PROPOSED DUAL OCCUPANCY

44 CADAGA ROAD, LOT 499 DP224374, GATESHEAD NSW 2290

Job No. N0221035

STORMWATER SERVICES



STORMWATER LEGEND

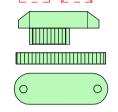


PROPOSED GRATED SUFACE INLET PIT. PIT DIMENSIONS ARE GOVERNED BY DEPTH REFER TO DETAIL. **EXISTING PIT**

PIT TO BE REMOVED

PROPOSED KERB INLET PIT

PROPOSED GRATED DRAIN



PROPOSED RAINWATER TANK DOWNPIPE, RISER OR VERTICAL DROP RWO - RAINWATER OUTLET FOR BALCONIES, ROOF, CARPARK ETC

GS1 - DOWNPIPE WITH RAIN



HEAD OVERFLOW GS2 - DOWNPIPE WITH SUMP SIDE OVERFLOW GS3 - DOWNPIPE WITH SUMP HIGH CAPACITY OVERFLOW

SWALE DRAIN OVERLAND FLOW PATH

ROOF FALL DIRECTION PROPOSED PAVEMENT SURFACE LEVEL PROPOSED PIT SURFACE LEVEL

IL 34.75

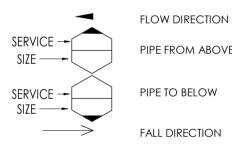
EXISTING SURVEY CONTOUR

EXISTING SURFACE LEVEL

PROPOSED PIT INVERT LEVEL

PROPOSED FINISHED FLOOR LEVEL

GENERAL PIPEWORK LEGEND



PIPE FROM ABOVE PIPE TO BELOW

FALL DIRECTION STW Ø225 @ 1.0%min PIPE TYPE, SIZE AND GRADE

END CAP

CONNECTION

CONTINUATION

KEYNOTE TAG

WITH THE ADJACENT NOTES

PROJECT INFORMATION TABLE

THE TABLES BELOW ARE TO BE READ IN CONJUNCTION

SURVEY INFORMATION THE SURVEY INFORMATION ON THESE DRAWINGS HAS BEEN PROVIDED BY

THE SURVET INFORMATION ON THESE DRAWINGS HAS BEEN FROVIDED BY				
COMPANY DATED				
RPS AUSTRALIA 23.02.22				

Safety in Design

THERE ARE INHERENT RISKS WITH CONSTRUCTING, MAINTAINING, OPERATING, DEMOLISHING, DISMANTLING AND DISPOSING THIS DESIGN THAT ARE TYPICAL OF SIMILAR DESIGNS, AS FAR AS IS REASONABLY PRACTICABLE RISKS HAVE BEEN ELIMINATED OR MINIMISED THROUGH THE DESIGN PROCESS. HAZARD CONTROLS MUST STILL BE IMPLEMENTED BY THE CONTRACTOR, OWNER OR OPERATOR TO ENSURE THE SAFETY OF WORKERS.

• JN DO NOT CONSIDER THAT THERE ARE ANY UNIQUE RISKS ASSOCIATED WITH THE DESIGN OF THIS PROJECT.

GENERAL

COMMENCEMENT OF WORKS

1. ALL EXISTING LEVELS TO BE CONFIRMED ON SITE PRIOR TO

- 2. ALL WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE NOMINATED OR APPLICABLE COUNCIL SPECIFICATION. WHERE A SPECIFICATION HAS NOT BEEN NOMINATED THEN THE CURRENT NSW DEPARTMENT OF HOUSING CONSTRUCTION SPECIFICATION IS TO BE USED. THE NOMINATED SPECIFICATION SHALL TAKE PRECEDENCE TO THESE NOTES
- 3. THESE DRAWINGS ARE DIAGRAMMATIC AND SHOW THE GENERAL ARRANGEMENT, ALL DIMENSIONS SHOWN SHALL BE VERIFIED BY THE CONTRACTOR ON SITE. ENGINEERS DRAWINGS SHALL NOT BE

4. ALL DRAWINGS SHOULD BE READ IN CONJUNCTION WITH THE

RELEVANT ARCHITECTURAL DRAWINGS & DRAWINGS FROM OTHER CONSULTANTS 5. THE CONTRACTOR SHOULD REPORT ANY DISCREPANCIES ON THE DRAWINGS TO THE ENGINEER RESPONSIBLE FOR THE DESIGN.

A THE CONTRACTOR SHOULD LOCATE AND LEVEL ALL EXISTING

- SERVICES PRIOR TO COMMENCING CONSTRUCTION AND PROTECT AND MAKE ARRANGEMENTS WITH THE RELEVANT AUTHORITY TO RELOCATE AND/OR ADJUST IF NECESSARY. INFORMATION GIVEN ON THE DRAWINGS IN RESPECT TO SERVICES IS FOR GUIDANCE ONLY AND IS NOT GUARANTEED
- COMPLETE NOR CORRECT. 7. CONTRACTOR IS NOT TO ENTER UPON NOR DO ANY WORK WITHIN ADJACENT LANDS WITHOUT THE PERMISSION OF THE
- 8. SURPLUS EXCAVATED MATERIAL SHALL BE PLACED WHERE DIRECTED OR REMOVED FROM SITE. 9. ALL NEW WORKS SHALL MAKE A SMOOTH JUNCTION WITH
- 10. ALL DRAINAGE LINES THROUGH ADJACENT LOTS SHALL BE CONTAINED WITHIN EASEMENTS CONFORMING TO COUNCIL'S STANDARDS
- 11. THE CONTRACTOR SHALL CLEAR THE SITE BY REMOVING ALL RUBBISH, FENCES AND DEBRIS ETC. TO THE EXTENT SPECIFIED. 12. PRIOR TO COMMENCEMENT OF WORK, THE CONTRACTOR SHALL PROVIDE A TRAFFIC MANAGEMENT PLAN PREPARED BY AN ACCREDITED PERSON IN ACCORDANCE WITH RMS

1. JONES NICHOLSON IS NOT RESPONSIBLE FOR THE ACCURACY OF ANY 3RD PARTY INFORMATION PROVIDED ON THIS DRAWING.

REQUIREMENTS, FOR ANY WORK ON OR ADJACENT TO PUBLIC

2. ALL LEVELS ARE TO A.H.D. 3. ALL CHAINAGES AND LEVELS ARE IN METRES, AND DIMENSIONS IN

ROADS, PLAN TO BE SUBMITTED TO COUNCIL & RMS.

- MILLIMETRES. 4. SET OUT COORDINATES ARE BASED ON SURVEY DRAWINGS PROVIDED FOR THE PURPOSE OF CARRYING OUT THE
- ENGINEERING DESIGN. 5. CONTRACTOR SHALL VERIFY ALL SET OUT COORDINATES SHOWN
- ON THE PLANS BY A REGISTERED SURVEYOR 6. CONTRACTORS SHALL ARRANGE FOR THE WORKS TO BE SET OUT
- BY A REGISTERED SURVEYOR. 7. ANY DISCREPANCIES SHOULD BE CLARIFIED IN WRITING WITH THE ENGINEER PRIOR TO COMMENCEMENT OF THE WORK FOR CONFIRMATION OF THE SURVEY.

