

Civil Design Documentation

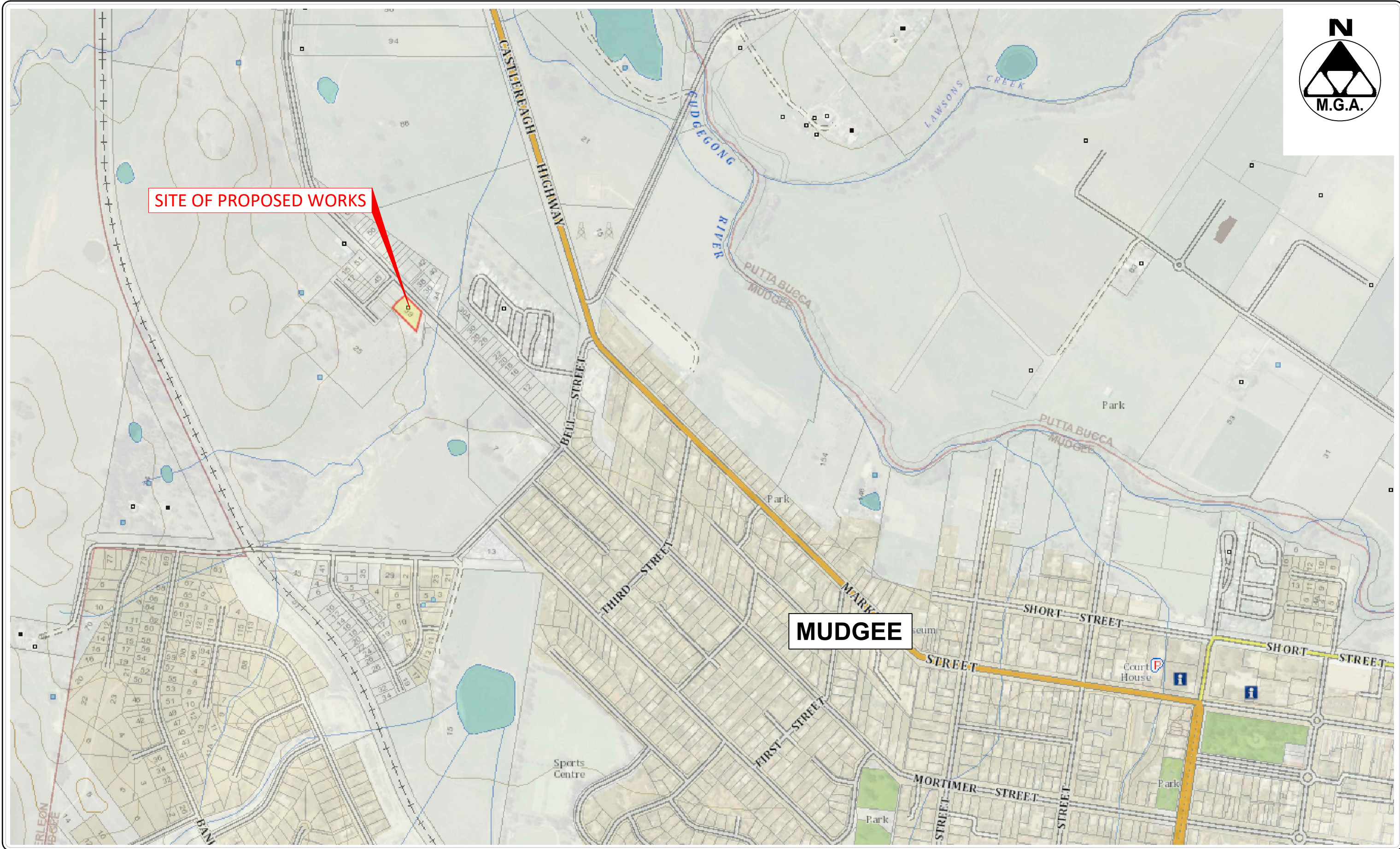
Proposed Extension to Gowrie  
Childcare Centre

Lot 30 in DP 1267157

39 Salesyards Lane, MUDGEE, NSW, 2850

SCHEDULE OF DRAWINGS

SHEET No.	DESCRIPTION
41821-C00	COVER SHEET AND DRAWING SCHEDULE
41821-C01	EXISTING SITE PLAN
41821-C02	PROPOSED SITE PLAN
41821-C10	PROPOSED STORMWATER MANAGEMENT PLAN
41821-C11	GENERAL NOTES & TYPICAL DETAILS - STORMWATER MANAGEMENT DESIGN
41821-C20	PROPOSED SEWER & SEWER SERVICES PLAN
41821-C21	GENERAL NOTES & TYPICAL DETAILS - WATER & SEWER SERVICES DESIGN
41821-C30	PROPOSED CUT & FILL PLAN

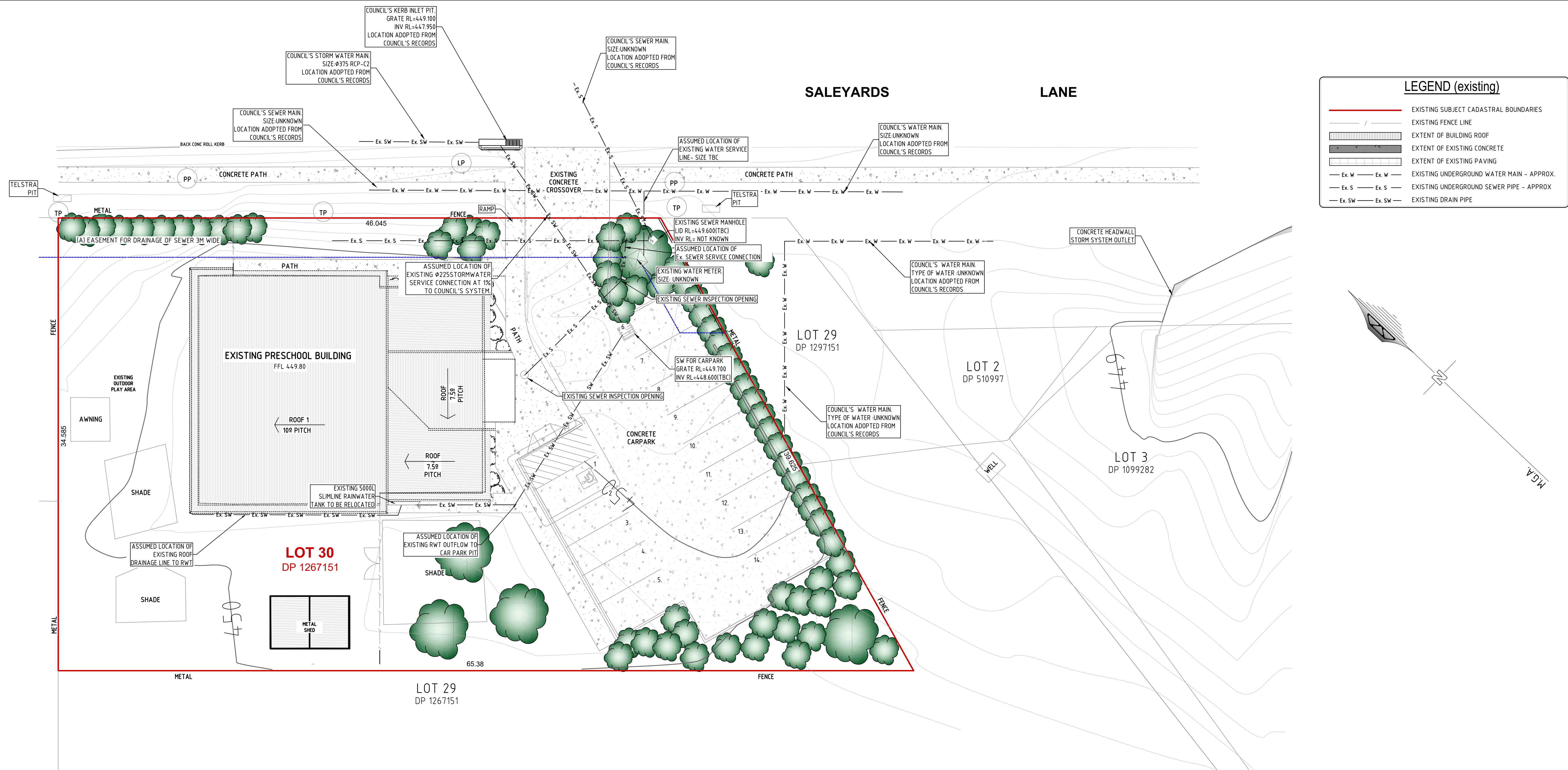


LOCALITY PLAN

NOT TO REDUCTION RATIO

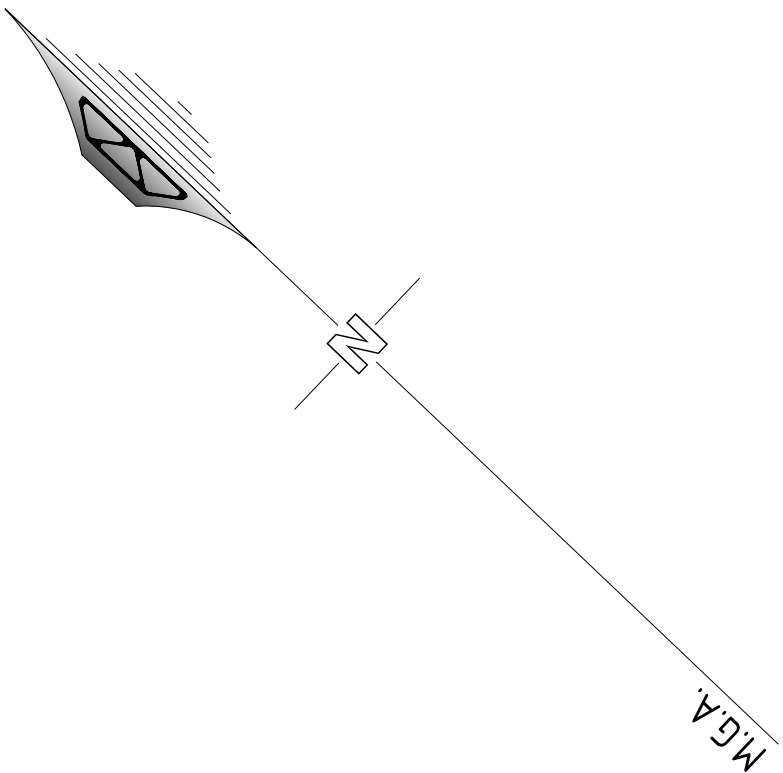
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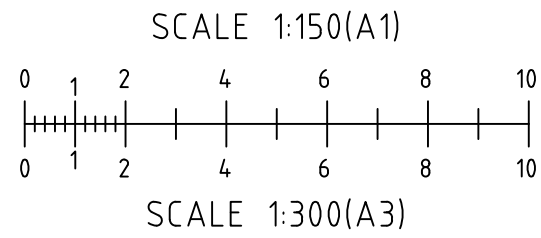
**LEGEND (existing)**

