposal is consistent with the recommendations of the CLUS. The subject site is not identified as Class 1-3 as shown in Figure 4 of this report. Therefore, it is not considered to be prime agricultural land and given the proposed minimum lot size of 12 hectares, will still be capable of supporting small scale agricultural activities such as animal grazing. Furthermore, the locality generally consists of R5 lands that have had minimal impact on the context of the total land area available for agricultural purposes in the LGA. R5 Rural residential land was identified as a priority under the Central West Orana Regional Plan 2041 which included the identification of new rural residential area opportunities. This was achieved by the Mid-Western CLUS of which it identified the subject site specifically for rural residential opportunity land. The R5 Large Lot Residential is a more appropriate and logical land use zone than the existing RU1 Primary Production Land zone given that the site is located within proximity to the existing R5 zoned land to the North and West and bordered by a railway line to the southeast and

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Table 2:Section 9.1 Directions		
		identified as 'opportunity land' specifically for the proposed land use change from RU1 to R5. The planning proposal is considered to be consistent with the intent of this direction. Any observed inconsistencies with this direction are considered to be of minor significance.
9.2 Rural Lands	Yes	As in the comments for Direction 9.1 (Rural Zones), this Planning Proposal is inconsistent with the direction as it applies to existing land zoned rural. Any observed inconsistencies with this direction are considered to be of minor significance.
9.3 Oyster Aquaculture	No	N/A
9.4 Farmland of State Regional Significance on the NSW Far North Coast	No	N/A

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6.3.1 Section C – Environmental, Social and Economic Impact

is there any likelihood that critical habitat or threatened species, populations or ecological communities, or their habitats, will be adversely affected because of the proposal?

No. The nature of the proposal does not lead to an assumption that significant land clearing or vegetation removal would be required due to the nature of the R5 land use/s and minimum lot size of 12 hectares. That being said, the *Biodiversity Conservation Act 2016* (BC Act) includes provisions that allow clearing the be undertaken in accordance with relevant thresholds and associated impacts.

The subject site contains minimal vegetation, as shown in the aerial image below. The site predominately contains grasslands that have been cultivated and slashed for an extended period, with some established trees/riparian vegetation within the north eastern corner of the site.

Figure 17 – Aerial Image of site

SEED data has been obtained for Plant Community Types located on the site and is shown in **Figure 18** below. Note that the PCT mapped area is limited to the cluster of vegetation located within the northeastern corner of the site, which is easily shown within the aerial imagery above.

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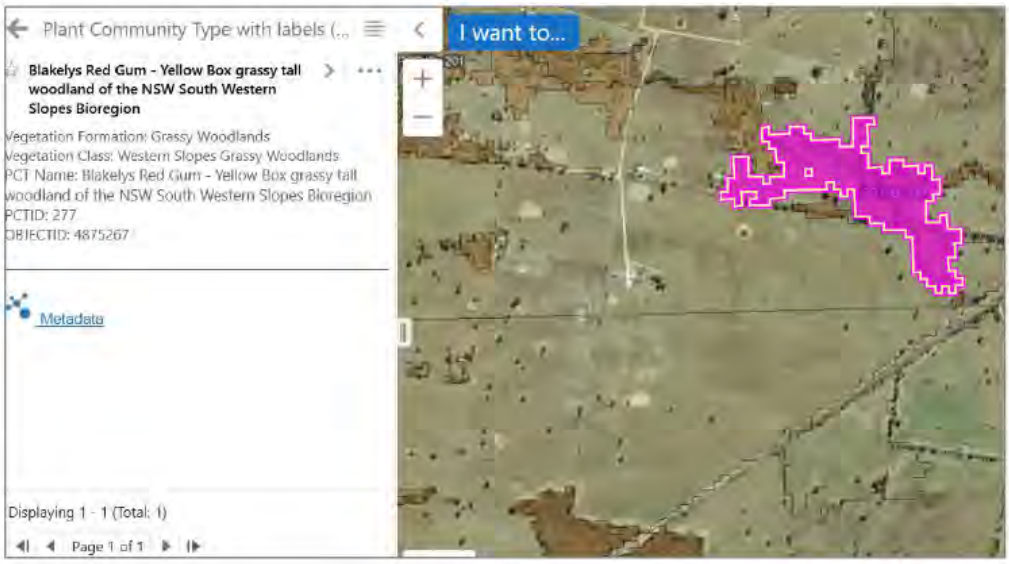

Figure 18 – PCT Mapping

A concept subdivision layout has been prepared and is provided in **Appendix A** of this report. The layout has been strategically designed in order to retain and not impact upon the native vegetation, as mapped above. Proposed Lots 3 and 4 identified within **Appendix A** would be subject to the PCT mapping. There is ample area within these proposed Lots to allow residential development to proceed without impact upon the mapped PCT biodiversity. Therefore there is no likelihood that the subject planning proposal and subsequent subdivision of the land would adversely affect critical habitat or threatened species, populations or ecological communities, or their habitats.

Are there any other likely environmental effects of the planning proposal and how are they proposed to be managed?

The following is a summary of other likely environmental effects as result of the Planning Proposal or any other constraints within the Planning Area.

Constraints	Comments
Noise/Vibration	The rezoning of the subject site would require consideration to the vibration and noise pollution from the railway corridor and its impact on future residential development. The *Noise Policy for Industry 2017* (NPfI) provides recommendations for amenity noise levels in rural environments. The recommended amenity noise levels will protect against noise impacts for rural and residential land uses within the vicinity of the

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site. Given that there is no industrial noise in the locality, an assessment of existing noise levels in the area is not required in this instance.

The site is located in a rural locality. The main contributor to noise in the area would be from rural machinery, traffic utilising the local roads and the nearby rail corridor.

The recommended amenity noise levels under the NPfI for the site and locality are as follows (in accordance with Table 2.2 of the NPfI):

Receiver	Noise amenity area	Time of day	L_{AEQ} dB
Residential	Rural	Day	50dB
		Evening	45dB
		Night	40dB

Pursuant to Section 2.5 *Maximum noise level event assessment* of the NPfI, the maximum night time noise level for the subject site would be 40dB plus 5dB (i.e. 45dB max).

Proposed Lots 3, 4, 5, 6 and 7 are adjacent to the nearby rail corridor.

Generally, rail corridors produce between 80-90dB at the source.

It is anticipated that noise and vibration assessments would be undertaken as part of the future development of each Lot.

Where a noise impact has been found as a result from an assessment, noise treatments can be implemented to reduce internal noise levels to avoid sleep disturbance. Consideration to the design layout of proposed dwellings and construction materials renders the site suitable for large lot residential accommodation. The suitability of individual property designs for each lot would be assessed on a case by case basis as part of future applications, which would determine the layout of dwellings and proposed construction/noise attenuation materials. Given the size of the proposed Lots, construction materials and dwelling orientation can readily achieve noise level reductions, as required. Noise is not anticipated to be a nuisance for the proposed rezoning and the assessment noise and vibration would be more suited for future applications of development on the site once rezoned.

Land Use Conflict	The locality generally consists of large lot residential land uses and rural land uses, which is consistent with the proposed rezoning and intended use of the site. Therefore, considering the proposed rezoning and end use of the proposed Lots/site is consistent with other landuses in the locality, the proposed rezoning fits in with the locality and there is no land use conflict as a result.

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Aboriginal Heritage	There are no known items or sites of significance or Aboriginal cultural heritage significance that have been identified as being recorded on or within the vicinity of the site. Refer to AHIMS Search provided in **Appendix C** of this report. A walkover was conducted by Tony Lonsdale, CEO of Mudgee Local Aboriginal Lands Council (LALC). It was concluded that based on a review of previous Aboriginal Cultural Heritage Assessments conducted in the vicinity, the AHIMS database and a walkover of the site, that no aboriginal Cultural Heritage materials were identified as potentially being impacted by the proposal. The Mudgee LALC clearance letter has been provided in **Appendix E** of this report.
Agricultural Land Capability	The property has historically been used for light grazing and has been frequently mown/slashed and managed. The site is classified as class 5 severe as shown in Figure 4 of this report. The CLUS identified approximately 37% or 320,000 hectares as being clause 4-5 land. The subject site barely contributes to the total amount of class4-5 land, therefore the impact is negligible. Grazing and small scale agriculture will be able to be continued on the site with the rezoning and associate 12 ha minimum lot site.
Traffic	The introduction of additional dwellings on the subject site *may* have some level of additional traffic impact to the area. It is essential to assess traffic implications against Council's local controls, being the Mid-Western Regional Development Control Plan (DCP). Pursuant to the Rural Subdivision principles under Council's DCP, a Traffic Impact Assessment would not be required for the future subdivision of the site (refer to i and ii of page 87 of the DCP and provided below). *New rural subdivisions be appropriately connected to the existing road network;* *i. All roads within a rural subdivision are to be sealed or connected to the sealed road network if the proposed lots are less than 500 metres from the sealed road network.* *ii. Road upgrades should extend from the new subdivision to a point where the existing road network is satisfactory* In relation to i), the site is located 1.5km from the nearest sealed network. In relation to ii), the existing road network complies with the standards applicable to the site, discussed below. Further, iii) of

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this part of the DCP states that a Traffic Report is only required alternative to i) and ii).

Traffic generation rates for relevant land uses are provided in the *RTA Guidelines to Traffic Generating Developments 2002* and recent TfNSW adoptions, as follows:

> ***Low density Residential Dwellings***
>
> *Weekday average evening peak hour vehicle trips = 0.99 per dwelling in Sydney (maximum 1.39), 0.78 per dwelling in regional areas (maximum 0.90).*
>
> *Weekday average morning peak hour vehicle trips = 0.95 per dwelling in Sydney (maximum 1.32), 0.71 per dwelling in regional areas (maximum 0.85).*

Given the rural locality of the site, the average regional provision is adopted. Therefore, the following estimated traffic generation is summarised.

Use	Scale	Peak	Generation Rate	Trips
Low density Residential	8 dwellings	AM	0.71 per dwelling	5.68
		PM	0.78 per dwelling	6.24

As shown in the above table, the expected traffic generation associated with the future subdivision of the site would be 5.68 vehicle trips in the AM period and 6.24 vehicle trips in the PM period, resulting in a total amount of trips of 11.92 per day. Pursuant to Council's Table on page 88 of the DCP, a 4.0m – 6.0m wide gravel carriageway would be required.

Across the entire length of Wyoming Road to the subject site is a 6m gravel carriageway width, and any new roads would easily comply with this requirement.

As such, the future subdivision would comply with Council's local DCP standards, which also explicitly state that a Traffic Impact Assessment or Report would not be required in this instance.

Other	There are no other constraints such as natural hazards, or significant adverse impacts the planning proposal is likely to have as a result of the rezoning of the subject site.

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Has the planning proposal adequately addressed any social and economic effects?

Social and economic effects arising from the Planning Proposal will be positive in terms of the provision for additional Large Lot Residential Land for new housing in the locality for the following reasons:

- The potential yield is not high enough to be detrimental in a social sense or create excessive demands on existing services.
- New large lot residential allotments will be similar in land use and character to surrounding properties.
- Increased choice for housing in the locality that would also benefit the residential building industry and employment within the industry.
- There is adequate social infrastructure in the area to cater for the proposed increase in large lot residential lots (potentially 8 additional lots) that will ultimately be created as a result of the Planning Proposal.
- There is established demand (identified in the regional plan and other relevant strategies and reports) for R5 rural residential lots in the Mid-Western region.

6.3.2 Section D – State and Commonwealth Interests

Is there adequate public infrastructure for the planning proposal?

The Planning Proposal is not expected to result in a noticeable increase in demand for public infrastructure. Existing service infrastructure would be augmented to support future development and onsite management services shall be utilised.

The opportunity identified by the Mid-Western CLUS was for R5 rural residential lots of which reticulated water and sewer is not available, as to ensure a more sustainable use of local groundwater and surface water resources with regard to the Rural/Primary Production SEPP Principles.

No limitations to existing services are known to exist.

What are the views of state and federal public authorities and government agencies consulted in order to inform the Gateway determination?

Should the proposal be supported, the Department of Planning, Industry and Environments Gateway Determination will specify consultation requirements

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6.4 Part 4 – Mapping

The plans provided in **Appendix A** clearly outline the PP and associated likely development requirements. The plans include:

- 38948-P01 – Site Plan
- 38948-P02 – Existing Zoning Map
- 38948-P02 – Proposed Zoning Map
- 38948-P03 – Existing Minimum Lot Size Map
- 38948-P03 – Proposed Minimum Lot Size Map
- 38948-P04 – Subdivision Concept Plan

Refer to **Appendix A** of this report.

6.5 Part 5 – Community Consultation

The EP&A Act provides statutory requirements for community consultation and public exhibition of Planning Proposal's. Consultation shall occur in accordance with the Gateway Determination made by the Minister, in accordance with clause 3.34 and Schedule 1 of the EP&A Act.

It is anticipated that the Planning Proposal would be required to be exhibited for a period of 28 days.

6.6 Part 6 -Project Timeline

The following indicative project timeline is provided:

Table 7 Indicative Project Timing

Stage	Timing
Consideration by Council	TBA
Council Decisions	TBA
Gateway Determination	25 Working Days
Post-Gateway	50 Working Days
Public Exhibition and Assessment	95 Working Days
Consideration of submission	TBA
Finalisation	55 Working Days

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7 Conclusion

This Planning Proposal applies to the site known as Lot 101 DP 1221461.

It has been prepared in accordance with the NSW Department of Planning, Industry and Environment's '*Local environmental Plan Making Guidelines* and is consistent with the Central West and Orana Regional Plan 2036, relevant State Environmental Planning Policies, section 9.1 Ministerial Directions and Council's shire strategies.

Any inconsistencies have been appropriately justified by the inclusion of ameliorative measures or by acknowledging the need for further consultation with the relevant Minister to which the inconsistency applies.

The Planning Proposal Area is currently zoned RU1 – Primary Production under the provisions of *Mid-Western Regional Local Environmental Plan 2012*. One of the main objectives of this Planning Proposal is to amend Mid-Western Regional Local Environmental Plan 2012 and change the Land Zoning to R5 Large Lot Residential and subsequently Minimum Allotment Size. It is requested that Council:

(a) Support this preliminary Planning Proposal based on the information provided in this report; and

(b) Resolve to refer this Planning Proposal to NSW Planning, Industry and Environment (DPIE) for a Gateway Determination to endorse its public exhibition.

Pending endorsement by NSW DPIE, the Planning Proposal will be exhibited in accordance with the criteria outlined in the Gateway Determination. The outcome of the exhibition and referrals to various government departments will be subsequently reported to Council for determination.

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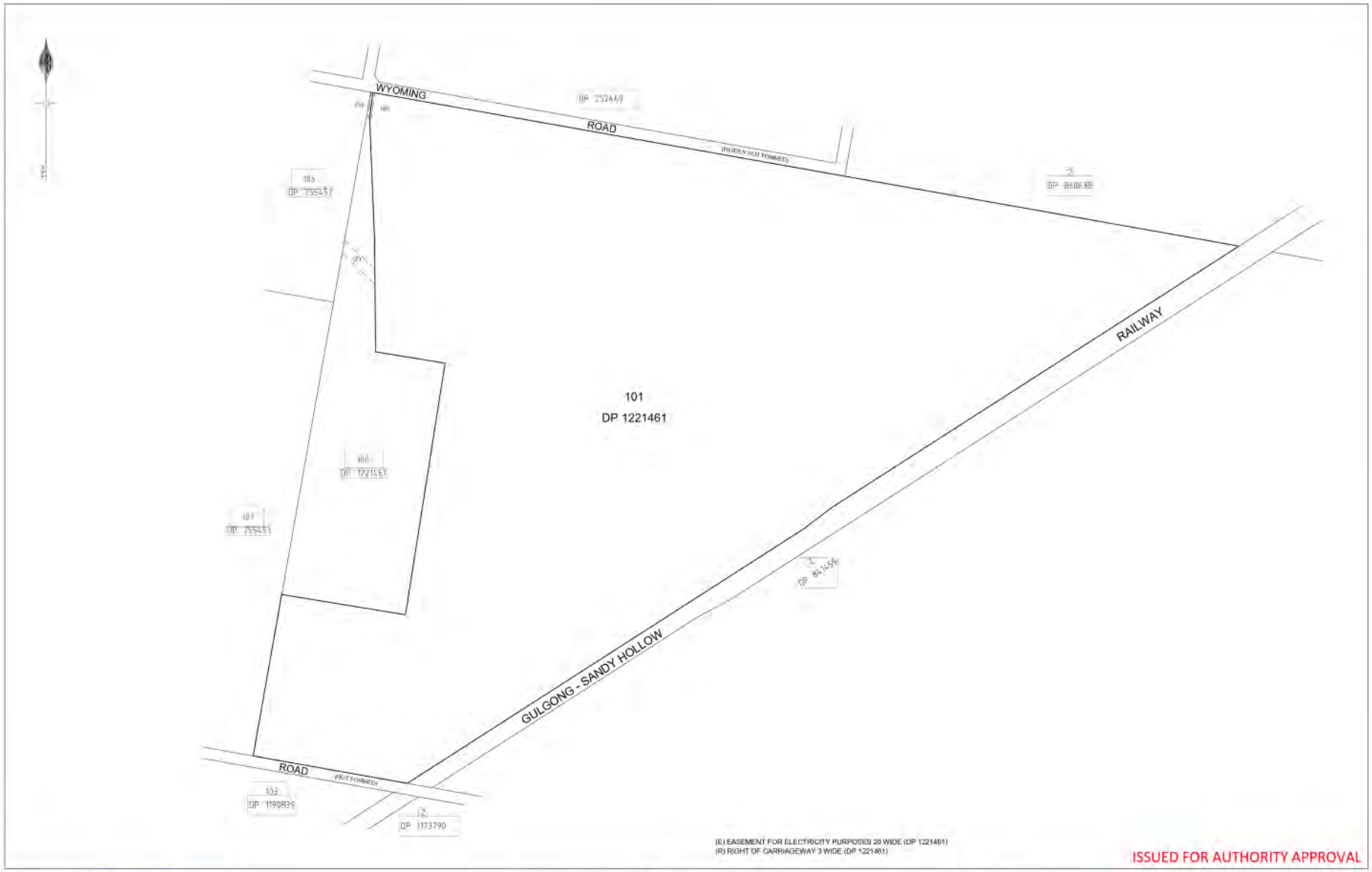
Appendix A – Plan Package

38948-PR01_B | A



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DESIGN. PLAN. MANAGE.

