

67 BEATRICE STREET, BALGOWLAH HEIGHTS NSW 2093

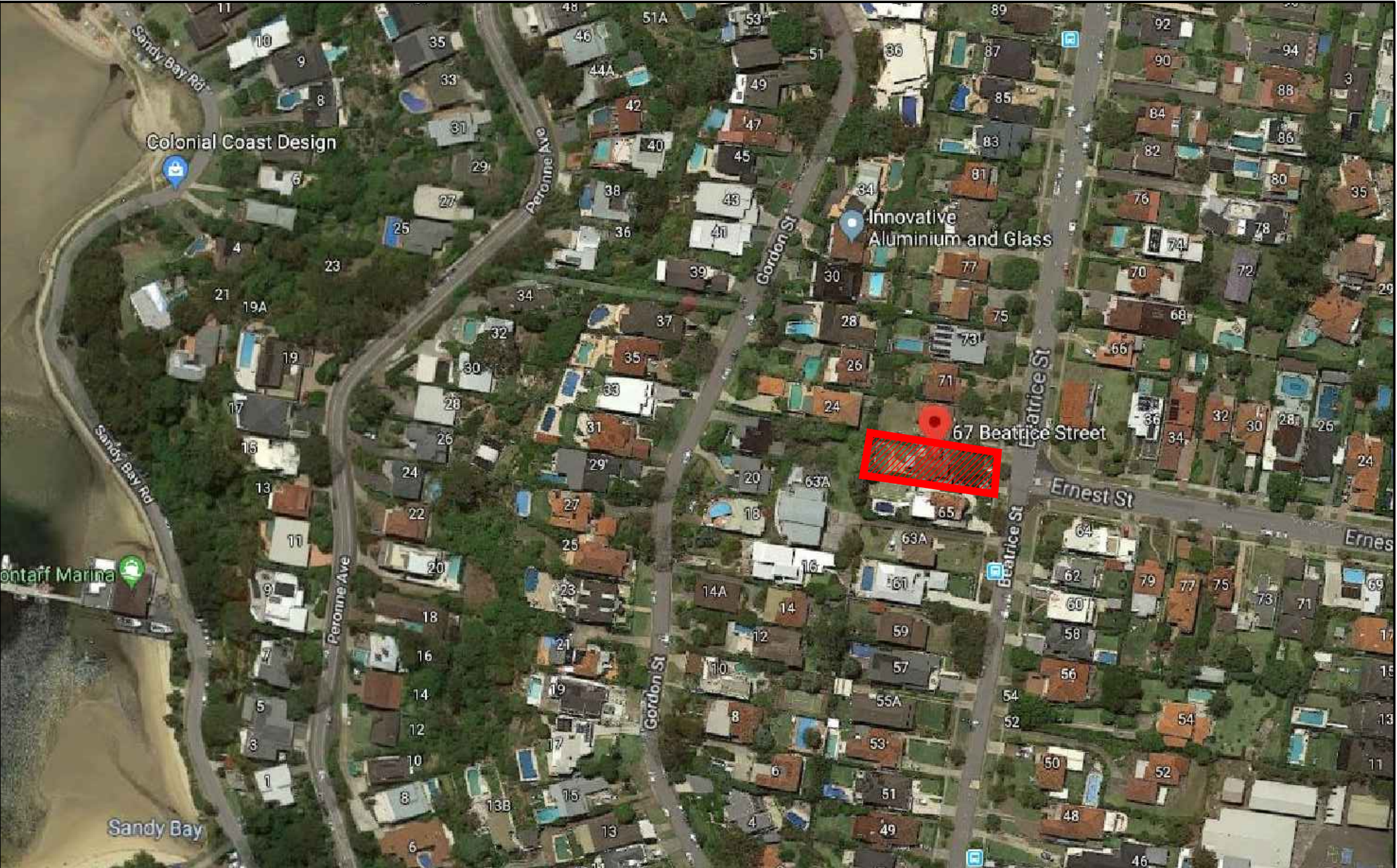
PROPOSED ADDITIONS & ALTERATIONS

STORMWATER CONCEPT PLANS - DEVELOPMENT APPLICATION

STORMWATER NOTES		
1.	CONTRACTOR MUST VERIFY ALL DIMENSIONS & EXISTING LEVELS, SERVICES & STRUCTURES ON SITE PRIOR TO COMMENCEMENT OF WORK.	
2.	THESE PLANS SHALL BE READ IN CONJUNCTION WITH APPROVED ARCHITECTURAL, LANDSCAPE, STRUCTURAL, HYDRAULIC, & OTHER SERVICES DRAWINGS & SPECIFICATIONS. IF THERE EXISTS AND DISCREPANCIES BETWEEN THE DRAWINGS, THE BUILDER SHALL REPORT THE DISCREPANCIES TO THE ENGINEER PRIOR TO COMMENCEMENT OF ANY WORKS.	
3.	EQUIVALENT STRENGTH REINFORCED CONCRETE PIPES MAY BE USED.	
4.	WHERE SUBSOIL DRAINAGE LINES PASS UNDER FLOOR SLABS & VEHICULAR PAVEMENTS, UNSLOTTED uPVC SEWER GRADE PIPE SHALL BE USED.	
5.	CHARGED LINES TO BE SEWER GRADE & SEALED.	
6.	ALL PIPES TO HAVE MIN 150mm COVER IF LOCATED WITHIN PROPERTY.	
7.	ALL PITS IN DRIVEWAYS TO BE CONCRETE & ALL PITS IN LANDSCAPED AREAS TO BE PLASTIC.	
8.	PITS LESS THAN 600mm DEEP MAY BE BRICK, PRECAST OR CONCRETE.	
9.	ALL BALCONIES & ROOFS TO BE DRAINED & TO HAVE SAFETY OVERFLOWS IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS.	
10.	ALL GRATES TO HAVE CHILD PROOF LOCKS.	
11.	ALL DRAINAGE WORKS TO AVID TREE ROOTS.	