- EXISTING SUBJECT CADASTRAL BOUNDARIES
- EXISTING FENCE LINE
- EXTENT OF EXISTING ROOF
- EXTENT OF EXISTING CONCRETE
- EXTENT OF EXISTING PAVING
- EXISTING UNDERGROUND WATER MAIN - APPROX.
- EXISTING UNDERGROUND SEWER PIPE - APPROX
- EXISTING DRAIN PIPE



**EXISTING SITE PLAN**

REDUCTION RATIO 1:150 @ A1  
1:300 @ A3



SUBMISSION FOR DA

**BARNSON PTY LTD**

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email generalenquiry@barnson.com.au  
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Rev Date Description  
A 04-07-2024 ISSUED FOR DA

Project  
**EXTENSION TO GOWRIE  
CHILDCARE CENTRE**  
Site Address  
39 SALEYARDS LANE  
MUDGEES NSW 2850  
Client  
GHQS PTY LTD

Drawing Title  
**EXISTING SITE PLAN**

Design ST  
Drawn JS  
Check DOS

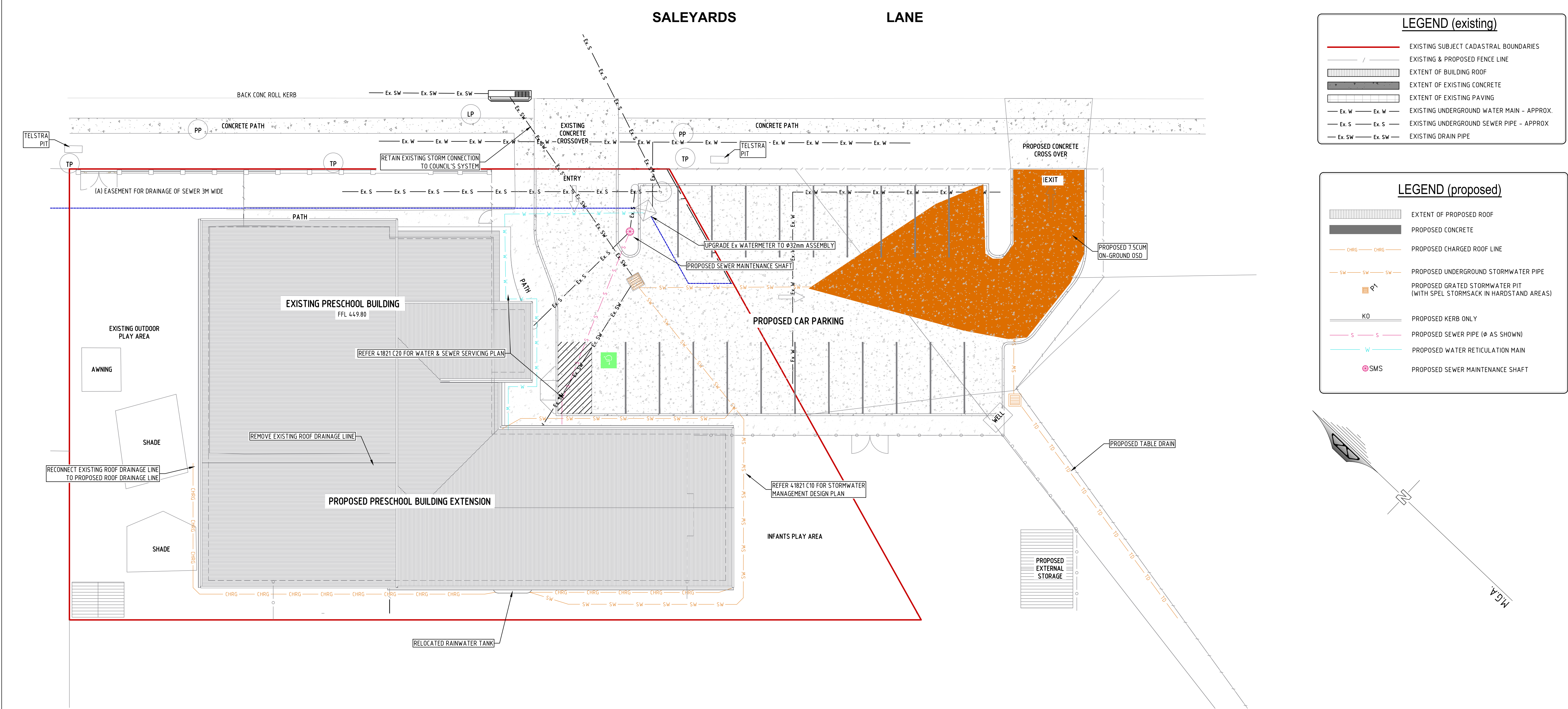
Original Sheet Size  
Revision

A1  
A

Certification  
Project No  
Drawing No

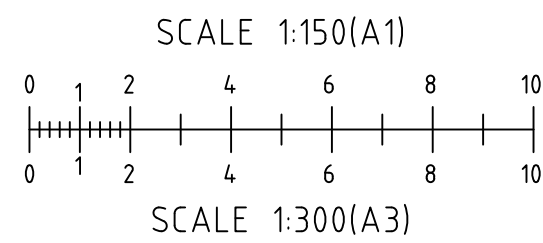
41821  
**C01**





PROPOSED SITE PLAN

REDUCTION RATIO 1:150 @ A1  
1:300 @ A3



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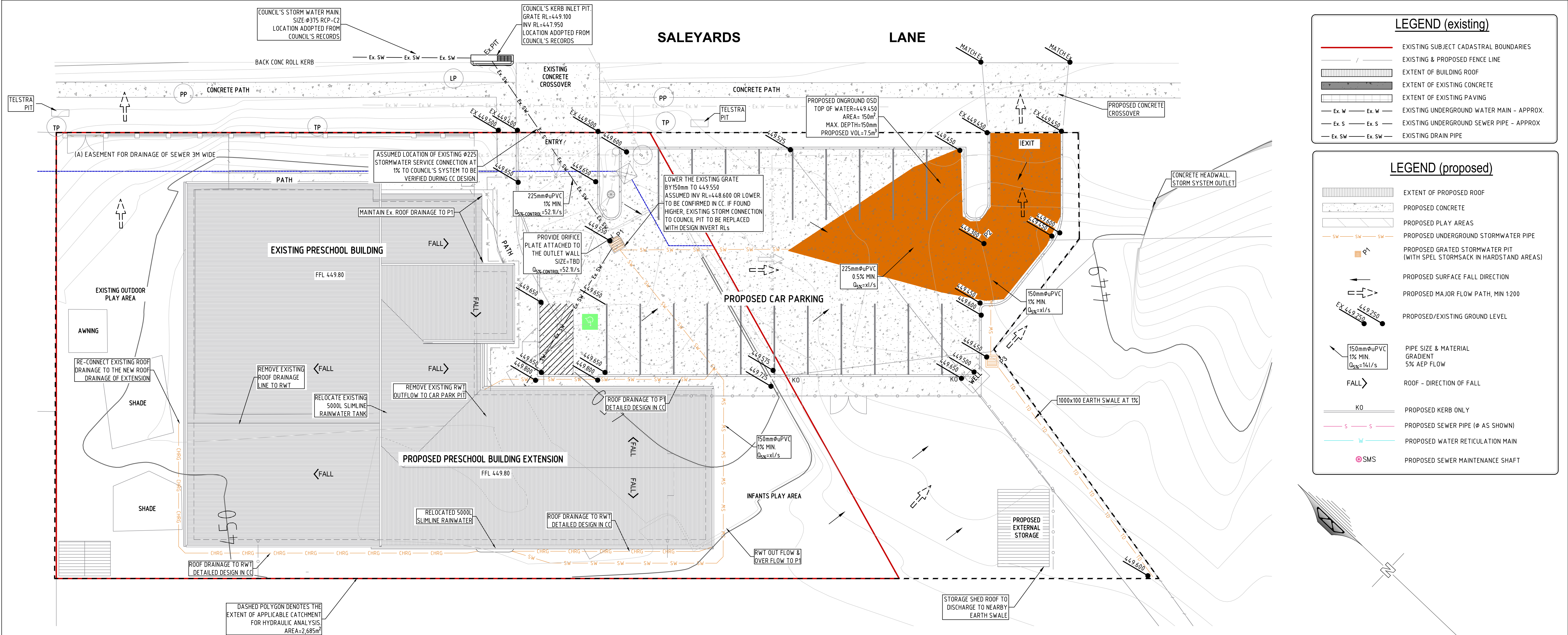
Original Sheet Size  
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A1  
A

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Drawing No

41821  
C02





**LEGEND (existing)**

EXISTING SUBJECT CADASTRAL BOUNDARIES

EXISTING & PROPOSED FENCE LINE

EXTENT OF BUILDING ROOF

EXTENT OF EXISTING CONCRETE

EXTENT OF EXISTING PAVING

Ex. W

Ex. W

EXISTING UNDERGROUND WATER MAIN - APPROX.