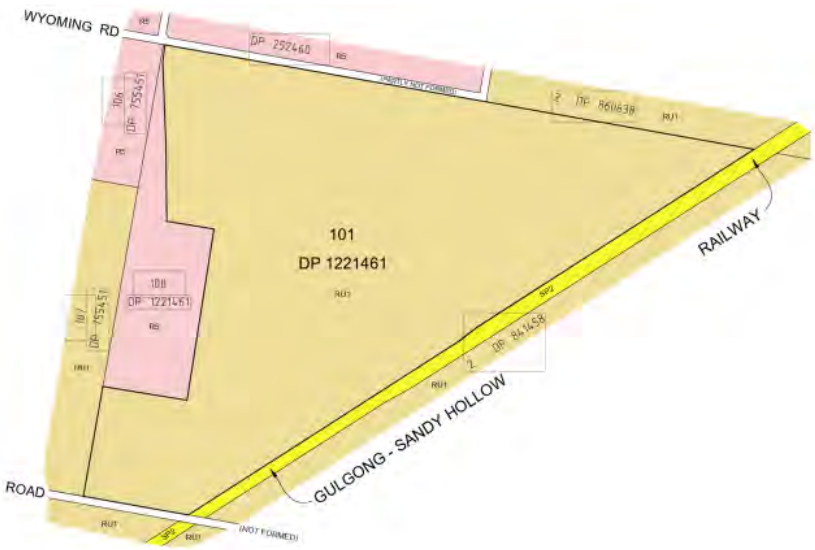
Client: CLIENT
Project: REZONING APPLICATION
LOT 101 DP 1221461
Drawing title: EXISTING SITE PLAN

Rev	Date	Amendment
A	10/11/23	ISSUED FOR AUTHORITY APPROVAL

Design: RB
Certification:
Drawn: MR
Check: RB
Drawing Number: 38948-P01
Revision: A
Original Sheet Size - A1

KEY

- SP2 INFRASTRUCTURE
- RS LARGE LOT RESIDENTIAL
- RU1 PRIMARY PRODUCTION



EXISTING ZONING MAP
REDUCTION RATIO 1:6000 @ A1
1:12000 @ A3

PROPOSED ZONING MAP
REDUCTION RATIO 1:6000 @ A1
1:12000 @ A3

ISSUED FOR AUTHORITY APPROVAL

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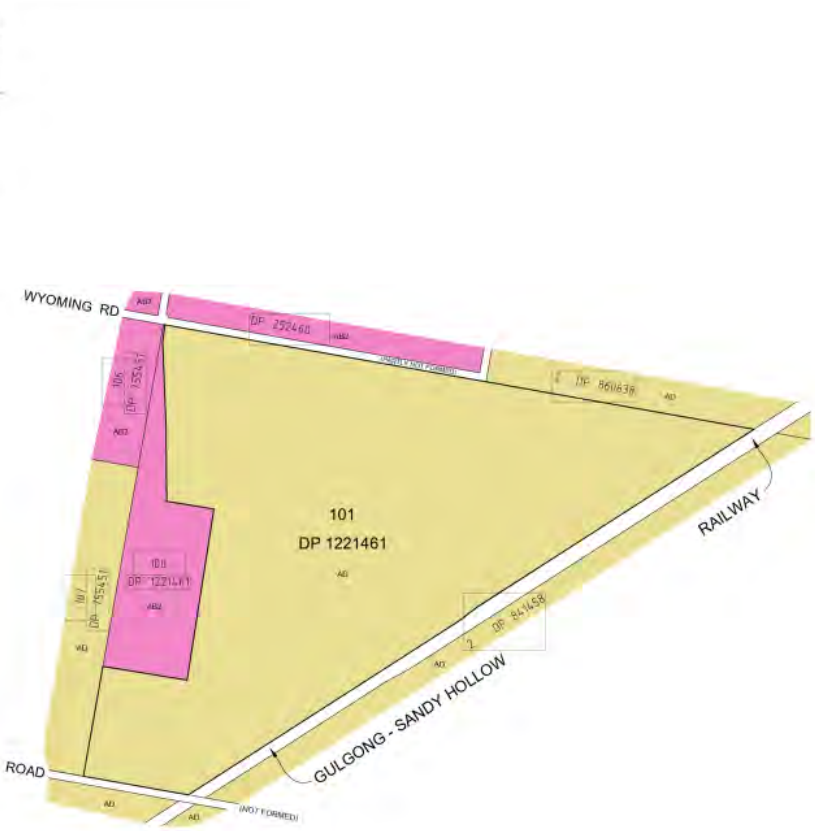
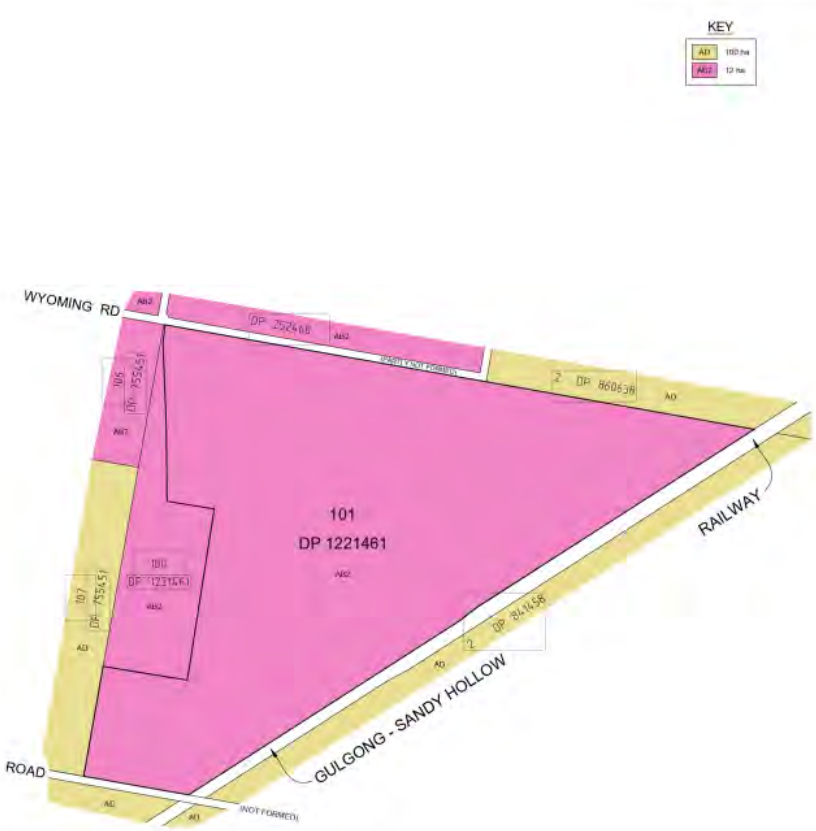
Project: REZONING APPLICATION
LOT 101 DP 1221461
Drawing Title: EXISTING AND PROPOSED ZONING MAP

Rev	Date	Amendment
A	10/11/22	ISSUED FOR AUTHORITY APPROVAL

Design: RB
Drawn: MR
Check: RB
Original Sheet Size = A1
Certification
Drawing Number: 38948-P02
Revision: A



EXISTING MINIMUM LOT SIZE MAP
REDUCTION RATIO 1:6000 @ A1
1:12000 @ A3



PROPOSED MINIMUM LOT SIZE MAP
REDUCTION RATIO 1:6000 @ A1
1:12000 @ A3

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Client: CLIENT
Project: REZONING APPLICATION
LOT 101 DP 1221461
Drawing Title: EXISTING AND PROPOSED MINIMUM LOT SIZE MAP

Rev	Date	Amendment
A	10/11/22	ISSUED FOR AUTHORITY APPROVAL

Design: RB
Drawn: MR
Check: RB
Original Sheet Size = A1
Certification
Drawing Number: 38948-P03
Revision: A

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Client: CLIENT
Project: REZONING APPLICATION
LOT 101 DP 1221461
Drawing title: SUBDIVISION CONCEPT PLAN

Rev	Date	Amendment
A	10/11/23	ISSUED FOR AUTHORITY APPROVAL

Design: RB
Drawn: MR
Check: RB
Certification
Drawing Number: 38948-P04
Revision: A
Original Sheet Size = A1

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Appendix B – Titles and Deposited Plan

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Appendix C – Aboriginal Heritage Information Management System (AHIMS) Report

38948-PR01_B | E

AHIMS Web Services (AWS)
Search Result

Your Ref/PO Number : 38948
Client Service ID : 714033

Date: 02 September 2022

Luke Bonnell
539 Armidale Road
East Tamworth New South Wales 2340
Attention: Luke Bonnell
Email: lbonnell@barnson.com.au

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lot : 101, DP:DP1221461, Section : - with a Buffer of 200 meters, conducted by Luke Bonnell on 02 September 2022.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.

A search of Heritage NSW AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

0	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the NSW Government Gazette (https://www.legislation.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Heritage NSW upon request

Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Heritage NSW and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date. Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

Level 6, 10 Valentine Ave. Parramatta 2150
Locked Bag 5020 Parramatta NSW 2124
Tel: (02) 9585 6345

ABN 34 945 244 274
Email: ahims@environment.nsw.gov.au
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Appendix D – Preliminary Site Investigation

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Site Contamination Investigation

Client: Brian & Frances Munro

Site Address: 148 Wyoming Road, Stubbo 2850

24 May 2023

Our Reference: 38948-ER01_A

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DISCLAIMER

This report has been prepared solely for Brian & Frances Munro (the client) in accordance with the scope provided by the client and for the purpose(s) as outlined throughout this report.

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Project Name:	Preliminary Site Investigation – 148 Wyoming Road, Stubbo NSW 2850
Client:	Brian & Frances Munro
Project Number:	38948
Report Reference:	38948 ER01_A
Date:	31/05/2023

Prepared by:	**Reviewed by:**

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Executive Summary

Barnson Pty Ltd was engaged by Brian & Frances Munro to undertake a preliminary contaminated site investigation (PSI) of the property at 148 Wyoming Road, Stubbo NSW 2850.

The investigation had as its objectives to identify contamination issues that may affect the suitability of the Subject Site for future residential development and assess the need for possible further investigations, remediation or management of any contamination issues identified.

The investigation was based on a desktop review of information available for the Subject Site, as well as the findings of a site inspection and confirmatory sampling and analysis of surface soils collected at the site.

A review of the available historical information, including contaminated sites databases, indicated no recorded activities with the potential to significantly contaminate the site.

Although the potential for *significant* environmental contamination to be present across the site was concluded to be low, activities associated with the current and historical use of the Subject Site were identified as having a potential to contaminate surface soil. The following potential sources and areas of contamination were identified:

- Historical and current livestock farming and grazing activities;
- Historical and current feed-crop cultivation;
- Use, maintenance and storage of motorised vehicles and equipment; and
- Indiscriminate disposal of waste.

A site inspection, supplemented with confirmatory sampling and analysis, was conducted to determine the presence and significance of potential contamination associated with the identified sources.

The investigation revealed localised levels of arsenic in surface soil that are elevated in comparison with other areas of the Subject Site investigated. The concentrations of all other contaminants investigated were below screening criteria in all surface soil samples collected.

Although the concentration of Arsenic detected exceed both health and ecological risk-based screening values, it was concluded that the contamination does not represent a risk to the proposed re-zoning and sub-division of the Subject Site, as it does not represent a significant risk to human health or the environment in the location it was discovered. It is recommended that the elevated Arsenic concentration identified be investigated further, only in the event of this specific portion of the Subject Site having to be disturbed for further development.

Based on the findings of the desktop review and site investigation it can be stated with a reasonable level of confidence that the areas comprising the Subject Site are unlikely to be contaminated. The Subject Site is therefore considered suitable for the proposed re-zoning and sub-division.

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1. INTRODUCTION

1.1. Background and Objectives

Barnson Pty Ltd was engaged by Brian & Frances Munro to undertake a preliminary contaminated site investigation (PSI) in support of a Planning Proposal for the rezoning and future subdivision of the property located at 148 Wyoming Road, Stubbo (hereafter referred to as the Subject Site).

The Client is submitting a planning proposal to Mid-Western Regional Council for portions of the Subject Site to be rezoned for large lot residential development. In accordance with the State Environmental Planning Policy Resilience and Hazards (2021), a consent authority must determine if land is contaminated and, if so, whether it is suitable for the intended purpose or require remediation, before (future) development consent may be given.

This report presents a general assessment of the conditions at the Subject Site in relation to general planning requirements and considers the contaminants potentially relevant to the current agricultural use of the property and proposed future residential land use scenario.

1.2. Objectives

The objectives of the Investigation are:

- Identify contamination that may affect the site's suitability for development, and
- Assess the need for possible further investigations, remediation or management of any contamination identified.

1.3. Scope of Work

To meet the stated objectives, Barnson completed the following scope of work:

- Site identification including a review of site history, site condition, surrounding environment, geology and, where information was available, hydrogeology.
- Desktop review of site history and assessment of potential sources of contamination.
- Development of a Conceptual Site Model (CSM) with information gathered from the data review and site inspection.
- Site inspection to assess site conditions.
- Collection of confirmatory soil samples and analysis to determine nature of possible contamination.
- Provide conclusions as to the suitability of the site for the intended future land use.
- Preparation of a report.

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1.4. Purpose of this report

The purpose of this report is to document, with cognisance of the Guidelines for Consultants Reporting on Contaminated sites (NSW EPA, 2020), works undertaken, in accordance with the scope of works as described in Section 1.3, results of the desktop review and site inspection, and recommendations for further actions required to determine fitness of the site for the intended use.

1.5. Assumptions and Limitations

The following assumptions have been made in preparing this report:

- The future use of the site will be for residential purposes. This assumption forms the basis for the conceptual site model (Section 4).
- All information pertaining to the contamination status of the site has been obtained through public record searches, a preliminary site inspection and analysis of confirmatory samples collected at the site. All documents and information in relation to the site, which were obtained from public records, are accepted to be correct and has not been independently verified or checked.

It should be recognised that even the most comprehensive site assessments may fail to detect all contamination on a site. This is because contaminants may be present in areas that were not previously surveyed or sampled or may migrate to areas that showed no signs of contamination when sampled. Investigative works undertaken at the Subject Site by Barnson identified actual conditions only at those locations in which sampling and analysis were performed. Opinions regarding the conditions of the site have been expressed based on historical information and analytical data obtained and interpreted from previous assessments of the site. Barnson does not take responsibility for any consequences as a result of variations in site conditions.

2. SITE DESCRIPTION

2.1. Site Identification

Table 2.1 presents a summary of the available information pertaining to the identification of the Subject Site. Figure 2.1 shows the Subject Site located to the north-east of Gulgong.

