STORMWATER MANAGEMENT STRATEGY

Federal Hotel Mudgee

Canberra Airport Group (CAG)

CONFIDENTIAL

Revision: 1.0 – DRAFT | **Issued**: 9 October 2023

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NDY

A TETRA TECH COMPANY

VERIFICATION

REVISION	DATE ISSUED	PREPARED BY	VERIFIED BY	AUTHORISED BY	COMMENT
1.0	DRAFT	J.Thai	N.Ye	A.Hayman	Issued for review

CONFIDENTIAL INFORMATION

DISCLAIMER OF LIABILITY

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1 INTRODUCTION

1.1 PROJECT BACKGROUND

This stormwater report has been prepared by Norman Disney & Young (NDY) on behalf of the Canberra Airport Group (CAG) to support a development application (DA) to Mid-Western Regional Council (Council) for the re-development of Federal Hotel Mudgee located at 34-42 Inglis St, Mudgee NSW 2850 (the site).

The proposed development is inclusive of the following:

- New bar and internal bistro areas;
- Indoor / outdoor beer garden covered by partially operable roof;
- New kitchen, back of house storage;
- New entries and access points;
- New accommodation;
- New bottle shop with drive through facility;
- Loading bay and car parking area.
- Ground floor comprising of entry foyer, back of house area, services area, lift and internal circulation/access areas. A total of 19 rooms are provided on the ground floor.
- First floor comprising of a total 20 rooms.

The site is located at 34-42 Inglis St, Mudgee NSW 2850. The site is rectangularly shaped and has an area of approximately 0.5ha. The site has three road frontages — one to the south (Inglis Street), one on the north (Lyons Lane) and one to the east (Lewis Street). All 3 sides provide direct access to the existing site.

FIGURE 1: SITE AERIAL IMAGE (NEARMAP)

1.2 PROPERTY DETAIL

The details of the property for the proposed development are shown in **Table 1** below.

Table 1 – Property Details

Title	Lot 10 DP 1275386, Lot 18 Sec 43 DP75872, Lot 16 Sec 43 DP758721 and Lot 17 Sec 43 DP758721
Street Address	34-42 Inglis St, Mudgee NSW 2850

Site Area	5065 m^2

1.3 SCOPE AND OBJECTIVE

This report addresses the requirements for stormwater management as described by:

- The Mid-Western Regional Council Development Control Plan;
- Mid-Western Regional Council's Engineering Design Specification D5 – Stormwater Drainage Design;
- Central West Councils Salinity & Water Quality Alliance Stormwater to Smartwater Technical Guidelines

The objective is to outline, and where possible, quantify the potential water quantity and quality impacts and issues associated with the proposed development. Information is presented in the form of modelled as well as designs of management strategies to meet current best practice relevant for the site.

2 EXISTING SITE

2.1 EXISTING SITE FEATURES

The site is rectangular and mostly flat, but there is a drop of around 1.2 meters between Inglis Street and Lyons Lane. The existing hotel lot contains a 2-storey Victorian Hotel and some nondescript buildings on the adjoining lots. The site has rear lane access to Lyons Lane. On the remaining part of the site, there are also nondescript commercial buildings.

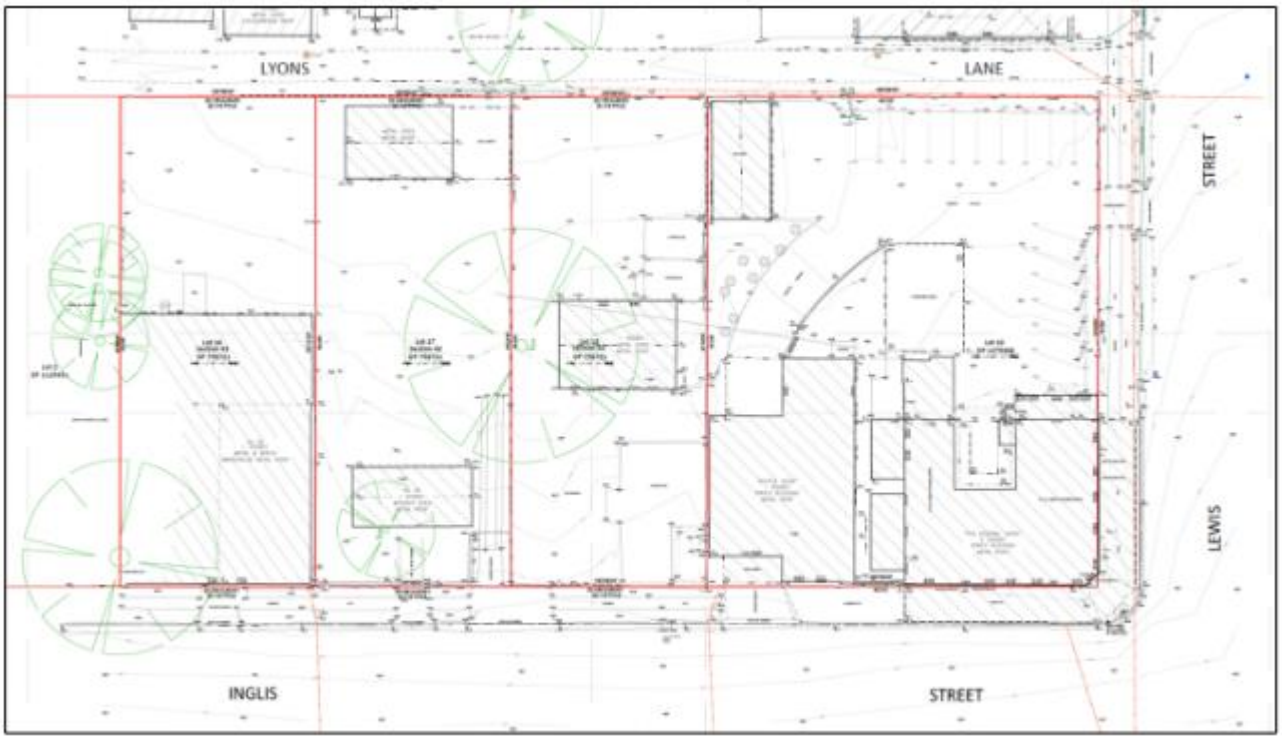

FIGURE 2: SITE SURVEY PREPARED BY VMARK SURVEY PTY LTD

2.2 EXISTING STORMWATER NETWORK

Based on the provided council assets map and the feature survey information shown in figure 2, there is an existing drainage pit (ID: ST01140) located on Inglis Street outside of the proposed development. The stormwater network appears to travel east along Inglis Street and then head north along Lewis Street and turn east at Horatio Street. Refer below snippet and Appendix B for additional information.

FIGURE 3: COUNCIL ASSET MAP

3 COUNCIL PLANNING REQUIREMENTS

3.1 MINOR AND MAJOR SYSTEM DESIGN

Design for the major and minor stormwater systems shall address the requirements set out in the Development Control Plan and Council's Engineering Design Specification to a level acceptable for development application.

3.2 ONSITE STORMWATER DETENTION (OSD)

Detention of stormwater is necessary to maintain the capacity of existing stormwater infrastructure, provide protection of downstream infrastructure and limit flooding impacts.

In this case OSD will be applied to reduce peak flow rates to existing levels. As per council's requirements, the stormwater outflow condition of the site can not exceed pre-development conditions and the pre-development conditions will need to be assumed as an un-developed site.

3.3 STORMWATER REUSE

The Building Sustainability Index (BASIX) may not apply to the proposed development. No rainwater tank has been allowed for the development.

3.4 STORMWATER QUALITY AND WATERWAY PROTECTION

Mid-Western Regional Council DCP does not contain specific stormwater quality targets, in the absence of specific requirements, NDY propose treatment targets as per Table 2 below:

3.4.1 RETENTION

There is no retention requirements for the subject site.