Ex. S

Ex. S

EXISTING UNDERGROUND SEWER PIPE - APPROX.

Ex. SW

Ex. SW

EXISTING DRAIN PIPE

**LEGEND (proposed)**

EXTENT OF PROPOSED ROOF

PROPOSED CONCRETE

PROPOSED PLAY AREAS

PROPOSED UNDERGROUND STORMWATER PIPE

PROPOSED GRATED STORMWATER PIT (WITH SPEL STORMSACK IN HARDSTAND AREAS)

PROPOSED SURFACE FALL DIRECTION

PROPOSED MAJOR FLOW PATH, MIN 1:200

PROPOSED/EXISTING GROUND LEVEL

PIPE SIZE & MATERIAL  
GRADIENT  
5% AEP FLOW

FALL

ROOF - DIRECTION OF FALL

KO

PROPOSED KERB ONLY

S

PROPOSED SEWER PIPE (Ø AS SHOWN)

W

PROPOSED WATER RETICULATION MAIN

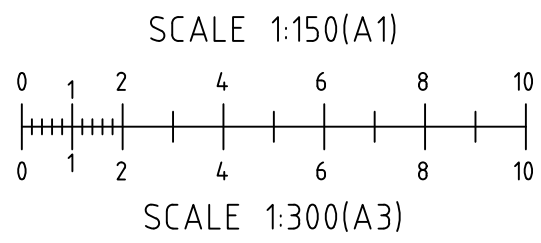
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PROPOSED SEWER MAINTENANCE SHAFT

STORMWATER PIT SCHEDULE						
MARK	TOP R.L.	DEPTH (mm)	IL INLET	IL OUTLET	LxB	LID TYPE
EX.PIT	449.100	1250	448.400	447.950	EXISTING	KIP
PIT P1	449.550	1050	448.625	448.600	600x600	HD GRATED (GALV)- SPELL STORMSACK
PIT P2	449.350	650	448.800	448.775	600x600	HD GRATED (GALV)- SPELL STORMSACK
PIT P3	449.450	550	-	448.900	600x600	MD GRATED (GALV)

PROPOSED STORMWATER MANAGEMENT PLAN

REDUCTION RATIO 1:150 @ A1  
1:300 @ A3



HYDRAULIC CALCULATIONS

1. PRE & POST DEVELOPMENT ANALYSIS  
DESIGN CALCULATIONS AS PER AS3500.3-2021

A) PRE-DEVELOPED:

  - TOTAL APPLICABLE CATCHMENT AREA (A) = 2,685 sq.m
  - RAINFALL INTENSITY (I) = 147 mm/hr (5min 5% AEP)
  - Cr = RUNOFF COEFFICIENT FOR ROOF AREA = 1.0
  - Ar = TOTAL ROOF AREA= 430sq.m
  - Ci = RUNOFF COEFFICIENT FOR UNROOFED IMPERVIOUS AREA = 0.9
  - Ai = TOTAL UNROOFED IMPERVIOUS AREA= 535 sq.m
  - Cp = RUNOFF COEFFICIENT FOR PERVIOUS AREA = 0.3
  - Ap = TOTAL PERVIOUS GRASS AREA = 1,720 sq.m
  - TOTAL FLOW Q<sub>PRE</sub> = (Cr Ar + Ci Ai + Cp Ap ). I / 3600 = 58.3 l/s

B) POST-DEVELOPED FLOW TO PIT :

  - TOTAL APPLICABLE CATCHMENT AREA (A) = 2,685 sq.m
  - RAINFALL INTENSITY (I) = 147mm/hr (5min 5% AEP)
  - Cr = RUNOFF COEFFICIENT FOR ROOF AREA = 1.0
  - Ar = TOTAL ROOF AREA= 920 sq.m
  - Ci = RUNOFF COEFFICIENT FOR DRIVEWAY IMPERVIOUS AREA = 0.9
  - Ai = TOTAL UNROOFED CONCRETE AREA= 775 sq.m
  - Cp = RUNOFF COEFFICIENT FOR PERVIOUS AREA = 0.3
  - Ap = TOTAL PERVIOUS GRASS AREA = 990 sq.m
  - TOTAL FLOW Q<sub>POST</sub> = (Cr Ar + Ci Ai + Cp Ap ). I / 3600) = 78.2 l/s
2. CONTROLLED FLOW FROM RWT & OSD

A) REQUIRED VOLUME OSD = (78.2-58.3)×5×60/1000=5.97CUM

B) PROPOSED CAR PARK OSD VOLUME = 7.5 m<sup>3</sup>

C) OSD-BY-PASS= 6.1 l/s

DESIGN NOTE:  
5% AEP, 5 MIN. INTERVAL  
RAINFALL INTENSITY =147mm/hr

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MUDGEES NSW 2850  
Client  
GHQS PTY LTD

Drawing Title  
**PROPOSED STORMWATER  
MANAGEMENT PLAN**  
Design ST  
Drawn JS  
Check DOS  
Original Sheet Size  
Revision  
A1  
A

Certification

Project No  
Drawing No

41821  
**C10**

SUBMISSION FOR DA



SITeworks NOTES

1. ORIGIN OF LEVELS :- AHD
2. CONTRACTOR MUST VERIFY ALL DIMENSIONS AND EXISTING LEVELS ON SITE PRIOR TO COMMENCEMENT OF WORK.
3. ALL WORK IS TO BE UNDERTAKEN IN ACCORDANCE WITH THE DETAILS SHOWN ON THE DRAWINGS, THE SPECIFICATIONS AND THE DIRECTIONS OF THE SUPERINTENDENT.
4. EXISTING SERVICES HAVE BEEN OBTAINED FROM SURFACE INSPECTION ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH THE LOCATION AND THE LEVEL OF ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY WORK. ANY DISCREPANCIES SHALL BE REPORTED TO THE SUPERINTENDENT. CLEARANCES SHALL BE OBTAINED FROM THE RELEVANT SERVICE AUTHORITY.
5. WHERE NEW WORKS ABUT EXISTING THE CONTRACTOR SHALL ENSURE THAT A SMOOTH EVEN PROFILE, FREE FROM ABRUPT CHANGES IS OBTAINED.
6. THE CONTRACTOR SHALL ARRANGE ALL SURVEY SETOUT TO BE CARRIED OUT BY A QUALIFIED SURVEYOR.
7. CARE IS TO BE TAKEN WHEN EXCAVATING NEAR EXISTING SERVICES. NO MECHANICAL EXCAVATIONS ARE TO BE UNDERTAKEN OVER TELECOM OR ELECTRICAL SERVICES. HAND EXCAVATE IN THESE AREAS.
8. ON COMPLETION OF CONSTRUCTION, ALL DISTURBED AREAS MUST BE RESTORED TO ORIGINAL, INCLUDING KERBS, FOOTPATHS, CONCRETE AREAS, GRAVEL AND GRASSED AREAS AND ROAD PAVEMENTS.
9. MAKE SMOOTH TRANSITION TO EXISTING AREAS.
10. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY DIVERSION DRAINS AND MOUNDS TO ENSURE THAT AT ALL TIMES EXPOSED SURFACES ARE FREE DRAINING AND WHERE NECESSARY EXCAVATE SUMPS AND PROVIDE PUMPING EQUIPMENT TO DRAIN EXPOSED AREAS. ALL WORK TO BE UNDERTAKEN WITH ADHERENCE TO THE REQUIREMENTS OF THE SOIL AND WATER MANAGEMENT PLAN.
11. THESE PLANS SHALL BE READ IN CONJUNCTION WITH APPROVED ARCHITECTURAL, STRUCTURAL, HYDRAULIC AND MECHANICAL DRAWINGS AND SPECIFICATIONS.

SURVEY NOTES

1. CONTOURS SHOWN DEPICT THE TOPOGRAPHY. EXCEPT AT SPOT LEVELS SHOWN THEY DO NOT REPRESENT THE EXACT LEVEL AT ANY PARTICULAR POINT.
2. SERVICES SHOWN HEREON HAVE BEEN DETERMINED FROM VISUAL EVIDENCE AND ARE INDICATIVE ONLY. PRIOR TO ANY DEMOLITION, EXCAVATION OR CONSTRUCTION ON THE SITE THE RELEVANT AUTHORITY SHOULD BE CONTACTED TO ESTABLISH DETAILED LOCATION AND DEPTH.

