FORESTVILLE RSL CLUB REDEVELOPMENT 22 MELWOOD AVENUE, FORESTVILLE, NSW, 2087 **CIVIL SERVICES**



TEMPORARY STOCKPILE WITH SEDIMENT FENCE SURROUND

EXISTING SERVICES LEGEND

——————————————————————————————————————	——————————————————————————————————————	EXISTING SEWER
——————————————————————————————————————	——————————————————————————————————————	EXISTING FIREMAIN
——————————————————————————————————————	——— E X / G ————	EXISTING GAS
——————————————————————————————————————	——————————————————————————————————————	EXISTING ELECTRICITY
EX/LV	——— E X / L V ————	EXISTING ELECTRICITY (LV)
————ЕХ/ОНЕ ———	——ЕХ/ОНЕ ———	EXISTING ELECTRICITY (OH)
EX/HV	—— Е X / H V ———	EXISTING ELECTRICITY (HV)
——————————————————————————————————————	——————————————————————————————————————	EXISTING STORMWATER
——————————————————————————————————————	——EX/C———	EXISTING COMMS
E X / T	——EX/T———	EXISTING TELSTRA
——————————————————————————————————————	——————————————————————————————————————	EXISTING WATER
E X / U	——————————————————————————————————————	EXISTING UNKNOWN SERVICE



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LOCALITY PLAN NTS













SUITE 129, 117 OLD PITTWATER ROAD

BROOKVALE, NSW, 2100



DRAWING INDEX								
DRAWING NUMBER	DRAWING NUMBER DRAWING TITLE							
C01-0001	COVER SHEET, LEGENDS AND DRAWING INDEX	С						
C01-0101	NOTES SHEET	С						
C03-0001	SOIL EROSION AND SEDIMENT CONTROL PLAN	С						
C03-0101	SOIL EROSION AND SEDIMENT CONTROL NOTES AND DETAILS	С						
C04-0001	BULK EARTHWORKS PLAN	С						
C08-0001	STORMWATER MANAGEMENT PLAN	С						
C08-0301	STORMWATER DETAILS - SHEET 1	С						
C08-0302	STORMWATER DETAILS - SHEET 2	С						
C08-0303	STORMWATER DETAILS - SHEET 3	С						
C08-0401	STORMWATER MANAGEMENT CATCHMENT PLAN	С						
C09-0001	PAVEMENT PLAN	С						



SL DPMENT	Drawing Title CIVIL SERVICES COVER SHEET, LEGENDS AND DRAWING INDEX						
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OR CONSTRUCTION	Project No. NA241102	Drawing No. C01-0001				lssue C	

GENERAL NOTES

- 1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND STRUCTURAL CONSULTANTS DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED
- ALL DIMENSIONS RELEVANT TO SETTING OUT AND OFF-SITE WORK SHALL BE VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION
- 3. DIMENSIONS SHALL NOT BE OBTAINED BY SCALING THE DRAWINGS.
- 4. ALL DIMENSIONS ON DETAILS ARE IN MILLIMETRES UNLESS STATED OTHERWISE. ALL PLANS AND LEVELS ARE EXPRESSED IN METRES.
- 5. DURING CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE STRUCTURAL STABILITY OF THE WORKS AND ENSURE NO PARTS BE OVER STRESSED UNDER CONSTRUCTION ACTIVITIES.
- 6. WORKMANSHIP AND MATERIALS ARE TO BE IN ACCORDANCE WITH THE RELEVANT CURRENT S.A.A. CODES INCLUDING ALL AMENDMENTS. AND THE LOCAL STATUTORY AUTHORITIES. EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.
- 7. THE APPROVAL OF A SUBSTITUTION SHALL BE SOUGHT FROM ACOR CONSULTANTS / PRINCIPAL'S REPRESENTATIVE BUT IS NOT AN AUTHORISATION FOR A VARIATION. ANY VARIATIONS INVOLVED MUST BE TAKEN UP WITH ACOR CONSULTANTS / PRINCIPAL'S REPRESENTATIVE BEFORE THE WORK COMMENCES.
- 8. ANY DISCREPANCIES OR OMISSIONS SHALL BE REFERRED TO THE ENGINEER FOR A DECISION BEFORE PROCEEDING WITH THE WORK.
- 9. THE CONTRACTOR SHALL GIVE 48 HOURS NOTICE FOR ALL ENGINEERING INSPECTIONS. ALL INSPECTIONS AND CERTIFICATIONS TO BE INCLUDED IN CONTRACTORS COST
- 10. BUILDING FROM THESE DRAWINGS IS NOT TO COMMENCE UNTIL APPROVED BY THE PRINCIPAL CERTIFYING AUTHORITY.
- 11. THE WORD 'ENGINEER' USED IN THESE NOTES REFER TO AN EMPLOYEE OR NOMINATED REPRESENTATIVE OF ACOR CONSULTANTS PTY LTD.
- 12. ALL CONSTRUCTION ACTIVITIES SHALL COMPLY WITH THE RELEVANT CURRENT WORKPLACE HEALTH AND SAFETY LEGISLATION.