EARTHWORKS

- 1. PROVIDE PROTECTION BARRIERS TO PROTECTED/SENSITIVE AREAS PRIOR TO ANY BUILK EXCAVATION.
- 2. OVER FULL AREA OF EARTHWORKS, CLEAR VEGETATION, RUBBISH. FALLING TO PITS TO MATCH PIT INVERTS. SLABS ETC. AND STRIP TOP SOIL, AVERAGE 200mm THICK. REMOVE FROM SITE, EXCEPT TOP SOIL FOR RE-USE.
- 3. CUT AND FILL OVER THE SITE TO LEVELS REQUIRED. 4. PRIOR TO ANY FILLING IN AREAS OF CUT OR IN EXISTING GROUND, PROOF ROLL THE EXPOSED SURFACE, REFER TO
- PROJECT INFORMATION TABLES FOR MINIMUM ROLLER WEIGHT AND THE MINIMUM NUMBER OF PASSES. 5. EXCAVATE AND REMOVE ANY SOFT SPOTS ENCOUNTERED DURING PROOF ROLLING AND REPLACE WITH APPROVED FILL AND FILL SHALL BE COMPACTED TO 98% STANDARD MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT $\pm 2\%$.
- 6. FOR ON SITE FILLING AREAS, THE CONTRACTOR SHALL TAKE LEVELS OF EXISTING SURFACE AFTER STRIPPING TOPSOIL AND PRIOR TO COMMENCING FILL OPERATIONS.
- 7. WHERE HARD ROCK IS EXPOSED IN THE EXCAVATED SUB-GRADE, THIS WILL BE INSPECTED AND A DECISION MADE ON THE LEVEL TO WHICH EXCAVATION IS TAKEN.
- 8. FILL IN 200mm MAXIMUM (LOOSE THICKNESS) LAYERS TO UNDERSIDE OF BASECOURSE USING THE EXCAVATED MATERIAL DRY DENSITY AT OPTIMUM MOISTURE CONTENT ± 2% SHOULD THERE BE INSUFFICIENT MATERIAL FROM SITE EXCAVATIONS, IMPORT AS NECESSARY CLEAN GRANULAR FILL TO THE DESIGN ENGINEERS APPROVAL
- 9. COMPACTION TESTING TO BE CARRIED OUT IN ACCORDANCE WITH THE PROJECT INFORMATION TABLE. THE COSTS OF TESTING AND RE-TESTING ARE TO BE ALLOWED FOR BY THE BUILDER. 10. BATTERS TO BE AS SHOWN, OR MAXIMUM 1 VERT: 4 HORIZ, ALL CONDUITS AND MAINS SHALL BE LAID PRIOR TO LAYING FINAL
- 11. ALL BATTERS AND FOOTPATHS ADJACENT TO ROADS SHALL BE TOP SOILED WITH 150mm APPROVED LOAM AND SEEDED UNLESS OTHERWISE SPECIFIED.

STORMWATER DRAINAGE INSTALLATION

- 1. SUPPLY & INSTALLATION OF DRAINAGE WORKS TO BE IN ACCORDANCEWITH THESE DRAWINGS, THE COUNCIL
- SPECIFICATION AND THE CURRENT APPLICABLE AUSTRALIAN STANDARDS BEDDING OF THE PIPELINES IS TO BE TYPE 'HS2' IN ACCORDANCE WITH THE STANDARDS AND AS FOLLOWS a. COMPACTED GRANULAR MATERIAL IS TO COMPLY WITH THE FOLLOWING GRADINGS:

SIEVE SIZE (mm)	19	2.36	0.60	0.30	0.15	0.075
% MASS PASSING	100	50-100	20-90	10-60	0-25	0-10

- AND THE MATERIAL PASSING THE 0.075 SIEVE HAVING LOW

- PLASTICITY AS DESCRIBED IN APPENDIX D OF AS1726. b. BEDDING DEPTH UNDER THE PIPE TO BE 100mm. C. BEDDING MATERIAL TO BE EXTENDED FROM THE TOP OF THE BEDDING ZONE UP TO 0.3 TIMES PIPE OUTSIDE DIAMETER. THIS REPRESENTS THE 'HALINCH TONE d. THE BEDDING & HAUNCH ZONE MATERIAL IS TO BE
- COMPACTED TO A MINIMUM RELATIVE COMPACTION OF 98% WITHIN ROAD RESERVES AND TRAFFICABLE AREAS AND 95% FLSEWHERE FOR COHESIVE MATERIAL OR A MINIMUM DENSITY INDEX OF 70% IN ACCORDANCE WITH THE STANDARDS FOR COHESIONLESS MATERIAL.
- e. COMPACTION TESTING SHALL BE CARRIED OUT BY AN APPROVED ORGANISATION WITH A NATA CERTIFIED LABORATORY FOR ALL DRAINAGE LINES LAID WHOLLY OR IN PART UNDER THE KERB & GUTTER OR PAVEMENT. 3. BACKFILL SHALL BE PLACED & COMPACTED IN ACCORDANCE
- WITH THE SPECIFICATION, A GRANULAR GRAVEL AGGREGATE MATERIAL (<10mm) BACKFILL IS RECOMMENDED FOR THE BEDDING, HAUNCH SUPPORT AND SIDE ZONE DUE TO IT'S SELF COMPACTING ABILITY. 4. A MINIMUM OF 150mm CLEARANCE IS TO BE PROVIDED BETWEEN

STORMWATER DRAINAGE

AND D/6 CLEARANCE FOR PIPES > 1200 DIA.