12.	ALL DOWNPIPES & GUTTERS TO HAVE LEAF GUARDS.	
13.	COUNCIL'S ISSUED FOOTWAY DESIGN LEVELS TO BE INCORPORATED INTO THE FINISHED LEVELS ONCE ISSUED BY COUNCIL.	
14.	ALL WORKS SHALL BE IN ACCORDANCE WITH B.C.A. & A.S.3500.3.	
15.	CARE TO BE TAKEN AROUND EXISTING SEWER. STRUCTURAL ADVICE REQUIRED FOR SEWER PROTECTION AGAINST ADDITIONAL LOADING FROM NEW PITS, PIPES, RETAINING WALLS & OSD BASIN WATER LEVELS.	
16.	ALL Ø300 DRAINAGE PIPES & LARGER SHALL BE CLASS 2 APPROVED SPIGOT & SOCKET RCP PIPES WITH RUBBER RING JOINTS (U.N.O.). ALL DRAINAGE PIPES UP TO & INCLUDING Ø225 SHALL BE SEWER GRADE uPVC WITH SOLVENT WELD JOINTS (U.N.O.).	
17.	EQUIVALENT STRENGTH FRC PIPES MAY BE USED.	
18.	ALL PIPE JUNCTIONS, BENDS & TAPERS UP TO & INCLUDING Ø450 SHALL BE VIA PURPOSE MADE FITTINGS.	
19.	CONTRACTOR TO SUPPLY & INSTALL ALL FITTINGS & SPECIALS INCLUDING VARIOUS PIPE ADAPTORS TO ENSURE PROPER CONNECTION BETWEEN DISSIMILAR PIPE WORK.	
20.	ALL CONNECTIONS TO EXISTING DRAINAGE PITS SHALL BE MADE IN A TRADESMAN-LIKE MANNER, & THE INTERNAL WALL OF THE PIT AT THE POINT OF ENTRY SHALL BE CEMENT RENDERED TO ENSURE A SMOOTH FINISH.	
21.	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.	
22.	BEDDING SHALL BE TYPE H1 (U.N.O.), IN ACCORDANCE WITH CURRENT RELEVANT AUSTRALIAN STANDARDS.	