3.4.2 STORMWATER QUALITY

Pollutant load reduction must be a minimum percentage reduction of the post development average annual load of pollutants in accordance with the following:

Table 2 – Water Quality & Quantity Performance Targets

POLLUTANT	POST-DEVELOPMENT AVERAGE ANNUAL LOAD REDUCTION
Total suspended solids (TSS)	80%
Total phosphorus (TP)	65%
Total nitrogen (TN)	45%
Reduction of peak flows to pre-development levels	100 year ARI

4 STORMWATER MANAGEMENT

4.1 STORMWATER MANAGEMENT STRATEGY OVERVIEW

Table 3 and Table 4 provide a breakdown of pre and post-development imperviousness and ultimate discharge points.

Table 3 – Pre-development catchment breakdown

PRE-DEVELOPMENT CONDITIONS		
ITEM	AREA	UNIT
UNSEALED AREA (LANDSCAPE/GRAVEL TRACKS)	2130	m2
CONCRETE PAVING	910	m2
ROOF	2000	m2

Table 4 – Post-development catchment breakdown

POST-DEVELOPMENT CONDITIONS		
ITEM	AREA	UNIT
UNSEALED AREA (LANDSCAPE/GRAVEL TRACKS)	475	m2
CONCRETE PAVING	1444	m2
ROOF	3121	m2

Key observation from these table as follows:

- Increase in impervious area of 4,565m2 under post-development scenario – pre-development site imperviousness of 60.3% vs post-development imperviousness of 90.5%
- Decrease of pervious area by 1655m2 in post-development scenario.

The proposed stormwater management strategy aims to limit peak flow discharge to council stormwater network and road reserve to as well as meet Council's stormwater quantity and quality requirements.

Stormwater management measures will include:

- New internal stormwater network to manage runoff from the site to an On-site detention (OSD) tank;
- "Stormfilter" Chamber with Stormfilter cartridges for stormwater treatment;
- OSD tank to temporarily detain runoff and reduce peak flow discharge, matching existing outflow conditions.
- Areas that cannot drain to new OSD tank to be directed to landscaped depressions to promote detention and infiltration.

Appendix C contains development design drawings which outline all the stormwater management features to be implemented at the site. Appendix A contains high level calculation of the detention system.

4.2 STORMWATER QUANTITY

4.2.1 TREATMENT APPROACH

Post-development peak flow is to be reduced to pre-development levels through the incorporation of stormwater detention.

Both pre and post-development hydrologic and hydraulic models were developed to establish peak flow targets (pre-development) and determine performance of proposed stormwater system (post-development) for a range of storm events.

4.2.2 HYDROLOGIC AND HYDRAULIC MODELLING

The pre and post-development stormwater systems were assessed using Boyd Method. Site IFD87 data was downloaded from the Bureau of Meteorology (BOM) website.

4.2.3 DESIGN PROCESS

The design process undertaken for this project is outlined below:

- Post-development Site split up into sub-catchments based on land use and ultimate drainage points
- Assuming the site is undeveloped in the pre-development scenario as per council request
- OSD sized to match pre and post development peak flows for range of events up to the 100-year ARI through refinement of orifice sizes and tank volumes (orifice sizing to be developed in detailed design phase).

The proposed OSD was calculated using the Boyd Method as shown in Appendix A

4.3 STORMWATER QUALITY

4.3.1 INTRODUCTION

The effectiveness of proposed stormwater quality measures is estimated using the Model for Urban Stormwater Improvement Conceptualisation (MUSIC). MUSIC uses a continuous period of rainfall, combined with a rainfall-runoff model and pollutant generation rates to estimate pollutant loads generated by landscapes. MUSIC has a range of treatment modalities that estimate pollutant collection as a factor of area, shape, retention time and treatment type.

4.3.2 TREATMENT APPROACH

Stormwater treatment measures include:

StormFilters - will be installed to treat roof and hardstand runoff.

The StormFilter™ cleans stormwater through a passive filtration system, with rechargeable, self-cleaning, media-filled cartridges to absorb and retain pollutants from stormwater runoff including total suspended solids, hydrocarbons, nutrients, soluble heavy metals, and other common pollutants.

The siphon actuated, high surface area cartridges draw stormwater evenly through the filter media. For modelling purposed certified MUSIC nodes are to be obtained from the manufacturer with high flow bypass adjustments made based on the number of cartridges nominated.

High level MUSIC modelling suggests 3 cartridges is required for the development and can be incorporated into the stormwater detention tank system. This is to be further developed in the detailed design phase.

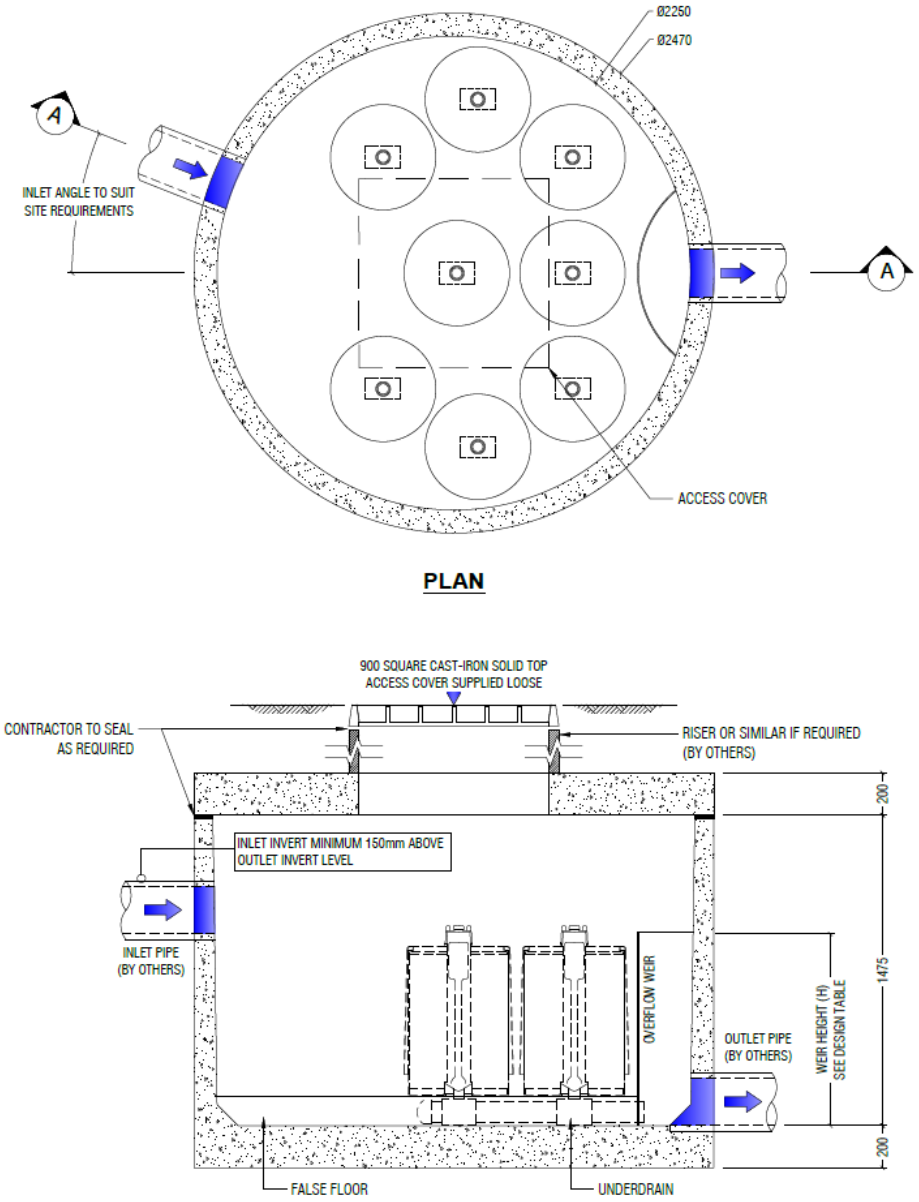

FIGURE 4: STORMFILTER TYPICAL PLAN VIEW

Passive irrigation – Private open space area will be largely vegetated with either grass or planter beds. Sub-surface drainage will be provided for planter beds which will essentially act as raingardens. For modelling purposes generic buffer treatment nodes shall be adopted to represent passive irrigation treatment.