EXISTING SERVICES AND FEATURES

- 1. THE CONTRACTOR SHALL ALLOW FOR THE CAPPING OFF. EXCAVATION, REMOVAL AND DISPOSAL IF REQUIRED OF ALL EXISTING SERVICES IN AREAS AFFECTED BY WORKS WITHIN THE CONTRACT AREA. AS SHOWN ON THE DRAWINGS UNLESS DIRECTED OTHERWISE BY THE PRINCIPAL'S REPRESENTATIVE.
- THE CONTRACTOR SHALL ENSURE THAT AT ALL TIMES SERVICES 2. TO ALL BUILDINGS NOT AFFECTED BY THE WORKS ARE NOT DISRUPTED.
- 3. PRIOR TO COMMENCEMENT OF ANY WORKS THE CONTRACTOR SHALL GAIN WRITTEN APPROVAL OF THEIR PROGRAMME FOR THE RELOCATION/CONSTRUCTION OF TEMPORARY SERVICES.
- 4. EXISTING BUILDINGS, EXTERNAL STRUCTURES, AND TREES SHOWN ON THESE DRAWINGS ARE FEATURES EXISTING PRIOR TO ANY DEMOLITION WORKS.
- 5. CONTRACTOR SHALL CONSTRUCT TEMPORARY SERVICES TO MAINTAIN EXISTING SUPPLY TO BUILDINGS REMAINING IN OPERATION DURING WORKS TO THE SATISFACTION AND APPROVAL OF THE PRINCIPAL'S REPRESENTATIVE. ONCE DIVERSION IS COMPLETE AND COMMISSIONED THE CONTRACTOR SHALL REMOVE ALL SUCH TEMPORARY SERVICES AND MAKE GOOD TO THE SATISFACTION OF THE PRINCIPAL'S REPRESENTATIVE.
- 6. INTERRUPTION TO SUPPLY OF EXISTING SERVICES SHALL BE DONE SO AS NOT TO CAUSE ANY INCONVENIENCE TO THE PRINCIPAL. CONTRACTOR TO GAIN APPROVAL OF PRINCIPAL'S REPRESENTATIVE FOR TIME OF INTERRUPTION.