Table 2.1: Summary of Subject Site

Information	Details
Site address	148 Wyoming Road, Stubbo
Lot/Section and Deposited Plan	Lot 101 DP 1221461
Land Zoning	RU1 – Primary Production
County	Phillip
Parish	Wialdra
Local Government Area	Mid-Western Regional Council

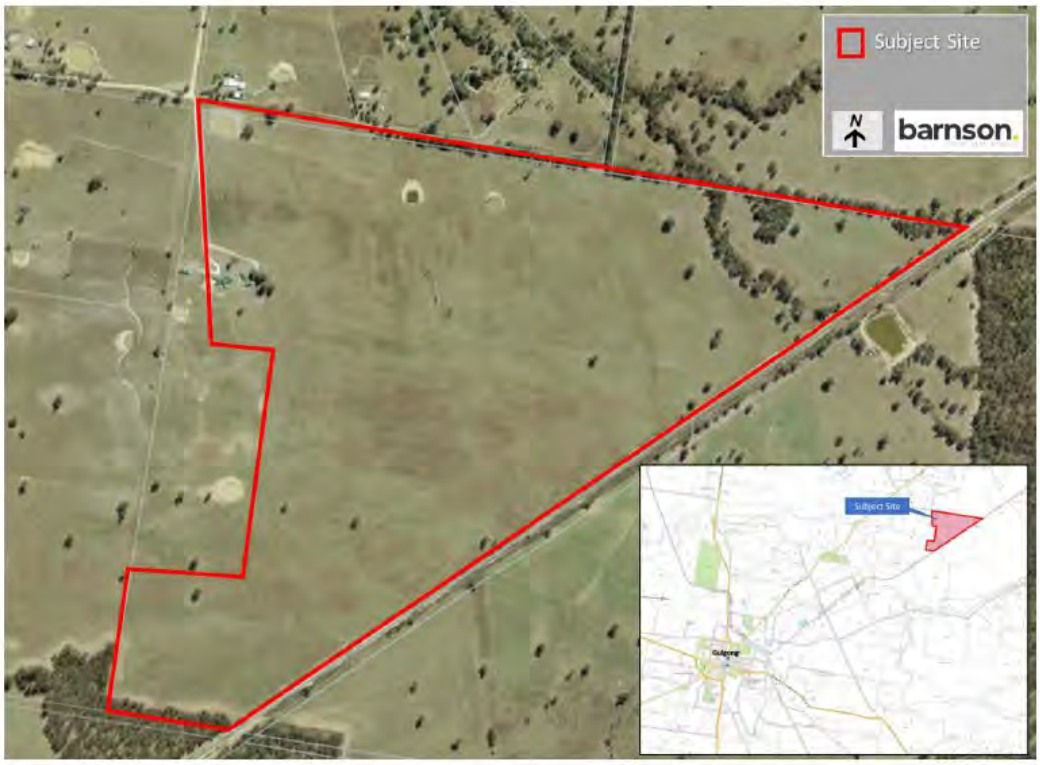

Figure 2.1: Location of the Subject Site.

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2.2. Site Layout and Proposed Development

The Subject Site is identified as Lots 17 and 18 of DP 136209 occupying an area of approximately 98.73ha, located to the south of Wyoming Road. The south-eastern boundary of the Site, at approximately 1.7km long, is formed by the Sandy Hollow / Gulgong railway.

The Subject Site is used for agricultural (pastoral) purposes and is largely unoccupied except for a dwelling and associated shed structures located on the western boundary of the Site. The site is sectioned into several paddocks with steel wire fencing, and include races and pens used for cattle management purposes. The Subject site is covered with maintained grass and there are several earthen farm dams present in the different paddocks on the property. Three unnamed tributaries to the Wialdra Creek pass through the northern and eastern portion of the Subject Site.

Figure 2.2 presents a plan of the Subject Site that is supplemented with photographs showing the different elements of the Site (Figure 2.3 to Figure 2.7). Figure 2.2 includes markers indicating the vantage point and direction of the photographs.

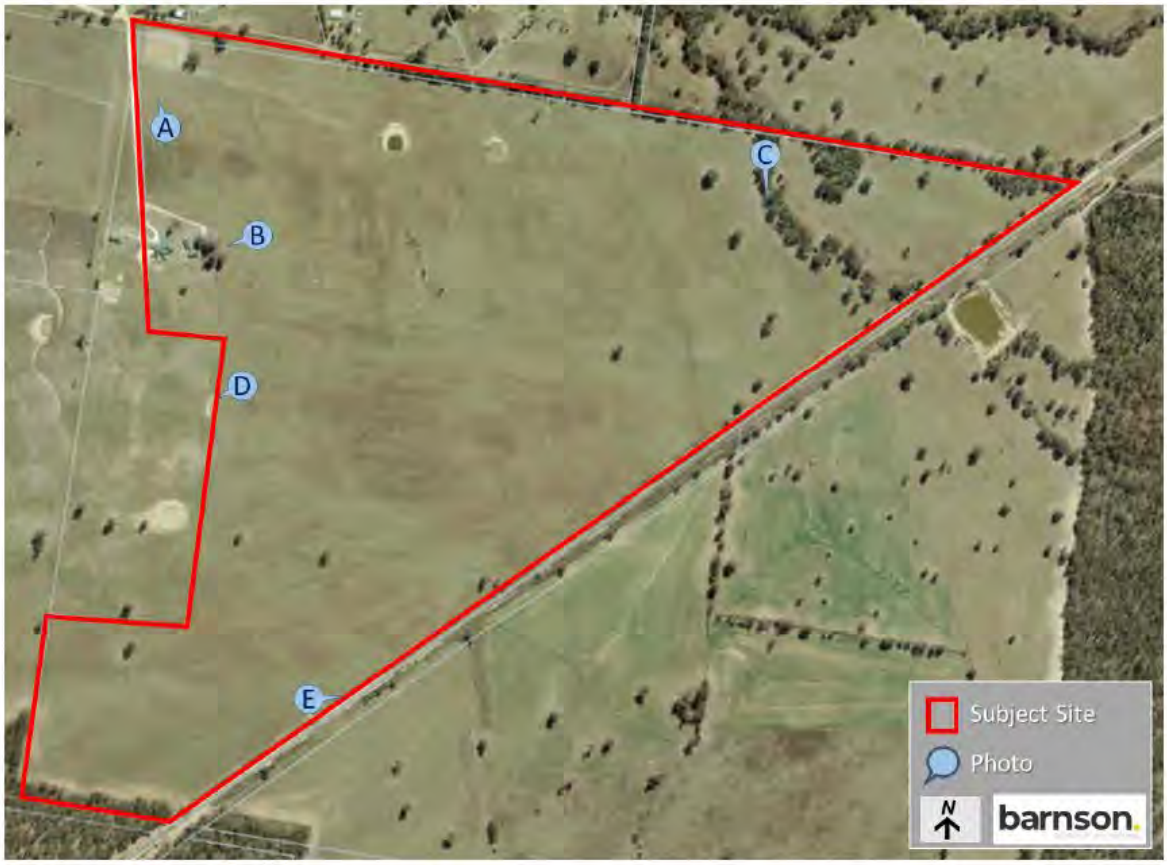

Figure 2.2: Existing Subject Site layout.

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Figure 2.3: Photo A –Unpaved access driveway.

Figure 2.4: Photo B – View of existing dwelling across paddock looking west.

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Figure 2.5: Photo C – Crossin at unnamed creek tributary in east of site.

Figure 2.6: Photo D – New dam in west of Subject Site.

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Figure 2.7: Photo E – Gate in southeastern boundary fence along railway.

2.3. Proposed Development

The proposal is to (future) rezone the Subject Site of approximately 100 hectares from RU1 Primary Production to R5 Large Lot Residential, with a corresponding reduction to the minimum lot size from 100 hectares to 12 hectares.

The intention of rezoning the land is to permit the future subdivision of the site and its development for rural residential purposes. Figure 2.8 shows an indicative subdivision layout. This preliminary layout provides the maximum yield for the site based on the proposed rezoning and any potential constraints.

2.4. Site History

The Subject Site previously formed part of a larger property which was subdivided in 2015. The larger property and current lots (Lot 100 and Lot 101 DP 1221461) have been in use for rural residential purposes and pastoral agriculture for an extended period of time.

Historical aerial photographs of the Subject Site shows that no structures were present on site prior to 2010. The existing development comprises a detached dual occupancy with the principal dwelling having a detached garage and studio. Both dwellings are located towards the western boundary of the site, approximately 400m south of the gate entry from Wyoming Road.

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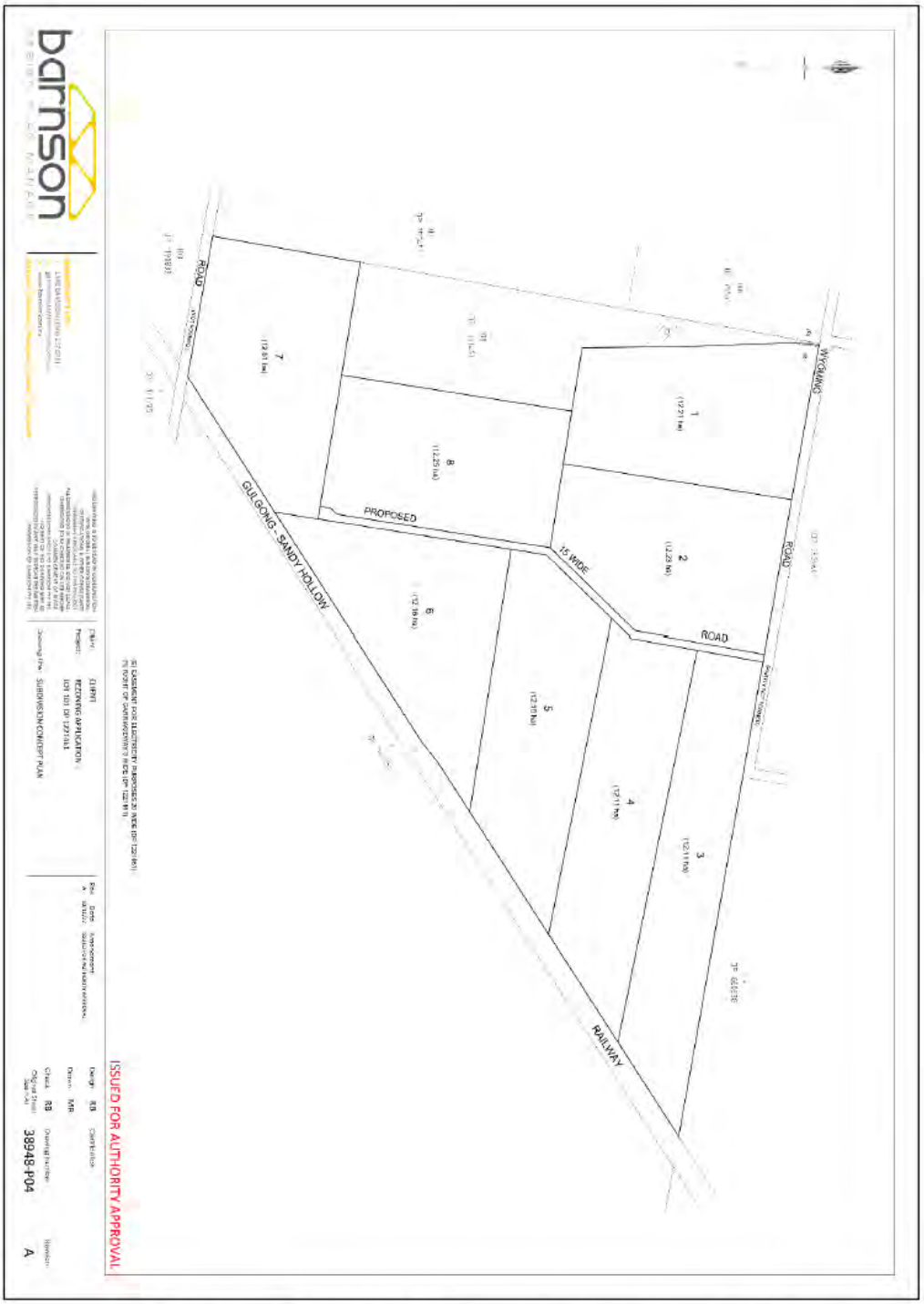

Figure 2.8: Proposed lot layout for the re-zoning and subdivision of the Subject Site.

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2.5. Historical Record of Site Contamination

Datasets maintained by the Office of Environment and Heritage (OEH) including notices under CLM Act, POEO Environment Protection License Register, and environmental incidents were reviewed.

- List of NSW contaminated sites notified to EPA – The sites appearing on the OEH "List of NSW contaminated sites notified to the EPA" indicate that the notifiers consider that the sites are contaminated and warrant reporting to EPA. However, the contamination may or may not be significant enough to warrant regulation by the EPA. The EPA needs to review information before it can make a determination as to whether the site warrants regulation. A search of the listing returned no record for the subject site.
- Contaminated Land Record of Notices – A site will be on the Contaminated Land Record of Notices only if the EPA has issued a regulatory notice in relation to the site under the *Contaminated Land Management Act 1997*. A search of the register in May 2023 returned no record for the Subject Site.

There is further no record of the Subject Site in any of the following databases:

- Former Gasworks Database
- EPA PFAS Investigation Program
- Defence PFAS Investigation & Management Program
- Air Services Australia National PFAS Management Program
- Defence 3 Year Regional Contamination Investigation Program.

2.6. Previous Site Investigations

No information relating to any previous assessment of contamination at the Subject Site were available for review.

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3. SITE SETTING

3.1. Geology

A review of the 1:100000 Geology Map of Gulgong (refer to Figure 3.1) shows that geologically, the Subject Site is underlain by alluvium and colluvium derived from the Gulgong and Rouse Granites.

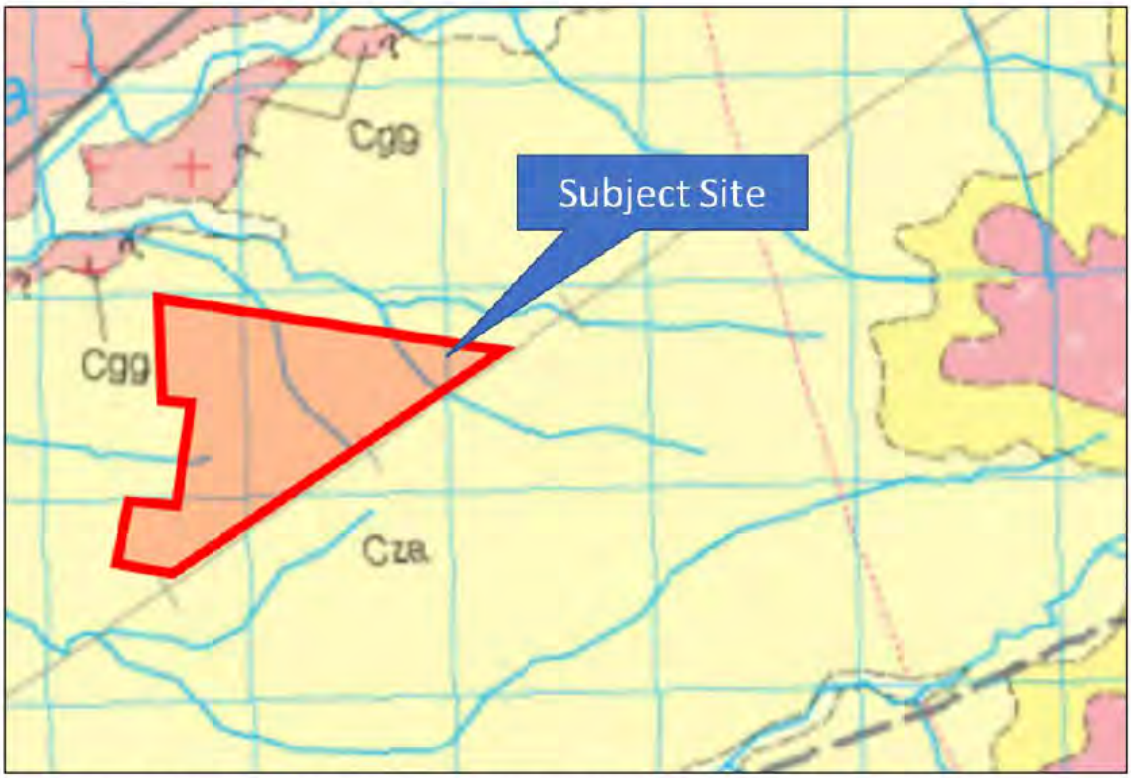

Figure 3.1: Gulgong 1:100,000 geology map showing the location of the Subject Site

Source: Google Earth, accessed 05/05/2023

An examination of the Geological Survey of NSW maps of Naturally Occurring Asbestos (accessed on 05 May 2023), shows that the geological units underlaying the Subject Site area has no asbestos potential.

3.2. Soils

The Subject Site is mapped within the Home Rule Soil Landscape. Soils at the Subject site is described as hardsetting brown to dark brown earthy sands that change to pale brown sandy loams below 40 cm. These are underlain by Yellowish-brown sandy loam to loamy sand.

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Soils are described as having very low fertility, low available waterholding capacity, acidic surface soils, seasonal waterlogging, sodic subsoils in lower slopes; and moderate to high erosion hazard under cultivation.

The Atlas of Australian Acid Sulfate Soil has the subject site in an area of 'extremely low' probability of occurrence (a 1-5% chance of occurrence). Surface soils in the area are not considered saline but sub-soils are.

3.3. Topography and Drainage

Figure 3.2 presents topographical information overlain on the map of the Subject Site. The presented data shows that the Subject Site in largely flat with a mild westerly slope toward the Wialdra Creek.