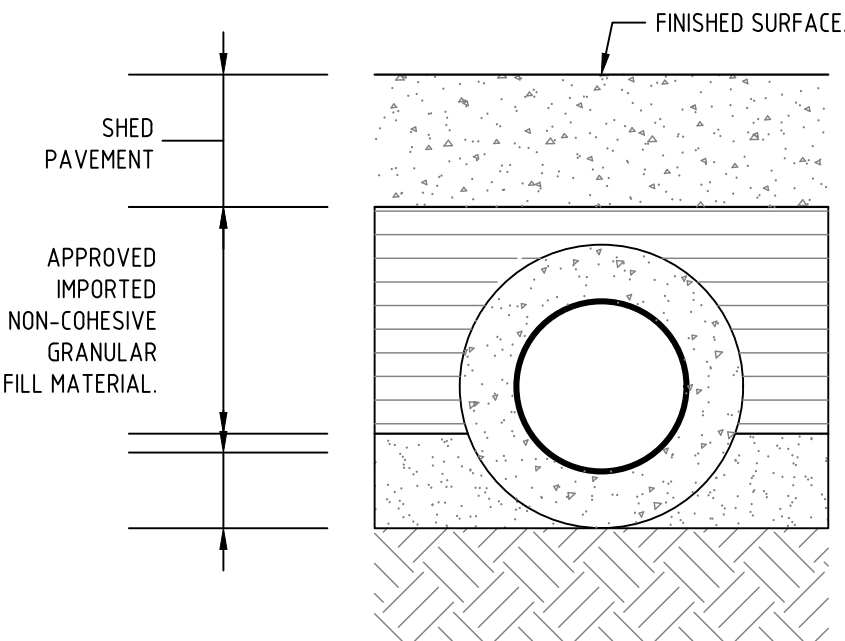
PIPE TRENCH - FILL NOTES:

1. BEDDING SAND  
BEDDING SAND SHALL BE GRANULAR MATERIAL HAVING A LOW PERMEABILITY AND HIGH STABILITY WHEN SATURATED, CONFORMING TO THE GRADING LIMITS FOR BEDDING SAND AS INDICATED IN THE CONTRACT DOCUMENTS. BEDDING SAND SHALL BE COMPACTED TO A DENSITY INDEX OF 95% AS DETERMINED IN ACCORDANCE WITH AS1289.
2. APPROVED IMPORTED GRANULAR FILL  
ONLY IMPORTED GRANULAR FILL MATERIAL APPROVED BY THE SUPERINTENDENT SHALL BE USED. THIS FILL MATERIAL SHALL BE COMPACTED IN LAYERS NOT EXCEEDING 300mm THICK TO A DRY DENSITY OF 100% OF THE STANDARD MAXIMUM DRY DENSITY OF THE MATERIAL AND WITH A MOISTURE CONTENT NO MORE THAN 1% ABOVE OPTIMUM MOISTURE CONTENT AS DETERMINED IN ACCORDANCE WITH AS1289.
3. ORDINARY EXCAVATED FILL MATERIAL  
ORDINARY EXCAVATED FILL MATERIAL IS EXCAVATED TRENCH MATERIAL THAT IS FREE OF VEGETABLE MATTER, HUMUS, LARGE CLAY LUMPS AND ROCK BOULDERS. THIS FILL MATERIAL SHALL BE COMPACTED IN LAYERS NOT EXCEEDING 300mm THICK, TO A DENSITY OF 95% OF THE STANDARD MAXIMUM DRY DENSITY OF THE MATERIAL WITH A MOISTURE CONTENT OF NOT MORE THAN 1% ABOVE THE OPTIMUM MOISTURE CONTENT AS DETERMINED IN ACCORDANCE WITH AS1289.

STORMWATER NOTES

1. ALL DOWNPIPE LINES SHALL BE SEWER GRADE uPVC WITH SOLVENT WELD JOINTS (U.N.O)
2. EQUIVALENT STRENGTH VCP OR FCP PIPES MAY BE USED.
3. MINIMUM GRADE TO STORMWATER LINES TO BE 0.5% MINIMUM (U.N.O)
4. CONTRACTORS TO SUPPLY AND INSTALL ALL FITTINGS AND SPECIALS INCLUDING VARIOUS PIPE ADAPTORS TO ENSURE PROPER CONNECTION BETWEEN DISSIMILAR PIPEWORK.
5. ALL CONNECTIONS TO EXISTING DRAINAGE PITS SHALL BE MADE IN A TRADESMAN-LIKE MANNER AND THE INTERNAL WALL OF THE PIT AT THE POINT OF ENTRY SHALL BE CEMENT RENDERED TO ENSURE A SMOOTH FINISH.
6. APPROVED PRECAST PITS MAY BE USED.
7. WHERE TRENCHES ARE IN ROCK, THE PIPE SHALL BE BEDDED ON A MIN. 50mm CONCRETE BED (75mm THICK BED OF 12mm BLUE METAL) UNDER THE BARREL OF THE PIPE. THE PIPE COLLAR AT NO POINT SHALL BEAR THE ROCK. IN OTHER THAN ROCK, PIPES SHALL BE LAID ON A 75mm THICK SAND BED. IN ALL CASES, BACKFILL THE TRENCH WITH THE SAND TO 200mm ABOVE THE PIPE .WHERE THE PIPE IS UNDER PAVEMENTS, BACKFILL REMAINDER OF TRENCH WITH SAND OR APPROVED GRANULAR BACKFILL COMPACTED IN 150mm LAYERS TO 98% MAX. DRY DENSITY.
8. WHERE STORMWATER LINES PASS UNDER FLOOR SLABS, SEWER GRADE RUBBER RING JOINTS ARE TO BE USED.
9. ALL PIPES IN THE ROADWAY AND FOOTPATH AREAS, WHERE THE DEPTH OF PIPE IS LESS THAN 500mm FROM THE FINISHED SURFACE LEVEL ARE TO BE CONCRETE ENCASED.

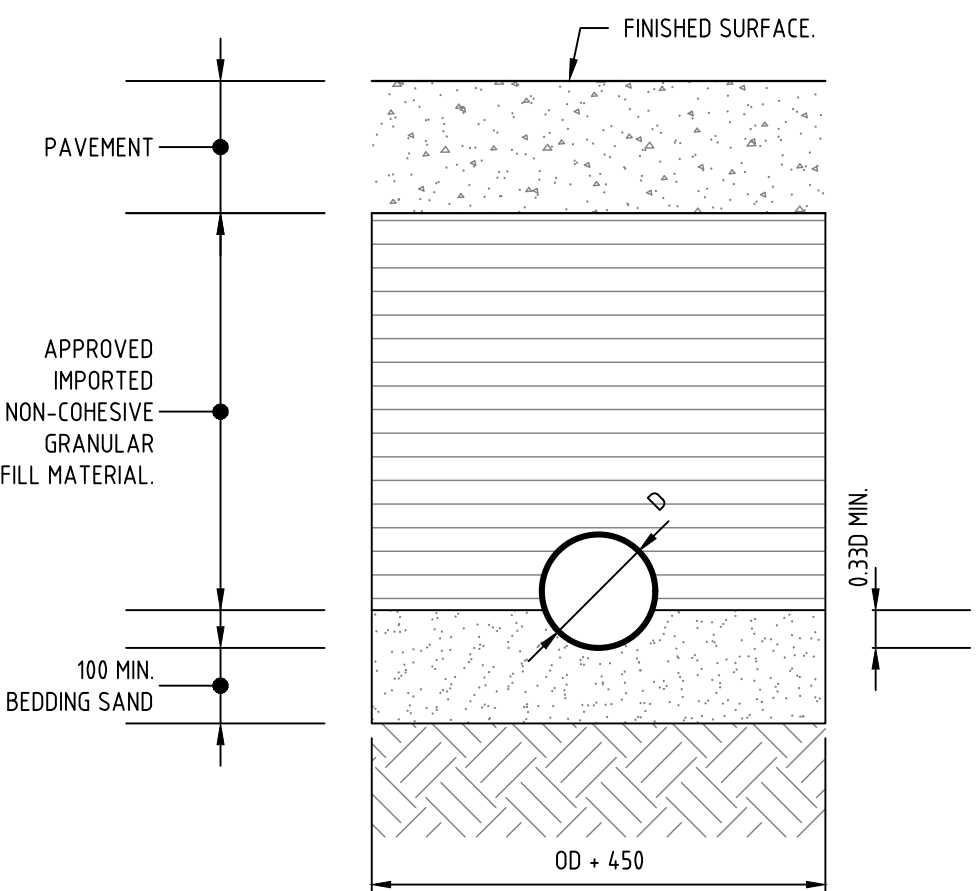
INSPECTION HOLD POINTS	
1. INSTALLATION OF SEDIMENT & EROSION CONTROL MEASURES.	
2. WATER & SEWER LINE INSTALLATION PRIOR TO BACKFILL.	
3. ESTABLISHMENT OF LINE & LEVEL FOR KERB & GUTTER PLACEMENT.	
4. ROAD PAVEMENT CONSTRUCTION.	
5. ROAD PAVEMENT SURFACING.	
6. PRACTICAL COMPLETION.	
SERVICES INSTALLATION	
1. INSTALLATION OF ALL UUNDERGROUND PIPES BE INSTALLED PRIOR TO INSTALLATION OF ROAD PAVEMENT.	