SITEWORKS NOTES

- 1. ORIGIN OF LEVELS :- AUSTRALIAN HEIGHT DATUM (A.H.D.)
- 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 PRINCIPAL'S REPRESENTATIVE.
- EXISTING SERVICES HAVE BEEN PLOTTED FROM SUPPLIED DAT AND AS SUCH THEIR ACCURACY CANNOT BE GUARANTEED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH THE LOCATION AND LEVEL OF ALL EXISTING SERVICES PRIOR TO TH COMMENCEMENT OF ANY WORK. ANY DISCREPANCIES SHALL B REPORTED TO THE PRINCIPAL'S REPRESENTATIVE. CLEARANCE SHALL BE OBTAINED FROM THE RELEVANT SERVICE AUTHORIT
- 5. WHERE NEW WORKS ABUT EXISTING THE CONTRACTOR SHALL ENSURE THAT A SMOOTH EVEN PROFILE. FREE FROM ABRUPT CHANGES IS OBTAINED.
- THE CONTRACTOR SHALL ARRANGE ALL SURVEY SETOUT TO BE CARRIED OUT BY A REGISTERED SURVEYOR.
- 7. CARE IS TO BE TAKEN WHEN EXCAVATING NEAR EXISTING SERVICES. NO MECHANICAL EXCAVATIONS ARE TO BE UNDERTAKEN OVER COMMUNICATIONS OR ELECTRICAL SERVICES. HAND EXCAVATE IN THESE AREAS.
- ALL SERVICE TRENCHES UNDER VEHICULAR PAVEMENTS SHALL BE BACKFILLED WITH AN APPROVED NON-NATURAL GRANULAR MATERIAL AND COMPACTED TO 98% STANDARD MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS 1289.5.1.1.
- 9. ALL TRENCH BACKFILL MATERIAL SHALL BE COMPACTED TO TH SAME DENSITY AS THE ADJACENT MATERIAL.
- 10. ON COMPLETION OF PIPE INSTALLATION ALL DISTURBED AREAS MUST BE RESTORED TO ORIGINAL, INCLUDING KERBS FOOTPATHS, CONCRETE AREAS, GRAVEL AND GRASSED AREAS AND ROAD PAVEMENTS.
- 11. PROVIDE 10mm WIDE EXPANDING CORK JOINTS BETWEEN CONCRETE PAVEMENTS AND ALL BUILDINGS, WALLS, FOOTING COLUMNS, KERBS, DISH DRAINS, GRATED DRAINS, BOLLARD FOOTINGS ETC
- 12. CONTRACTOR TO OBTAIN ALL AUTHORITY APPROVALS.
- ALL BATTERS TO BE GRASSED LINED WITH MINIMUM 100 TOPSC AND APPROVED COUCH LAID AS TURF.
- 14. MAKE SMOOTH TRANSITION TO EXISTING SERVICES AND MAKE GOOD.
- 15. 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 DRA EXPOSED AREAS.
- 16. THESE PLANS SHALL BE READ IN CONJUNCTION WITH APPROVED ARCHITECTURAL, STRUCTURAL, HYDRAULIC AND ELECTRICAL DRAWINGS AND SPECIFICATIONS.
- 17. TRENCHES THROUGH EXISTING ROAD AND CONCRETE PAVEMENTS SHALL BE SAWCUT TO FULL DEPTH OF CONCRETE AND A MIN 50mm IN BITUMINOUS PAVING.
- 18. ALL BRANCH GAS AND WATER SERVICES UNDER DRIVEWAYS AND BRICK PAVING SHALL BE LOCATED IN Ø80 uPVC SEWER GRADE CONDUITS EXTENDING A MIN OF 500mm PAST PAVING.
- 19. ON COMPLETION OF WORKS ALL DISTURBED AREAS MUST BE RESTORED TO ORIGINAL INCLUDING, BUT NOT LIMITED TO, KERBS, FOOTPATHS, CONCRETE AREAS, GRASS AND LANDSCAPED AREAS.

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	STO	ORMWATER NOTES
	1.	ALL 375 DIA. DRAINAGE PIPES AND LARGER SHALL BE CLASS "2" APPROVED SPIGOT AND SOCKET FRC OR RCP PIPES WITH RUBBER RING JOINTS. (U.N.O.) ALL DOWNPIPE DRAINAGE LINES SHALL BE SEWER GRADE uPVC WITH SOLVENT WELD JOINTS. (U.N.O.)
)	2.	EQUIVALENT STRENGTH REINFORCED CONCRETE PIPES MAY BE USED.
ΓA S	3.	ALL PIPE JUNCTIONS UP TO AND INCLUDING 450 DIA. AND TAPERS SHALL BE VIA PURPOSE MADE FITTINGS.
: IE	4.	MINIMUM GRADE TO STORMWATER LINES TO BE 1%. (U.N.O.)
BE ES Y.	5.	CONTRACTOR TO SUPPLY AND INSTALL ALL FITTINGS AND SPECIALS INCLUDING VARIOUS PIPE ADAPTORS TO ENSURE PROPER CONNECTION BETWEEN DISSIMILAR PIPEWORK.
E	6.	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.
	7.	PRECAST PITS SHALL NOT BE USED UNLESS WRITTEN APPROVAL IS OBTAINED FROM THE ENGINEER.
IL IE	8.	WHERE TRENCHES ARE IN ROCK, THE PIPE SHALL BE BEDDED ON A MIN. 50MM CONCRETE BED (OR 75MM THICK BED OF 12MM BLUE METAL) UNDER THE BARREL OF THE PIPE. THE PIPE COLLAR AT NO POINT SHALL BEAR ON THE ROCK. IN OTHER THAN ROCK, PIPES SHALL BE LAID ON A 75MM THICK SAND BED. IN ALL CASES BACKFILL THE TRENCH WITH 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% STANDARD MAX. DRY DENSITY.
S	9.	BEDDING SHALL BE (U.N.O.) TYPE HS2, IN ACCORDANCE WITH CURRENT RELEVANT AUSTRALIAN STANDARDS.
5	10.	WHERE STORMWATER LINES PASS UNDER FLOOR SLABS SEWER GRADE RUBBER RING JOINTS ARE TO BE USED.
S,	11.	WHERE SUBSOIL DRAINAGE LINES PASS UNDER FLOOR SLABS AND VEHICULAR PAVEMENTS UNSLOTTED UPVC SEWER GRADE PIPE SHALL BE USED.
DIL	12.	PROVIDE 3.0M LENGTH OF 100 DIA. SUBSOIL DRAINAGE PIPE WRAPPED IN FABRIC SOCK, AT UPSTREAM END OF EACH PIT.
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COMPACTION NOTES