23.	WHERE STORMWATER LINES PASS UNDER FLOOR SLABS, SEWER GRADE RUBBER RING JOINTS ARE TO BE USED.	
24.	ALL PIPES IN BALCONIES TO BE Ø65 uPVC CAST IN CONCRETE SLAB.	
25.	Ø65 PVC @ MIN 1.0% Ø90 PVC @ MIN 1.0% Ø100 PVC @ MIN 1.0% Ø150 PVC @ MIN 1.0% Ø225 PVC @ MIN 0.5% Ø300 PVC @ MIN 0.4% UNLESS NOTED OTHERWISE	
26.	CONTRACTOR TO PROVIDE A BREAK / OPEN VOID IN RAIL / BALLUSTRADE FOR STORMWATER EMERGENCY OVERFLOW.	
27.	ALL ENCLOSED AREAS/PLANTER BOXES BE FITTED WITH FLOOR WASTES & TO DRAINED TO OSD.	
28.	DOWNPIPES TO BE CHECKED BY ARCHITECT & PLUMBER PRIOR TO CONSTRUCTION .	
29.	PROVIDE 3.0m LENGTH OF Ø100 SUBSOIL DRAINAGE PIPE WRAPPED IN FABRIC SOCK, AT UPSTREAM END OF EACH PIT.	
30.	ALL THE CLEANING EYES (OR INSPECTION EYES) FOR THE UNDERGROUND PIPES HAVE TO BE TAKEN UP TO THE FINISHED GROUND LEVEL FOR EASY IDENTIFICATION & MAINTENANCE PURPOSES.	
31.	ALL SUB-SOIL DRAINAGE SHALL BE A MIN OF Ø65 & SHALL BE PROVIDED WITH A FILTER SOCK. THE SUBSOIL DRAINAGE SHALL BE INSTALLED IN ACCORDANCE WITH DETAILS TO BE PROVIDED BY THE LANDSCAPE ARCHITECT.	
32.	PRIOR TO COMMENCING ANY WORKS, THE BUILDER SHALL ENSURE THAT THE INVERT LEVELS OF WHERE THE SITE STORMWATER SYSTEM CONNECTS INTO THE COUNCILS KERB/DRAINAGE SYSTEM MATCHED THE DESIGN LEVELS. ANY DISCREPANCIES SHALL BE REPORTED TO THE DESIGN ENGINEER IMMEDIATELY.	