TYPICAL PIPE ENCASEMENT

SCALE 1:10

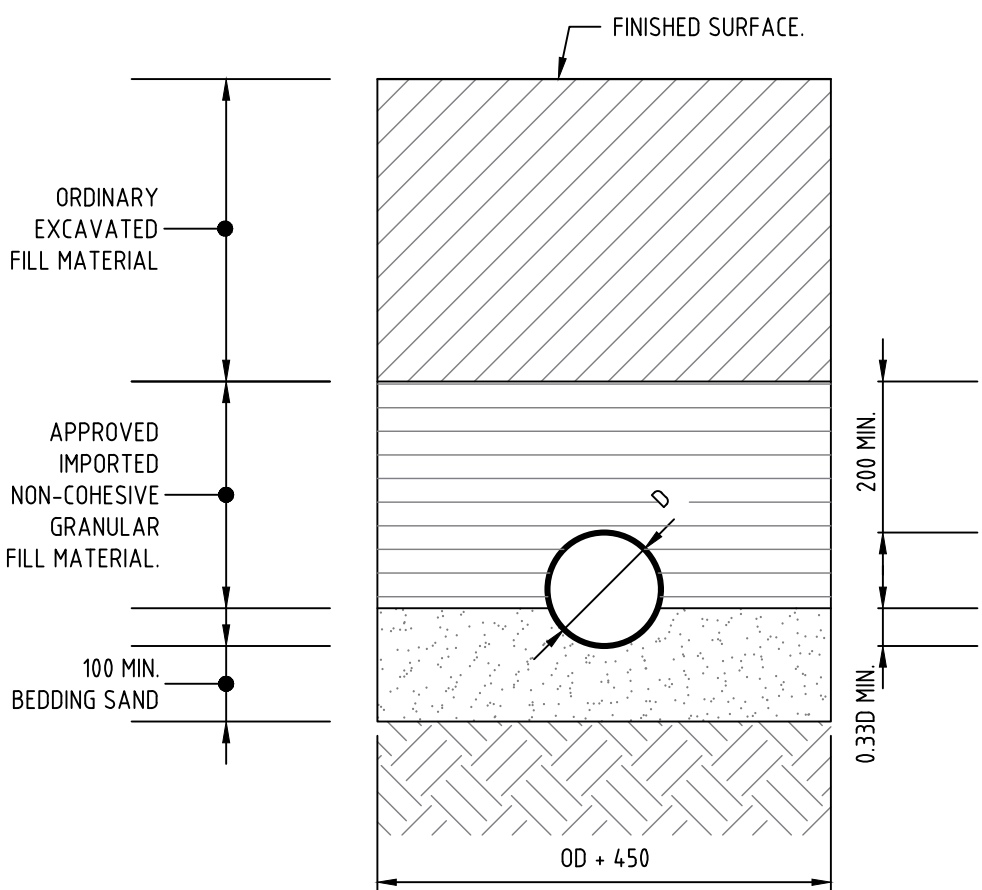
NOTE: PIPE COLLAR IS NOT TO REST ON ORIGINAL MATERIAL



TYPICAL SECTION TRENCH IN ROADWAY

SCALE 1:10

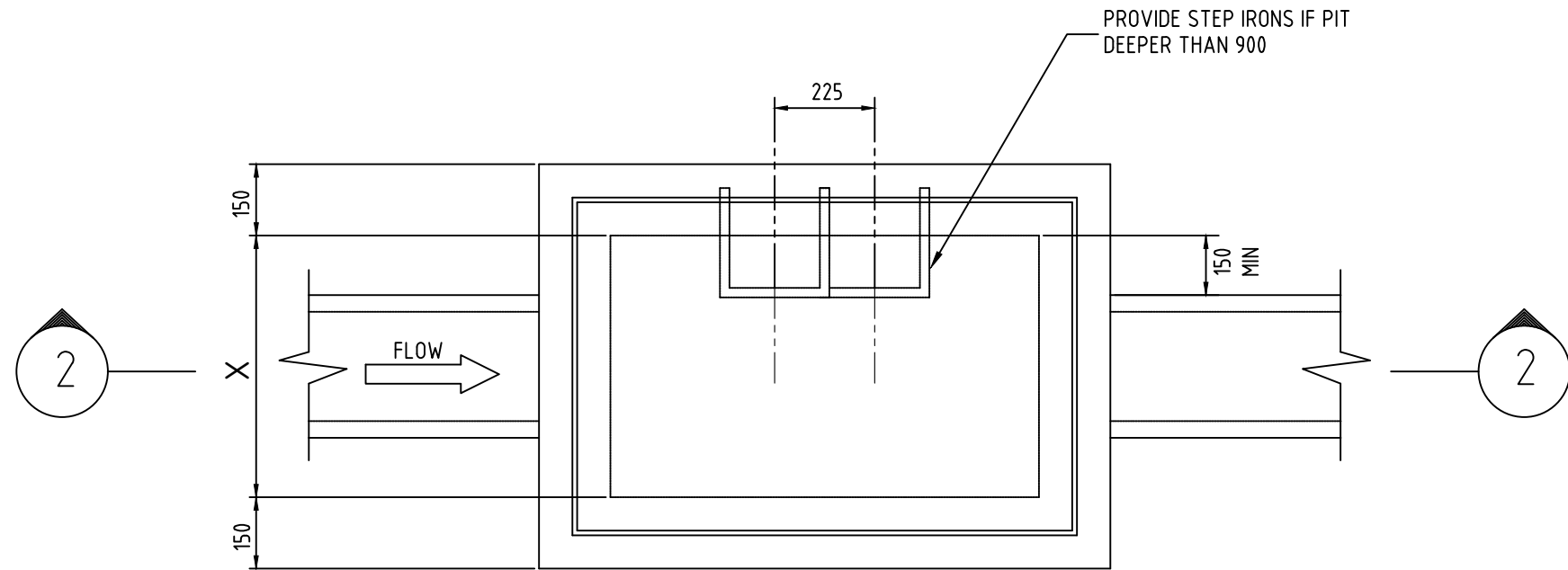
NOTE: PIPE COLLAR IS NOT TO REST ON ORIGINAL MATERIAL



TYPICAL SECTION EARTH FOUNDATION TRENCH

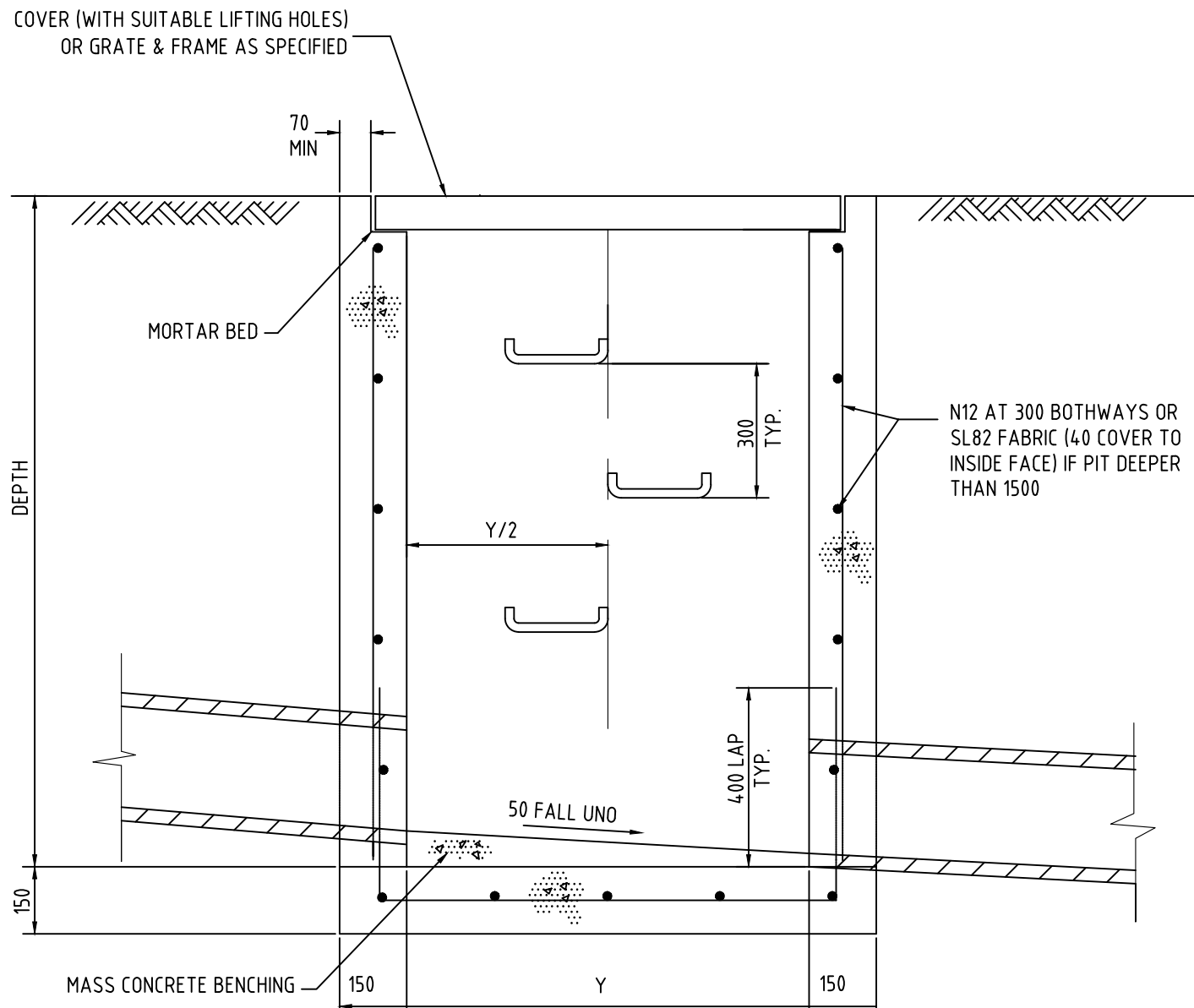
SCALE 1:10

NOTE: PIPE COLLAR IS NOT TO REST ON ORIGINAL MATERIAL

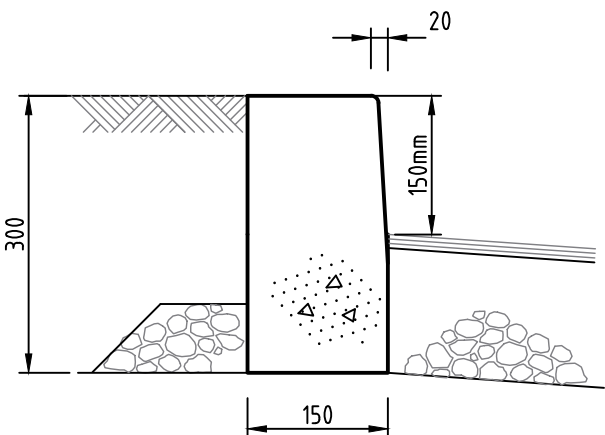


PLAN  
GRATED INLET PIT  
N.T.S.