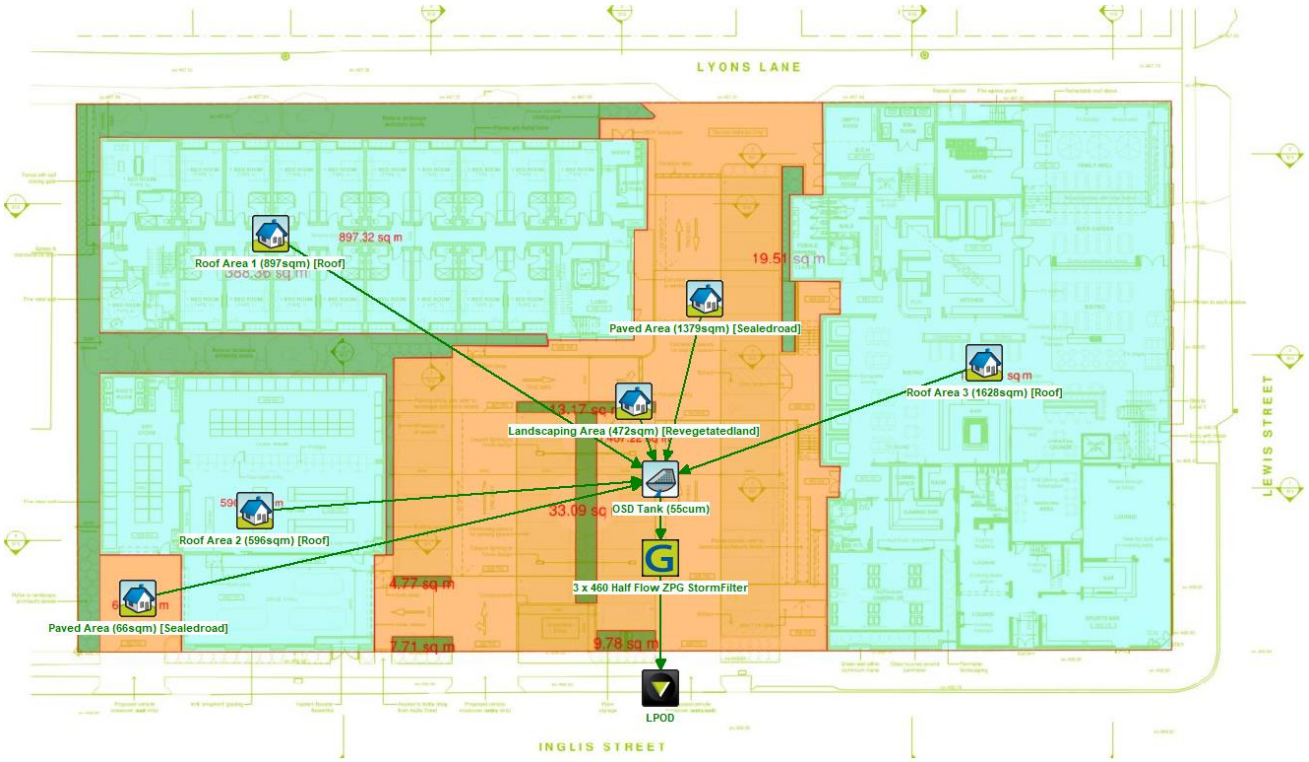

FIGURE 5: MUSIC MODELLING LAYOUT - POST-DEVELOPMENT SCENARIO

4.4 MODELLING RESULT

Figure 6 shows MUSIC Modelling result that meets the stormwater quality treatment targets outlined in section 3.4.2

	Sources	Residual Load	% Reduction
Flow (ML/yr)	6.39	6.39	0
Total Suspended Solids (kg/yr)	725	82.2	88.7
Total Phosphorus (kg/yr)	1.65	0.378	77.1
Total Nitrogen (kg/yr)	14.5	7.67	47.3
Gross Pollutants (kg/yr)	155	0	100

FIGURE 6: MUSIC MODELLING RESULT

Additional MUSIC output is presented in Appendix D of the report.

4.5 OPERATION AND MAINTENANCE

Maintenance requirements are shown in Table 5.

Table 5 – Maintenance requirements.

MAINTENANCE		
Item	Description	Inspection Frequency
OSD	Inspect and clean inlet and outlets Clean tank	1/ 12 months As required

MAINTENANCE		
StormFilters	Inspect StormFilter interior to assess the condition of the cartridges relative to the level of visual sediment loading as it relates to decreased treatment capacity.	1/ 12 months
	It may be desirable to conduct this inspection during a storm to observe the relative flow through the filter cartridges. If the submerged cartridges are severely plugged, then typically large amounts of sediments will be present and very little flow will be discharged from the drainage pipes. If this is the case, the cartridges need to be replaced (Typically 1 – 5 year intervals)	Also check the condition of the StormFilter unit after major storms for potential damage caused by high flows and for high sediment accumulation.
	Removal of accumulated sediments should be performed during periods of dry weather.	It may be necessary to adjust the inspection/ maintenance schedule depending on the actual operating conditions encountered by the system.

In addition, inspection of system elements will also be required after large rain events to check for blockages.

4.6 CONSTRUCTION PERIOD CONTROLS

A Soil and Water Management Plan (SWMP) shall be developed for CC in accordance with the Managing Urban Stormwater, Soils and Construction (Blue Book).

Excavation and earthworks will need to include diversions and erosion and sediment controls that can accommodate steeper slopes.

5 SUMMARY AND CONCLUSION

5.1 STORMWATER MANAGEMENT STRATEGY OVERVIEW

Stormwater management measures will include:

- New internal stormwater network to manage runoff from the development site to On-site detention (OSD) tank;
- "Stormfilter" Chamber with Stormfilter cartridges for stormwater treatment;
- OSD tank to temporarily detain runoff and reduce peak flow discharge to the legal point of discharge (to be provided by council);
- Areas that cannot drain to new OSD tank to be directed to landscaped depressions to promote detention and infiltration.

6 APPENDIX A – STORMWATER DETENTION CALCULATION

Stormwater Detention Computation Sheet

Project	Job No:	C40286-001	Intensities		
	Design	J.Thai	ARI in	100	YEARS
Drainage Calculations	Date	4-Oct-23	pipe k	0.013	mm

CATCHMENT TAKE OFF

Pre Development

Type	Total Area	ha	C	Ae
Landscape	**5040**	0.50	**0.45**	0.227
Roof		0.00	1.00	0.000
Paving		0.00	0.90	0.000
TOTAL	5,040		0.450	0.227

Post Development

Type	Total Area	ha	C	Ae
Landscape	**475**	0.05	0.70	0.033
Roof	**3121**	0.31	1.00	0.312
Paving	**1444**	0.14	0.90	0.130
TOTAL	**5,040**		0.943	0.475
CHECK That Pre-dev area = Post-dev area				TRUE

OUTFLOW CALCULATOR (RATIONAL METHOD) - ARI=100

Area (Ha)		0.504	tc(calc)	6.1	min	* calculated tc based on ARR Sect 5.4.3 for small - medium catchments in Victoria
C		0.450	Ae =	0.227	Ha	
I - mm/hr		200.7	Q =	0.1264	cumec	126.441 L/s