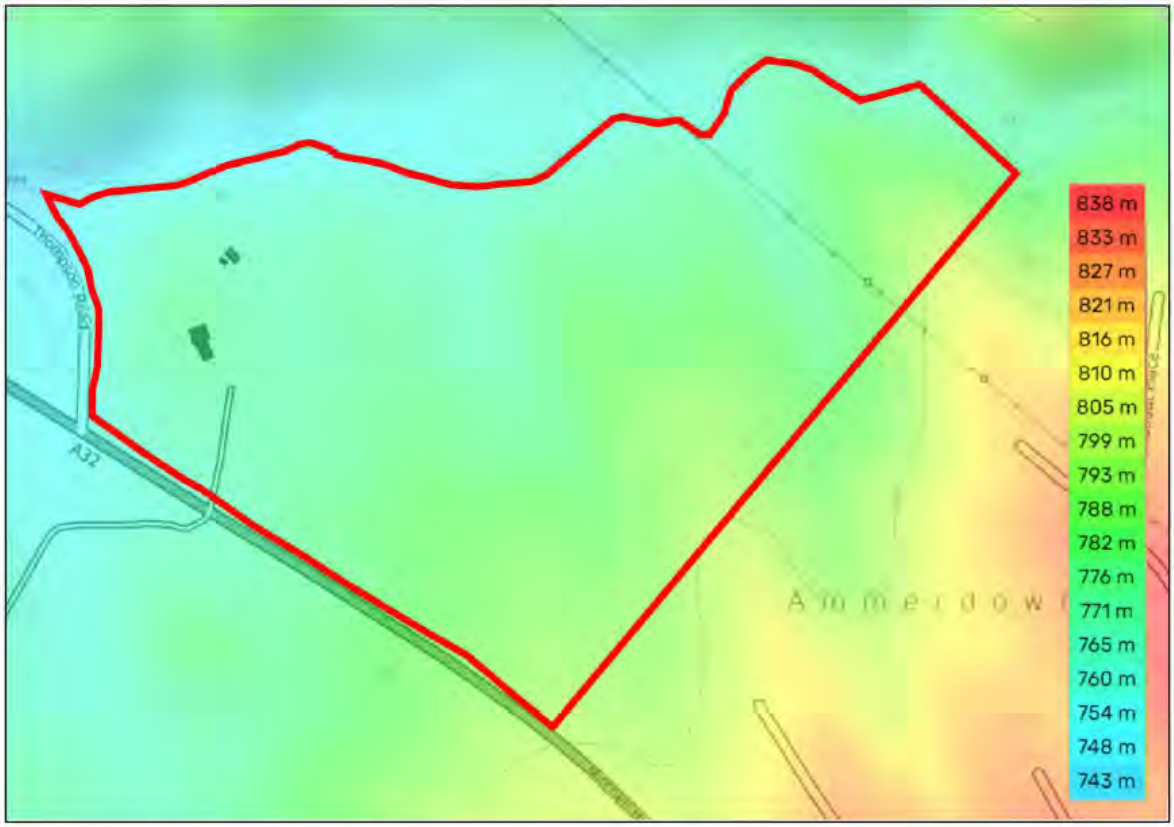

Figure 3.2: Subject Site topography.

Source: en-au.topographic-map.com, accessed 01/05/2023

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The closest natural water body is the Wialdra Creek located to the northern of the Subject Site. There are three drainage lines mapped in the northern portion of the Site (see Figure 3.3). Water drains predominantly in a northerly direction toward the Wialdra Creek.

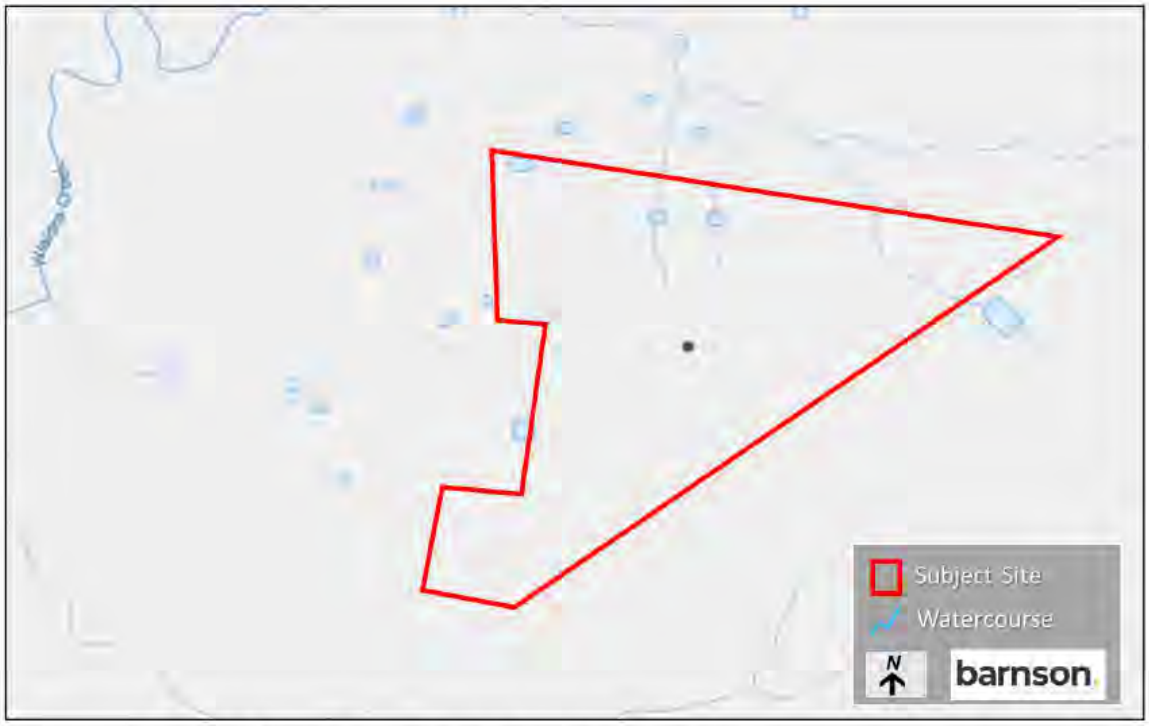

Figure 3.3: Drainage lines mapped across the Subject Site.

Source: en-au.topographic-map.com, accessed 01/05/2023

3.4. Groundwater Resources

A review of existing groundwater bore records (WaterNSW, 2023) indicate one groundwater bore located within the boundaries of the Subject Site, with one bore are identified within 500m of the Subject Site. The database contain no records for the on-site bore (GW807228). The off-site bore (GW061597) is located approximately 350m to the north west of the Site. The location of these groundwater bores are shown in Figure 3.4.

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Figure 3.4: Groundwater bores near the subject site

Source: WaterNSW All Goundwater Map, accessed 03/05/2023

The information recorded in the database for the off-site groundwater bore indicates the depth of the bore reach final depth of 53.0m. No Standing Water Level (S.W.L) or Water Bearing Zone (W.B.Z) data is recorded for this bore. According to the database the bores are utilised for domestic or stock watering purposes.

Groundwater Sensitivity mapping obtained from the ePlanning Spatial Viewer, indicate that the Subject Site is located in an area of groundwater vulnerability. The riparian corridor traversing through the north-eastern corner of the site is mapped by the LEP as Sensitive Biodiversity.

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4. CONCEPTUAL SITE MODEL

4.1. General

The Conceptual Site Model (CSM) is intended to provide an understanding of the potential for contamination and exposure to contaminants within the investigation areas. The CSM draws together the available historical information for the site, with site specific geological, and hydrogeological information to identify potential contaminants, contamination sources, migration and exposure pathways and sensitive receptors.

4.2. Sources

The identification of sources presented here is based on the review of available historical information and photographs, as well as an understanding of current conditions at the Subject Site. The following is a summary of the potentially contaminated areas and sources of contamination identified:

- Historical farming activities.

The Subject Site has historically been used in the operation of the livestock farming activities. Potential sources of contamination associated with these activities include the animal pens and yards, as well as the disposal of animal wastes. Activities associated with the management of animal health, including sheep dip or spraying for the control of parasites could further result in localised contamination. Potential contaminants include pesticides, hydrocarbons, heavy metals, and elevated nutrients.

- Cropping and feed production.

Historical photographs of the Subject Site indicate periodic feed crop (oats) farming activities in the centre of the Site. Crop farming in low fertility soils likely required the use of chemicals such as fertilisers and pesticides in the maintenance of the crops. Potential contaminants associated with these chemicals include heavy metals, organochlorine and organophosphate pesticides. Intensive use of fertiliser can also lead to the build-up of heavy metals in surface soil particularly zinc and cadmium, depending on the type and source of the fertiliser.

- Vehicles and equipment.

Operation of farm often involves the use of motorised vehicles and equipment used for a variety of applications such as transport, earth moving or pumping water. The use, storage, maintenance and refuelling of the equipment and vehicles has the potential to contribute to localised contamination of surface soils.

- Use of unclassified fill or uncontrolled disposal of waste.

There is no evidence to suggest that significant quantities of fill material have ever been imported to the Site for levelling or construction purposes. The Subject Site is further fenced and it is unlikely that large quantities of domestic or demolition waste would have been disposed of at the Site. However, foreign or potentially hazardous materials or wastes sporadically disposed of at the site could contribute a variety of contaminants to localised areas of the Site. Contaminants may include hydrocarbons and heavy metals.

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4.3. Contaminants of Potential Concern

Considering the potential sources relevant to the Subject Site, a wide variety of contaminants may be present. With the historical agricultural activities considered the primary potential source of contamination, the residues of agricultural chemicals such as pesticides and fertilisers are accepted as the most likely contaminants. Of interest here are chlorinated organic compounds which historically have been widely used as insecticides, fungicides, herbicides and soil fumigants in agriculture and which are stable enough in the environment (persistent) to remain in soil for extended periods of time. Inorganic compounds that contain heavy metal including arsenic, copper, lead and mercury were also historically used as pesticides, particularly in the control of external parasites on sheep. The use of fertiliser, although not commonly considered a source of soil contamination, potentially could lead to a build-up of heavy metals such as cadmium in soils in areas where it has been extensively applied.

The potential presence of fuels and lubricants are further potentially relevant to the on-site storage, maintenance or movement of vehicles and equipment in the operation of the farm.

Based on this understanding of the site history and activities, the contaminants of potential concern identified for the investigation of the Subject Site include:

- pesticides (organochlorines, organophosphates);
- hydrocarbons (mainly fuel and lubricants); and
- heavy metals (As, Cd, Cr, Cu, Pb, Hg, Ni and Zn)

4.4. Pathways

The primary pathways by which receptors could be exposed to the contaminants outlined above include:

- Inhalation of dust or vapours.
- Dermal contact with contaminated soils.
- Incidental ingestion of contaminated soils.
- Surface runoff, sediment transport and discharge to surface waters.
- Vertical and horizontal migration of contamination through the soils into the underlying groundwater.

Of the listed potential pathways, the contamination of water resources through infiltration is considered the most unlikely. Although the Subject Site is indicated as a groundwater vulnerable zone, the lack of groundwater bores and the presumed depth to groundwater at the site (approximately 50m) would limit vertical migration of any contaminants which may be entering the surface soil from above.

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4.5. Receptors

Potential receptors may include:

Human receptor populations

- Future residents of the subdivided lots.
- Visitors to the site (e.g. workers conducting maintenance, contractors, members of the public);
- Workers involved in the construction of residential dwellings for future residents of the Subject Site; and
- Workers conducting agricultural activities on the subdivided lots of the Subject Site.

Environmental Receptors

- Local drainage channels and receiving surface water bodies; and
- Groundwater resources beneath the site (negligible likelihood of contamination expected).

4.6. Potential for Contamination

The Subject Site is not listed in any of the contaminated land databases. Based on the results of the desktop assessment, the overall likelihood for *significant* chemical contamination to be present within the site is low.

Although former land use and activities at the site is reasoned to have a potential for contaminating surface soils, the type and quantity of contaminants introduced through this land use is not expected to have led to significant contamination.

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5. SITE INVESTIGATION

5.1. General

The objective of the investigation is to determine whether there are any environmental risks associated with the Subject Site that could affect the proposed future development and would require further investigation or action to render the site suitable for its intended use.

The desktop evaluation of the site history and current use of the site did not identify any significant risks in this regard but did identify both historical and current land use activities that could contribute to contamination of the surface soils of the Subject Site.

Barnson conducted an inspection of the Subject Site on 27 April 2023. The purpose of the site inspection was to verify the findings of the desktop assessment, as well as to collect confirmatory samples of soil from areas of the Subject Site where development is proposed, or contamination is suspected.

Based on the findings of the CSM the inspection and sampling were focussed on the surface soils (0-150mm). The site inspection included all areas of the Subject Site.

During the site inspection the following observations were made:

- The Subject Site is fenced and access to the site is controlled. There are several informal vehicle paths traversing the site and there are multiple access gates and paths both from the Wyoming road frontage and the rail corridor along the south-east boundary.
- At the time Barnson conducted the site inspection, most of the Subject Site was covered with tall pasture grass. All areas of the site was attended by vehicle, where vehicle paths were available, and all visible open ground and prominent features were inspected. No visible discoloration or staining of open ground or soil, and no obvious discoloration or irregularities in the occurrence of vegetation was observed during the site inspection.
- Evidence of waste disposal was discovered in two localised areas. The first is a stockpile of mainly cut vegetation (Figure 5.1) located in the north-eastern corner of the site. This is understood to originate from clearing of the a nearby area to allow access for recreational purposes. The second was near the southern corner of the site where a heap of animal bones and a mound of soil suggest the burial of dead animals (Figure 5.2). No demolition waste was observed in any other part of the Subject Site during the site inspection.
- The Subject Site is divided into different paddocks with steel wire fencing and gates allowing access to the different areas. No livestock were observed during the site inspection.
- There is a livestock yard and pens located near the existing main dwelling at the Subject Site (see Figure 5.3).

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Figure 5.1: Photo vegetation waste stockpile.

Figure 5.2: Animal bone fragments and mound of soil.

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Figure 5.3: Livestock yard in the west of the property.

- The surface water observed on site were confined to one of four dams located on the property. Water from paddocks comprising the Subject Site drain to the dams from where it may overflow from time to time to enter the Creek to the north.
- Other than the existing dwelling there was no evidence found to indicate that any other area of the Subject Site has previously included any structures. No evidence of demolition waste or footings of any previous structures were observed during the site investigations.

5.2. Confirmatory Sampling

The purpose of collecting confirmatory samples as part of the site inspection is to determine if any of the potential contaminants identified from the CSM are present. The samples are not intended for statistically valid characterisation or quantification of contamination levels.

Based on the findings of the CSM the inspection and sampling were focussed on the surface soils (0-150mm). The site inspection included all accessible areas of the Subject Site. Samples of soil were collected from the paddocks and livestock management infrastructure. The disposal areas discovered in the north and south of the Subject Site were also specifically investigated with separate surface soil samples collected. Table 5.1 is a summary description of the collected samples submitted for analysis. Figure 5.4 presents a map of the Subject Site with the locations of the surface soil samples indicated.

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Table 5.1: Summary of sample details.

Reference in Figure 5.4	Description	Assigned Sample Number
A	Surface soil/sediment (0-150mm) sample collected from on-site dam inlet.	BM-01
B	Surface soil (0-150mm) samples collected from area where surface water seem to settle.	BM -02
C	Surface soil (0-150mm) samples collected from disturbed soil inside entry gate from rail corridor.	BM -03
D	Surface soil/sediment (0-150mm) samples collected from watercourse draining through Subject Site.	BM -04
E	Surface soil/sediment (0-150mm) samples collected from cleared field.	BM -05
F	Surface soil/sediment (0-150mm) samples collected from inflow to Dam.	BM-06
G	Surface soil/sediment (0-150mm) samples collected from inflow to Dam	BM-07
H	Surface soil (0-150mm) samples collected from paddock historically used for feed cropping.	BM-08
I	Surface soil (0-150mm) samples collected from livestock yard area.	BM -09
I	Surface soil (0-150mm) samples collected from livestock yard area.	BM -10
J	Surface soil (0-150mm) samples collected from waste disposal area.	BM -12

The pattern followed for the soil sampling can be described as Judgement Sampling, where points are selected on the basis of the investigator's knowledge of the proposed land use and likely distribution of contaminants at a site. It is an efficient sampling method for confirmatory sampling that utilises knowledge of the site history and field observations to direct sample collection (NSW EPA, 1995).

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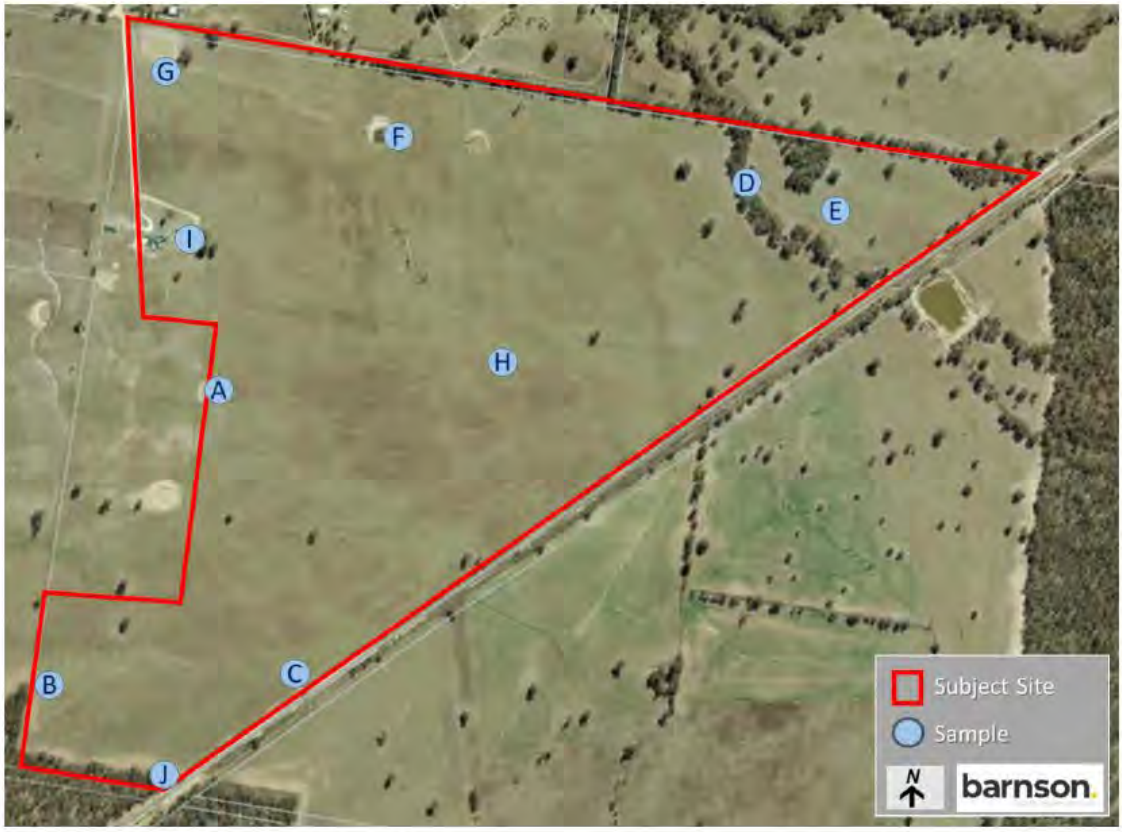

Figure 5.4: Surface soil sample locations.