1. STORMWATER DRAINAGE SHALL BE GENERALLY IN ACCORDANCE WITH CURRENT AUSTRALIAN STANDARDS AND COUNCIL'S

THE OUTSIDE OF THE PIPE BARREL AND THE TRENCH WALL FOR

PIPES < 600 DIA. 200mm CLEARANCE FOR PIPES 600 TO 1200 DIA

- 2. PIPES OF 225mm DIA. AND UNDER SHALL BE UPVC. PIPES OF 300mm DIA. AND LARGER SHALL BE FRC OR CONCRETE CLASS 2 RUBBER RING JOINTED UNO.
- 4. ALL FRC OR RCP STORMWATER PIPES WITHIN ROAD RESERVE AREAS
- 5. MINIMUM COVER TO PIPES 300mm DIA. AND OVER GENERALLY SHALL BE 600mm IN CARPARK & ROADWAY AREAS UNO. 6. PIPES SHALL GENERALLY BE LAID AT THE GRADES INDICATED ON THE
- 7. PIPES UP TO 150mm DIA SHALL BE LAID AT 1.0% MIN. GRADE U.N.O. 8. PIPES 225mm DIA AND OVER SHALL BE LAID AT 0.5% MIN. GRADE
- 9. BACKFILL TRENCHES WITH APPROVED FILL COMPACTED IN 200mm LAYERS TO 98% OF STANDARD DENSITY.
- 10. ANY PIPES OVER 16% GRADE SHALL HAVE CONCRETE BULKHEADS AT 11. PITS SHALL BE AS DETAILED WITH METAL GRATES AT LEVELS
- INDICATED. ALL PITS DEEPER THAN 1200mm TO HAVE CLIMB IRONS. 12. BUILD INTO UPSTREAM FACE OF ALL PITS A 3.0m SUBSOIL LINE
- 13. ALL COURTYARD & LANDSCAPED PITS TO BE 450 SQUARE LOAD CLASS A UNLESS NOTED OTHERWISE.
- 14. ALL DRIVEWAY & OSD PITS TO BE 600 SQUARE LOAD CLASS D UNLESS 15. INSTALL TEMPORARY SEDIMENT BARRIERS TO INLET PITS, TO
- COUNCIL'S STANDARDS UNTIL SURROUNDING AREAS ARE PAVED OR 16. PITS & DOWNPIPE LOCATIONS AND LEVELS MAY BE VARIED TO SUIT
- SITE CONDITIONS AFTER CONSULTING THE ENGINEER. COMPACTED IN LAYERS. THE WHOLE OF THE EXPOSED SUBGRADE 17. DOWNPIPES SHOWN ARE INDICATIVE ONLY, ALL ROOF GUTTERING AND DOWNPIPES TO THE CURRENT AUSTRALIAN STANDARDS. 18. ALL PLANTER BOXES AND BALCONIES TO BE CONNECTED TO THE
 - PROPOSED STORMWATER DRAINAGE LINE. 19. HAND-EXCAVATE STORMWATER PIPES IN VICINITY OF TREE ROOTS. 20. FOOTPATH CROSSING LEVELS SHOWN ARE TO BE ADJUSTED TO FINAL COUNCIL'S ISSUED LEVELS.
 - 21. GEOTEXTILE FABRIC TO BE PLACED UNDER RIP RAP SCOUR PROTECTION. 22. ALL BASES OF PITS TO BE BENCHED TO HALF PIPE DEPTH AND
- PROVIDE GALVANISED ANGLE SURROUNDINGS TO GRATE. AND COMPACTED TO 98% STANDARD (AS 1289 5.1.1), MAXIMUM 23, SUBSOIL LINE PIPES AND FITTINGS SHALL BE PERFORATED PLASTIC TO CURRENT AUSTRALIAN STANDARDS. LAY PIPES ON FLOOR OF TRENCH GRADED AT 1% MIN. AND OVERLAY WITH FILTER MATERIAL EXTENDING TO WITHIN 200mm OF SURFACE. PROVIDE FILTER FABRIC OF PERMEABLE POLYPROPYLENE BETWEEN FILTER MATERIAL AND
 - 24. SHOULD THE CONTRACTOR ELECT TO INSTALL PRECAST STORMWATER PITS AND THEY ARE PERMITTED BY COUNCIL AND THE CLIENT, THE PRECAST PITS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH RMS STANDARDS INCLUDING:
 - 1. SEAL THE SEGMENTS TOGETHER USING A SITE-APPROVED NON-SHRINK GROUT OR MASTIC-TYPE PRODUCT. APPLY THE SEALANT IN ACCORDANCE WITH THE PRODUCT MANUFACTURER'S REQUIREMENTS.
 - 2. ENSURE THAT NO GAPS REMAIN AND THAT A SMOOTH FACE EXISTS BETWEEN MULTIPLE UNITS.
 - 3. LEAVE THE SEGMENTS UNDISTURBED UNTIL THE PERIOD OF CURING IS COMPLETED IN ACCORDANCE WITH THE GROUT OR SEALANT PRODUCT MANUFACTURER'S REQUIREMENTS.

PAVEMENT LEGEND

	EXTENT OF CONCRETE PAVEMENT
<u>DJ</u>	DOWELLED JOINT
KJ	KEYED JOINT
<u>SC</u>	SAW CUT JOINT
BJ	BUTT JOINT
	2N12 TRIMMERS x 1200 LONG (TIED UNDER TOP MESH)
150 K&G	150mm HIGH KERB & GUTTER
150 KO	150mm HIGH KERB ONLY

EXTENT OF BITUMEN PAVEMENT

PAVEMENT - RIGID

PAVEMENT

- 1. THE PAVEMENT DESIGN AS DETAILED ASSUMES A PROPERLY PREPARED UNIFORM AND STABLE SUBGRADE. CONFIRMATION OF DESIGN CBR RATIO IS REQUIRED BY A GEOTECHNICAL ENGINEER PRIOR TO WORKS
- COMMENCING 2. PREPARATION FOR PAVEMENT: CLEAR SITE, STRIP TOPSOIL, CUT AND FILL AND PREPARATION OF SUBGRADE SHALL BE AS DESCRIBED IN
- "EARTHWORKS" NOTES 3. SUBGRADE SHALL BE COMPACTED TO 98% STANDARD MAXIMUM DRY
- DENSITY AT OPTIMUM MOISTURE CONTENT ± 2% IN ACCORDANCE WITH AS 4. BASE COURSE SHALL BE CONSTRUCTED FROM FINE CRUSHED ROCK DGB20
- COMPACTED TO 100% STANDARD MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT ± 2% IN ACCORDANCE WITH AS 1289 5.1.11 CONCRETE PAVEMENT SLABS SHALL BE AS DETAILED ON THE DRAWINGS.
- 6. ALL WORKMANSHIP AND MATERIALS FOR CONCRETE WORK SHALL BE IN ACCORDANCE WITH AS 3600 AND AS 3610 CURRENT EDITIONS WITH AMENDMENTS, EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.

7. CONCRETE QUALITY ALL CEMENT SHALL BE TYPE SL SHRINKAGE LIMITED

CEMENTIN	ACCORDANCE WITH A	453972	
ELEMENT	STRENGTH GRADE (MPa)	SLUMP	MAXIMUM AGGREG. SIZE (mm)

- 80 8. PROJECT CONTROL TESTING SHALL BE CARRIED OUT IN ACCORDANCE WITH
- 9. NO ADMIXTURES SHALL BE USED IN CONCRETE UNLESS APPROVED IN
- 10. CLEAR CONCRETE COVER TO ALL REINFORCEMENT FOR DURABILITY SHALL
- 11. CONSTRUCTION JOINTS WHERE NOT SHOWN SHALL BE LOCATED TO THE APPROVAL OF THE ENGINEER. 12. THE FINISHED CONCRETE SHALL BE MECHANICALLY VIBRATED TO ACHIEVE
- A DENSE HOMOGENEOUS MASS. COMPLETELY FILLING THE FORMWORK THOROUGHLY EMBEDDING THE REINFORCEMENT AND FREE OF STONE POCKETS. CONCRETE SHALL BE COMPACTED WITH MECHANICAL
- 13. CURING OF ALL CONCRETE IS TO BE ACHIEVED BY KEEPING SURFACES CONTINUOUSLY WET FOR A PERIOD OF THREE DAYS, AND THE PREVENTION OF LOSS OF MOISTURE FOR A TOTAL OF 7 DAYS FOLLOWED BY A GRADUAL DRYING OUT.