DRAWING INDEX	
Drawing No.	DESCRIPTION
MBR19014 - 000	COVER SHEET, NOTES & DRAWING INDEX
MBR19014 - 101	STORMWATER CONCEPT PLAN
MBR19014 - 102	MISCELLANEOUS DETAILS SHEET

SITeworks NOTES	
1.	ORIGIN OF LEVELS : AUSTRALIAN HEIGHT DATUM (A.H.D.)
2.	CONTRACTOR MUST VERIFY ALL DIMENSIONS & EXISTING LEVELS ON SITE PRIOR TO COMMENCEMENT OF WORK.
3.	ALL WORKS ARE TO BE UNDERTAKEN IN ACCORDANCE WITH THE DETAILS SHOWN ON THE DRAWINGS, THE SPECIFICATIONS & THE DIRECTIONS OF THE PRINCIPAL'S REPRESENTATIVE.
4.	EXISTING SERVICES HAVE BEEN PLOTTED FROM SUPPLIED DATA & AS SUCH THEIR ACCURACY CANNOT BE GUARANTEED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH THE LOCATION & LEVEL OF ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY WORK. ANY DISCREPANCIES SHALL BE REPORTED TO THE PRINCIPAL'S REPRESENTATIVE. 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 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.
8.	ALL SERVICE TRENCHES UNDER VEHICULAR PAVEMENTS SHALL BE BACKFILLED WITH AN APPROVED NON-NATURAL GRANULAR MATERIAL & COMPACTED TO 98% STANDARD MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS.1289.5.1.1.
9.	ALL TRENCH BACKFILL MATERIAL SHALL BE COMPACTED TO THE 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 & GRASSED AREAS & ROAD PAVEMENTS.
11.	PROVIDE 12mm WIDE EXPANDING CORK JOINTS BETWEEN CONCRETE PAVEMENTS & ALL BUILDINGS , WALLS, FOOTINGS, COLUMNS, KERBS, DISH DRAINS, GRATED DRAINS, BOLLARD FOOTINGS ETC
12.	CONTRACTOR TO OBTAIN ALL AUTHORITY APPROVALS.
13.	ALL BATTERS TO BE GRASSED LINED WITH MIN 100mm TOPSOIL & APPROVED COUCH LAID AS TURF.
14.	MAKE SMOOTH TRANSITION TO EXISTING SERVICES & MAKE GOOD.
15.	THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY DIVERSION DRAINS & MOUNDS TO ENSURE THAT, AT ALL TIMES, EXPOSED SURFACES ARE FREE DRAINING & , WHERE NECESSARY, EXCAVATE SUMPS & PROVIDE PUMPING EQUIPMENT TO DRAIN EXPOSED AREAS.
16.	THESE PLANS SHALL BE READ IN CONJUNCTION WITH APPROVED ARCHITECTURAL, LANDSCAPE, STRUCTURAL, HYDRAULIC & ELECTRICAL DRAWINGS & SPECIFICATIONS. IF THERE EXISTS AND DISCREPANCIES BETWEEN THE DRAWINGS, THE BUILDER SHALL REPORT THE DISCREPANCIES TO THE ENGINEER PRIOR TO COMMENCEMENT OF ANY WORKS.
17.	TRENCHES THROUGH EXISTING ROAD & CONCRETE PAVEMENTS SHALL BE SAWCUT TO FULL DEPTH OF CONCRETE & A MIN 50mm IN BITUMINOUS PAVING.
18.	ALL BRANCH GAS & WATER SERVICES UNDER DRIVEWAYS & BRICK PAVING SHALL BE LOCATED IN Ø80 uPVC SEWER GRADE CONDUITS EXTENDING A MIN OF 500mm PAST PAVING.
19.	ALL WORKS WITHIN COUNCIL RESERVE TO BE INSPECTED BY COUNCIL PRIOR TO CONSTRUCTION.
20.	COUNCIL'S ISSUED FOOTWAY DESIGN LEVELS TO BE INCORPORATED INTO THE FINISHED LEVELS ONCE ISSUED BY COUNCIL.



LOCALITY PLAN
N.T.S

DIAL BEFORE YOU DIG NOTE

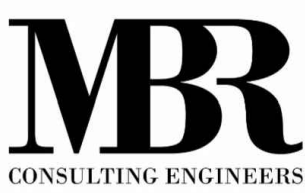


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THE CONTRACTOR MUST CONTACT ALL SERVICES & MAINTAIN A SET OF 'DIAL BEFORE YOU DIG' DRAWINGS ON SITE AT ALL TIMES.