All samples were submitted to the Australian Laboratory Services (ALS) laboratory in Mudgee, for determination of the following parameters:

- metallic element (cadmium, chromium, copper, lead, nickel and zinc) concentrations, including arsenic and mercury in soil;
- Extraction with organic solvent and analysis of Total Recoverable Hydrocarbons (TRH) fractions C6 to C40, benzene, toluene, ethylbenzene and total xylene (BTEX), Polycyclic Aromatic Hydrocarbons (PAHs), polychlorinated biphenyls (PCBs) and phenols; and
- Extraction with organic solvent and analysis of Organochlorine (OCP) and Organophosphorus (OPP) pesticide compounds.

A composite sample of sediment (WF-11) from the on-site watercourse and dams were submitted for asbestos screening.

The ALS laboratory is NATA accredited for all the analysis indicated above.

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5.3. Analytical Results

5.3.1. Surface Soil

The ALS report for the samples is attached as Appendix A. The laboratory report indicates that only heavy metals and trace quantities of petroleum hydrocarbons were detected in the soil. The concentrations of all pesticides, polycyclic organic compounds as well as total polychlorinated biphenyls are indicated as below the limits of detection in all surface soil and sediment samples.

The metals detected include arsenic (As), chromium (Cr), copper (Cu), lead (Pb), nickel (Ni), and zinc (Zn). Concentrations of cadmium (Cd) and mercury (Hg) were shown to be below the limit of reporting in all samples.

Table 5.2 presents a summary of the compounds and elements detected above the limit of detection in surface soil samples.

Table 5.2: Summary of metals and hydrocarbons detected in soil samples collected from the Subject Site.

Element	BM-01	BM-02	BM-03	BM-04	BM-05	BM-06	BM-07	BM-08	BM-09	BM-10	BM-12
						$mg.kg^{-1}$					
Arsenic (As)	<5	<5	167	<5	<5	<5	<5	<5	<5	<5	<5
Cadmium (Cd)	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chromium (Cr)	8	10	4	2	8	3	8	3	<2	4	8
Copper (Cu)	<5	<5	9	<5	<5	<5	<5	<5	6	<5	<5
Lead (Pb)	8	9	22	<5	<5	<5	6	6	<5	10	10
Mercury (Hg)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel (Ni)	<2	4	3	<2	<2	<2	<2	<2	<2	<2	3
Zinc (Zn)	<5	5	58	<5	<5	<5	<5	<5	82	22	11
>C10-C40 Fraction (sum)	<50	<50	<50	<50	<50	<50	<50	<50	490	<50	<50
>C16-C34 Fraction (F3)	<100	<100	<100	<100	<100	<100	<100	<100	290	<100	<100
>C34 - C40 Fraction (F4)	<100	<100	<100	<100	<100	<100	<100	<100	110	<100	<100

5.4. Analytical Data Quality

Samples were collected in new, clean containers using cleaned equipment and soils were placed in glass jars provided by the laboratory that were refrigerated after filling and transported in an insulated container to the laboratory. Chain of custody was recorded for all samples. A copy of the signed sheet is attached as Appendix A.

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The analyses were undertaken at a NATA accredited laboratory. The laboratory quality control procedures in the form of duplicates as well as analyte and surrogate spikes were applied to all contaminant classes analysed. The results reported for the duplicate is within the Relative Percent Difference range of the acceptance criteria for a duplicate sample. The analyte spike recoveries reported for the different sets of organic analytes are indicated as within the acceptance criteria (see Appendix A).

All media appropriate to the objectives of this investigation have been adequately analysed and no area of significant uncertainty exist. It is concluded the data is suitable for the purposes of the contaminated site investigation.

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6. ASSESSMENT

6.1. Assessment Criteria – Human Health and Environmental Risk

Screening for human health and ecological risk, utilises published human health investigation levels (HILs) and ecological screening and investigation levels (ESLs & EILs) from the National Environment Protection (Assessment of Site Contamination) Measure (NEPC, 1999) to identify contaminant concentrations in soil that may pose a risk to future residents, people visiting the site, or to ecological receptors.

HILs are scientifically based, generic assessment criteria designed to be used in the screening of potential risks to human health from chronic exposure to contaminants. HIL's are conservatively derived and are designed to be protective of human health under the majority of circumstances, soil types and human susceptibilities and thus represent a reasonable 'worst-case' scenario for specific land-use settings.

The HILs selected for evaluation of the Investigation Areas are those derived for a standard residential scenario (HIL-A), which assumes typical residential land use with garden/accessible soil (home grown produce <10% fruit and vegetable intake, and no poultry). The standard residential scenario is conservative to use for evaluation. Although all of the exposure pathways included in the residential scenario are unlikely to exist in the proposed development, the more conservative HILs are used to account for sensitive receptors such as children, the elderly or persons with illnesses which may be residing in the proposed future development.

Although the primary concern in most site assessments is protection of human health, the assessment should also include consideration of ecological risks and protection of groundwater resources that may result from site contamination. EILs provide screening criteria to assess the effect of contaminants on a soil ecosystem and afford species level protection for organisms that frequent or inhabit soil and protect essential soil processes.

Ecological investigation levels (EILs) have been derived for common metallic contaminants in soil. The values selected for the evaluation of the heavy metals detected in the soil samples from the Subject Site considers the physicochemical properties of soil and contaminants and the capacity of the soil to accommodate increases in contaminant levels above natural background while maintaining ecosystem protection for identified land uses.

Table 6.1 presents a summary of the health-risk based criteria and ecological investigation levels selected for assessment of the detected metal concentrations.

The health risks associated with petroleum hydrocarbon compounds are assessed using Health Screening Levels (HSLs) developed to be protective of human health by determining the reasonable maximum exposure from sources for a range of situations commonly encountered on contaminated sites. HSLs are derived for soil, groundwater and soil vapour and relate to exposure to petroleum hydrocarbons through the vapour inhalation exposure pathway only. Direct exposure pathways such as incidental soil ingestion and dermal exposure pathways are generally not the risk drivers when compared to inhalation exposure (NEPC, 1999). HSLs have been developed for BTEX and naphthalene plus four hydrocarbon fractions namely:

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Table 6.1: Human health and ecological risk screening levels.

Element	Health-based Investigation Levels HIL A Residential mg.kg^{-1}	Ecological Investigation Levels (EIL) Urban residential and public open space mg.kg^{-1}
Arsenic (As)	100	100
Cadmium (Cd)	20	NA
Chromium	NR	190
Copper (Cu)	6,000	190
Lead (Pb)	300	1,100
Mercury (Hg)	40	NA
Nickel (Ni)	400	30
Zinc (Zn)	7,400	230

Note: NR=not relevant due to low human toxicity of Cr(III). NA=No applicable screening level. EILs selected are most conservative values relevant to residential land use scenario.

- C6-C10- Fraction number F1
- >C10-C16- Fraction number F2
- >C16-C34- Fraction number F3
- >C34-C40- Fraction number F4

Ecological risks associated with hydrocarbons are evaluated by using ecological screening levels (ESLs), which are based on EC_{25} weight-of-evidence ecotoxicity data, evaluated for a residential land use scenario (NEPC, 1999). The ESLs (Table 6.2) are evaluated for the same four carbon chain fraction ranges (F1 to F4) listed above. Screening values for a residential/public open space exposure scenario are listed.

Table 6.2: Human health and ecological risk screening levels for hydrocarbon fractions.

Fraction	Management limits for TPH in Soil Residential/public open space mg.kg^{-1}	Health Screening Levels (HSLs) for vapour intrusion Residential/public open space (silt) mg.kg^{-1} (soil)	Ecological Screening Levels (ESL) Residential/public open space (fine) mg.kg^{-1}
F1	800	40	180
F2	1,000	230	120
F3	3,500	NA	1,300
F4	10,000	NA	5,600

NA=No applicable screening level.

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It was confirmed that limits of detection reported by the laboratory are below the criteria values. All other contaminants analysed for in the soil samples that are reported below the limit of detection by the laboratory can therefore be excluded from further assessment.

6.2. Findings

Direct comparison of the analytical results presented in Table 5.2 with the assessment criteria (refer Table 6.1 and Table 6.2) show that the detected metal and hydrocarbon concentrations in all but one of the samples collected from the Subject Site, are well below residential health and ecological risk based criteria values. The general low concentrations of heavy metals detected suggest naturally occurring element abundance. A single elevated concentration of arsenic, exceeding health and ecological screening criteria, was detected in a sample of surface soil collected from a disturbed area located just inside an access gate in the south-eastern boundary of the site. Arsenic is generally associated with historic use of livestock drenching liquids that contain heavy metals for insect and fungus control. The source of the elevated arsenic observed in this particular location is uncertain.

Hydrocarbons were detected in a sample of soil collected just outside the livestock yards where vehicles and equipment are likely parked. No stained or discoloured soil were observed in this area.

The concentrations of metals and hydrocarbons detected most likely do not relate to large scale contamination anywhere on Site. No other contaminants evaluated were detected at concentrations exceeding screening criteria. The soil samples collected at the waste disposal area (BM-12) and the livestock pens (BM-09 and -10) show no elevated levels of pesticides, hydrocarbons or heavy metals.

The confirmatory soil samples thus support the assertion that significant and widespread chemical contamination is unlikely to be present within the Subject Site.

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7. CONCLUSIONS AND RECOMMENDATIONS

7.1. Conclusions

In accordance with the objectives stated in Section 1.2, and based on the information contained within this assessment, the following conclusions are presented (subject to the limitations noted in Section 1.5):

- Activities associated with the historical and current use of the Subject Site were identified as having a potential to contaminate surface soil at the site.
- The following potential sources of contamination were identified:
  - Historical and current livestock farming and grazing activities;
  - Historical and current feed-crop cultivation;
  - Use, maintenance and storage of motorised vehicles and equipment, and
  - Localised waste disposal
- A review of the available historical information, including contaminated sites databases and aerial photographs, indicated a low potential for significant environmental contamination to be present across the Subject Site.
- A site investigation and confirmatory sampling revealed localised arsenic levels in surface soil that exceed health and ecological risk-based criteria.
- The concentrations of all other contaminants investigated were below screening criteria in all surface soil samples collected. No persistent pesticides or herbicides were detected in any of the samples collected from cropping areas or the livestock management areas (yards and races).
- The screening criteria used in the evaluation of the contaminant concentrations were appropriately conservative and suitable for assessment of the proposed residential land use categories.
- Based on the findings of the site investigation it is concluded that the single incidence of an elevated arsenic concentration detected in surface soil at the Subject Site represent a limited risk to the proposed future land use. The elevated concentration of arsenic detected is likely localised to the area just inside the access gate and was not observed in any of the samples collected near any of the livestock management infrastructure or surface water dams. The potentially contaminated soil is therefore accepted to have a very low probability of dispersion to other areas of the site and present no significant risk to human health and the environment.

7.2. Recommendations

- Based on the findings of the desktop review and site investigation it can be stated with a reasonable level of confidence that the Subject Site is suitable for the intended rezoning and subdivision.

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- It is recommended that the elevated Arsenic concentration identified be investigated further, only in the event of this specific portion of the Subject Site having to be disturbed for further development. At that time, the level and extent of the elevated heavy metal concentration will determine if further remedial action is required.

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8. REFERENCES

NEPC. (1999). *National Environment Protection (Assessment of Site Contamination) Measure (as amended, 2013)*. National Environment Protection Council.

NSW EPA. (1995). *Contaminated Sites: Sampling Guidelines*. NSW Environmental Protection Agency.

NSW EPA. (2020). *Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites*. NSW Environmental Protection Agency.

WaterNSW. (2023). *Real Time Data*. Retrieved May 8, 2023, from Water NSW: https://realtimedata.waternsw.com.au/water.stm

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APPENDIX A

Chain of Custody and Laboratory Report – Surface Soil

Environmental Division
Mudgee
Work Order Reference
ME2300804

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Unit 4 / 108-110 Market Street
Mudgee NSW 2850
1300 BARNSON (1300 227 676)
generalenquiry@barnson.com.au
www.barnson.com.au
Telephone : 02 6372 6735

CHAIN OF CUSTODY AND ANALYTICAL REQUEST

Job Number	38948	Date	01/05/2023
Laboratory	ALS Mudgee	Report to	Nardus Potgieter npotgieter@barnson.com.au
Sample Temperature on Receipt		Notes	
1 °C			

Sample ID	Description	Sample Date/Time	Sample Matrix	Analysis request					
				1	2	3	4	5	6
BM-01	In-situ soil	28/04/2023	Soil	X					
BM-02	In-situ soil	28/04/2023	Soil	X					
BM-03	In-situ soil	28/04/2023	Soil	X					
BM-04	In-situ soil	28/04/2023	Soil	X					
BM-05	In-situ soil	28/04/2023	Soil	X					
BM-06	In-situ soil	28/04/2023	Soil	X					
BM-07	In-situ soil	28/04/2023	Soil	X					
BM-08	In-situ soil	28/04/2023	Soil	X					
BM-09	In-situ soil	28/04/2023	Soil	X					
BM-10	In-situ soil	28/04/2023	Soil	X					
BM-12	In-situ soil	28/04/2023	Soil	X					

Analysis request		Method Code
1	TRH (C6-C40) / BTEXN / PAH / OC / OP / PCB / 8 Metals	S-16
2		
3		
4		
5		
6		

	Accepted by / Affiliation	Date

CERTIFICATE OF ANALYSIS

Work Order	: **ME2300804**	Page	: 1 of 15
Client	: **BARNSON**	Laboratory	: Environmental Division Mudgee
Contact	: Nardus Potgieter	Contact	: Mary Monds (ALS Mudgee)
Address	: Unit 4 108-110 Market Street MUDGEE NSW 2850	Address	: 1/29 Sydney Road Mudgee NSW Australia 2850
Telephone	: 0429 464 067	Telephone	: +61 2 6372 6735
Project	: Soil	Date Samples Received	: 01-May-2023 10:35
Order number	: ----	Date Analysis Commenced	: 04-May-2023
C-O-C number	: ----	Issue Date	: 08-May-2023 17:57
Sampler	: Client Sampler		
Site	: ----		
Quote number	: SY/053/14		
No. of samples received	: 11		
No. of samples analysed	: 11		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP068: Where reported, Total Chlordane (sum) is the sum of the reported concentrations of cis-Chlordane and trans-Chlordane at or above the LOR.
- EP068: Where reported, Total OCP is the sum of the reported concentrations of all Organochlorine Pesticides at or above LOR.
- EP075(SIM): Where reported, Total Cresol is the sum of the reported concentrations of 2-Methylphenol and 3- & 4-Methylphenol at or above the LOR.
- EP071: Results of sample BM-09 have been confirmed by re-extraction and re-analysis.