14. REPAIRS TO CONCRETE SHALL NOT BE ATTEMPTED WITHOUT THE PERMISSION

DATE DESCRIPTION 05.04.23 ISSUED FOR DA

CIVIL DRAWING LIST				
No. SHEET NAME				
C001 NOTES & LEGEND				
C050 TYPICAL DETAILS				
C200	C200 GROUND STORMWATER PLAN			
C300 ROOF STORMWATER PLAN				
C400	DRIVEWAY LAYOUT PLAN			



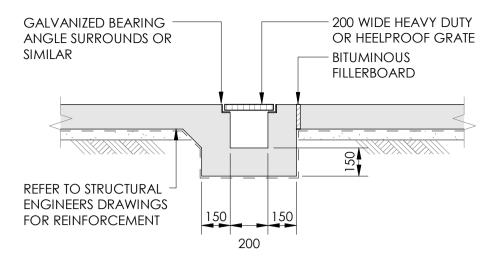
ZMP ARCHITECTS

PRELIMINARY

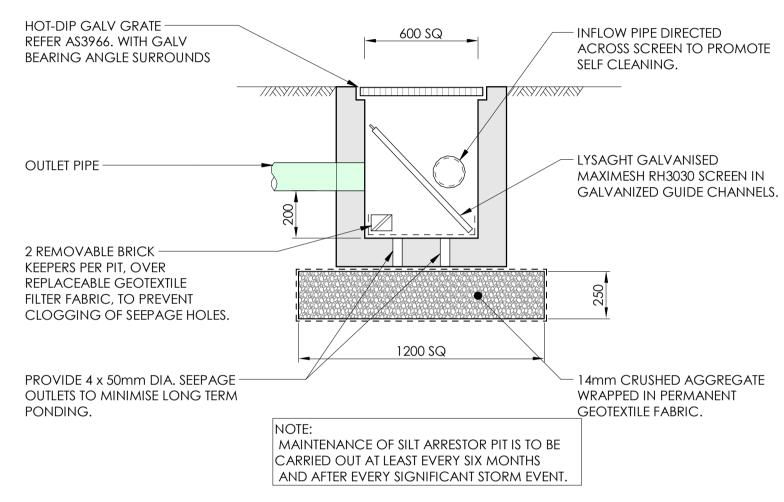
CIVIL DESIGN

DRAWING TITLE **NOTES & LEGEND**

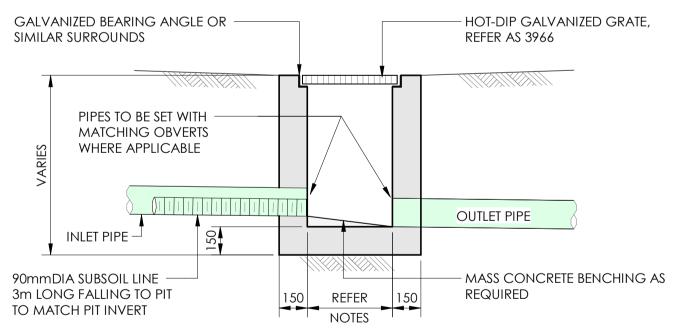
PROPOSED DUAL OCCUPANCY



TYPICAL 200mm GRATED DRAIN DETAIL



TYPICAL SILT ARRESTOR PIT



MINIM	minimum internal dimensions for stormwater pits			
DEPTH OF INVERT OF OUTLET DEPTH OF INVERT OF OUTLET			OF OUTLET	
		WIDTH	LENGTH	
	< 600	450	450	
> 600		600	600	
> 900		600	900	
> 1200		900	900	
*STEP IRONS SHALL BE PROVIDED FOR PITS WITH DEPTHS EXCEEDING 1000mm				

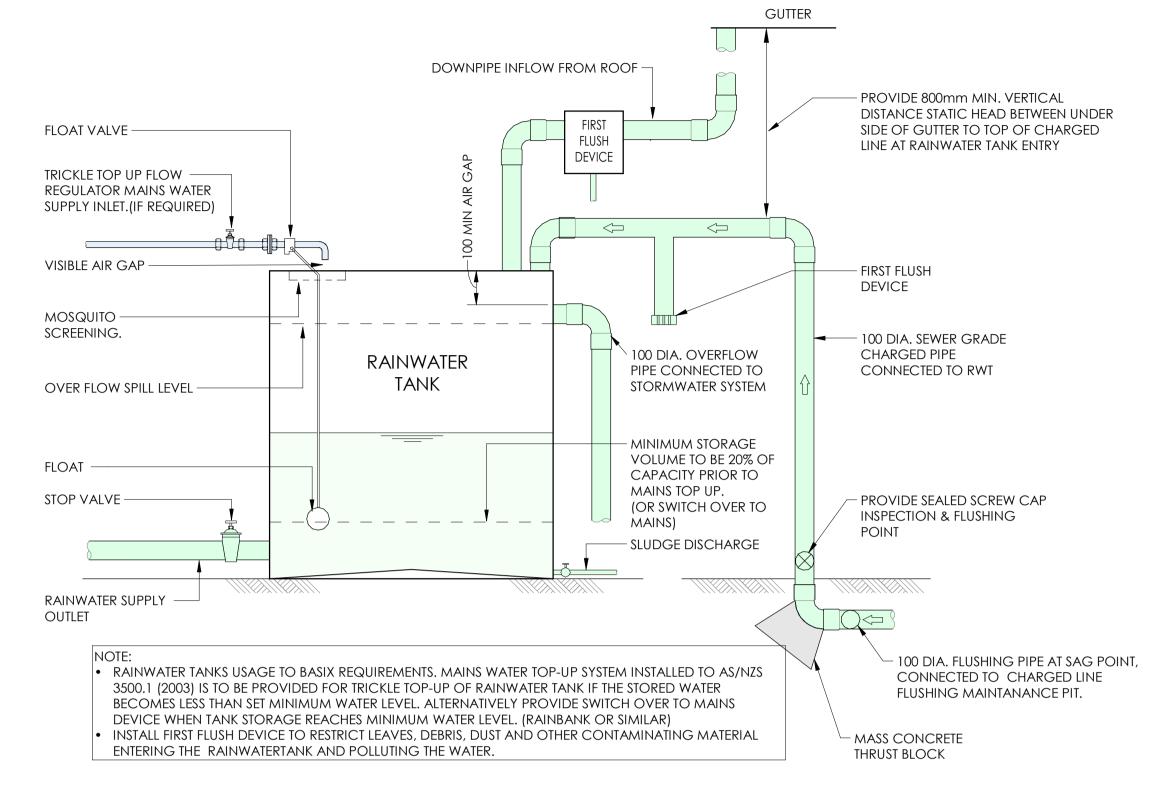
NOTE:

1. CLIMB IRONS SHALL BE PROVIDED UNDER LID AT 300 CTS TO COUNCIL STANDARDS WHERE PIT

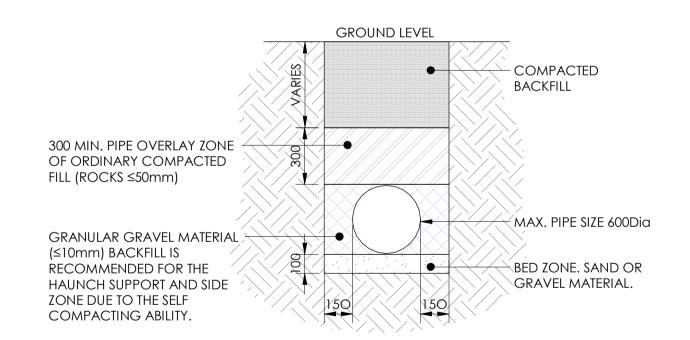
DEPTH IS DEEPER THAN 1000. 2. PROVIDE 90Dia x 3000 LONG SUBSOIL DRAINAGE STUB PIPE SURROUNDED WITH 100mm THICKNESS OF NOMINAL 20mm COARSE FILTER MATERIAL WRAPPED IN GEOTEXTILE FILTER