- REFER TO GEOTECHNICAL INVESTIGATION REPORT PREF BY: JK GEOTECHNICS, REF: 31993BMrpt, DATED: 27th JANU 2023.
- STRIP TOPSOIL TO EXPOSE NATURALLY OCCURRING MA 2 AND STOCKPILE ON SITE FOR SELECTIVE RE-USE OR DIS OFF-SITE AS DIRECTED BY THE SUPERINTENDENT.
- 3. UNCONTROLLED FILLING IS TO BE REMOVED FROM THE FOOTPRINT OF THE BUILDING AND PAVEMENT AREAS, TH STRIPPED SURFACE SHALL BE INSPECTED BY A GEOTEC ENGINEER.
- PROOF ROLL EXPOSED NATURAL SURFACE WITH A MININ EIGHT PASSES OF A SMOOTH DRUM ROLLER (MINIMUM ST WEIGHT OF 10 TONNES) THE FINAL PASS SHALL BE IN THI PRESENCE OF A GEOTECHNICAL ENGINEER.
- ALL SOFT, WET OR UNSUITABLE MATERIAL TO BE REMOV DIRECTED BY THE GEOTECHNICAL ENGINEER AND REPLA WITH APPROVED MATERIAL SATISFYING THE REQUIREME LISTED BELOW.
- 6. WASTE CLASSIFICATION OF SPOIL MATERIAL, INCLUDING PROVISION OF APPROPRIATE HAZARDOUS MATERIALS H (AS REQUIRED) IS THE RESPONSIBILITY OF THE CONTRACT PRIOR TO UNDERTAKING THE EXCAVATION WORKS.
- 7. ALL FILL MATERIAL SHALL BE FROM A SOURCE APPROVE THE GEOTECHNICAL ENGINEER AND SHALL COMPLY WIT FOLLOWING :
 - a. FREE FROM ORGANIC, PERISHABLE AND
 - CONTAMINATED MATTER
 - b. MAXIMUM PARTICLE SIZE 75MM
 - c. PLASTICITY INDEX BETWEEN 2% AND 15%
- ALL FILL MATERIAL SHALL BE PLACED IN MAXIMUM 200M 8. LAYERS AND COMPACTED AT OPTIMUM MOISTURE CONT OR - 2%) TO ACHIEVE A DRY DENSITY DETERMINED IN ACCORDANCE WITH AS 1289 5.3.1 OF NOT LESS THAN TH FOLLOWING STANDARD MINIMUM DRY DENSITY IN ACCOI WITH AS 1289 5.1.1 :

LOCATION STANDARD DRY DEN UNDER BUILDING SLABS AREAS OF SERVICE TRENCHES EXTERNAL PAVED AREAS, ROADS AND CARPARKS LANDSCAPED AREAS