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Work Order : ME2300804
Client : BARNSON
Project : Soil

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BM-01 In-situ soil	BM-02 In-situ soil	BM-03 In-situ soil	BM-04 In-situ soil	BM-05 In-situ soil
			Sampling date / time	28-Apr-2023 00:00	28-Apr-2023 00:00	28-Apr-2023 00:00	28-Apr-2023 00:00	28-Apr-2023 00:00
Compound	CAS Number	LOR	Unit	ME2300804-001	ME2300804-002	ME2300804-003	ME2300804-004	ME2300804-005
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	---	1.0	%	14.0	5.3	2.2	1.8	2.5
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	167	<5	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	8	10	4	2	8
Copper	7440-50-8	5	mg/kg	<5	<5	9	<5	<5
Lead	7439-92-1	5	mg/kg	8	9	22	<5	<5
Nickel	7440-02-0	2	mg/kg	<2	4	3	<2	<2
Zinc	7440-66-6	5	mg/kg	<5	5	58	<5	<5
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	---	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Total Chlordane (sum)	---	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05

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Work Order : ME2300804
Client : BARNSON
Project : Soil

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BM-01 In-situ soil	BM-02 In-situ soil	BM-03 In-situ soil	BM-04 In-situ soil	BM-05 In-situ soil
			Sampling date / time	28-Apr-2023 00:00	28-Apr-2023 00:00	28-Apr-2023 00:00	28-Apr-2023 00:00	28-Apr-2023 00:00
Compound	CAS Number	LOR	Unit	ME2300804-001	ME2300804-002	ME2300804-003	ME2300804-004	ME2300804-005
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
4.4'-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5

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Work Order : ME2300804
Client : BARNSON
Project : Soil

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BM-01 In-situ soil	BM-02 In-situ soil	BM-03 In-situ soil	BM-04 In-situ soil	BM-05 In-situ soil
			Sampling date / time	28-Apr-2023 00:00	28-Apr-2023 00:00	28-Apr-2023 00:00	28-Apr-2023 00:00	28-Apr-2023 00:00
Compound	CAS Number	LOR	Unit	ME2300804-001	ME2300804-002	ME2300804-003	ME2300804-004	ME2300804-005
				Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	—	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	—	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	—	0.5	mg/kg	**0.6**	**0.6**	**0.6**	**0.6**	**0.6**
^ Benzo(a)pyrene TEQ (LOR)	—	0.5	mg/kg	**1.2**	**1.2**	**1.2**	**1.2**	**1.2**
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	—	10	mg/kg	<10	<10	<10	<10	<10
C10 - C14 Fraction	—	50	mg/kg	<50	<50	<50	<50	<50
C15 - C28 Fraction	—	100	mg/kg	<100	<100	<100	<100	<100
C29 - C36 Fraction	—	100	mg/kg	<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	—	50	mg/kg	<50	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	<10	<10	<10
>C10 - C16 Fraction	—	50	mg/kg	<50	<50	<50	<50	<50
>C16 - C34 Fraction	—	100	mg/kg	<100	<100	<100	<100	<100
>C34 - C40 Fraction	—	100	mg/kg	<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	—	50	mg/kg	<50	<50	<50	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	—	50	mg/kg	<50	<50	<50	<50	<50
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5

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Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BM-01 In-situ soil	BM-02 In-situ soil	BM-03 In-situ soil	BM-04 In-situ soil	BM-05 In-situ soil
			Sampling date / time	28-Apr-2023 00:00	28-Apr-2023 00:00	28-Apr-2023 00:00	28-Apr-2023 00:00	28-Apr-2023 00:00
Compound	CAS Number	LOR	Unit	ME2300804-001	ME2300804-002	ME2300804-003	ME2300804-004	ME2300804-005
				Result	Result	Result	Result	Result
EP080: BTEXN - Continued								
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	---	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
^ Total Xylenes	---	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	80.5	78.1	83.9	95.2	99.3
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	82.9	78.4	99.2	97.8	102
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	79.8	73.3	96.5	94.3	88.0
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	77.3	82.5	81.1	82.3	80.4
2-Chlorophenol-D4	93951-73-6	0.5	%	79.9	85.9	85.1	84.7	83.5
2.4.6-Tribromophenol	118-79-6	0.5	%	76.5	81.7	74.1	76.3	71.8
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	93.4	100	98.6	97.8	96.9
Anthracene-d10	1719-06-8	0.5	%	92.6	100	98.0	96.5	95.2
4-Terphenyl-d14	1718-51-0	0.5	%	86.8	93.7	91.1	90.4	90.0
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	85.3	125	94.4	95.3	106
Toluene-D8	2037-26-5	0.2	%	93.3	99.1	93.5	98.6	102
4-Bromofluorobenzene	460-00-4	0.2	%	116	103	98.3	93.7	103

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Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BM-06 In-situ soil	BM-07 In-situ soil	BM-08 In-situ soil	BM-09 In-situ soil	BM-10 In-situ soil
			Sampling date / time	28-Apr-2023 00:00	28-Apr-2023 00:00	28-Apr-2023 00:00	28-Apr-2023 00:00	28-Apr-2023 00:00
Compound	CAS Number	LOR	Unit	ME2300804-006	ME2300804-007	ME2300804-008	ME2300804-009	ME2300804-010
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	---	1.0	%	8.5	4.6	3.4	7.2	1.8
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	3	8	3	<2	4
Copper	7440-50-8	5	mg/kg	<5	<5	<5	6	<5
Lead	7439-92-1	5	mg/kg	<5	6	6	<5	10
Nickel	7440-02-0	2	mg/kg	<2	<2	<2	<2	<2
Zinc	7440-66-6	5	mg/kg	<5	<5	<5	82	22
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	---	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Total Chlordane (sum)	---	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05

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Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BM-06 In-situ soil	BM-07 In-situ soil	BM-08 In-situ soil	BM-09 In-situ soil	BM-10 In-situ soil
			Sampling date / time	28-Apr-2023 00:00	28-Apr-2023 00:00	28-Apr-2023 00:00	28-Apr-2023 00:00	28-Apr-2023 00:00
Compound	CAS Number	LOR	Unit	ME2300804-006	ME2300804-007	ME2300804-008	ME2300804-009	ME2300804-010
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
4.4'-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5

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Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BM-06 In-situ soil	BM-07 In-situ soil	BM-08 In-situ soil	BM-09 In-situ soil	BM-10 In-situ soil
			Sampling date / time	28-Apr-2023 00:00	28-Apr-2023 00:00	28-Apr-2023 00:00	28-Apr-2023 00:00	28-Apr-2023 00:00
Compound	CAS Number	LOR	Unit	ME2300804-006	ME2300804-007	ME2300804-008	ME2300804-009	ME2300804-010
				Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	—	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	—	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	—	0.5	mg/kg	0.6	0.6	0.6	0.6	0.6
^ Benzo(a)pyrene TEQ (LOR)	—	0.5	mg/kg	1.2	1.2	1.2	1.2	1.2
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	—	10	mg/kg	<10	<10	<10	<10	<10
C10 - C14 Fraction	—	50	mg/kg	<50	<50	<50	<50	<50
C15 - C28 Fraction	—	100	mg/kg	<100	<100	<100	200	<100
C29 - C36 Fraction	—	100	mg/kg	<100	<100	<100	180	<100
^ C10 - C36 Fraction (sum)	—	50	mg/kg	<50	<50	<50	380	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	<10	<10	<10
>C10 - C16 Fraction	—	50	mg/kg	<50	<50	<50	90	<50
>C16 - C34 Fraction	—	100	mg/kg	<100	<100	<100	290	<100
>C34 - C40 Fraction	—	100	mg/kg	<100	<100	<100	110	<100
^ >C10 - C40 Fraction (sum)	—	50	mg/kg	<50	<50	<50	490	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	—	50	mg/kg	<50	<50	<50	90	<50
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5

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Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BM-06 In-situ soil	BM-07 In-situ soil	BM-08 In-situ soil	BM-09 In-situ soil	BM-10 In-situ soil
			Sampling date / time	28-Apr-2023 00:00	28-Apr-2023 00:00	28-Apr-2023 00:00	28-Apr-2023 00:00	28-Apr-2023 00:00
Compound	CAS Number	LOR	Unit	ME2300804-006	ME2300804-007	ME2300804-008	ME2300804-009	ME2300804-010
				Result	Result	Result	Result	Result
EP080: BTEXN - Continued								
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	---	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
^ Total Xylenes	---	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	89.7	106	122	101	76.7
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	105	112	116	92.3	77.2
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	100	104	106	95.0	63.3
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	78.0	78.9	81.8	80.8	80.1
2-Chlorophenol-D4	93951-73-6	0.5	%	81.6	82.9	82.7	84.3	84.2
2.4.6-Tribromophenol	118-79-6	0.5	%	69.9	69.3	69.8	82.7	79.1
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	97.1	97.6	98.1	98.0	97.6
Anthracene-d10	1719-06-8	0.5	%	95.3	95.7	97.9	97.1	96.3
4-Terphenyl-d14	1718-51-0	0.5	%	89.8	89.8	90.9	90.2	89.8
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	90.1	91.0	90.5	104	100
Toluene-D8	2037-26-5	0.2	%	93.3	98.6	110	97.1	105
4-Bromofluorobenzene	460-00-4	0.2	%	89.5	101	89.0	96.7	97.9

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BM-12 in-situ soil	----	----	----	----
			Sampling date / time	28-Apr-2023 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	ME2300804-011	--------	--------	--------	--------
				Result	----	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	**2.1**	----	----	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	----	----	----	----
Cadmium	7440-43-9	1	mg/kg	<1	----	----	----	----
Chromium	7440-47-3	2	mg/kg	**8**	----	----	----	----
Copper	7440-50-8	5	mg/kg	<5	----	----	----	----
Lead	7439-92-1	5	mg/kg	**10**	----	----	----	----
Nickel	7440-02-0	2	mg/kg	**3**	----	----	----	----
Zinc	7440-66-6	5	mg/kg	**11**	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	----	----	----	----
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	----	----	----	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	----	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	----	----	----	----
beta-BHC	319-85-7	0.05	mg/kg	<0.05	----	----	----	----
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	----	----	----	----
delta-BHC	319-86-8	0.05	mg/kg	<0.05	----	----	----	----
Heptachlor	76-44-8	0.05	mg/kg	<0.05	----	----	----	----
Aldrin	309-00-2	0.05	mg/kg	<0.05	----	----	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	----	----	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	----	----	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	----	----	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	----	----	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	----	----	----	----
Dieldrin	60-57-1	0.05	mg/kg	<0.05	----	----	----	----
4.4'-DDE	72-55-9	0.05	mg/kg	<0.05	----	----	----	----
Endrin	72-20-8	0.05	mg/kg	<0.05	----	----	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	----	----	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	----	----	----	----
4.4'-DDD	72-54-8	0.05	mg/kg	<0.05	----	----	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	----	----	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	----	----	----	----

Page : 12 of 15
Work Order : ME2300804
Client : BARNSON
Project : Soil

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BM-12 in-situ soil	----	----	----	----
			Sampling date / time	28-Apr-2023 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	ME2300804-011	--------	--------	--------	--------
				Result	----	----	----	----
EP068A: Organochlorine Pesticides (OC) - Continued								
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	----	----	----	----
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	----	----	----	----
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	----	----	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	----	----	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	----	----	----	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	----	----	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	----	----	----	----
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	----	----	----	----
Dimethoate	60-51-5	0.05	mg/kg	<0.05	----	----	----	----
Diazinon	333-41-5	0.05	mg/kg	<0.05	----	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	----	----	----	----
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	----	----	----	----
Malathion	121-75-5	0.05	mg/kg	<0.05	----	----	----	----
Fenthion	55-38-9	0.05	mg/kg	<0.05	----	----	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	----	----	----	----
Parathion	56-38-2	0.2	mg/kg	<0.2	----	----	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	----	----	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	----	----	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	----	----	----	----
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	----	----	----	----
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	----	----	----	----
Ethion	563-12-2	0.05	mg/kg	<0.05	----	----	----	----
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	----	----	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	----	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	----	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	----	----	----	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	----	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	----	----	----	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	----	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	----	----	----	----

Page : 13 of 15
Work Order : ME2300804
Client : BARNSON
Project : Soil

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BM-12 In-situ soil	----	----	----	----
				Sampling date / time	28-Apr-2023 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ME2300804-011	----------	----------	----------	----------
					Result	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Pyrene	129-00-0	0.5	mg/kg		<0.5	----	----	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	----	----	----	----
Chrysene	218-01-9	0.5	mg/kg		<0.5	----	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	----	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	----	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	----	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	----	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	----	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		<0.5	----	----	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		0.6	----	----	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		1.2	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	----	----	----	----
C10 - C14 Fraction	----	50	mg/kg		<50	----	----	----	----
C15 - C28 Fraction	----	100	mg/kg		<100	----	----	----	----
C29 - C36 Fraction	----	100	mg/kg		<100	----	----	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	----	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		<10	----	----	----	----
>C10 - C16 Fraction	----	50	mg/kg		<50	----	----	----	----
>C16 - C34 Fraction	----	100	mg/kg		<100	----	----	----	----
>C34 - C40 Fraction	----	100	mg/kg		<100	----	----	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	----	----	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	----	----	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	----	----	----	----
Toluene	108-88-3	0.5	mg/kg		<0.5	----	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	----	----	----	----

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Work Order : ME2300804
Client : BARNSON
Project : Soil

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BM-12 in-situ soil	----	----	----	----
			Sampling date / time	28-Apr-2023 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	ME2300804-011	----------	----------	----------	----------
				Result	----	----	----	----
EP080: BTEXN - Continued								
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	----	----	----	----
^ Sum of BTEX	----	0.2	mg/kg	<0.2	----	----	----	----
^ Total Xylenes	----	0.5	mg/kg	<0.5	----	----	----	----
Naphthalene	91-20-3	1	mg/kg	<1	----	----	----	----
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	126	----	----	----	----
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	110	----	----	----	----
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	56.0	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	77.9	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%	85.6	----	----	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%	61.4	----	----	----	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	112	----	----	----	----
Anthracene-d10	1719-06-8	0.5	%	90.3	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.5	%	100	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	83.0	----	----	----	----
Toluene-D8	2037-26-5	0.2	%	120	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.2	%	112	----	----	----	----

Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	39	149
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	49	147
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	35	143
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	63	123
2-Chlorophenol-D4	93951-73-6	66	122
2.4.6-Tribromophenol	118-79-6	40	138
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	70	122
Anthracene-d10	1719-06-8	66	128
4-Terphenyl-d14	1718-51-0	65	129
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	63	125
Toluene-D8	2037-26-5	67	124
4-Bromofluorobenzene	460-00-4	66	131

Inter-Laboratory Testing

Analysis conducted by ALS Sydney, NATA accreditation no. 825, site no. 10911 (Chemistry) 14913 (Biology).

(SOIL) EP068B: Organophosphorus Pesticides (OP)
(SOIL) EP068A: Organochlorine Pesticides (OC)
(SOIL) EP068T: Organophosphorus Pesticide Surrogate
(SOIL) EP068S: Organochlorine Pesticide Surrogate
(SOIL) EA055: Moisture Content (Dried @ 105-110°C)
(SOIL) EP066: Polychlorinated Biphenyls (PCB)
(SOIL) EP066S: PCB Surrogate
(SOIL) EG035T: Total Recoverable Mercury by FIMS
(SOIL) EG005(ED093)T: Total Metals by ICP-AES
(SOIL) EP080/071: Total Petroleum Hydrocarbons
(SOIL) EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions
(SOIL) EP080: BTEXN
(SOIL) EP080S: TPH(V)/BTEX Surrogates
(SOIL) EP075(SIM)B: Polynuclear Aromatic Hydrocarbons
(SOIL) EP075(SIM)S: Phenolic Compound Surrogates
(SOIL) EP075(SIM)T: PAH Surrogates

barnson.

Appendix E – Mudgee Local Aboriginal Land Council Clearance Letter

MUDGEE
LOCAL ABORIGINAL LAND COUNCIL

Brian and Frances Munro
PO Box 77
Gulgong, NSW 2852

17/05/23

RE: Clearance Letter for 148 Wyoming Road, Gulgong NSW – Lot 101 DP 1221461

Dear Brian and Frances,

On behalf of the Mudgee LALC I would like to thank you for consulting with us regarding your proposed development at 148 Wyoming Road, Gulgong NSW – Lot 101 DP 1221461.

Following a review of the Aboriginal Cultural Heritage Assessments previously conducted in the vicinity, the AHIMS Database and a walkover we can advise you that whilst there are Aboriginal sites recorded in the area no Aboriginal Cultural Heritage materials were identified as being potentially impacted by your development.

As such the Mudgee Local Aboriginal Land Council has no problem with the development proceeding.

If you have any queries or require any further assistance please do not hesitate to contact our office.

Yours Sincerely,

Tony Lonsdale
CEO
Mudgee LALC

Mudgee Local Aboriginal Land Council
PO Box 1098, Mudgee NSW 2850
Ph: 0263723511 Mobile: 0419479512
Email: mudgeelalc@bigpond.com
ABN: 54 927 738 589

POLICY

Meals on Wheels

A prosperous and progressive community

ADOPTED DRAFT		VERSION NO	2
COUNCIL MEETING MIN NO 133/19		REVIEW DATE	MAY 2023SEPT 2027
DATE:	15 MAY 2019	FILE NUMBER	GOV400047 /COS300025

Objective

The purpose of Mudgee Meals on Wheels Service is to maintain frail aged and younger people living with disability and their carers, who are at risk of premature or inappropriate institutionalisation, in their own homes by providing them with nutritious, affordable meals that are appropriate to their individual medical conditions and choices.

Legislative requirements

Disability Inclusion Act 2014 (NSW)
Disability Services Act 1986 (Cth)
National Disability Insurance Scheme Act 2013 (Cth)
National Disability Insurance Scheme Code of Conduct and Practice Standards
Anti-Discrimination Act 1977 (NSW)
Community Services (Complaints, Reviews and Monitoring) Act 1993 (NSW)
Aged Care Act 1997 (Cth)
Aged Care Quality Standards (applicable from 1 July 2019) and Aged Care Quality and Safety Commission Rules 2018
Australian Government Charter of Rights and Responsibilities – Home Care (2017)
Disability Service Standards (2014) and National Standards for Disability Standards 2013
Work Health and Safety Act 2011 and Work Health and Safety Regulations
Privacy Act 1988 (Cth)
Privacy & Personal Information Protection Act 1998 (NSW)
Government Information (Public Access) Act 2009 (NSW)
State Records Act 1998 (NSW)
National Privacy Principles
Coroners Act 2009 (NSW)
Commonwealth Home Support Program Manual (and any formal guidelines issued from time to time)

Related policies and plans

Australian Government Department of Health Commonwealth Standard Grant agreement with Mid-Western Regional Council as executed from time to time (including any Deeds of Variation)
Australian Government Serious Incident Reporting Scheme
Children and Vulnerable People Policy and Procedure
Code of Conduct
Complaints Policy
Disability Inclusion Action Plan
Access to Information Policy
Records Management Policy
Risk Management Policy
Work Health and Safety Policy

Policy

Mudgee Meals on Wheels believes in:

- The right of people to be informed and supported to make independent nutritional choices.