(BIDUM A24 OR APPROVED SIMILAR). TO BE PARALLEL TO UPSTREAM SIDE OF EACH INLET PIPE. 4. ALTERNATIVE PIT CONSTRUCTION MAY BE USED SUBJECT TO THE ENGINEERS APPROVAL. 5. CONCRETE STRENGTH F'c = 32 MPa

> TYPICAL CONCRETE INLET PIT -NATURAL SURFACE



TYPICAL RAINWATER TANK DETAIL - CHARGED LINE



TYPICAL SCHEMATIC PIPE TRENCH DETAIL



ZMP ARCHITECTS

No DATE

1 05.04.23 ISSUED FOR DA

DESCRIPTION

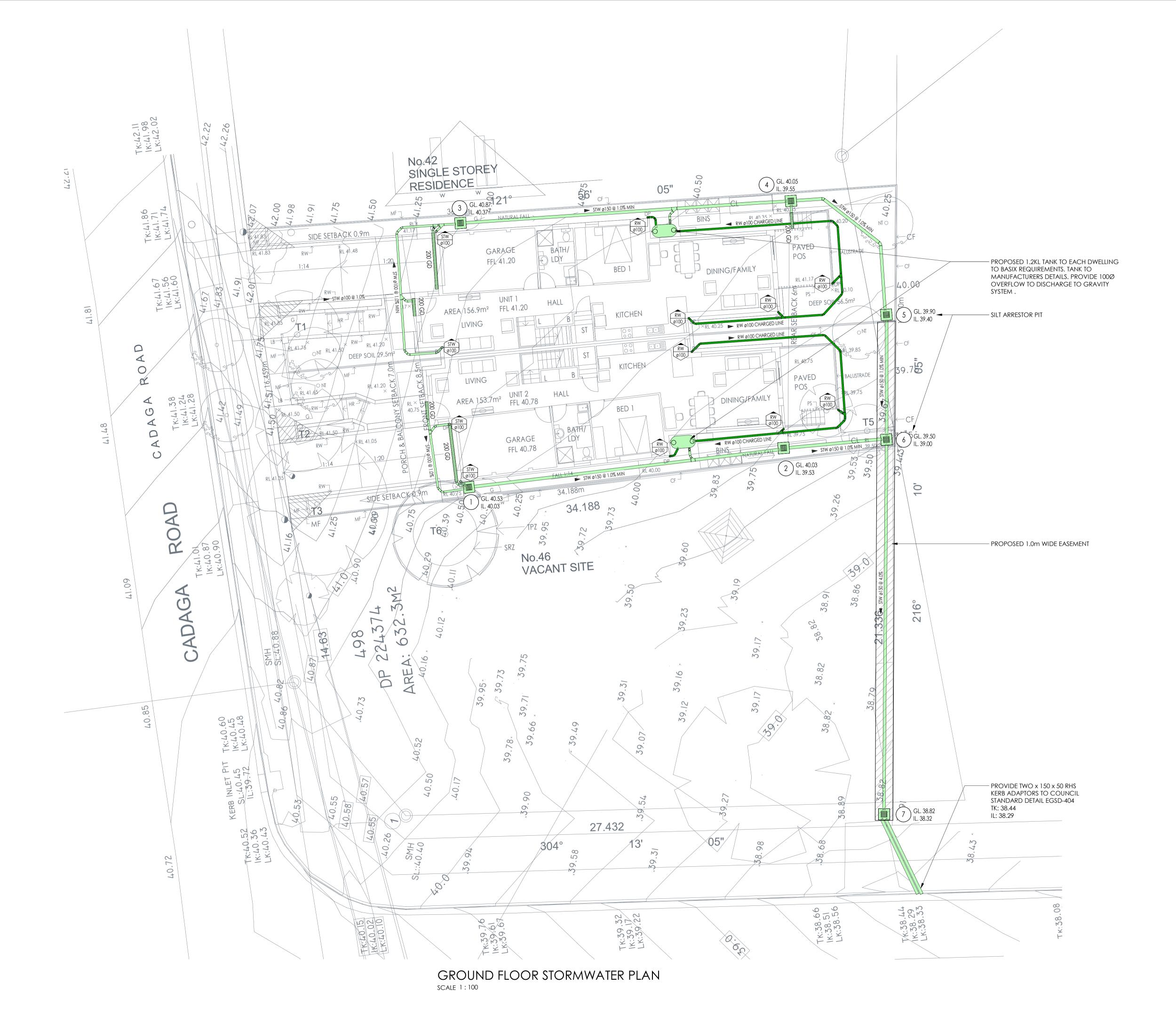
STATUS

CIVIL DESIGN

TYPICAL DETAILS

PROJECT PROPOSED DUAL OCCUPANCY





No	DATE	DESCRIPTION	BY
1	05.04.23	ISSUED FOR DA	ER

STORMWATER DESIGN SUMMARY:

LAKE MACQUARIE DCP - 2014 DRAINAGE DESIGN HANDBOOK - 2013 WATER CYCLE MANAGEMENT GUIDELINES, **REVISION 2 - 2013**

SITE AREA: 543.8m² PROPOSED DUAL OCCUPANCY IMPERVIOUS AREA: 418m² ROOF AREA: 285m²

SDI = 0, ALL IMPERVIOUS AREAS DRAIN THROUGH EITHER THE RAINWATER TANK OR SILT ARRESTOR PITS WITH TRASH SCREEN, SUMP AND INFILTRATION BASE.