TANK SIZE - BOYDS METHOD

D(hr)	D(min)	D(sec)	I (100)	Qin	Qout	Inflow V	out/in	Storage (m^3)
	5	300	218.00	0.288	0.126	86.35	0.44	48.42
	6	360	202.00	0.267	0.126	96.01	0.47	50.49
	10	600	163.00	0.215	0.126	129.13	0.59	53.26
	20	1200	117.00	0.154	0.126	185.37	0.82	33.64
	30	1800	93.50	0.123	0.126	222.21	1.02	-5.39
1	60	3600	60.70	0.080	0.126	288.51	1.58	-166.67
2	120	7200	37.30	0.049	0.126	354.58	2.57	-555.79
3	180	10800	27.60	0.036	0.126	393.56	3.47	-972.00
4	240	14400	16.30	0.022	0.126	309.90	5.88	-1510.85
12	720	43200	9.75	0.013	0.126	556.11	9.82	-4906.13
24	1440	86400	5.93	0.008	0.126	676.46	16.15	-10248.02
48	2880	172800	3.55	0.005	0.126	809.93	26.98	-21039.04
72	4320	259200	2.52	0.003	0.126	862.40	38.00	-31911.05

Critical Peak analysis

6.00	360	**202.0**	0.267	0.126	96.01	0.47	**50.49**	m -0.162500
7.00	420	192.3	0.254	0.126	106.61	0.50	**53.50**	
8.00	480	182.5	0.241	0.126	115.66	0.52	**54.97**	
9.00	540	172.8	0.228	0.126	123.16	0.55	**54.89**	
10.00	600	**163.0**	0.215	0.126	129.13	0.59	**53.26**	

ANK NEEDS TO BE 54.97 cubic metres

7 APPENDIX B – COUNCIL ASSET MAP

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Mid-Western Regional Council
PO Box 156
86 Market Street
MUDGEE NSW 2850
Telephone: 02 6378 2850
Fax: 02 6378 2815
Email: council@midwestern.nsw.gov.au

Water Hydrant
Water Fitting Node
Water Junction
Water Plant
Water Pump Station
Water Reservoir
Water Valve
Water Pipe (Decommissione..
Water Pipe
Water Service
DWMS
Water Meter Service
Dam

Sewer
Sewer Nodes
Sewer Chamber
Sewer Connection
Sewer Dead End
Sewer Junction
Sewer Pump Station
Sewer Plant
Sewer Pipe
Sewer Riser
Sewer Valve
Sewer Vent Stack

Stormwater
Stormwater Pit
Stormwater Pipe
Stormwater Open Drain

8 APPENDIX C – CIVIL CONCEPT LAYOUT PLANS

LEGEND:

	SW	PROPOSED STORMWATER
M2 M2 M2	M2	PROPOSED SPOON DRAIN
B1 B1 B1	B1	PROPOSED BARRIER KERB
ES ES ES	ES	PROPOSED EDGE STRIP
B	B	PROPOSED BOLLARD
	EX SW	EXISTING STORMWATER
	TG	TRENCH GRATE
	VEHICLE CROSSOVER AS PER COUNCIL STANDARD DRAWING	
	PROPOSED FOOTPATH	
	PROPOSED VEHICULAR PAVEMENT (PAVEMENT TYPE TBC)	
	PROPOSED VEHICULAR PAVEMENT PAVER	
AG AG	SUBSOIL DRAINAGE (AGI)	
RM RM	STORMWATER PUMP RISING MAIN	
	WS	WHEEL STOP

GENERAL NOTES:

- THE FOLLOWING GENERAL NOTES APPLY TO EVERY PAGE OF THIS DOCUMENT.

- ALL DIMENSIONS ARE IN METRE UNLESS OTHERWISE INDICATED.

- PROPOSED LEGAL POINT OF DISCHARGE IS INDICATIVE ONLY AND PENDING FINALISATION OF RELEVANT FEATURE SURVEY AND SERVICES PROVING.

- LOCATE AND CONFIRM LOCATIONS, SIZE AND CONDITION OF EXISTING PIPEWORK AND AUTHORITY INFRASTRUCTURE. ALLOW TO CAP OFF REDUNDANT PIPEWORK. ALL PIPEWORK ROUTES SHOWN ARE INDICATIVE ONLY, SUBJECT TO CONFIRMATION AND FURTHER COORDINATION BETWEEN SERVICES.

- LANDSCAPE AREAS WILL REQUIRE MINOR DRAINAGE INFRASTRUCTURE. TO BE CONFIRMED IN DETAILED DESIGN PHASE.

NDY
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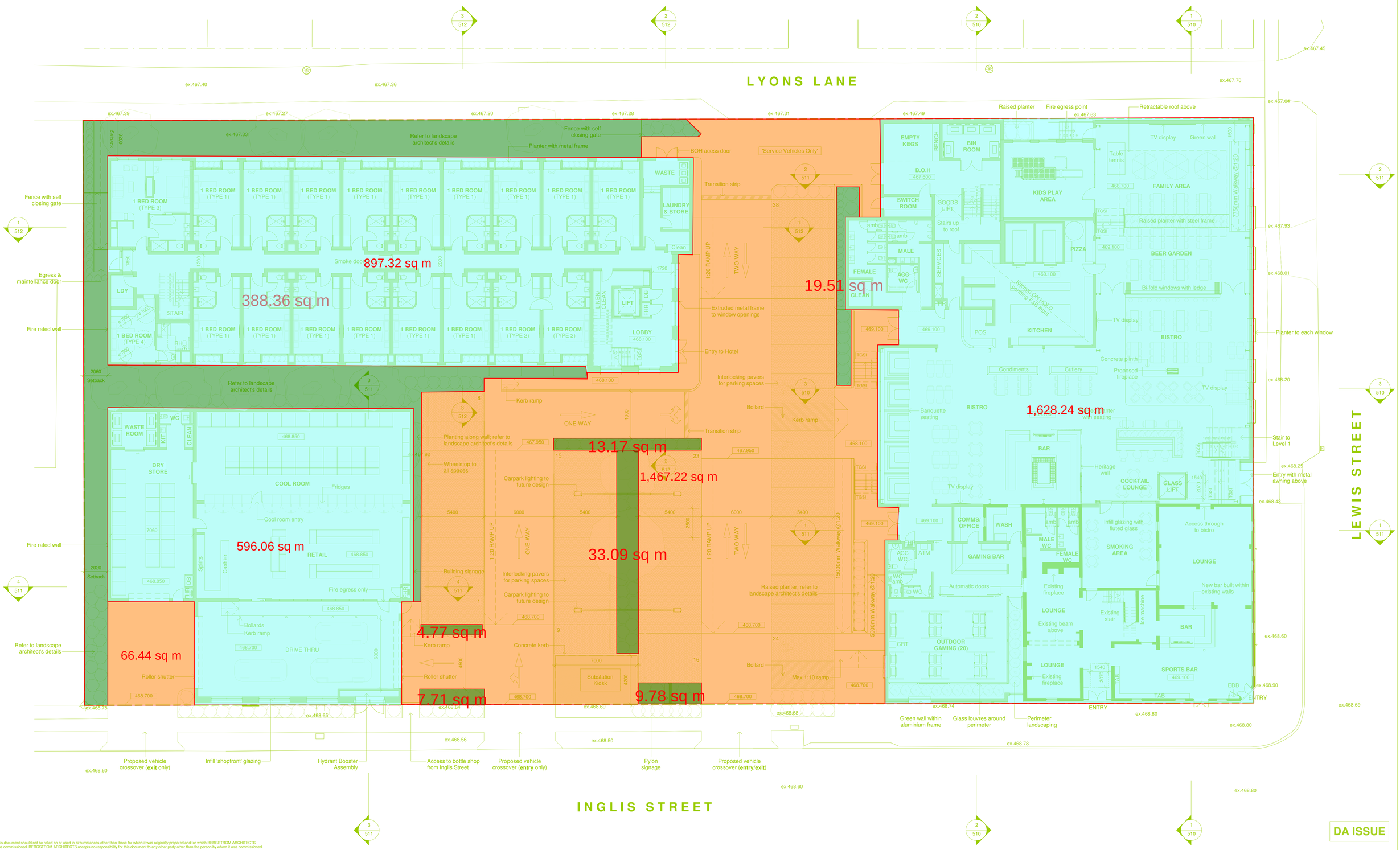
Project: FEDERAL HOTEL MUDGEE

Title: CIVIL CONCEPT (PRE-DA)

Document Number: NDY-CIV-001

Project No: C40286-001	Drawn: JT	Date: 04/10/2023	Scale: 1:150	Rev: 1.0



DA ISSUE

PROJECT ADDRESS
34 INGLIS STREET
MUDGEE, NSW, 2850

GENERAL NOTES:

DA NOTES:

POST-DEVELOPMENT CONDITIONS		
ITEM	AREA	UNIT
UNSEALED AREA (LANDSCAPE/GRAVEL TRACKS)	475	m2
CONCRETE PAVING	1444	m2
ROOF	3121	m2

Y LIGHTING, EXIT SYSTEMS, FIRE RE EXTINGUISHERS, ETECTION, ALARM CORDANCE WITH STRALIAN STANDARDS.