THE UPPER 0.5m THICKNESS FOR THE FOLLOWING AREA BE COMPACTED AT OPTIMUM MOISTURE CONTENT (+ OR FOLLOWS

LOCATION UNDER BUILDING SLABS PAVEMENTS AND CARPARKS STANDARD DRY DEM

- THE CONTRACTOR SHALL PROGRAM THE EARTHWORKS 9 OPERATION SO THAT THE WORKING AREAS ARE ADEQUA DRAINED DURING THE PERIOD OF CONSTRUCTION. THE SURFACE SHALL BE GRADED AND SEALED OFF TO REMO DEPRESSIONS, ROLLER MARKS AND SIMILAR WHICH WOL ALLOW WATER TO POND AND PENETRATE THE UNDERLY MATERIAL. ANY DAMAGE RESULTING FROM THE CONTRA NOT OBSERVING THESE REQUIREMENTS SHALL BE RECT THE CONTRACTOR AT THEIR COST.
- 10. TESTING OF THE SUBGRADE SHALL BE CARRIED OUT BY APPROVED NATA REGISTERED LABORATORY AT THE CONTRACTORS EXPENSE. TESTING FREQUENCY SHALL BI ACCORDANCE WITH THE FREQUENCY SPECIFIED IN THE GEOTECHNICAL REPORT - FOR EARTHWORKS 1 TEST / 1000m² / LAYER OR THREE TESTS PER VISIT. WHICHEVER IS THE GREATER



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CONSULTANTS

ACOR Consultants Pty Ltd FORESTVILLE RS CLUB REDEVELC St Leonards NSW 2065 T +61 2 9438 5098 22 MELWOOD AVENUE FORESTVILLE, NSW, 2







ARCHITECTURE

	ON	-SITE DETENTION NOTES
PARED IARY	1.	CONTRACTOR MUST VERIFY ALL DIMENSIONS AND EXISTING LEVELS, SERVICES AND STRUCTURES ON SITE PRIOR TO COMMENCEMENT OF WORK.
ATERIAL SPOSE	2.	ALL WORK SHALL BE UNDERTAKEN IN ACCORDANCE WITH THE DETAILS SHOWN ON THE DRAWINGS AND THE SPECIFICATION.
I E HNICAL	3.	ON COMPLETION OF PROPOSED WORKS ALL DISTURBED AREAS MUST BE RESTORED TO ORIGINAL, INCLUDING KERBS, FOOTPATHS, CONCRETE AREAS, GRAVEL, GRASSED & LANDSCAPE AREAS AND ROAD PAVEMENTS. (U.N.O.)
	4.	CONTRACTOR TO OBTAIN ALL AUTHORITY APPROVALS.
/UM OF TATIC E	5.	MAKE SMOOTH TRANSITION TO EXISTING SERVICES AND MAKE GOOD.
/ED AS ACED	6.	WHERE NEW WORKS ABUT EXISTING THE CONTRACTOR SHALL ENSURE THAT A SMOOTH EVEN PROFILE, FREE FROM ABRUPT CHANGES IS OBTAINED.
ENTS ANDLING	7.	CARE IS TO BE TAKEN WHEN EXCAVATING NEAR EXISTING SERVICES. NO MECHANICAL EXCAVATIONS ARE TO BE UNDERTAKEN OVER THESE SERVICES. HAND EXCAVATE IN THESE AREAS.
D BY	8.	THESE PLANS SHALL BE READ IN CONJUNCTION WITH APPROVED ARCHITECTURAL, STRUCTURAL, HYDRAULIC, AND OTHER SERVICES DRAWINGS AND SPECIFICATIONS.
HTHE	9.	EQUIVALENT STRENGTH FRC PIPES MAY BE USED.
	10.	ALL PIPE JUNCTIONS, BENDS AND TAPERS UP TO AND INCLUDING 450 DIA SHALL BE VIA PURPOSE MADE FITTINGS.
	11.	MINIMUM GRADE TO STORMWATER LINES TO BE 1%. (U.N.O.)
E	12.	CONTRACTOR TO SUPPLY AND INSTALL ALL FITTINGS AND SPECIALS INCLUDING VARIOUS PIPE ADAPTORS TO ENSURE PROPER CONNECTION BETWEEN DISSIMILAR PIPEWORK.
NSITY 98%	13.	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.
98% 90% S MUST -2%) AS <u>NSITY</u> 100% 100%	14.	WHERE TRENCHES ARE IN ROCK, THE PIPE SHALL BE BEDDED ON A MIN. 50mm CONCRETE BED (OR 75mm THICK BED OF 12mm BLUE METAL) UNDER THE BARREL OF THE PIPE. THE PIPE COLLAR AT NO POINT SHALL BEAR ON THE ROCK. IN OTHER THAN ROCK, PIPES SHALL BE LAID ON A 75mm THICK SAND BED. IN ALL CASES BACKFILL THE TRENCH WITH 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% STANDARD MAX. DRY DENSITY.
	15.	BEDDING SHALL BE (U.N.O.) TYPE H1, IN ACCORDANCE WITH CURRENT RELEVANT AUSTRALIAN STANDARDS.
	16.	WHERE STORMWATER LINES PASS UNDER FLOOR SLABS SEWER GRADE RUBBER RING JOINTS ARE TO BE USED.
'ING ICTOR TFIED BY	17.	PROVIDE 3.0M LENGTH OF 100 DIA. SUBSOIL DRAINAGE PIPE WRAPPED IN FABRIC SOCK, AT UPSTREAM END OF EACH PIT.
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A ISSUE FOR DEVELOPMENT APPLICATION

Issue.