ONSITE DETENTION NOT REQUIRED FOR DUAL OCCUPANCY

WATER CYCLE MANAGEMENT PLAN NOT REQUIRED FOR DUAL OCCUPANCY



ZMP ARCHITECTS

PRELIMINARY

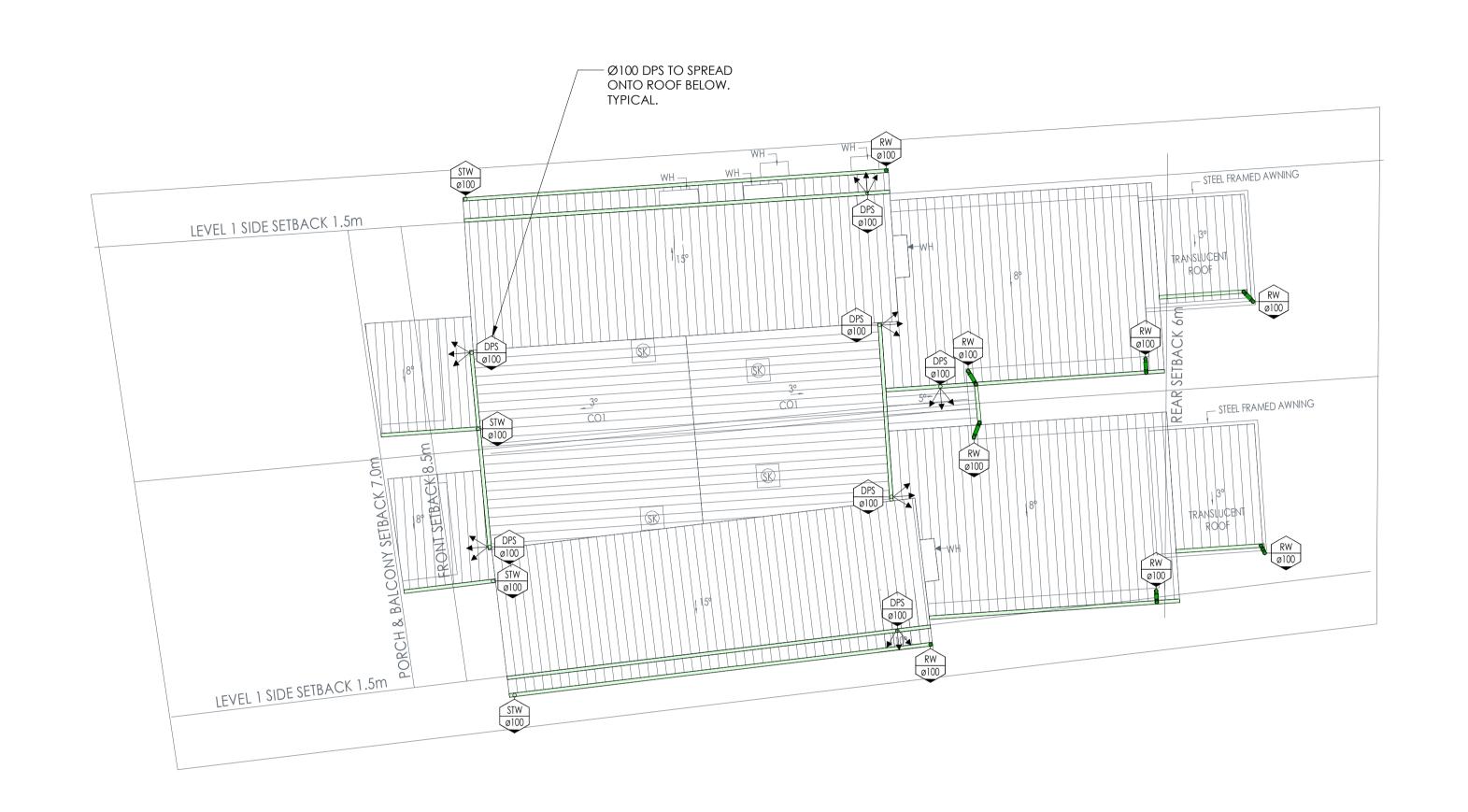
CIVIL DESIGN

GROUND STORMWATER PLAN

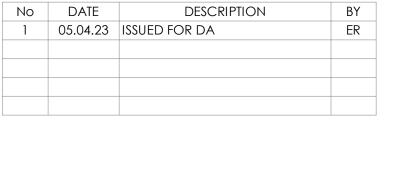
PROJECT

PROPOSED DUAL OCCUPANCY





ROOF STORMWATER PLAN SCALE 1:100





ZMP ARCHITECTS

STATUS PRELIMINARY

CIVIL DESIGN

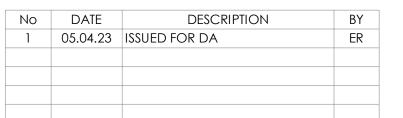
ROOF STORMWATER PLAN

PROJECT

PROPOSED DUAL OCCUPANCY







LEGEND



NEW KERB LAYBACK TO COUNCIL STANDARD DETAIL EGSD-103



NEW FOOTPATH TO COUNCIL STANDARD DETAIL EGSD-301



NEW VEHICLE ACCESS TO COUNCIL STANDARD DETAIL EGSD-201



ZMP ARCHITECTS

PRELIMINARY

DISCIPLINE **CIVIL DESIGN**

DRIVEWAY LAYOUT PLAN

PROJECT

PROPOSED DUAL OCCUPANCY



PROPOSED DUAL OCCUPANCY

44 CADAGA ROAD, LOT 499 DP224374, GATESHEAD NSW 2290 Job No. N0221035

ENVIRONMENTAL SITE MANAGEMENT LEGEND

----- PROPOSED BUILDING LINE

- - - - - PROPRIETARY SILT FENCE

PROVIDE TEMPORARY CHAIN WIRE FENCING (HOARDING) ALONG THE SITE BOUNDARY.

TEMPORARY STABALISED CONSTRUCTION ENTRY/EXIT. (SHAKER PAD)

TEMPORARY FILTER TUBE WITH SAFETY BARRICADE KERB INLET PITS.

NOMINATED DISPOSAL ROUTE FOR TRUCK MATERIAL TRANSPORTATION.

TEMPORARY MASS CONCRETE FOOTPATH CROSSING.

UNDISTURBED NON-TRAFFICABLE AREA

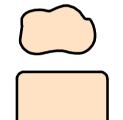
DIVERSION BANK



SURFACE INLET DRAINAGE PIT WITH SURROUNDING FILTER

SEDIMENT TRAP OR FILTER TUBES (SANDBAGS)

TEMPORARY GEOTEXTILE WRAPPED HAY BALES/SAND BAGS



SITE EQUIPMENT LOCATIONS

STOCK MATERIALS

SAFETY IN DESIGN THERE ARE INHERENT RISKS WITH CONSTRUCTING, MAINTAINING, OPERATING, DEMOLISHING, DISMANTLING AND DISPOSING THIS DESIGN THAT ARE TYPICAL OF SIMILAR DESIGNS. AS FAR AS IS

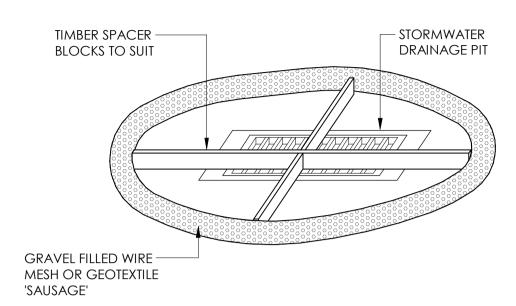
REASONABLY PRACTICABLE RISKS HAVE BEEN ELIMINATED OR MINIMISED THROUGH THE DESIGN PROCESS. HAZARD CONTROLS MUST STILL BE IMPLEMENTED BY THE CONTRACTOR, OWNER OR OPERATOR TO ENSURE THE SAFETY OF WORKERS.

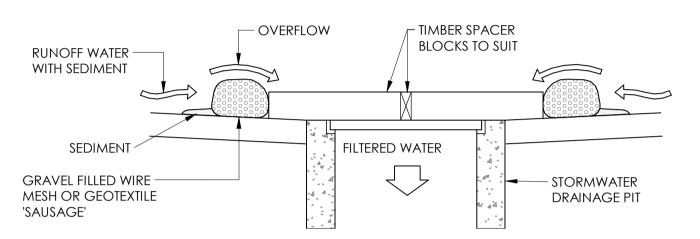
• JN DO NOT CONSIDER THAT THERE ARE ANY UNIQUE RISKS ASSOCIATED WITH THE DESIGN OF THIS PROJECT.