PIT DIMENSIONS		
DEPTH	X	Y
D<600	450	450
D<1000	600	600
D<1500	600	900
1500<D<2400	900	900
D>2400	750	1200



SECTION  
2



KO KERB ONLY

SCALE 1:10 (A1), 1:20 (A3)

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**39 SALEYARDS LANE  
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**GHQS PTY LTD**

Drawing Title GENERAL NOTES & TYPICAL DETAILS STORMWATER MANAGEMENT DESIGN			
Design	ST	Original Sheet Size	A1
Drawn	JS		
Check	DOS	Revision	A

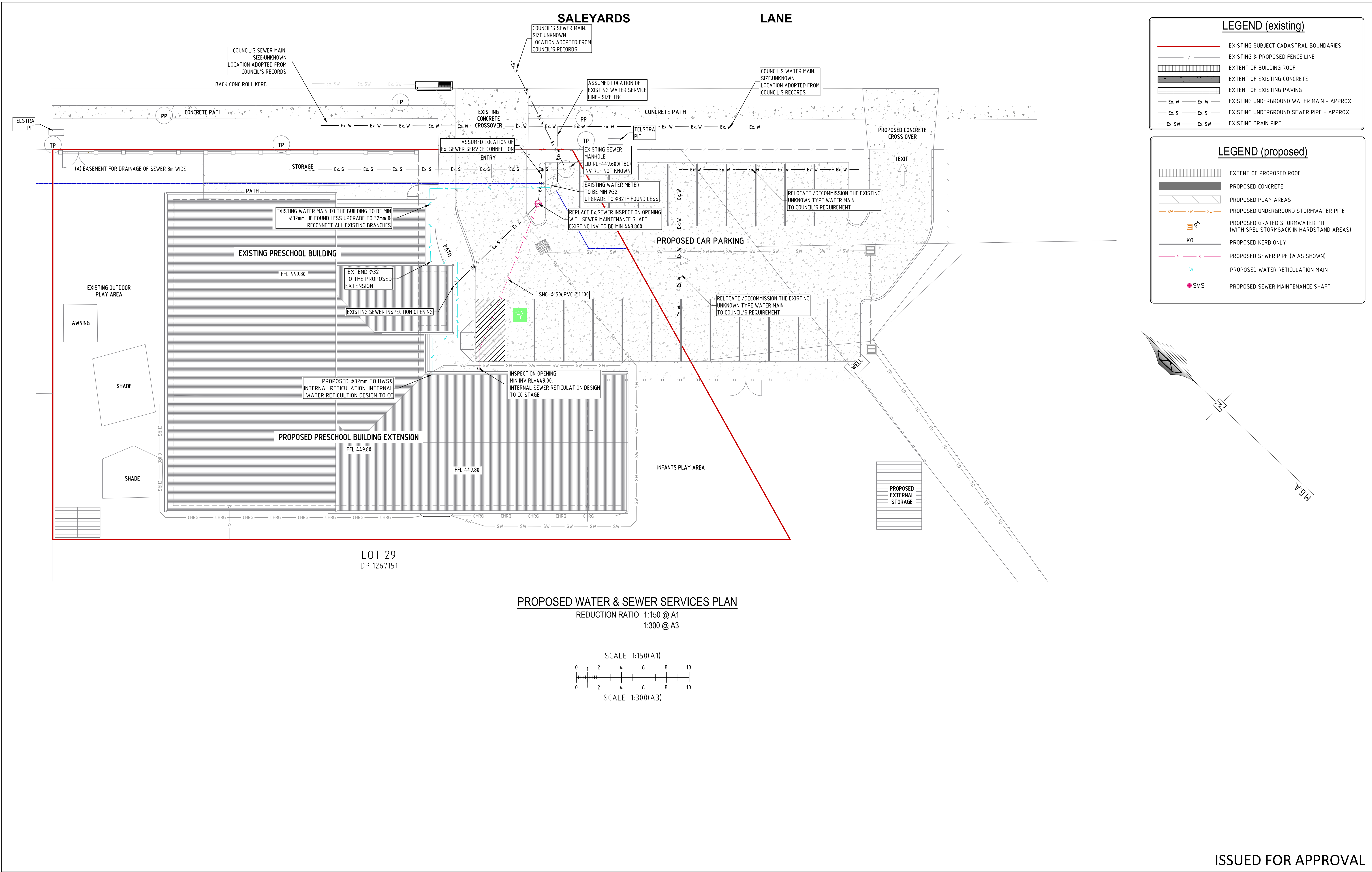
Certification

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41821  
**C11**







SITeworks Notes:

1. ORIGIN OF LEVELS :- A.H.D.
2. CONTRACTOR MUST VERIFY ALL DIMENSIONS AND EXISTING LEVELS ON SITE PRIOR TO COMMENCEMENT OF WORK.
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9. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY DIVERSION DRAINS AND MOUNDS TO ENSURE THAT AT ALL TIMES EXPOSED SURFACES ARE FREE DRAINING AND WHERE NECESSARY EXCAVATE SUMPS AND PROVIDE PUMPING EQUIPMENT TO DRAIN EXPOSED AREAS.
10. ALL WORK TO BE UNDERTAKEN WITH ADHERENCE TO THE REQUIREMENTS OF THE SOIL AND WATER MANAGEMENT PLAN
11. THESE PLANS SHALL BE READ IN CONJUNCTION WITH APPROVED ARCHITECTURAL, STRUCTURAL, HYDRAULIC AND MECHANICAL DRAWINGS AND SPECIFICATIONS.

SEWER MAIN NOTES

1. ALL SEWER MAINS SHALL BE 150Ø CLASS SN8 RRJ UPVC PIPE. ALL GRAVITY LINES TO USE SEWER GRADE FITTINGS WHERE REQUIRED.
2. CONSTRUCTION OF SEWER MAINS AND MANHOLES SHALL BE CARRIED OUT IN ACCORDANCE WITH THE WSA SEWERAGE CODE, WSA-02, 2002.
3. ANY OTHER SERVICES INCLUDING TELSTRA, GAS, POWER, WATER AND STORMWATER MUST BE LOCATED BEFORE WORK COMMENCES.
4. MANHOLES SHALL BE PRECAST CONCRETE FROM A SUPPLIER APPROVED BY COUNCIL AND HAVE STEP IRONS AT 300mm SPACINGS, A ROUND REMOVABLE LIGHT DUTY GATIC COVER (UNO) AND A MINIMUM INTERNAL DIAMETER OF 1020mm.
5. 150mmØ BOUNDARY RISERS SHALL BE PROVIDED TO EACH LOT TO THE REQUIREMENTS OF THE MANAGER, HEALTH & BUILDING.
6. RISERS AND SIDELINES TO BE CONSTRUCTED TO WSA-02 2002.
7. FLOW LINE CHANNELS AND INTERSECTIONS SHALL BE CONSTRUCTED THROUGH MANHOLES AS PER WSA-02 2002.
8. ALL SEWER MAINS TO BE PRESSURE TESTED AS PER WSA-02 2002 AND THE REQUIREMENTS OF COUNCIL.
9. ANY EXTERNAL MANHOLE DROPS TO BE IN ACCORDANCE WITH SEWER CODE OF AUSTRALIA DRAWING No SEW\_1303 MN DROP 460mm
10. THE MINIMUM DEPTH TO TOP OF PIPE SHALL BE 600mm, EXCEPT UNDER ROAD PAVEMENT WHERE MINIMUM COVER TO TOP OF PIPE SHALL BE 800mm MINIMUM UNLESS SHOWN OTHERWISE. PIPES WITH LESS COVER THAN THESE LIMITS TO BE CONCRETE ENCASED, AND DICL UNDER ROADS.
11. GRADES OF GRAVITY MAINS NOT TO BE FLATTER THAN 1 IN 80 (1.25%) FOR 150mm DIAMETER PIPES AS PER DESIGN, UNLESS APPROVED BY COUNCIL.
12. MANHOLES SHALL BE PLACED AT EACH CHANGE IN DIRECTION OR GRADE OF THE PIPE LINE AT INTERVALS ALONG THE LINE NOT EXCEEDING 80m.

BEDDING NOTES:

1. THE MINIMUM DEPTH TO TOP OF PIPE SHALL BE 600mm, EXCEPT UNDER ROAD PAVEMENT WHERE MINIMUM COVER TO TOP OF PIPE SHALL BE 800mm MINIMUM UNLESS SHOWN OTHERWISE. PIPES WITH LESS COVER THAN THESE LIMITS TO BE CONCRETE ENCASED, AND DICL UNDER ROADS.

GENERAL WATER RETICULATION NOTES:

1. ALL PLUMBING WORKS SHALL BE IN ACCORDANCE WITH AS 3500, LOCAL WATER AUTHORITY, THE BUILDING CODE OF AUSTRALIA, & WATER GUIDELINES.
2. LIASE WITH THE LOCAL WATER AUTHORITY AND PLUMBING INDUSTRY COMMISSION AND ALLOW TO PAY ALL REQUIRED FEES/LEVIES ETC. ASSOCIATED WITH THE WORKS.
3. FIXTURES, TAP WARE & FITTINGS SHALL BE SUPPLIED & INSTALLED AS PER ARCHITECTS SELECTION. REFER BUILDING WORKS SPECIFICATION. CONCEAL ALL PIPES WITHIN WALLS. NO SURFACE MOUNTED PIPING IS ACCEPTABLE. INCLUDE RETICULATION OF DOMESTIC HOT AND COLD WATER TO ALL FIXTURES – REFER ARCHITECT’S PLANS.
4. COORDINATE ALL WORKS WITH ALL OTHER SERVICES. CHECK LEVELS OF ALL PIPES PRIOR TO WORKS.
5. THE PLUMBING CONTRACTOR SHALL CARRY OUT ALL EXCAVATION, SHORING AND BACKFILLING. BACK FILL WITH CONSOLIDATED CLASS 2 CRUSHED ROCK WHERE SERVICES ARE BELOW PATHS, ROADS ETC. 98% COMPACTION DRY DENSITY.
6. ALL PIPEWORK SHALL BE CONCEALED WITHIN WALL CAVITIES, DUCTS, VANITIES AND CEILING SPACES. INSTALL PIPEWORK SUCH THAT NO WATER HAMMER OCCURS. SHOULD WATER HAMMER OCCUR RECTIFY AS REQUIRED.
7. PIPING, VALVES LOCATED UNDERGROUND SHALL WHERE REQUIRED BE WRAPPED WITH AN APPROVED MATERIAL.
8. THE PLUMBING CONTRACTOR SHALL SUPPLY AND INSTALL, TEST AND COMMISSION ALL PLUMBING SYSTEMS AS NOTED ON DRAWINGS. ALL WORKS TO BE IN ACCORDANCE WITH AS 3500 RELEVANT PARTS, LOCAL WATER AUTHORITY, FIRE AUTHORITY AND BUILDING CODE OF AUSTRALIA.
9. TESTING OF WATER SERVICES SHALL BE AS PER AS3500.12:1998 i.e. AT 1500KPa FOR A PERIOD OF NOT LESS THAN 30 MINUTES. WORKS MUST BE TESTED PRIOR TO CONCEALMENT. TEST SECTIONS OF WORK (STAGES) AS REQUIRED. TESTING OF FIRE SERVICES SHALL BE TO AUTHORITIES REQUIREMENTS INCLUDING FLOW/PRESSURE TESTS, HOSE REELS AND HYDROSTATIC TESTS BY AN INDEPENDENT FIRE TESTER.
10. MATERIALS:

- WATER SERVICES TO BE POLYETHYLENE PIPE TO AS3500.1, FITTING TO COMPLY WITH AS 1589.