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CONSULTANTS

Suite 2, Level 1, 33 Herbert Street St Leonards NSW 2065







BROOKVALE, NSW, 2100



EROSION AND SEDIMENT CONTROL NOTES

GENERAL INSTRUCTIONS

- E1. THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE ENGINEERING PLANS, AND ANY OTHER PLANS OR WRITTEN INSTRUCTIONS THAT MAY BE ISSUED AND RELATING TO DEVELOPMENT AT THE SUBJECT SITE.
- E2. THE PRINCIPAL'S REPRESENTATIVE WILL ENSURE THAT ALL SOIL AND WATER MANAGEMENT WORKS ARE UNDERTAKEN AS INSTRUCTED IN THIS SPECIFICATION AND CONSTRUCTED FOLLOWING THE GUIDELINES OF "MANAGING URBAN STORMWATER SOILS AND CONSTRUCTION", DEPT OF HOUSING, 2004 (BLUE BOOK).
- E3. ALL BUILDERS AND SUB-CONTRACTORS WILL BE INFORMED OF THEIR RESPONSIBILITIES IN MINIMISING THE POTENTIAL FOR SOIL EROSION AND POLLUTION TO DOWNSLOPE LANDS AND WATERWAYS.

CONSTRUCTION SEQUENCE

- E4. THE SOIL EROSION POTENTIAL ON THIS SITE SHALL BE MINIMISED. HENCE WORKS SHALL BE UNDERTAKEN IN THE FOLLOWING **SEQUENCE**:
 - a. INSTALL SEDIMENT FENCES, TEMPORARY CONSTRUCTION EXIT AND SANDBAG KERB INLET SEDIMENT TRAP.
 - b. UNDERTAKE SITE DEVELOPMENT WORKS IN ACCORDANCE WITH THE ENGINEERING PLANS. PHASE DEVELOPMENT SO THAT LAND DISTURBANCE IS CONFINED TO AREAS OF WORKABLE SIZE.

EROSION CONTROL

- E5. DURING WINDY CONDITIONS, LARGE, UNPROTECTED AREAS WILL BE KEPT MOIST (NOT WET) BY SPRINKLING WITH WATER TO KEEP DUST UNDER CONTROL.
- E6. FINAL SITE LANDSCAPING WILL BE UNDERTAKEN AS SOON AS POSSIBLE AND WITHIN 20 WORKING DAYS FROM COMPLETION OF CONSTRUCTION ACTIVITIES.

FENCING

- E7. STOCKPILES WILL NOT BE LOCATED WITHIN 2 METRES OF HAZARD AREAS, INCLUDING LIKELY AREAS OF CONCENTRATED OR HIGH VELOCITY FLOWS SUCH AS WATERWAYS. WHERE THEY ARE BETWEEN 2 AND 5 METRES FROM SUCH AREAS. SPECIAL SEDIMENT CONTROL MEASURES SHOULD BE TAKEN TO MINIMISE POSSIBLE POLLUTION TO DOWNSLOPE WATERS, E.G. THROUGH INSTALLATION OF SEDIMENT FENCING.
- E8. ANY SAND USED IN THE CONCRETE CURING PROCESS (SPREAD OVER THE SURFACE) WILL BE REMOVED AS SOON AS POSSIBLE AND WITHIN 10 WORKING DAYS FROM PLACEMENT.
- E9. WATER WILL BE PREVENTED FROM ENTERING THE PERMANENT DRAINAGE SYSTEM UNLESS IT IS RELATIVELY SEDIMENT FREE, I.E. THE CATCHMENT AREA HAS BEEN PERMANENTLY LANDSCAPED AND/OR ANY LIKELY SEDIMENT HAS BEEN FILTERED THROUGH AN APPROVED STRUCTURE.
- E10. TEMPORARY SOIL AND WATER MANAGEMENT STRUCTURES WILL BE REMOVED ONLY AFTER THE LANDS THEY ARE PROTECTING ARE REHABILITATED.