- The right of people to be valued as individuals.
- The right of the community to answerable, accountable and responsive services.
- To be treated with dignity, respect, privacy and confidentiality.
- The right to access the service without prejudice of gender, marital status, religion, cultural beliefs, political affiliation, disability, ethnic background, age, sexual preference, inability to pay and geographical location.
- The right of the community to safe, comfortable and reliable services.
- Enhancing the quality of life by providing affordable, nutritional meals.

Outcomes

Mudgee Meals on Wheels pursues the following outcomes:

- That people who are frail-aged and/or living with disability can remain in their own homes with the help of supplied nutritional meals and thus prevent premature institutionalisation.
- The family or other primary givers are supported in their role.
- The service operates in an effective, efficient and accountable manner.
- ~~Carers of frail-aged or people living with disability are recognised for their role.~~

Target Groups

People who are frail, aged and people living with disability and carers who are at risk of premature or inappropriate institutionalisation.

CLIENT ENTRY

Objectives

Mudgee Meals on Wheels will endeavour to ensure that a food service is available to frail-aged people and people living with disability ~~and their carers~~ living within the town of Mudgee and surrounding regions without discrimination. People cannot be excluded from access to the service on the grounds of their gender, marital status, religion or cultural beliefs, political affiliations, particular disabilities, ethnic background, age, sexual preferences, or circumstances of their carer.

Mudgee Meals on Wheels will provide nutritional needs to the target group through referrals from:

- The Department of Health My Aged Care Portal (or in accordance with other funding body directions).
- The National Disability Insurance Scheme.
- Medical practitioner.
- Hospital or any health or welfare service.
- A relative, friend, carer or neighbour.
- The person requiring the service.
- The client's referral source and classification of eligibility will determine whether subsidised funding is available for the service.

Requests for Assistance

The following factor will be used to determine relative needs:

- The client is unable to prepare meals with safety due to a disability or recent medial episodes or deteriorating health.
- The home cooking facilities or client's cooking methods are unsafe.
- The client lives alone and is isolated from family, community and carers for whatever reason.
- ~~The carer of the client is committed totally to their charges physical well-being.~~
- The carer is also frail-aged or living with disability.

Policy

- Following initial contact with Meals on Wheels, ~~Coordinator a Community Services Officer~~ a staff member will contact the person requesting the service and/or his/her representative within five working days to arrange an initial engagement.
- A referral from My Aged Care may be necessary to progress a registration with the service.

- At (or shortly thereafter; no more than two working days) the initial engagement, ~~the Coordinator or a Community Services Officer~~ Meals on Wheels will inform the person requesting the service of the availability of his/her preferences.
- If the services are offered to a client on temporary bases, it must be made clear the duration of the service.
- Meals on Wheels service places a high importance on the quality of the client engagement process to make sure that the needs of client are heard, understood and met in an appropriate and acceptable manner that protects the clients' privacy and right to self-determination.
- The engagement is between the ~~Coordinator or a Community Services Officer~~staff member, the client and with their permission, his/her legal guardian or advocate. Use will be made of an interpreter service, if necessary.
- Priority will be given to clients with the highest need.
- An application form will be explained and completed at the time of the engagement (or following the engagement if the client wishes to do so independently or in consultation with others). At the same time, the client will be given any relevant information on Meals on Wheels. Provision of information may reoccur from time to time as opportunities for the client present or initial information requires updating.
- ~~The Coordinator or a Community Services Officer~~Meals on Wheels will advise the client if they are refused the service and why. ~~The Coordinator or a Community Services Officer will advise the client if they are to be placed on a waiting list.~~
- ~~If the client requests, the Coordinator or a Community Services Officer will refer them to another agency to discuss meal alternatives with the client.~~

Decision

The decision will be:

- Provision of service.
- ~~Placing the request on a waiting list.~~
- Refusal of service.
- ~~Referral to another agency.~~
- Development of an alternate plan, possibly in consultation with other services (with the client's permission).

If service is refused

- The person requesting the service should be advised immediately, giving reasons why the service is unable to be provided (eg, dangerous unrestrained dog on the premises, or client lives out of service delivery boundaries).
- Information should be provided on other available services and if appropriate, a referral should be arranged.

- Information should be provided on when, and under what circumstances the person could reapply for Meals on Wheels.
- The person should be made aware of Council's Complaints Policy and its procedures.

CLIENTS WITH SPECIAL NEEDS

Non-English Speaking Clients

In cases where the client does not speak English, an interpreter will be used to ensure that the client understands the initial engagement process, the service being offered and the general information provided in the client's information handbook.

The need for an interpreter should be clearly identified within the client's file.

Aboriginal and Torres Strait Islander Clients

~~Mudgee~~ Meals on Wheels will endeavour to provide Aboriginal and Torres Strait Islander clients with culturally appropriate services. The ~~CoordinatorCommunity Services Officer~~ Service will~~should~~ ensure that ~~the~~ information regarding ~~the~~ assessments, reviews, and service are available in culturally appropriate formats and are clearly explained and understood by the client.

Clients who cannot read or write

In cases where a client cannot read or write, the CoordinatorCommunity Services Officer should ensure that the information in the client's information handbook and information regarding the assessment, review, and services are clearly explained and understood by the client, or his/her advocate.

Clients with Dementia and other Special Needs Groups

~~Volunteers~~ Staff will be ~~briefed~~ supported on how to deal with people with dementia or specific disabilities and every effort made to ensure that the service is delivered in an appropriate and sensitive way. For people with severe dementia or severe intellectual, psychiatric or brain injury disabilities, the focus will be more on ensuring that the carers or advocates are fully aware of the contents of the
client's information handbook and that they are aware of the information regarding commencement, review, and services. However, to whatever extent possible the client should be given the same information and their questions answered.

Regardless of the class of special need, every client should be supported in his/her independent decision making to the extent possible and practical.

PRINCIPLES TO BE OBSERVED IN ENGAGEMENT

In conducting the initial engagement, the following principles should be observed:-

Information about the engagement

The client should be made aware that they have been referred to Mudgee Meals on Wheels and their needs and expectations, as well as their suitability for receipt of service are being considered.

The client should understand that their service will be reviewed by Meals on Wheels at a minimum, every six twelve months, and that the service provided by Meals on Wheels may change as a result of the review. If services are provided on a temporary basis, clients should be made aware of the duration of the service. An up-to-date copy of the assessment and any reviews must be kept.

The client will be provided with a copy of the client's information handbook at the time of the initial engagement with the contents being verbally explained at that time, as well as at any subsequent reviews.

Coordination with other services

The client must agree to any referrals to another service before they are made. The client's consent should be obtained before any information about them is given to another agency, or requested by Mudgee Meals on Wheels from another agency.

Other options

Alternative options should be discussed with all clients and especially when Meals on Wheels are unable to provide a service.

Alternative services and fee for services options should be identified, and relevant information provided.

The client has the right to refuse a service. Refusal will not prejudice their future access to the service.

Individual needs and preferences

The individual needs of the client are taken into account including their physical, cultural, social, economic, nutritional needs and the needs of their primary carer.

Complaints

Council's Complaints Policy and procedures should be explained at the initial engagement.

Advocacy

Clients should be aware that they may ask a relative, friend or other person to advocate on their behalf.

WITHDRAWAL OF SERVICE

Objectives

- A client has the right to withdraw from Meals on Wheels at any time. This withdrawal does not hinder the client from receiving the service at a later date.
- If Meals on Wheels cannot provide the service to suit the client's needs or expectations, the service may be withdrawn.
- The CoordinatorMeals on Wheels has the right to withdraw the service if the client does not take reasonable responsibility of their delivered service.

- Meals on Wheels The Coordinator has the right to withdraw the service if the client should act in a way which does not respect the rights of other clients and the Meals on Wheels staff and volunteers.
- Meals on Wheels The Coordinator has the right to withdraw the service if the client does not take responsibility for the results of any decision they make.

Policy

- A temporary or permanent withdrawal from the service may be made by the client or Meals on Wheels the Coordinator at any time (preferably in writing)
- The client or advocate will inform the service that they no longer require the service.
- Available information will be given to the client on alternative suppliers (where applicable).
- The service will be withdrawn from the client, if inappropriate behaviour is continually shown towards the staff or volunteers.

CLIENT RE-ENTRY TO SERVICE

Policy

1. The Community Services Officer or CoordinatorMeals on Wheels will confirm the client wishes to re-enter the service. The Community Services Officer Coordinator Meals on Wheels will establish whether the potential client requires the use of an advocate or interpreter.
2. The client will be notified if the service is unable to meet their needs or expectations.
3. The client will be referred to another service if requested, or if deemed appropriate with "duty of care" responsibilities

PRINCIPLES FOR SERVICE DELIVERY

Objectives

Meals on Wheels will endeavour to provide its service in accordance with the following principles:

- Clients are the focus of Meals on Wheels.
- The service exists solely to meet the needs of the client.
- Each client is an individual and has different needs determined by their age, gender, cultural background and life circumstances.
- Clients have a right to make and are offered informed choices for their food service.
- Clients have a right to dignity, respect, privacy and confidentiality.
- Clients have a right to access services on a non-discriminatory basis.

Policy

Meals on Wheels should be tailored to suit the client and meet their needs and expectations as well as being responsive and able to be modified to meet changing needs and expectations of time.

Options may include (where available) a choice of:

- Choice of days for accepting the service.
- An alternative community service.
- ~~Service provider.~~

However, in presenting options it is important that clients do not feel under pressure.

PRIORITISING OF CLIENTS

Objectives

In some circumstances, Mudgee Meals on Wheels may not be able to cater for those requesting assistance. In these circumstances, the following factors will be used to determine relative need.

Client

- The client does meet the target groups of frail-aged, persons living with disability or carers.
- The client lives alone, or with a carer who is frail-aged or is living with disability.
- The cooking facilities are unsafe.
- The client experiences difficulty preparing meals with safety.
- The client is socially or geographically isolated.
- ~~The client is financially disadvantaged.~~

~~Carer~~

- ~~Is caring for a person living with severe disability.~~
- ~~Is frail-aged/ill or is living with disability.~~
- ~~Is socially or geographically isolated.~~
- ~~Is financially disadvantaged.~~

Policy

- Priority will be given to persons whose circumstances meet one or more of the above factors.

- ~~Where a person is eligible to receive the service but resources are inadequate, the person will be placed on a waiting list and informed by the Community Services Officer of the decision.~~
- ~~The Community Services Officer will provide information regarding alternative services available to those placed on a waiting list.~~ Despite not meeting one or more of the above criteria, a client may still be able to access the service on a full cost recovery basis.

RIGHTS AND RESPONSIBILITIES

Objectives

Clients are the focus of Meals on Wheels and it is important that their rights are acknowledged and promoted at every opportunity. As service users, however, clients also have responsibilities to Meals on Wheels.

Policy

Client Rights

- The client, or with their permission their carer has access to all information about themselves held by Meals on Wheels in accordance with Council's Access to Information Policy.
- In cases where a client has a legal guardian or advocate appointed to act on their behalf, the rights of the guardian or advocate are to be acknowledged and respected to the extent stipulated in the guardianship or advocacy arrangements.
- Clients and, with their permission, their carers, should be involved in decisions about their engagement. They should be aware of all the options available, and any fees to be charged.
- Clients should be made aware of the standard of service which they can expect. Services should be provided in a safe manner, which respects the dignity, and independence of the client, is responsive to the social, cultural and physical needs of the client and the needs of the carer (where applicable).
- Clients have the right to refuse a service and should not prejudice their future access to service.
- Clients have a right to complain about the service they are receiving without fear of retribution.
- Complaints by clients should be dealt with fairly and promptly in accordance with Council's Complaints Policy.
- The client may involve an advocate of their choice to represent his/her interest.
- Clients' views should be taken into account in the planning and evaluation of the service.
- Clients' rights to privacy and confidentiality should be represented.

Objectives

To ensure that ~~Mudgee~~ Meals on Wheels services are accessed by all sections of the community, it is important that the service is strongly promoted.

Policy

That all the target groups of the frail-aged, the disabled and carers are informed of the service and opportunities available to meet their nutritional needs.

Outcomes

- A community brochure is developed and maintained.
- The brochure is distributed to all health and welfare agencies in the region, including community centres, doctors surgeries, libraries and pharmacies.
- ~~The Coordinator and the Community Services Officer are responsible for maintaining list of relevant agencies in the region and for ensuring adequate supplies of information on the service is always available.~~
- Promotion of the service by radio, the press and social media.

PRIVACY AND CONFIDENTIALITY

Objectives

Protecting the privacy of clients is very important to Meals on Wheels and the following policies and procedures are designed to ensure that details about clients are kept confidential.

Policy

- The initial engagement of a client and any follow-up or review should take place in the client's own home. If this is not possible, it should take place in an area which provides privacy and confidentiality.
- The assessment and review should be between ~~the Community Services Officer (or a service staff member)~~Meals on Wheels and the client and, with the client's consent, his/her legal guardian or advocate.
- ~~The Community Services Officer~~ Meals on Wheels should note any particular privacy requirements of the client.

Privacy and Confidentiality of Information

- The only information held by ~~Mudgee~~ Meals on Wheels about a client will be information necessary to provide the service.
- Information should be as non-obtrusive and objective as possible, yet relevant and up-to-date.
- The client has the right to withhold information for privacy reasons provided this does not place any stakeholder at risk of harm.
- Information about a client will not be shared with another agency without the permission of the client or his/her legal guardian or advocate, except in the case of an emergency.

- Clients have the right to read any personal information kept about them by ~~Mudgee~~ Meals on Wheels in accordance with Council's Access to Information Policy. Requests from clients to access files should be referred to the CHSP Services Coordinator, who should ensure that assistance is provided for the client to access information on his/her file within a reasonable timeframe.

- Information regarding clients will be secured stored ~~in a filing cabinet, which is kept locked when the office is unattended and within Council's Records Management System. This information is~~ and only accessible to the CHSP Services Coordinator, ~~the~~ Community Services Officers and relevant Council staff.

Outcomes

The procedure for opening Meals on Wheels client files involves:

- An individual file will be created for each client following initial engagement (should the client choose to proceed with the service).

- Procedures for the storage, retrieval and re-filing of files will be developed in accordance with Council's Records Management System.

- File notes should be kept on client contact which include:

  1. Engagement
  2. Review
  3. Change in care plan
  4. Change in circumstances of the client or client preferences
  5. Reports/information from other agencies
  6. Requests from the client for any change in service.

Files removed from the office should be placed inside a folder, which does not identify the client.

Hard copy files should be stored in the filing cabinet when not in use.

All incoming and outgoing correspondence will be handled in accordance with Council's Records Management Policy.

Length of time records are held

If the service of Meals on Wheels has stopped being provided to the client, but may need to be resumed at a future date, information relating to the client will be kept ~~in the filing cabinet for a period of five years before~~ for a reasonable period prior to being managed and archived in accordance with Council's Records Management Policy.

~~If the service will not need to be resumed, the client records will be managed in accordance with Council's Records Management Policy.~~

Identification

All ~~Mudgee~~ Meals on Wheels staff and volunteers will be given either a badge or lanyard identifying them as Council or Meals on Wheels staff or volunteers. This will be shown to clients at every contact in their home until the client knows the representative person.

Training

All staff should be aware of and understand the policy on privacy and confidentiality.

COORDINATION OF THE SERVICE

Objectives

It is important for the service of Meals on Wheels to co-ordinate with other government and non-government services at a local level. This ensures that the service provided is effective and efficient and avoids duplication or gaps in service.

Meals on Wheels will keep in contact with relevant services through representation at regional forums and meetings, including Interagency and regional Meals on Wheels forums.

The Community Services Officer will make sure that staff of other agencies understand the services available through Meals on Wheels. They in turn will be able to promote Meals on Wheels amongst their own clients and refer people who may be eligible.

CLIENT REVIEW

Objectives

The Community Services Officer should initiate regular reviews, these should be at least every ~~six~~ twelve months or as required. The client should be involved in any review and agree to any changes in service.

A new plan should be completed and fully explained to the client (or his/her advocate) after a review.

Complaints

The client should be made aware that they may lodge a complaint should they have any concerns regarding their service. This should be emphasised to them at the time of review when the information in the client information handbook is being explained.

Complaints will be handled in accordance with Council's Complaints Policy.

Coordination with other services

If other agencies are involved in providing services, they may all be involved in the review of client's services. If appropriate, a joint review could occur or alternatively, a case discussion following the review.

Permission must be obtained from the client before any information is shared except in cases of serious risk of harm to one or more persons.

FEES AND CHARGES

Objectives

Fees charged for services provided by Meals on Wheels are determined by Council and reviewed annually.