- FIRE SERVICES SHALL BE COPPER TYPE A TO AS 1432

- HOT WATER SERVICES SHALL BE LAGGED WITH 19mm ARMAFLEX.
11. PROVIDE CONCRETE THRUST BLOCKS AS PER PIPE MANUFACTURERS REQUIREMENTS AND AS PER AS3500.12:1998.
12. VALVES SHALL BE AS FOLLOWS:

- TEMPERING VALVES RMC OR APPROVED EQUAL.

- ALL ISOLATING VALVES TO BE BRONZED GATE VALVES WITH NON RISING SPINDLE TYPE.

- ALL VALVES TO BE FULLY TESTED.

- PROVIDE CAST IRON VALVE BOXES TO ALL IN GROUND VALVES.

- PROVIDE ISOLATING VALVES AS REQUIRED BY STANDARDS.
13. PROVIDE VACUUM BREAKERS TO ALL HOSE BIBBS.
14. OTHER REQUIREMENTS:- PRIOR TO COMPLETION OF DEFECTS WARRANTY PERIOD CARRY OUT A MAINTENANCE VISIT AND CHECK THE COMPLETE SYSTEM INCLUDING ALL EQUIPMENT TAPWARE ETC.
15. ALLOW FOR ALL AUTHORITIES CHARGES INCLUDING METERS & INSTALLATION, APPLICATION FEES, CONNECTION AND TAPPING FEES FOR WATER. CLEARLY IDENTIFY IN TENDER WITH DETAILED BREAKDOWN.
16. PROVIDE IDENTIFICATION (LABELS TO ALL PIPING)
17. AVAILABLE WATER PRESSURE & FLOW RATES TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION TO ENSURE COMPLIANCE WITH AS3500.

MAINTENANCE SHAFT NOTES

1. ALL DIMENSIONS IN MILLIMETERS
2. ALL CONNECTION TYPES SHOWN ARE APPLICABLE TO VC, PVC (SOLVENT WELD) AND PVC (RUBBER RING) PIPES UNLESS OTHERWISE SHOWN
3. INSTALL BRANCH CONNECTIONS & PROPERTY CONNECTIONS (AS SHOWN) IN RISER SHAFT (DROP JUNCTIONS WHERE SHOWN. MAXIMUM OF 1 RETICULATION INLET OR 2 PROPERTY CONNECTIONS.
4. MS MAY BE MANUFACTURED USING VARIOUS MATERIALS AND JOINTING SYSTEMS AS AUTHORISED BY WATER AGENCY
5. MAXIMUM DEPTH TO INVERT 5000
6. ADJUST MS TO PIPE GRADE BY TILTING MS CHAMBER. MAX. DEVIATION FROM VERTICAL OF THE RISER TO BE 1:10 OR A MAXIMUM OF 300 AT SURFACE.
7. ACCESS COVER, FRAME AND SUPPORT SLAB TO BE AS AUTHORISED BY MWRC

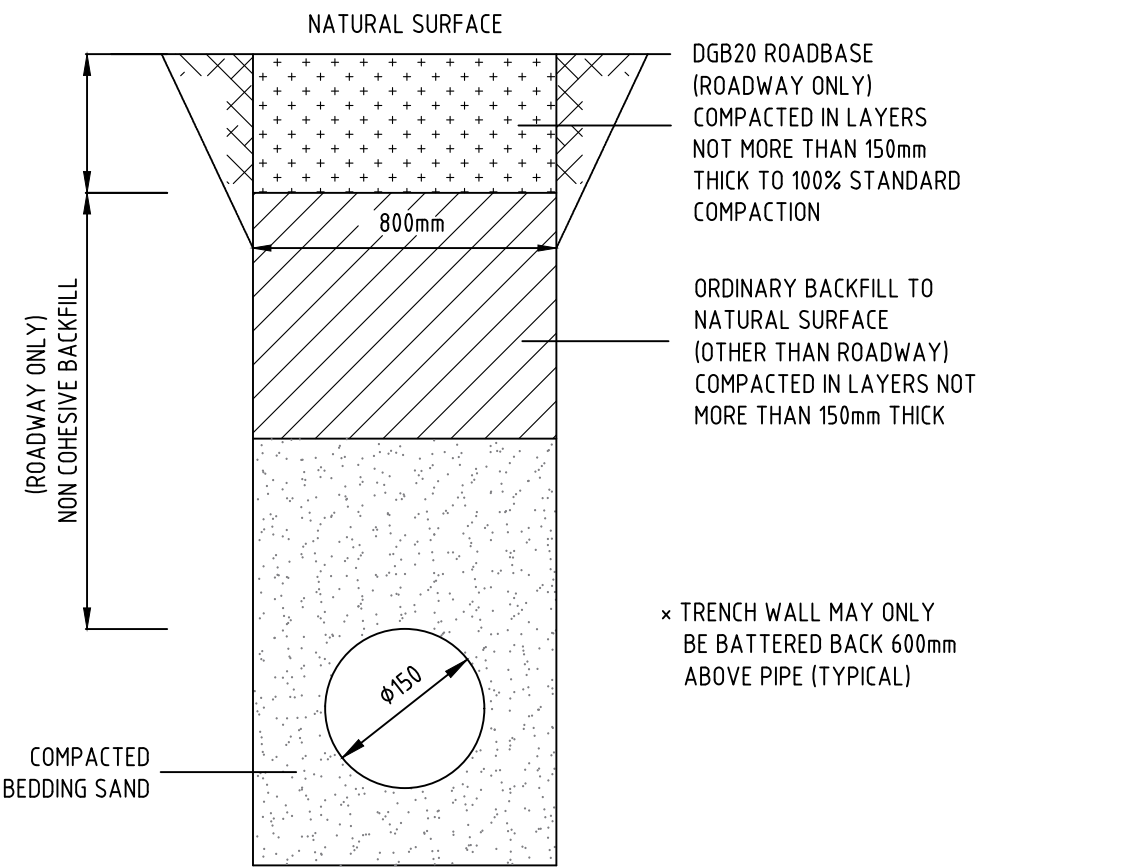
PIPE TRENCH - FILL NOTES:

1. BEDDING SAND

BEDDING SAND SHALL BE GRANULAR MATERIAL HAVING A LOW PERMEABILITY AND HIGH STABILITY WHEN SATURATED, CONFORMING TO THE GRADING LIMITS FOR BEDDING SAND AS INDICATED IN THE CONTRACT DOCUMENTS. BEDDING SAND SHALL BE COMPACTED TO A DENSITY INDEX OF 95% AS DETERMINED IN ACCORDANCE WITH AS1289.
2. APPROVED IMPORTED GRANULAR FILL

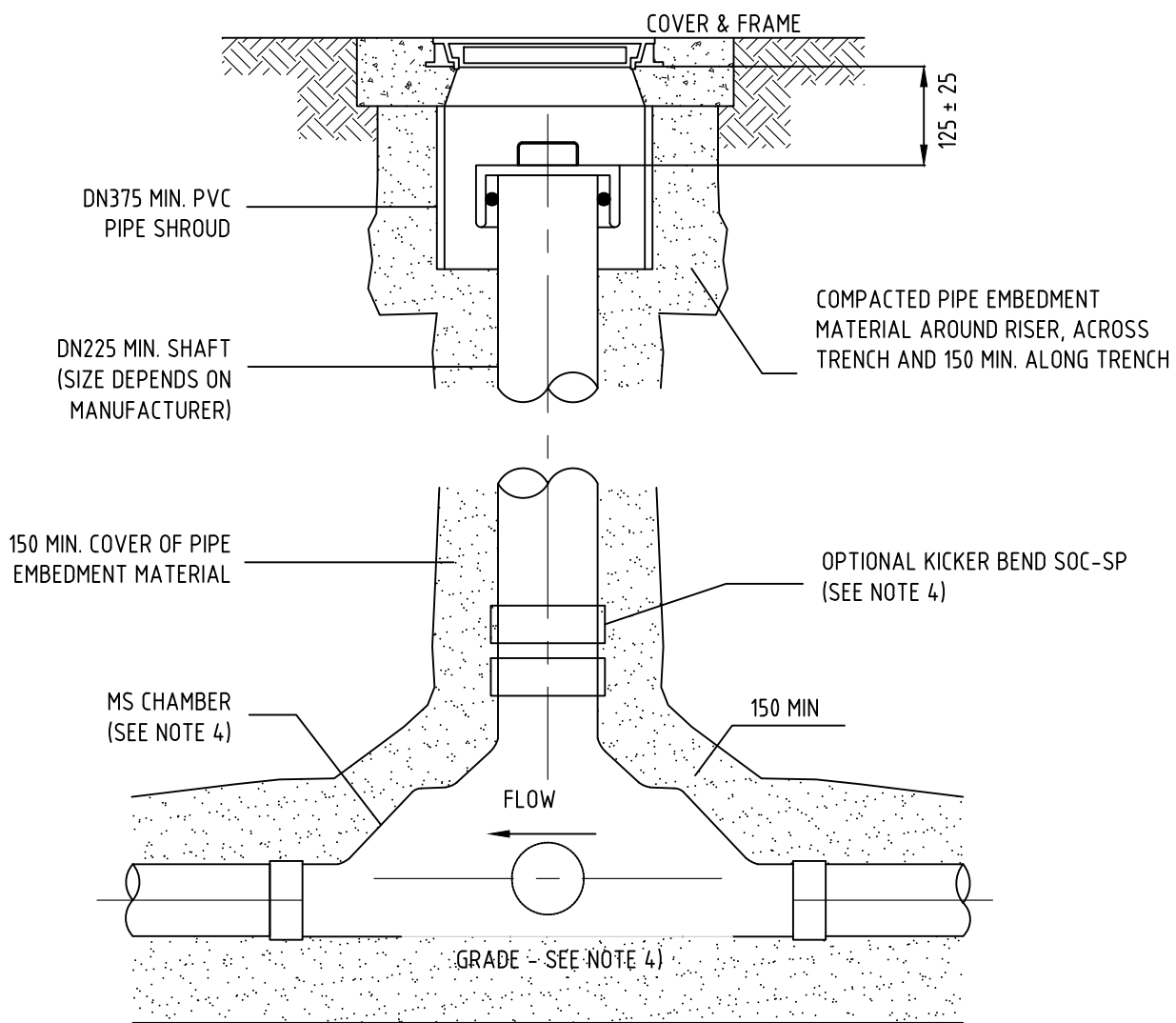
ONLY IMPORTED GRANULAR FILL MATERIAL APPROVED BY THE SUPERINTENDENT SHALL BE USED. THIS FILL MATERIAL SHALL BE COMPACTED IN LAYERS NOT EXCEEDING 300mm THICK TO A DRY DENSITY OF 100% OF THE STANDARD MAXIMUM DRY DENSITY OF THE MATERIAL AND WITH A MOISTURE CONTENT NO MORE THAN 1% ABOVE OPTIMUM MOISTURE CONTENT AS DETERMINED IN ACCORDANCE WITH AS1289.
3. ORDINARY EXCAVATED FILL MATERIAL