OTHER MATTERS

- E11. ACCEPTABLE RECEPTORS WILL BE PROVIDED FOR CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHINGS, LIGHT-WEIGHT WASTE MATERIALS AND LITTER.
- E12. RECEPTORS FOR CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHINGS, LIGHT-WEIGHT WASTE MATERIALS AND LITTER ARE TO BE EMPTIED AS NECESSARY. DISPOSAL OF WASTE SHALL BE IN A MANNER APPROVED BY THE PRINCIPAL'S REPRESENTATIVE.

SITE INSPECTION & MAINTENANCE

E13. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED AFTER RAINFALL EVENTS TO ENSURE THAT THEY OPERATE EFFECTIVELY. REPAIR AND OR MAINTENANCE SHALL BE UNDERTAKEN AS REQUIRED.



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LEGEND									
EAR	EARTHWORKS CUT/ FILL ISOPACH								
LOWER	VALUE	UPPER VA	LUE	COLOUR					
-999	to	-7.00	m						
-7.00	to	-6.00	m						
-6.00	to	-5.00	m						
-5.00	to	-4.00	m						
-4.00	to	-3.00	m						
-3.00	to	-2.00	m						
-2.00	to	-1.00	m						
-1.00	to	0.00	m						
0.00	to	1.00	m						
1.00	to	2.00	m						
2.00	to	3.00	m						
3.00	to	4.00	m						
4.00	to	5.00	m						
5.00	to	6.00	m						
6.00	to	7.00	m						
7.00	to	999	m						

CUT / FILL QUANTITIES TOTAL CUT

-35,410m³ 5m³ -34,405m³

NOTE: ALL EARTHWORKS QUANTITIES ARE THEORETICAL AND INDICATIVE ONLY, BASED UPON BANKED VOLUMES WITH NO ALLOWANCE FOR BULKING FACTORS. CONTRACTOR TO MAKE HIS OWN ASSESSMENT OF EARTHWORKS QUANTITIES

EARTHWORKS CUT AND FILL NOTES:

TOTAL FILL

TOTAL BALANCE

- 1. BULKING AND COMPACTION FACTORS HAVE NOT BEEN APPLIED TO THE CUT AND FILL QUANTITIES.
- 2. PROPOSED BUILDING FLOOR LEVELS HAVE BEEN PROVIDED BY THE ARCHITECT.
- 3. A NOMINAL BOXING OUT OF 200mm FOR FLOOR SLABS HAVE BEEN ALLOWED FOR IN THE CUT AND FILL CALCULATION.
- ALL TOP SOIL SHALL BE RETAINED ON THE DEVELOPMENT SITE AND UTILISED EFFECTIVELY TO ENCOURAGE APPROPRIATE VEGETATION. NO STRIP TOPSOIL DEPTHS HAVE BEEN INCLUDED IN THESE CALCULATIONS.
- CUT AND FILL QUANTITIES ARE LIMITED TO THE BUILDING 5. ENVELOPE AND COURTYARD AREAS. DRIVEWAY, EXTERNAL LANDSCAPE, FOOTPATH AND RETAINING WALL AREAS HAVE NOT BEEN ACCOUNTED FOR IN THE QUANTITIES. DETAILED BULK EARTHWORKS CUT/FILL QUANTITIES FOR FOOTINGS, TRENCHING AND THE LIKE HAS NOT BEEN INCLUDED IN THE CUT AND FILL ASSESSMENT.

Zero Damage - Zero Hai							
SL DPMENT	Drawing Title CIVIL SERVICES BULK EARTHWORKS PLAN						
E 087	Drawn RP	Designed GL	Q.A. Check GL	Date 06.05.25	Scal 1:2	le @ A1 200	1.4 East
FOR CONSTRUCTION	Project No. NA241102	Drawing No. C04-0001				lssue C	000 000

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OPMENT	STORMWATER DETAILS SHEET 1						
E 2087	Drawn RP	Designed GL	Q.A. Check GL	Date 06.05.25	Scal AS	le @ A1 SHOWN	
FOR CONSTRUCTION	Project No. NA241102	Drawing No. C08-0301				lssue C	

	©0.273		
			N1 [°]
	/	0	
	Q <u>0.465</u>		
	126.70 122.33	0.066 122	050
1% AEP DRAIN	IS RESULT		DRAII
Results for median storm in	ritical 5% AFP ensembles		
using Full Unsteady hydraulig	model		
using I un onsteady nyuraunt	mouch.		