EROSION & SEDIMENT CONTROL NOTES	
GENERAL INSTRUCTIONS:	
E1.	THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE ENGINEERING PLANS, & ANY OTHER PLANS OR WRITTEN INSTRUCTIONS THAT MAY BE ISSUED & RELATING TO DEVELOPMENT AT THE SUBJECT SITE.
E2.	THE SITE SUPERINTENDENT WILL ENSURE THAT ALL SOIL & WATER MANAGEMENT WORKS ARE LOCATED AS INSTRUCTED IN THIS SPECIFICATION.
E3.	ALL BUILDERS & SUB-CONTRACTORS WILL BE INFORMED OF THEIR RESPONSIBILITIES IN MINIMISING THE POTENTIAL FOR SOIL EROSION & POLLUTION TO DOWNSLOPE LANDS & WATERWAYS.
CONSTRUCTION SEQUENCE:	
E4.	THE SOIL EROSION POTENTIAL ON THIS SITE SHALL BE MINIMISED. HENCE, WORKS SHALL BE UNDERTAKEN IN THE FOLLOWING SEQUENCE : <div><div>a.</div><div>b.</div></div> INSTALL SEDIMENT FENCES. TEMPORARY CONSTRUCTION EXIT & SANDBAG KERB INLET SEDIMENT TRAP 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 & WITHIN 20 WORKING DAYS FROM COMPLETION OF CONSTRUCTION ACTIVITIES.
FENCING:	
E7.	STOCKPILES WILL NOT BE LOCATED WITHIN 2m OF HAZARD AREAS, INCLUDING LIKELY AREAS OF CONCENTRATED OR HIGH VELOCITY FLOWS SUCH AS WATERWAYS. WHERE THEY ARE BETWEEN 2 & 5m 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 & 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 & 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 & MORTAR SLURRIES, PAINTS, ACID WASHINGS, LIGHT-WEIGHT WASTE MATERIALS & LITTER.
E12.	RECEPTORS FOR CONCRETE & MORTAR SLURRIES, PAINTS, ACID WASHINGS, LIGHT-WEIGHT WASTE MATERIALS & LITTER ARE TO BE EMPTIED AS NECESSARY. DISPOSAL OF WASTE SHALL BE IN A MANNER APPROVED BY THE SITE SUPERINTENDENT.
SITE INSPECTION & MAINTENANCE:	
E13.	EROSION & SEDIMENT CONTROL MEASURES SHALL BE INSPECTED AFTER RAINFALL EVENTS TO ENSURE THAT THEY OPERATE EFFECTIVELY. REPAIR & OR MAINTENANCE SHALL BE UNDERTAKEN AS REQUIRED.

NOT FOR CONSTRUCTION - DA APPROVAL ONLY



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Issue	Description	Date	Design	Check
A	ISSUE FOR DEVELOPMENT APPLICATION	03/12/2019	MBR	KE



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Client
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& Mr. Brad Burden

Scale @ A1

Project
67 BEATRICE STREET, BALGOWLAH HEIGHTS
PROPOSED ADDITIONS & ALTERATIONS
STORMWATER CONCEPT PLAN
DEVELOPMENT APPLICATION

Drawing Title
COVER SHEET, NOTES
& DRAWING INDEX

Project No.	19014
Dwg. No.	000
Rev	A

DIAL BEFORE YOU DIG NOTE



DIAL BEFORE YOU DIG

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LEGEND



PROPOSED BOUNDARY SHOWN OUTSIDE FOR CLARITY



PROPOSED CONCRETE AREA



PROPOSED GRASS AREA



PROPOSED ROOF AREA



PROPOSED PAVEMENT AREA



EXISTING POOL AREA



EXISTING DWELLING



EXISTING CONCRETE AREA




PROPOSED STORMWATER PIPE



EXISTING SEWER MAIN (FROM RECORDS)



ROOF SLOPE



GUTTER DOWNPIPE



DOWNPIPE NUMBER & SIZE



RAINWATER OUTLET



PROPOSED GRATED / SEALED PIT



PROPOSED GRATED DRAIN



SURFACE FLOW ARROWS



DESIGN SURFACE LEVEL



EXISTING SURFACE LEVEL



TREES TO BE RETAINED

GROUND FLOOR PLAN
SCALE 1:100

LEVEL 1 PLAN
SCALE 1:100

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A	ISSUE FOR DEVELOPMENT APPLICATION	03/12/2019	MBR	KE

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SCALE 1:100 @ A1

Project
67 BEATRICE STREET, BALGOWLAH HEIGHTS
PROPOSED ADDITIONS & ALTERATIONS
STORMWATER CONCEPT PLAN
DEVELOPMENT APPLICATION

Drawing Title
STORMWATER CONCEPT PLAN

Project No.	19014
Dwg. No.	101
Rev	A