PREPARED BY A QUALIFIED FIRE ENGINEER).

- EXTENT OF NEW WORKS
- EXTENT OF ALTERATIONS
- EXISTING BUILDING TO REMAIN
- NEW BUILDING WORK

N

1.5 0 1.5 3 4.5 6m

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1:300@A3

A	23/08/2023	DA DRAFT ISSUE	

REVISIONS

CLIENT
IMG GROUP

PROJECT
22-017 FEDERAL HOTEL

SCALE
1:150@A1 1:300@A3

DRAWING NO.
DA 101

REVISION
A

ARCHITECT
Bergstrom ARCHITECTS
BERGSTROM ARCHITECTS PTY. LTD. (ABN 75 095 092 989)
SUITE 103/3 EDEN STREET,
NORTH SYDNEY NSW 2060
Ph. 02.8920.1499 Fax. 02.8920.1599

DRAWING
PROPOSED
GROUND FLOOR PLAN

DATE: MAY 2023

DRAWN BY:

Job Number: 22-017

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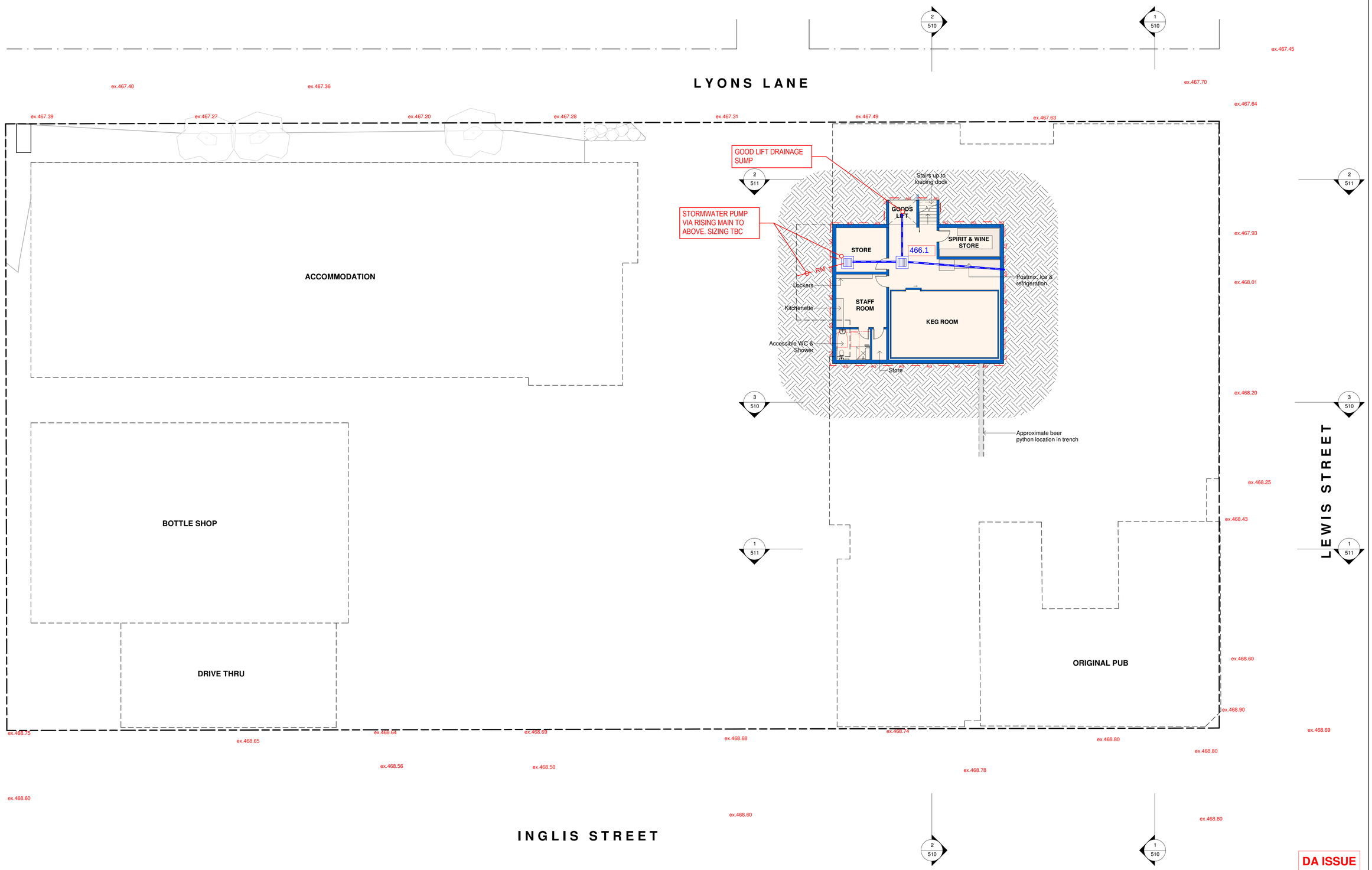

DA ISSUE

PROJECT ADDRESS:
34 INGLIS STREET
MUDGEE, NSW, 2850

N

1.5 0 1.5 3 4.5 6m

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1:300@A3

23/08/2023 4:04:12 PM

GENERAL NOTES:

1. DO NOT SCALE OFF DRAWINGS. USE ONLY FIGURED DIMENSIONS.
2. ALL DIMENSIONS ARE TO BE VERIFIED ON SITE PRIOR TO COMMENCEMENT OF ANY WORK.
3. ANY DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF BERGSTROM ARCHITECTS PTY LTD BEFORE COMMENCEMENT OF ANY WORK.
4. ALL DIMENSIONS ARE GIVEN IN MILLIMETRES EXCEPT LEVELS & DRAWINGS TO SCALE 1:500 AND SMALLER WHICH ARE IN METRES.
5. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH RELEVANT CONSULTANTS DOCUMENTATION.
6. ALL DESIGNS, PRINTS & SPECIFICATIONS ARE THE PROPERTY OF BERGSTROM ARCHITECTS PTY LTD & MUST NOT BE ISSUED, USED OR REPRODUCED WITHOUT WRITTEN PREMISSION FROM BERGSTROM ARCHITECTS PTY LTD.

DA NOTES:

1. DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE DEVELOPMENT APPLICATION FORM AND STATEMENT OF ENVIRONMENTAL EFFECTS.
2. THE NEW BUILDING WORK IS TO BE CARRIED OUT IN ACCORDANCE WITH THE PROVISIONS OF THE BCA.
3. ALL NEW BUILDING WORK IS TO BE CARRIED OUT IN ACCORDANCE WITH THE NOTICE OF DETERMINATION FOR THIS DEVELOPMENT APPLICATION.
4. DISABILITY ACCESS AND FACILITIES TO BE IN ACCORDANCE WITH AS 1428.1 AND AS 1428.4
5. THE PROPOSED WORKS WILL ADDRESS FIRE SAFETY MEASURES TO COMPLY WITH THE PERFORMANCE REQUIREMENTS OF THE BCA (EITHER DEEMED TO SATISFY OR ALTERNATIVE SOLUTIONS TO BE PREPARED BY A QUALIFIED FIRE ENGINEER).
6. ALL MEANS OF EGRESS, EMERGENCY LIGHTING, EXIT SIGNS, FIRE DOORS, FIRE HYDRANT SYSTEMS, FIRE HOSE REEL SYSTEMS, PORTABLE FIRE EXTINGUISHERS, SMOKE AND HEAT VENTS, SMOKE DETECTION, ALARM AND EXHAUST SYSTEM TO BE IN ACCORDANCE WITH THE BCA AND OTHER RELEVANT AUSTRALIAN STANDARDS.