Results for median storm in critical 1% AEP ensembles using Full Unsteady hydraulic model.





TOTAL SUSPENDED SOLIDS (kg/yr): 85% TOTAL PHOSPHORUS (kg/yr): 65% TOTAL NITROGEN (kg/yr): 45% GROSS POLLUTANT (kg/yr): 90%







SNAPSHOT OF MUSIC MODEL SHOWING PERCENTAGE REDUCTION

I CRITERIA - ON-SITE DETENTION					
OPMENT WORKS =	9014 m²				
	ILSAX				
JS AREA =	9014m ² (0%)				
DUS AREA =	6654m ² (74%)				
) =	$Q^5 = 66.0$ $Q^{20} = 153.0$ $Q^{100} = 173.0$				
/s) =	$Q^5 = 42$ $Q^{20} = 53.0$ $Q^{100} = 66.0$				
OSD SYSTEM =	9014m ² (100%)				
REAM 1% AEP =	RL126.7				
ME PROVIDED =	480m³				

Proposed Kerb outlet

26 x 690 PSORB STORMWATER CARTRIDGES AND 2x OCEAN GUARD PIT BASKETS (LOCATION TO BE CONFIRMED AT DETAILED DESIGN STAGE) ARE UTILISED TO ACHIEVE THE REQUIRED WATER QUALITY TARGETS AS PER NORTHERN BEACHES COUNCIL REQUIREMENTS GIVEN BELOW:













(MCC) Post-Developm	ent Node				
lectiveness - Post-Devel	opment Node				
	Sources	Residual Load	% Reduction		
	9.16	9.16	0		
ded Solids (kg/yr)	745	111	85.1		
	1.91	0.474	75.2		
horus (kg/yr)					
horus (kg/yr) en (kg/yr)	19.8	9.84	50.4		
horus (kg/yr) en (kg/yr) ants (kg/yr)	19.8 236	9.84 0	50.4 100		

SL DPMENT	Drawing Title CIVIL SERVICES STORMWATER DETAILS SHEET 2						
E 087	Drawn RP	Designed GL	Q.A. Check GL	Date 06.05.25	Sca AS	ie @ A1 SHOWN	
OR CONSTRUCTION	Project No. NA241102	Drawing No. C08-0302				lssue C	



SL DPMENT	Drawing Title CIVIL SERVICES STORMWATER DETAILS SHEET 3						
E 1087	DrawnDesignedQ.A. CheckDateRPGLGL06.05.25				Scale	e @ A1 SHOWN	
FOR CONSTRUCTION	Project No. NA241102	Drawing No. C08-0303				lssue C	

CALCULATIONS MUSIC MODEL

CUMULATIVE ROOF AREA - DESIGNED BY HYDRAULIC CONSULTANT



ROOF AREA: 5129 m² (0% PERVIOUS, SEE SPREADSHEET ON DRAINS DESIGN FOLDER)



PAVED ROAD AREA: 480 m² (0% PERVIOUS)





CONSULTANTS









PAVEMENT LEGEND

PAVEMENT TYPE 3 RIGID CONCRETE PAVEMENT

DESIGN FINISHED SURFACE LEVEL	 230mm N40 CONCRETE SL92 TOP AND BTM 50 COVER 125mm LEAN CONCRETE SUB-BASE COMPACTED SUBGRADE - DESIGN CBR MIN 2%
PAVE	MENT TYPE 8

STRUCTURAL SLAB REFER STRUCTURAL CONSULTANTS DRAWINGS FOR DETAILS



PAVEMENT TYPE 9 DRIVEWAY

LAYBACK AND DRIVEWAY TO BE CONSTRUCTED TO NORTHERN BEACHES COUNCIL DETAILS AND SPECIFICATIONS



						North	Scale	Client
						1		FORESTVILLE
	1							
Ц			1					
			+					
Т	 		+					
Π	1 C	RE-ISSUE FOR DEVELOPMENT APPLICATION	06.05.25	RP	GL			
Н	В	RE-ISSUE FOR DEVELOPMENT APPLICATION	20.09.24	DJ	GL			1
	A	ISSUE FOR DEVELOPMENT APPLICATION	30.08.24	RP	GL		PRINT IN COLOUR O	
	lssue.	Description	Date	Drawn	Approved			
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