Policy

Meals on Wheels recognises that many clients have a limited capacity to pay for services provided, ~~however, the payment of a fee for Meals on Wheels by clients who have the capacity to pay is endorsed~~. Meals on Wheels will ensure that clients are not excluded from utilising the service in cases of financial hardship and alternate payments, such as payment plans, may be deemed appropriate. Where this is the case, appropriate records must be kept in order to provide an audit trail. Meals on Wheels staff do not have authority to waive or discount fees.

Capacity to pay

In assessing clients ability to pay for Meals on Wheels the following shall apply:

- Information will be obtained from each new client as to what other community services they are receiving and the costing of these services.
- The assessment will be based on the client's own statement of income in the form of an application for review of fees. Sighting of bank statements will not be required but a paper trail must be kept by the service in order to ensure no internal abuse of process.
- Information obtained about a client's income and expenditure will be treated as private and confidential.
- ~~Clients will be asked to advise Meals on Wheels within 30 days of any significant change in circumstances, which may alter status in relation to the payment/non-payment of fees (eg. compensation payment ceases etc.).~~
- ~~Clients, potential clients and their advocates may lodge an appeal with the Commonwealth Home Support Program Services Coordinator (the Community Service Officer's direct supervisor) if they are unhappy with the level or extent of fees charged.~~
- ~~This can be done in writing or by telephone and only requires that the client ask the Coordinator to review their fees.~~
- ~~All clients will be advised of the appeal process.~~

Payment of fees

All clients will be informed of the fees associated with any service at the time of initial engagement and given a copy of the fees list. Clients will also be advised of any forthcoming variation to fees that may affect them.

Service for which fees are not charged

Fees do not apply to information, advocacy, engagement and review services.

Collection of fees

- The client is invoiced once a month and fees are to be paid using one of the methods outlined on the invoice.

- Clients are also given the option to pay for any meals upon collection from the Meals on Wheels office.
- The client will be issued with a receipt (or receipt number) upon payment.

Appeals mechanism

All clients and potential clients shall be advised of the process for lodging an appeal if they are unhappy with the level or extent of fees charged.

The process for appeal is:

- The client contacts the CHSP Services Coordinator in writing or by telephone about their concerns with the fee.
- The Coordinator responds within 7 working days and consults with the client regarding the situation.
- In some instances, based on the principles outlined under Capacity to Pay, the CHSP Services Coordinator may arrange, with the client's consent for ~~the fees to be waived or reduced~~a payment plan to be established.
- If the client is not satisfied with the result of the CHSP Services Coordinator's response, the matter will be dealt with in accordance with Council's Complaints Policy.
- Any client who appeals about the level or extent of fees charged will receive a written statement of the outcome of their appeal and advice of what steps they can take if they are still not satisfied.
- No client will be disadvantaged or penalised as a result of lodging an appeal about the fee charged.

CLIENT ADVOCATE

Objective

Meals on Wheels will accept advocates as representing the interests of the client.

Policy

Where appropriate, Meals on Wheels will assist clients and potential clients to access an advocate or advocacy agency that will protect their interests and rights. Advocacy must be in the best interest of the client and not an extension of the service.

Clients may use an advocate of their choice to negotiate on their behalf. This may be a family member, friend or advocacy service.

Advocates may be used during engagement, reviews, and complaints or for any other communication between the client and the service.

The following guidelines for an advocate are observed by Meals on Wheels:

- The client should be informed of their right to use an advocate, and should regularly be reminded of this option.

- Where possible, clients wishing to use and advocate should inform the service in writing of the name of the person they wish to negotiate on their behalf.
- The client has the right to change their advocate at any time and should inform the service in writing (where possible) of any change.

This information is available in the client's information handbook or brochure and should be explained at formal engagements and reviews and through informal discussion.

CLIENT COMPLAINTS

Objectives

Responses from clients is important in ensuring that services are continuing to meet client's needs and for planning an appropriate service for Meals on Wheels.

An important source of feedback is client complaints and these are welcomed and encouraged by Meals on Wheels.

Policy

- All complaints will be dealt with fairly, promptly and confidentially and in accordance with Council's Complaints Policy.
- All clients should be made aware of their right to complain, and should fully understand the complaints procedure and the use and availability of an advocate.
- Clients have a right to complain about the service they are receiving without fear of retribution and can expect complaints to be dealt with promptly.
- ~~The Community Services Officer and Coordinator~~Meals on Wheels should take steps to ensure that clients feel comfortable to continue accessing the service after making a complaint.
- Information on the complaint procedure of Meals on Wheels is to be included in the client information handbook and presented to and explained to the client at the time of assessment.
- The client has the right to use an advocate of their choice to negotiate on their behalf with the Community Services Officer. This may be a family member or friend, or an agency~~, such as Disability Information Advocacy Service Inc~~.
- All complaints are to be recorded and stored in Council's Records Management System and treated in accordance with Council's Complaints Policy.
- Person/s affected by the complaints should be fully informed of all facts and given the opportunity to put their case forward.

Outcomes

Clients are encouraged to raise their complaints with the Community Services Officer or Coordinator:-

- If the client is not satisfied with the outcome, or not happy to discuss the issue, they should use an advocate to negotiate on their behalf.

Procedure

If after the Complaints Policy procedure, the issue is still not resolved, the client can complain to the (as relevant):

The Ombudsman's Office
(NSW) Community Services
Division Level 24, 580
George Street
SYDNEY NSW 2000
Phone: 1800 451 524 (Freecall) / TIS 131 450
Email: ~~nswombo.nsw.gov.au~~ info@ombo.nsw.gov.au
Web: www.ombo.nsw.gov.au

Aged Care Quality and Safety Commission
GPO Box 9819
SYDNEY NSW 2000
Phone: 1800 951 822 / (02) 9633 1711
Email: ~~audit.feedback@agedcarequality.gov.au~~info@agedcarequality.gov.au
Web: www.agedcarequality.gov.au

NDIS Quality and Safeguards Commission
PO Box 210
PENRITH NSW 2750
Phone: 1800 035 544
Web: www.ndiscommission.gov.au

Confidentiality of complaints

As far as possible, the fact that a client has lodged a complaint and the details of that complaint should be kept confidential amongst Council staff directly concerned with its resolution. The client's permission should be obtained prior to any information being given to other parties, which it may be desirable to involve in order to satisfactorily resolving the complaint.

VOLUNTEERS

Objectives

Meals on Wheels recognises the valuable contribution to the service made by volunteers and actively encourages their participation because it:-

- Enables volunteers to contribute to their community.
- Provides the opportunity for work experience and the development of new skills in volunteers.
- Enhances the range of services available through Meals on Wheels.
- Allows for wider community participation in the service.

Policy

The process used for the recruitment of volunteer organisations is as follows:

Requests for volunteer organisations will be advertised in the local press, radio and social media.

Interested volunteer organisations will be interviewed and will cover the following areas:

- Name
- Address
- Telephone number
- Times available
- Commitment
- Explain reimbursement for expenses
- Names of two referees

Photocopy of individual volunteers':

- Driver's licence
- Insurance
- Vehicle registration

Original identification will also need to be presented to service staff accompanied by an executed Consent for a ~~Criminal~~ National Police History Record Check for each individual volunteer.

~~The Community Services Officer should~~Meals on Wheels inform the volunteer as soon as possible of his/her decision regarding recruitment.

If the volunteer's application is rejected they should be given the reasons why.

If the application is accepted the volunteer should be given a copy of the Volunteer Information Handbook, as well as a Volunteer Agreement. The volunteer will also be supported to understand obligations under the Serious Incident Reporting Scheme and receive a copy of the Keeping Our Clients Safe acknowledgement (for the Serious Incident Reporting Scheme) to sign and return.

Sufficient time should be allowed for the volunteer to read the information and ask questions before signing the agreement and commencing volunteering. An induction and orientation process will also be conducted with the new volunteer(s).

Agreement of employment for volunteers

All volunteers must sign a Volunteer Agreement and have a current Criminal Record check clearance before commencing volunteering.

Code of behaviour

Volunteers are expected to conform to Council's Code of Conduct, the Keeping Our Clients Safe acknowledgement and comply with privacy and confidentiality expectations, as well as the content of this policy and the Serious Incident Reporting Scheme.

Volunteer service delivery

Any individuals under the age of 16 volunteering for the service, must be accompanied by a registered, adult volunteer.

Volunteers are encouraged to undertake deliveries in pairs. If, on any occasion, the person a volunteer is scheduled to deliver with is unavailable, the Community Services Officer is to be notified immediately in order that alternative arrangements may be sought.

DEATH OF A CLIENT

Objectives

Council staff and service volunteers will respond immediately to the situation of the death of a client with dignity and sensitivity.

Policy

The response to the death of a client is to be sensitive and appropriate. This includes ensuring that:-

- The cultural and religious beliefs and practices of the client and their family are respected.
- The response is dignified and prompt to minimise the distress arising from the event.
- Confidentiality is to be maintained by staff and volunteers with respect to the death, meaning the event is only to be discussed with those associated and carrying responsibilities regarding the immediate situation.

Procedures

- Staff / Volunteers to call 000, **do not** move or touch the client.
- Volunteers to notify ~~the Coordinator or Community Services Officer~~Meals on Wheels staff.
- Volunteers to wait until ~~the Coordinator or Community Services Officer and~~ relevant emergency services and Meals on Wheels staff arrive.
- The Community Services Officer will ~~organise~~ arrange for ~~replacement volunteers~~ the meal run to continue ~~the meal run~~.
- The Coroners Act (2009) requires that either police or coroner be notified of the death.

- ~~The Community Services Officer and Coordinator will~~Meals on Wheels staff may assist police with enquiries if required.
- An incident report must be completed by the volunteer involved as soon as practical after the incident.
- The death of a client is a critical event. Volunteers may request a debriefing through the appropriate channels.
- Bereavement support may be provided to volunteers who are experiencing grief following the death of a client.
- ~~The Coordinator or Community Services Officer~~Meals on Wheels staff and/or volunteers will obtain advice from or refer to a bereavement counselling service for emotional or practical support, if necessary. In exceptional circumstances, and at Council's discretion, Council's Employee Assistance Program may be available to a volunteer.

SERVICE PROMOTION

Objectives

To promote the service to the community and surrounding area.

Policy

1. The CHSP Services Coordinator will promote the service regularly by:-

- Responding to all enquiries.
- Visiting prospective clients following referrals.
- Distributing brochures to Community Health Centres, surgeries, pharmacies, ~~Home Care~~ and ~~other~~ aged care groups.
- Local media, eg radio station, local newspaper and social media (as appropriate).
- Other community support services.
- Meetings such as interagency and disability services.

2. The Coordinator will conduct surveys with clients every 12 months or more often if circumstances change and also:-

- Client reviews.
- Phone calls / visits to clients.
- Complaints received.
- Informal feedback follow-up (clients / volunteers).
- Meetings with clients / carers / family members or advocates.

3. The Coordinator will follow-up on any feedback received promptly and confidentially.
4. The source of the complaints will be informed of the outcome.
5. Council's Finance Department, along with the Manager of Community and Cultural Services and the CHSP Services Coordinator will ensure that the annual budget supplied by funding bodies from time to time is maximised to promote the service by:-

- Regularly monitoring the budget.
- Ensuring accurate financial procedure is followed.
- Adhering to the requirements of the funding bodies and Council.
- Maintaining relevant insurances, such as workers compensation, public liability, professional indemnity, building / contents, and volunteer personal accident insurance.

USE OF CLIENT INFORMATION AND REFERRAL RECORD

Objective

A client information and referral record must be completed for all clients.

Policy

- All information collected at the initial engagement of a client is entered in the referral paperwork and is kept by the service in a locked filing cabinetsecurely.
- Information collected within the referral paperwork will be entered on the meal management software.
- Upon request, a copy of the completed referral paperwork is left with the client after the initial assessment along with all other relevant information of Meals on Wheels.
- A referral to another service may be made using the referral paperwork provided the client has signed the permission section of the paperwork.

WORK HEALTH AND SAFETY

Objectives

Work health and safety for staff, volunteers and clients within the Meals on Wheels organisation and those visiting the organisation are considered to be the utmost importance.

Policy

- Hazard identification, assessment and control.
- Changes to work methods and practices.
- Emergency procedures.
- Reporting and recording of incidents, accidents, near misses, injuries and illnesses.
- Provision of information to volunteers and clients.
- Smoke free working area.
- Completion of the risk section of the client records regarding animals. Eliminate/minimise hazards around the home of clients for the safety of the service provider.
- All employees and volunteers are required to co-operate with the Council's Work Health and Safety Policy to ensure safety to themselves and safety to others in the workplace.
- The premises of the Meals on Wheels office have fire safety equipment and a first aid kit.
- The Meals on Wheels car is fitted with an up-to-date first aid kit.
- In the case of a volunteer suffering from an illness, that volunteer is not to deliver Meals on Wheels.

- PPE is available for deliveries upon request.

SERVICE MANAGEMENT

Objectives

To manage the service in accordance with relevant aged care and disability standards (as amended from time to time) and the requirements of any funding bodies from time to time.

To manage the service in accordance with Council's policies.

To ensure that the service has annual planning and evaluation mechanisms in accordance with funding body guidelines.

To ensure the service complies with reporting mechanism in accordance with funding body and Council guidelines and policy.

A commitment to continuous improvement in delivery of the service by surveying clients annually, and actions for improvement taken based on the survey.

To provide a service that is appropriate to the individual needs of each client.

Policy

- The Service will be managed by the auspicing body, Mid-Western Regional Council, through the Manager Community and Cultural Services and the CHSP Services Coordinator.
- Council will provide financial management and accountability to the funding bodybodies.
- Council will maintain all relevant insurances covering workers compensation, public liability, professional indemnity, building and contents and volunteer personal accident insurances.
- Day to day facilitation of the service will be the responsibility of the Community Services Officer in accordance with his/her position description.
- The service budget will be regularly monitored and adhered to.
- Reports will be submitted to Council quarterly of client numbers and meals supplied.
- Service statistics will be electronically submitted to funding bodies on a quarterly basis.
- Work health and safety will be adhered to in accordance with Council's policies.
- Conduct an initial engagement with every new client.
- Compliance with Council's Records Management Policy.

- ~~To provide a service that caters to the needs of people from culturally and linguistically diverse backgrounds, Aboriginal and Torres Strait Islanders, and people who may be socially and financially disadvantaged.~~
- Conduct regular reassessments by phone/visits.
- To provide a service to suit people with special dietary needs.
- Collect feedback from clients by regular phone calls.
- Collect feedback from surveys of existing clients.
- Act on information provided by clients on improvement to the service.
- Act on information given by volunteers on improvements to the service.
- Act on complaints received from clients/carers/volunteers.

CONFLICT OF INTEREST

Objectives

To provide a framework for clients, carers, volunteers and staff to recognise and deal with conflicts of interest.

Policy

As a government funded organisation, the service must be impartial and fair in dealing with clients, carers, volunteers, suppliers and the general public. To do this, it is essential that all possible conflict of interest are appropriately handled.

~~The Community Services Officer, Coordinator, other service~~Meals on Wheels staff and volunteers need to be aware that gifts and benefits may be specifically offered to influence the attitudes or decisions of the recipients in favour of the giver. In this case, the gifts or benefits must be regarded as bribes and the giving and acceptance of them is a criminal offence.

The difference between token gifts and benefits and other gifts and benefits is explained in Council's Gifts and Benefits Policy.

USE OF MEALS ON WHEELS VEHICLE

Policy

The following policy applies to the use of Mudgee Meals on Wheels vehicle:-

- The cost of travel is to be kept to a minimum.
- All grant conditions relating to the use of the vehicle must be strictly adhered to.
- Staff must have an appropriate current licence before using the vehicle.

- The vehicle is to be used solely for work purposes. Private use of the vehicle is not permitted.
- Vehicle must be locked at all times that it is unattended.
- The primary user of the vehicle will ensure that the vehicle is maintained to the appropriate standard by;-
    - Cleaning the vehicle inside and out on a regular basis.
    - Making sure that the vehicle has petrol and oil at all times.
    - Reporting when the vehicle is damaged, or when repairs are required.
    - Making sure that the required servicing and maintenance is carried out.
- Emergency breakdown service through Council is available for the vehicle.
- Petrol is to be obtained from Council's referred local fuel supplier and will be accounted for against the vehicle not the driver.
- The vehicle is to have a fuel charge card. This card must be presented at Council's referred local fuel supplier for payment. The card must remain in the car at all times. Coordinator
- Emergency telephone numbers are ~~displayed in the vehicle. This includes the hospital, police and local general practitioners~~listed in a mobile telephone that is taken in the vehicle for the purposes of Meals on Wheels activity.

Procedures

The service vehicle is to be used specifically for:-

- Travelling to and from ~~Pioneer House~~meal providers each weekday.
- Filling-in for volunteers in delivering meals and delivering meals out of usual service boundaries in exceptional occasions and as authorised by the CHSP Services Coordinator.
- Visiting clients for assessments and re-assessments.
- Travelling to and from conferences, forums and work-shops associated with the service.
- Travel associated with the service.
- The vehicle is to be garaged the locked carpark at the rear of the Community Services Support Centre.
- All expenses and repairs (except under warranty) are to be met by the service.