ORDINARY EXCAVATED FILL MATERIAL IS EXCAVATED TRENCH MATERIAL THAT IS FREE OF VEGETABLE MATTER, HUMUS, LARGE CLAY LUMPS AND ROCK BOULDERS. THIS FILL MATERIAL SHALL BE COMPACTED IN LAYERS NOT EXCEEDING 300mm THICK, TO A DENSITY OF 95% OF THE STANDARD MAXIMUM DRY DENSITY OF THE MATERIAL WITH A MOISTURE CONTENT OF NOT MORE THAN 1% ABOVE THE OPTIMUM MOISTURE CONTENT AS DETERMINED IN ACCORDANCE WITH AS1289.



TYPICAL SEWER TRENCH SECTION  
N.T.S.

× INSTALLATION OF UPVC PIPES SHALL TO CONFORM TO AS2032-1977  
"INSTALLATION OF UPVC PIPE SYSTEMS",  
AS2566-1998 "BURIED FLEXIBLE PIPELINES", WSA-02 2002  
AND MANUFACTURERS INSTRUCTIONS.



TYPICAL JUNCTION MAINTENANCE SHAFT ELEVATION  
N.T.S.

SUBMISSION FOR DA

BARNSON PTY LTD

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Rev Date Description  
A 04-07-2024 ISSUED FOR DA

Project  
EXTENSION TO GOWRIE  
CHILDCARE CENTRE  
Site Address  
39 SALEYARDS LANE  
MUDGEES NSW 2850  
Client  
GHQS PTY LTD

Drawing Title  
GENERAL NOTES & TYPICAL DETAILS  
WATER & SEWER SERVICES DESIGN

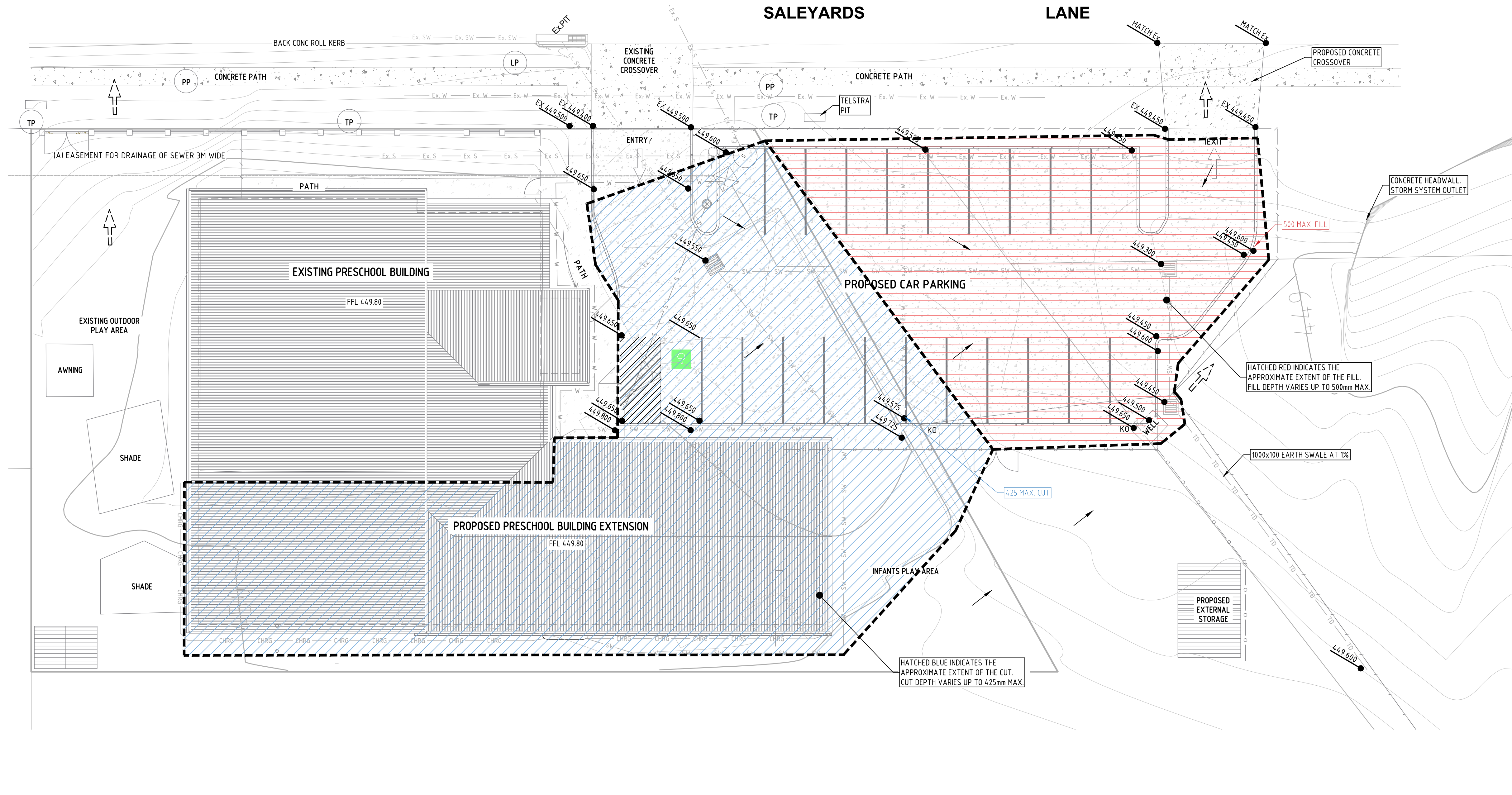
Design	ST	Original Sheet Size	A1
Drawn	JS		
Check	DOS	Revision	A

Certification

Project No  
Drawing No

41821  
C21





**LEGEND (existing)**

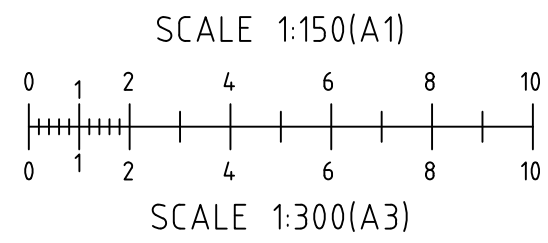
- EXISTING SUBJECT CADASTRAL BOUNDARIES
- EXISTING & PROPOSED FENCE LINE
- EXTENT OF BUILDING ROOF
- EXTENT OF EXISTING CONCRETE
- EXTENT OF EXISTING PAVING
- EXISTING UNDERGROUND WATER MAIN - APPROX.
- EXISTING UNDERGROUND SEWER PIPE - APPROX
- EXISTING DRAIN PIPE

**LEGEND (proposed)**

- EXTENT OF PROPOSED ROOF
- PROPOSED CONCRETE
- PROPOSED PLAY AREAS
- PROPOSED UNDERGROUND STORMWATER PIPE
- PROPOSED GRATED STORMWATER PIT (WITH SPEL STORMSACK IN HARDSTAND AREAS)
- PROPOSED SURFACE FALL DIRECTION
- PROPOSED/EXISTING GROUND LEVEL
- PROPOSED KERB ONLY
- PROPOSED SEWER PIPE (Ø AS SHOWN)
- PROPOSED WATER RETICULATION MAIN
- PROPOSED SEWER MAINTENANCE SHAFT

PROPOSED CUT & FILL PLAN

REDUCTION RATIO 1:150 @ A1  
1:300 @ A3



SUBMISSION FOR DA

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Rev	Date	Description
A	28-08-2024	ISSUED FOR DA

Project  
**EXTENSION TO GOWRIE  
CHILDCARE CENTRE**  
Site Address  
**39 SALEYARDS LANE  
MUDGEES NSW 2850**  
Client  
**GHQS PTY LTD**

Drawing Title  
**PROPOSED CUT & FILL PLAN**

Design **ST**  
Drawn **JS**  
Check **DOS**

Original Sheet Size **A1**  
Revision **A**

Certification

Project No  
Drawing No

41821  
**C30**