ESM DRAWING LIST			
No.	SHEET NAME		
ESM1	ESM1 NOTES LEGEND & DETAILS		
ESM2 ESM PLAN			

ENVIRONMENTAL SITE MANAGEMENT

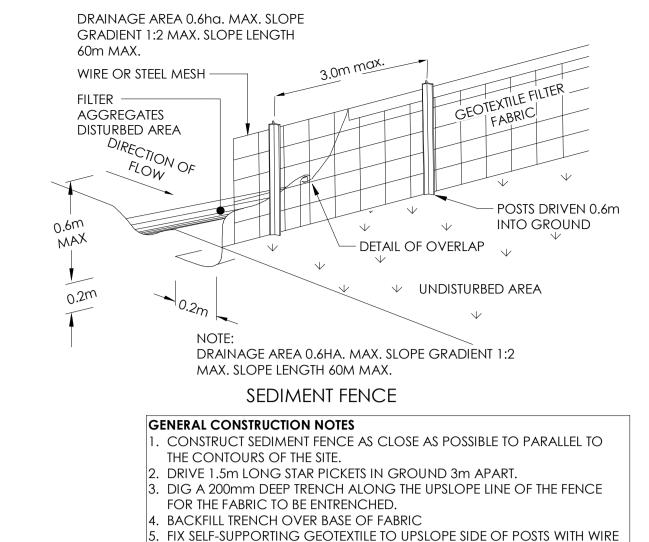
- 1. EROSION & SEDIMENT CONTROLS TO BE INSTALLED IN ACCORDANCE WITH COUNCIL'S SPECIFICATION & THE NSW DEPARTMENT OF HOUSING "BLUE BOOK" -SOILS AND CONSTRUCTION - MANAGING URBAN STORMWATER, 2004. REFER TO THE BLUE BOOK FOR STANDARD DRAWINGS "SD"
- 2. SEDIMENT & EROSION CONTROLS MUST BE IN PLACE PRIOR TO THE COMMENCEMENT OF ANY EARTHWORKS OR DEMOLITION ACTIVITY. THE LOCATION OF SUCH DEVICES IS INDICATIVE ONLY AND FINAL POSITION SHOULD BE
- 3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL MEASURES ARE TAKEN DURING THE COURSE OF CONSTRUCTION TO PREVENT SEDIMENT EROSION AND POLLUTION OF THE DOWNSTREAM SYSTEM, SUPERVISING ENGINEER SHOULD BE CONTACTED IF IN DOUBT. ALL SEDIMENT CONTROL STRUCTURES TO BE INSPECTED AFTER EACH RAINFALL EVENT FOR STRUCTURAL DAMAGE AND ALL TRAPPED SEDIMENT TO BE REMOVED TO A NOMINATED SOIL STOCKPILE SITE.
- 4. RETAIN ALL EXISTING GRASS COVER WHEREVER POSSIBLE. TOPSOIL FROM ALL AREAS THAT WILL BE DISTURBED TO BE STRIPPED AND STOCKPILED AT THE NOMINATED SITE. A SEDIMENT FENCE TO BE PLACED DOWNHILL OF STOCKPILE
- 5. AREAS OF SITE REGRADING ARE TO BE COMPLETED PROGRESSIVELY DURING THE WORKS AND STABILISED AS EARLY AS POSSIBLE. THE SUPERVISING ENGINEER MAY DIRECT THE CONTRACTOR TO HAVE AREAS OF DISTURBANCE COMPLETED AND STABILISED DURING THE COURSE OF THE WORKS.
- 6. ALL DISTURBED AREAS ARE TO BE SEEDED & FERTILISED WITHIN 14 DAYS OF EXPOSURE 7. ALL EXISTING TREES TO BE RETAINED UNLESS SHOWN OTHERWISE ON APPROVED DRAWINGS. TREES RETAINED ARE TO BE PROTECTED WITH A HIGH VISIBILITY FENCE,
- PLUS FLAGGING TO INDIVIDUAL TREES AS NECESSARY 8. INSTALL TEMPORARY SEDIMENT BARRIERS TO ALL INLET PITS LIKELY TO COLLECT SILT LADEN WATER, UNTIL SURROUNDING AREAS ARE PAVED OR REGRASSED. GRAVEL OR
- GEOTEXTILE INLET FILTERS TO SD6-11 & SD6-12. 9. ALL SILT FENCES & BARRIERS ARE TO BE MAINTAINED IN GOOD ORDER & REGULARLY DESILTED DURING THE CONSTRUCTION PERIOD. SILT FENCES TO SD6-8 OR SD6-9.
- 10. STOCKPILES OF LOOSE MATERIALS SUCH AS SAND, SOIL, GRAVEL MUST BE COVERED WITH GEOTEXTILE SILT FENCE MATERIAL. PLASTIC SHEETING OR MEMBRANE MUST NOT BE USED. SAFETY BARRICADING SHOULD BE USED TO ISOLATE STOCKPILES OF SOLID
- MATERIALS SUCH AS STEEL REINFORCING, FORMWORK AND SCAFFOLDING. 11. WASTE MATERIALS ARE TO BE STOCKPILED OR LOADED INTO SKIP-BINS LOCATED ON SITE AS SHOWN ON PLAN.
- 12. NO MORE THAN 150m OF TRENCHING TO BE OPEN AT ANY ONE TIME. IMMEDIATELY AFTER TRENCH BACKFILLING, PROVIDE SANDBAGS OR SAUSAGE FILTERS ACROSS EACH TRENCH AT MAXIMUM 20m SPACINGS. FILTERS TO REMAIN IN PLACE UNTIL REVEGETATION HAS OCCURRED.
- 13. ALL VEHICLES LEAVING THE SITE MUST PASS OVER THE STABILISED SITE ACCESS BALLAST AREA (SIMILAR TO SD6-14) TO SHAKE OFF SITE CLAY AND SOIL. IF NECESSARY WHEELS AND AXLES ARE TO BE HOSED DOWN. BALLAST IS TO BE MAINTAINED & REPLACED AS NECESSARY DURING THE CONSTRUCTION PERIOD.
- 14. THE HEAD CONTRACTOR IS TO INFORM ALL SITE STAFF AND SUB-CONTRACTORS OF THEIR OBLIGATIONS UNDER THE EROSION AND SEDIMENT CONTROL PLAN.
- 15. ANY SEDIMENT DEPOSITED ON THE PUBLIC WAY, INCLUDING FOOTPATH RESERVE AND ROAD SURFACE, IS TO BE REMOVED IMMEDIATELY.
- 16. PROVIDE BARRIERS AROUND ALL CONSTRUCTION WORKS WITHIN THE FOOTPATH AREA TO PROVIDE SAFE ACCESS FOR PEDESTRIANS.
- 17. CONCRETE PUMPS AND CRANES ARE TO OPERATE FROM WITHIN THE BALLAST ENTRY DRIVEWAY AREA AND ARE NOT TO OPERATE FROM THE PUBLIC ROADWAY UNLESS SPECIFIC COUNCIL PERMISSION IS OBTAINED.
- 18. TRUCKS REMOVING EXCAVATED / DEMOLISHED MATERIAL SHOULD TRAVEL ON STABILISED CONSTRUCTION PATHS. MATERIAL TO BE TAKEN TO THE TRUCK TO REDUCE TRUCK MOVEMENT ON SITE. TRUCKS TO BE LIMITED TO SINGLE UNIT HEAVY RIGID VEHICLES. (NO SEMITRAILERS)
- 19. ANY EXCAVATION WORK ADJACENT TO ADJOINING PROPERTIES OR THE PUBLIC ROADWAY IS NOT TO BE COMMENCED UNTIL THE STRUCTURAL ENGINEER IS CONSULTED AND SPECIFIC INSTRUCTIONS RECEIVED FROM THE ENGINEER.
- 20. TOILET FACILITIES MUST BE EITHER A FLUSHING TYPE OR APPROVED PORTABLE CHEMICAL CLOSET. CHEMICAL CLOSETS ARE TO BE MAINTAINED & SERVICED ON A REGULAR BASIS SO THAT OFFENSIVE ODOUR IS NOT EMITTED.
- 21. DURING TRENCH EXCAVATION ALL SPOIL SHALL BE MOUNDED ON THE UPHILL SIDE OF TRENCHES AND PLACEMENT IS TO COMPLY WITH THE SUPERINTENDENTS REQUIREMENT.
- 22. DIVERSION BANKS SHOULD BE CONSTRUCTED BY MOUNDING STRIPPED TOPSOIL (MIN HEIGHT 600mm) WHERE DIRECTED. MATERIAL TO BE RESPREAD ON FOOTWAYS AFTER FINAL TRIMMING.
- 23. UNDISTURBED BUFFER ZONE AREAS ARE CLOSED TO ALL TRAFFIC MOVEMENTS UNLESS OTHERWISE NOTED BY THE SUPERINTENDENT AND ACCESS TO THE SEWER OR C.D.L. TRENCHING WILL BE AS SHOWN, OR HEAVY PENALTIES MAY BE IMPOSED.
- 24. TRAFFIC MANAGEMENT MEASURES ARE REQUIRED TO BE IMPLEMENTED AND MAINTAINED DURING CONSTRUCTION, IN ACCORDANCE WITH 'R.T.A. TRAFFIC CONTROL AT WORK SITES - CURRENT EDITION' AND AS 1742 'MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.'
- 25. PEDESTRIAN CONTROL MEASURES ARE REQUIRED TO BE IMPLEMENTED AND MAINTAINED DURING CONSTRUCTION. IN ACCORDANCE WITH AS 1742 'MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