- EXTENT OF NEW WORKS
- EXTENT OF ALTERATIONS
- EXISTING BUILDING TO REMAIN
- NEW BUILDING WORK

A	23/08/2023	DA DRAFT ISSUE

REVISIONS

CLIENT: IMG GROUP

PROJECT: 22-017 FEDERAL HOTEL

SCALE: 1:150@A1 1:300@A3

DRAWING NO.: DA 100

ARCHITECT:
Bergstrom ARCHITECTS
BERGSTROM ARCHITECTS PTY. LTD. (ABN 75 095 092 989)
SUITE 103/3 EDEN STREET,
NORTH SYDNEY NSW 2060
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DRAWING: PROPOSED LOWER GROUND FLOOR PLAN

REVISION: A

DATE: MAY 2023
DRAWN BY: Author
Job Number: 22-017

LYONS LANE

INGLIS STREET

LEWIS STREET

1 BED ROOM (TYPE 1)
1 BED ROOM (TYPE 2)
1 BED ROOM (TYPE 3)
1 BED ROOM (TYPE 4)
WASTE
LAUNDRY & STORE
Clean
LDY
STAIR
LIFT
LINEN CLEAN
DB
FHR
LOBBY
468.100
RH
Smoke door
Refer to landscape architect's details
Fence with self closing gate
Planter with metal frame
Egress & maintenance door
Fire rated wall
Setback
3200
2060
1200
1850
2000
1730
ø 1500
Transition strip
BOH acess door
'Service Vehicles Only'
Extruded metal frame to window openings
Entry to Hotel
Interlocking pavers for parking spaces
Bollard
Kerb ramp
ONE-WAY
TWO-WAY
1:20 RAMP UP
Planting along wall; refer to landscape architect's details
Wheelstop to all spaces
Carpark lighting to future design
Building signage
Fire egress only
Concrete kerb
Roller shutter
DRIVE THRU
Substation Kiosk
Bollards
Cashier
Spirits
WASTE ROOM
WC
KIT
CLEAN
DRY STORE
COOL ROOM
Fridges
Cool room entry
RETAIL
468.850
7060
2020
6000
5400
4500
7000
4200
2500
15
23
9
24
1
10.00 m
5.50 m
B 1ax 1:10 ramp
RM
B1
RISING MAIN FROM BELOW
PROPOSED STORMWATER QUALITY DEVICE. (OCEAN PROTECT CARTRIDGE STORMFILTERS)
CONNECTING INTO EXISTING COUNCIL PIT AND MAKE GOOD. LOCATION OF EXISTING PIT IS INDICATIVE ONLY AND PENDING FEATURE SURVEY COMPLETION
PROPOSED CONCRETE ON-SITE STORMWATER DETENTION SYSTEM.
10m LONG x 5.5m WIDE x 1m DEEP.
TOTAL VOLUME = 55m3
EXISTING CROSSOVER TO BE REMOVED AND REINSTATED WITH KERB AND CHANNEL TO COUNCIL'S STANDARD REQUIREMENTS
EXISTING CROSSOVER TO BE REMOVED AND REINSTATED WITH NATURE STRIP
Proposed vehicle crossover (**exit** only)
Infill 'shopfront' glazing
Hydrant Booster Assembly
Access to bottle shop from Inglis Street
Proposed vehicle crossover (**entry** only)
Pylon signage
Proposed vehicle crossover (**entry/exit**)
EMPTY KEGS
BENCH
BIN ROOM
B.O.H
467.600
SWITCH ROOM
GOODS LIFT
Stairs up to roof
MALE
FEMALE
ACC WC
SERVICES
CLEAN
KITCHEN
POS
Kitchen ON HOLD pending F&B input
Raised planter
Fire egress point
Retractable roof above
KIDS PLAY AREA
PIZZA
TV display
Green wall
Table tennis
FAMILY AREA
468.700
Raised planter with steel frame
7750mm Walkway @1:20
BEER GARDEN
469.100
Bi-fold windows with ledge
BISTRO
Planter to each window
Concrete plinth
Proposed fireplace
Condiments
Cutlery
Banquette seating
Raised planter with seating
Stair to Level 1
BAR
Heritage wall
TV display
COCKTAIL LOUNGE
GLASS LIFT
1540
2070
Entry with metal awning above
COMMS/ OFFICE
WASH
GAMING BAR
ATM
Automatic doors
CRT
OUTDOOR GAMING (20)
15000mm Walkway @1:20
Infill glazing with fluted glass
SMOKING AREA
Access through to bistro
LOUNGE
MALE WC
FEMALE WC
Existing fireplace
Existing beam above
Existing stair
Ice machine
New bar built within existing walls
SPORTS BAR
EDB
ENTRY
TAB
Green wall within aluminium frame
Glass louvres around perimeter
Perimeter landscaping
ex.467.39
ex.467.27
ex.467.33
ex.467.20
ex.467.28
ex.467.31
ex.467.49
ex.467.63
ex.467.64
ex.467.70
ex.467.45
ex.467.40
ex.467.36
ex.467.99
ex.468.01
ex.468.20
ex.468.25
ex.469.43
ex.468.60
ex.468.90
ex.468.80
ex.468.74
ex.468.78
ex.468.69
ex.468.68
ex.468.64
ex.468.65
ex.468.56
ex.468.50
ex.467.92
ex.468.60

DA ISSUE

PROJECT ADDRESS
34 INGLIS STREET
MUDGEE, NSW, 2850

N
1.5 0 1.5 3 4.5 6m
1:150@A1
1:300@A3

23/08/2023 4:04:22 PM

GENERAL NOTES:

1. DO NOT SCALE OFF DRAWINGS. USE ONLY FIGURED DIMENSIONS.
2. ALL DIMENSIONS ARE TO BE VERIFIED ON SITE PRIOR TO COMMENCEMENT OF ANY WORK.
3. ANY DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF BERGSTROM ARCHITECTS PTY LTD BEFORE COMMENCEMENT OF ANY WORK.
4. ALL DIMENSIONS ARE GIVEN IN MILLIMETRES EXCEPT LEVELS & DRAWINGS TO SCALE 1:500 AND SMALLER WHICH ARE IN METRES.
5. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH RELEVANT CONSULTANTS DOCUMENTATION.
6. ALL DESIGNS, PRINTS & SPECIFICATIONS ARE THE PROPERTY OF BERGSTROM ARCHITECTS PTY LTD & MUST NOT BE ISSUED, USED OR REPRODUCED WITHOUT WRITTEN PREMISSION FROM BERGSTROM ARCHITECTS PTY LTD.

DA NOTES:

1. DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE DEVELOPMENT APPLICATION FORM AND STATEMENT OF ENVIRONMENTAL EFFECTS.
2. THE NEW BUILDING WORK IS TO BE CARRIED OUT IN ACCORDANCE WITH THE PROVISIONS OF THE BCA.
3. ALL NEW BUILDING WORK IS TO BE CARRIED OUT IN ACCORDANCE WITH THE NOTICE OF DETERMINATION FOR THIS DEVELOPMENT APPLICATION.
4. DISABILITY ACCESS AND FACILITIES TO BE IN ACCORDANCE WITH AS 1428.1 AND AS 1428.4
5. THE PROPOSED WORKS WILL ADDRESS FIRE SAFETY MEASURES TO COMPLY WITH THE PERFORMANCE REQUIREMENTS OF THE BCA (EITHER DEEMED TO SATISFY OR ALTERNATIVE SOLUTIONS TO BE PREPARED BY A QUALIFIED FIRE ENGINEER).
6. ALL MEANS OF EGRESS, EMERGENCY LIGHTING, EXIT SIGNS, FIRE DOORS, FIRE HYDRANT SYSTEMS, FIRE HOSE REEL SYSTEMS, PORTABLE FIRE EXTINGUISHERS, SMOKE AND HEAT VENTS, SMOKE DETECTION, ALARM AND EXHAUST SYSTEM TO BE IN ACCORDANCE WITH THE BCA AND OTHER RELEVANT AUSTRALIAN STANDARDS.