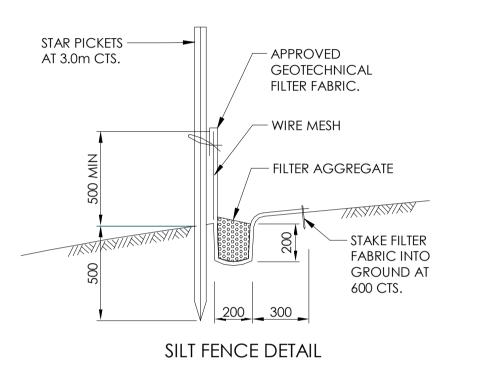




- 1. FABRICATE A SLEEVE MADE FROM GEOTEXTILE OR WIRE MESH LONGER
- THAN THE LENGTH ON THE INLET PIT.
- 2. FILL THE SLEEVE WITH 25mm TO 50mm GRAVEL. 3. FORM AN ELLIPTICAL CROSS SECTION ABOUT 150mm HIGH x 400mm
- 4. MAINTAIN A CLEAR DISTANCE AWAY FROM THE PIT WITH SPACER BLOCKS.

SAUSAGE BARRIER DETAIL

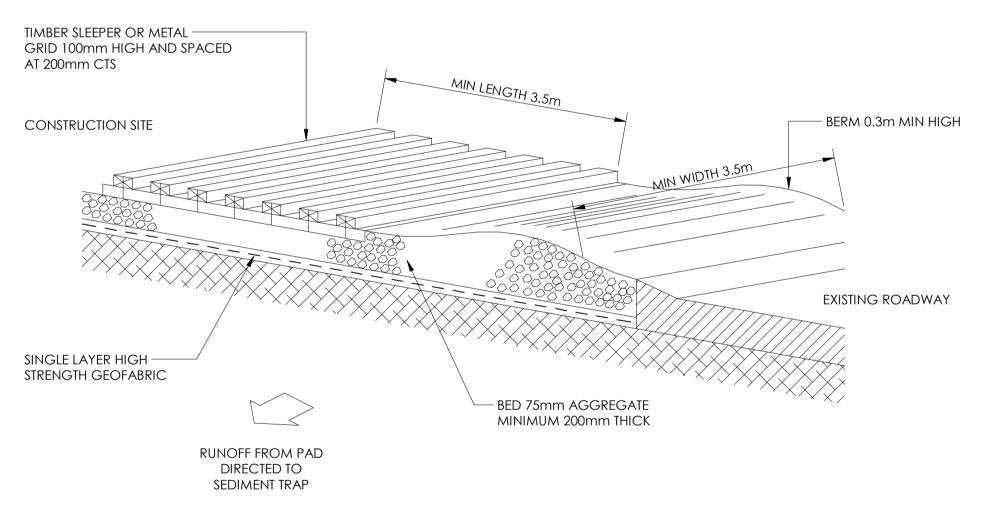




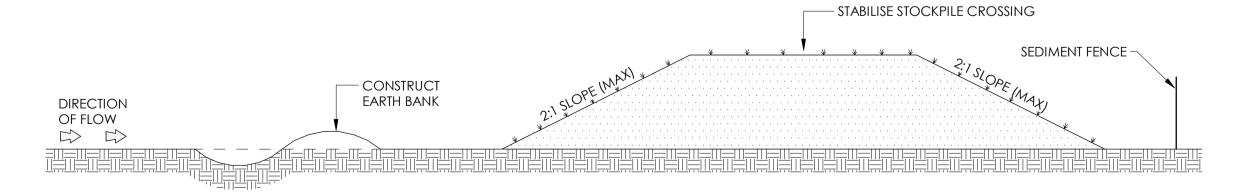
TIES OR AS RECOMMENDED BY GEOTEXTILE MANUFACTURER.

JOIN SECTIONS OF FABRIC AT A SUPPORT WITH A 150m OVERLAP.

SEDIMENT SILT FENCE DETAIL



TEMPORARY CONSTRUCTION EXIT DETAIL - SHAKER



STOCKPILES

N.T.S GENERAL CONSTRUCTION NOTES:

- 1. LOCATE STOCKPILE AT LEAST 5m FROM VEGETATION, CONCENTRATED WATER FLOWS, ROADS AND HAZARD AREAS.
- 2. CONSTRUCT ON THE CONTOUR AS A LOW FLAT ELONGATED MOUND.

AND A SEDIMENT FENCE 1m TO 2m DOWNSLOPE OF STOCKPILE.

3. WHERE THERE IS A SUFFICIENT AREA TOPSOIL STOCKPILES SHALL BE LESS THAN 2m IN HEIGHT. (TO ALLOW AIR VENTILATION FOR FUTURE REUSE) 4. REHABILITATE IN ACCORDANCE WITH THE SWMP/ESCP

5. CONSTRUCT EARTH BANK ON THE UPSLOPE SIDE TO DIVERT RUN OFF AROUND THE STOCKPILE

STOCKPILES



DESCRIPTION

DATE

05.04.23 ISSUED FOR DA

ZMP ARCHITECTS

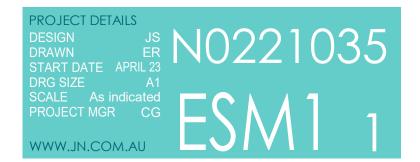
PRELIMINARY

CIVIL DESIGN

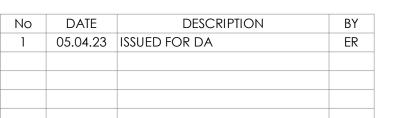
NOTES LEGEND & DETAILS

PROPOSED DUAL

OCCUPANCY 44 CADAGA ROAD, LOT 499 DP224374, GATESHEAD NSW









ZMP ARCHITECTS

PRELIMINARY

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DISCIPLINE CIVIL DESIGN

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