- EXTENT OF NEW WORKS
- EXTENT OF ALTERATIONS
- EXISTING BUILDING TO REMAIN
- NEW BUILDING WORK

A	23/08/2023	DA DRAFT ISSUE

REVISIONS

CLIENT
IMG GROUP

PROJECT
22-017 FEDERAL HOTEL

SCALE
1:150@A1 1:300@A3

DRAWING NO.
DA 101

REVISION
A

DATE: MAY 2023
DRAWN BY:
Job Number: 22-017

ARCHITECT
Bergstrom ARCHITECTS
BERGSTROM ARCHITECTS PTY. LTD. (ABN 75 095 092 989)
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NORTH SYDNEY NSW 2060
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DRAWING
PROPOSED
GROUND FLOOR PLAN

9 APPENDIX D – MUSIC MODELLING OUTPUT

DESCRIPTION							
This section allows you to specify any information or notes for your project.							
VersionNumber						205	{MUSIC Setup File version number}
MeteorologicalTemplat	C:\Program Files (x86)\eWater\MUSIC 6					6.	{MLB Filename}
ConstituentAbbreviatic	TSS						{Constituent Abbreviation}
ConstituentName	Total Suspended Solids						{Constituent Name}
MUSIC-link Project - En						1	{0 = enabled | 1 = disabled}
MUSIC-link - Music Version							{The music version this was created with}
MUSIC-link - Metadata Version							{The version of the metadata used}
MUSIC-link - Council Name							{The name of the council}
MUSIC-link - Area Name							{The name of the audit area}
MUSIC-link - Scenario Name							{The name of the audit scenario}
BackgroundImage	C:\Users\SETH.CARABEO\Desktop\Jobs\Fe						{Background Image}

Node Type	UrbanSourceNode	UrbanSourceNode	UrbanSourceNode	UrbanSourceNode	UrbanSourceNode	UrbanSourceNode	{Node Type}
Zoning Surface Type	Roof	Roof	Roof	Revegetatedland	Sealedroad	Sealedroad	{Zoning Surface Type}
Node Name	Roof Area 1 (897sqm)	Roof Area 2 (596sqm)	Roof Area 3 (1628sqm)	Landscaping Area (472sqm)	Paved Area (66sqm)	Paved Area (1379sqm)	{Node Name}
Node ID	1	2	3	4	6	7	{Node ID}
Coordinates	290.185801296496:-269.920414614944	273.123992120182:-560.255696586776	1039.22601891183:-405.187271069181	670.623835074036:-445.767328005452	150.073819448643:-652.711123683371	745.020606123866:-338.399260694901	{Coordinates}{[X:Y]}
General - Location	Roof Area 1 (897sqm)	Roof Area 2 (596sqm)	Roof Area 3 (1628sqm)	Landscaping Area (472sqm)	Paved Area (66sqm)	Paved Area (1379sqm)	
General - Notes							
General - Fluxes - Daily							
General - Fluxes - Sub-Daily							
General - Flux unit	mm	mm	mm	mm	mm		
Areas - Total Area (ha)	0.09	0.06	0.163	0.047	0.007	0.138	{ha}
Areas - Impervious (%)	100	100	100	30	90	90	{%}
Areas - Pervious (%)	0	0	0	70	10	10	{%}
Rainfall-Runoff - Imper	1	1	1	1	1	1	{mm/day}
Rainfall-Runoff - Pervio	120	120	120	120	120	120	{mm}
Rainfall-Runoff - Pervio	25	25	25	25	25	25	{% of Capacity}
Rainfall-Runoff - Pervio	80	80	80	80	80	80	{mm}
Rainfall-Runoff - Pervio	200	200	200	200	200	200	
Rainfall-Runoff - Pervio	1	1	1	1	1	1	
Rainfall-Runoff - Groun	10	10	10	10	10	10	{mm}
Rainfall-Runoff - Groun	25	25	25	25	25	25	{%}
Rainfall-Runoff - Groun	5	5	5	5	5	5	{%}
Rainfall-Runoff - Groun	0	0	0	0	0	0	{%}
Total Suspended Solids	1.1	1.1	1.1	1.15	1.2	1.2	{log mg/L}
Total Suspended Solids	0.17	0.17	0.17	0.17	0.17	0.17	{log mg/L}
Total Suspended Solids	1	1	1	1	1	1	{Index from 0 to 1 for "Mean" | "Stochastically generated"}
Total Suspended Solids	0	0	0	0	0	0	{R squared}
Total Suspended Solids	1.3	1.3	1.3	1.95	2.43	2.43	{log mg/L}
Total Suspended Solids	0.32	0.32	0.32	0.32	0.32	0.32	{log mg/L}
Total Suspended Solids	1	1	1	1	1	1	{Index from 0 to 1 for "Mean" | "Stochastically generated"}
Total Suspended Solids	0	0	0	0	0	0	{R squared}
Total Phosphorus - Bas	-0.82	-0.82	-0.82	-1.22	-0.85	-0.85	{log mg/L}
Total Phosphorus - Bas	0.19	0.19	0.19	0.19	0.19	0.19	{log mg/L}
Total Phosphorus - Bas	1	1	1	1	1	1	{Index from 0 to 1 for "Mean" | "Stochastically generated"}
Total Phosphorus - Bas	0	0	0	0	0	0	{R squared}
Total Phosphorus - Stor	-0.89	-0.89	-0.89	-0.66	-0.3	-0.3	{log mg/L}
Total Phosphorus - Stor	0.25	0.25	0.25	0.25	0.25	0.25	{log mg/L}
Total Phosphorus - Stor	1	1	1	1	1	1	{Index from 0 to 1 for "Mean" | "Stochastically generated"}
Total Phosphorus - Stor	0	0	0	0	0	0	{R squared}
Total Nitrogen - Base Fl	0.32	0.32	0.32	-0.05	0.11	0.11	{log mg/L}
Total Nitrogen - Base Fl	0.12	0.12	0.12	0.12	0.12	0.12	{log mg/L}
Total Nitrogen - Base Fl	1	1	1	1	1	1	{Index from 0 to 1 for "Mean" | "Stochastically generated"}
Total Nitrogen - Base Fl	0	0	0	0	0	0	{R squared}
Total Nitrogen - Storm	0.3	0.3	0.3	0.3	0.34	0.34	{log mg/L}
Total Nitrogen - Storm	0.19	0.19	0.19	0.19	0.19	0.19	{log mg/L}
Total Nitrogen - Storm	1	1	1	1	1	1	{Index from 0 to 1 for "Mean" | "Stochastically generated"}
Total Nitrogen - Storm	0	0	0	0	0	0	{R squared}
Import Flow Properties	1	1	1	1	1	1	
Import Flow Properties - Import Flow File							
Import Flow Properties	0	0	0	0	0	0	
Import Flow Properties	0	0	0	0	0	0	
Import Flow Properties	0	0	0	0	0	0	
Import Flow Properties	0	0	0	0	0	0	
Import Flow Properties	5	5	5	5	5	5	{Index from 0 to 14 for "ML" | "kL" | "L" | "mL" | "ML/s" | "m3/s" | "L/s" | "mL/s" | "ML/day" | "kL/day" | "L/day" | "mL/day" | "km" | "m" | "mm"}
Import Flow Properties	1	1	1	1	1	1	{ha}

Node Type	SedimentationBasinNode	{Node Type}
Node Name	OSD Tank (55cum)	{Node Name}
Node ID	9	{Node ID}
Coordinates	699.368042070561:-527.772859730832	{Coordinates}{[X:Y]}
General - Location	OSD Tank (55cum)	
General - Notes		
General - Fluxes		
General - Flux File Time	3600	{in seconds}
Reuse Properties - Reu	1	
Reuse Properties - Ann	1	
Reuse Properties - Ann	0	{ML/year}
Reuse Properties - Ann	0	{Index from 0 to 2 for "PET" | "PET - Rain" | "Monthly"}
Reuse Properties - Mor	8.33;8.33;8.33;8.33;8.33;8.33;8.33;8.33;8.33;8.33;8.33;8.33	
Reuse Properties - Dail	1	
Reuse Properties - Dail	0	{ML/day}
Reuse Properties - Cust	1	
Reuse Properties - Custom Demand Time Series File		
Reuse Properties - Cust	5	{Index from 0 to 11 for "ML" | "kL" | "L" | "mL" | "ML/s" | "m3/s" | "L/s" | "mL/s" | "ML/day" | "kL/day" | "L/day" | "mL/day"}
Reuse Properties - Min	0	
Inlet Properties - Low F	0	{cubic metres per sec}

Inlet Properties - High F	100	{cubic metres per sec}
Storage and Infiltration	54.3	{square metres}
Storage and Infiltration	1	{metres}
Storage and Infiltration	0	{cubic metres}
Storage and Infiltration	0	
Storage and Infiltration	0	{mm/hr}
Storage and Infiltration	0	
Outlet Properties - Equ	57	{mm}
Outlet Properties - Ove	2	{metres}
Outlet Properties - Not	1.992469566	{hrs}
Advanced Properties - I	0.6	
Advanced Properties - '	1.7	
Advanced Properties - I	1	
Advanced Properties - '	8000	{m/yr}
Advanced Properties - '	20	{mg/L}
Advanced Properties - '	20	{mg/L}
Advanced Properties - '	6000	{m/yr}
Advanced Properties - '	0.13	{mg/L}
Advanced Properties - '	0.13	{mg/L}
Advanced Properties - '	500	{m/yr}
Advanced Properties - '	1.4	{mg/L}
Advanced Properties - '	1.4	{mg/L}
Advanced Properties - '	3500	{m/yr}
Advanced Properties - User Defined Storage-Discharge-Height		
Node Type	ReceivingNode	{Node Type}
Node Name	LPOD	{Node Name}
Node ID	8	{Node ID}
Coordinates	698.630691502794:-746.126825009196	{Coordinates}{[X:Y]}
General - Location	LPOD	
General - Notes		

==========

Node Type	GenericNode	
Node Name	3 x 460 Half Flow ZPG StormFilter	
Node ID	5	
Coordinates	698.876838082568:-610.083761897006	
Notes		
Fluxes		
Flux File Timestep (in s	1	
Lo-flow bypass rate (cu	0	
High Flow By-pass (cub	0.0033	
Flow Transfer Enabled	0	
Flow Transfer Function	0	
Flow Transfer Function	0	
Flow Transfer Function	10	
Flow Transfer Function	10	
Flow Transfer Function - Input #3		
Flow Transfer Function - Output #3		
Flow Transfer Function - Input #4		
Flow Transfer Function - Output #4		
Flow Transfer Function - Input #5		
Flow Transfer Function - Output #5		
Flow Transfer Function - Input #6		
Flow Transfer Function - Output #6		
Flow Transfer Function - Input #7		
Flow Transfer Function - Output #7		
Flow Transfer Function - Input #8		
Flow Transfer Function - Output #8		
Flow Transfer Function - Input #9		
Flow Transfer Function - Output #9		
Flow Transfer Function - Input #10		
Flow Transfer Function - Output #10		
GP Transfer Enabled	0	
GP Transfer Function -	0	
GP Transfer Function -	0	
GP Transfer Function -	1000	
GP Transfer Function -	50	
GP Transfer Function - Input #3		
GP Transfer Function - Output #3		
GP Transfer Function - Input #4		
GP Transfer Function - Output #4		
GP Transfer Function - Input #5		
GP Transfer Function - Output #5		
GP Transfer Function - Input #6		
GP Transfer Function - Output #6		
GP Transfer Function - Input #7		
GP Transfer Function - Output #7		
GP Transfer Function - Input #8		
GP Transfer Function - Output #8		
GP Transfer Function - Input #9		
GP Transfer Function - Output #9		
GP Transfer Function - Input #10		
GP Transfer Function - Output #10		
TN Transfer Enabled	0	
TN Transfer Function -	0	
TN Transfer Function -	0	
TN Transfer Function -	10	
TN Transfer Function -	4.41	
TN Transfer Function - Input #3		
TN Transfer Function - Output #3		
TN Transfer Function - Input #4		
TN Transfer Function - Output #4		
TN Transfer Function - Input #5		
TN Transfer Function - Output #5		
TN Transfer Function - Input #6		
TN Transfer Function - Output #6		

TN Transfer Function - Input #7									
TN Transfer Function - Output #7									
TN Transfer Function - Input #8									
TN Transfer Function - Output #8									
TN Transfer Function - Input #9									
TN Transfer Function - Output #9									
TN Transfer Function - Input #10									
TN Transfer Function - Output #10									
TP Transfer Enabled	0								
TP Transfer Function - I	0								
TP Transfer Function - (	0								
TP Transfer Function - I	10								
TP Transfer Function - (	1.39								
TP Transfer Function - Input #3									
TP Transfer Function - Output #3									
TP Transfer Function - Input #4									
TP Transfer Function - Output #4									
TP Transfer Function - Input #5									
TP Transfer Function - Output #5									
TP Transfer Function - Input #6									
TP Transfer Function - Output #6									
TP Transfer Function - Input #7									
TP Transfer Function - Output #7									
TP Transfer Function - Input #8									
TP Transfer Function - Output #8									
TP Transfer Function - Input #9									
TP Transfer Function - Output #9									
TP Transfer Function - Input #10									
TP Transfer Function - Output #10									
TSS Transfer Enabled	0								
TSS Transfer Function -	0								
TSS Transfer Function -	0								
TSS Transfer Function -	100								
TSS Transfer Function -	6.6								
TSS Transfer Function - Input #3									
TSS Transfer Function - Output #3									
TSS Transfer Function - Input #4									
TSS Transfer Function - Output #4									
TSS Transfer Function - Input #5									
TSS Transfer Function - Output #5									
TSS Transfer Function - Input #6									
TSS Transfer Function - Output #6									
TSS Transfer Function - Input #7									
TSS Transfer Function - Output #7									
TSS Transfer Function - Input #8									
TSS Transfer Function - Output #8									
TSS Transfer Function - Input #9									
TSS Transfer Function - Output #9									
TSS Transfer Function - Input #10									
TSS Transfer Function - Output #10									
TSS Flow-Efficiency Ena	1								
TSS Flow-Efficiency Valı	[0:1];[1:1]								
TN Flow-Efficiency Enal	1								
TN Flow-Efficiency Valu	[0:1];[1:1]								
TP Flow-Efficiency Enat	1								
TP Flow-Efficiency Valu	[0:1];[1:1]								
GP Flow-Efficiency Enal	1								
GP Flow-Efficiency Valı	[0:1];[1:1]								
==========									
Link Name	Drainage Link	Drainage Link	Drainage Link	Drainage Link	Drainage Link	Drainage Link	Drainage Link	Drainage Li	{Link Name}
Source Node ID	5	9	1	3	2	6	7	4	{The is the ID of the upstream node}
Target Node ID	8	5	9	9	9	9	9	9	{This is the ID of the downstream node}
Notes									{Notes}
Routing	Not Routed	Not Routed	Not Routed	Not Routed	Not Routed	Not Routed	Not Routed	Not Routec	{either "Not Routed" or "Routed"}
Muskingum K	300	300	300	300	300	300	300	300	{no value required for no routing or "numerical value" for routed}
Muskingum Theta	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	{no value required for no routing or "numerical value" for routed. Must be between 0.1 and 0.49}
Secondary Outflow Components									{for secondary drainage link only}
==========									

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