

PROPOSED SUBDIVISION of LOT 4 D.P. 553816 16 MACPHERSON STREET, WARRIEWOOD

NARRABEEN CREEK REHABILITATION WORKS DEVELOPMENT APPLICATION



LOCALITY PLAN
NOT TO SCALE

(SOURCE: NEARMAP MARCH 2023)

DRAWING No.	DRAWING TITLE	REV.
048-22C-CK-0001	COVER SHEET, LOCALITY PLAN & INDEX	D
048-22C-CK-0003	GENERAL LEGEND	D
048-22C-CK-0101	NARRABEEN CREEK PLAN, LONGITUDINAL SECTION & TYPICAL CROSS SECTION	D
048-22C-CK-0741	NARRABEEN CREEK CROSS SECTIONS	D
048-22C-CK-0771	DRAINAGE DETAILS	D
048-22C-CK-0901	SEDIMENT & EROSION CONTROL PLAN	D
048-22C-CK-0902	SEDIMENT & EROSION CONTROL DETAILS	D

ROCK SCOUR PROTECTION

- ROCK USED IN THE SCOUR PROTECTION SHALL CONSIST OF MATERIAL WHICH COMPLIES WITH THESE NOTES AND THE DRAWINGS. THESE REQUIREMENTS APPLY TO BOTH IMPORTED ROCK AND IN-SITU ROCK WHICH IS REUSED.
- INDIVIDUAL ROCKS SHALL BE FREE FROM CRACKS, CLEAVAGE PLANES, SEAMS AND DEFECTS WHICH WOULD RESULT IN THE BREAKDOWN OF ROCK IN SERVICE
- ROCK UNITS SHALL BE EITHER SEDIMENTARY ROCK ONLY OR IGNEOUS ROCK ONLY AND, AS A MINIMUM, SHALL SATISFY THE FOLLOWING CRITERIA:
 - ROCK SHALL BE BOTH ROUGH AND ANGULAR
 - ROCK SHALL HAVE A MINIMUM DRY DENSITY OF 2200 kg/m³
 - IGNEOUS ROCK SHALL NOT HAVE MORE THAN 10% (BY VOLUME) OLIVINE MATERIAL AND SHALL EXHIBIT NO ZONES OF SECONDARY ALTERATION SUCH AS CHLORITISATION.
 - SEDIMENTARY ROCK SHALL HAVE A SODIUM SULPHATE SOUNDNESS WEIGHT LOSS NOT EXCEEDING 25%
- ROCK SHALL HAVE A SATURATED POINT LOAD STRENGTH INDEX (15SO) NO LESS THAN 5.0MPa FOR IGNEOUS ROCK AND 1.5MPa FOR SEDIMENTARY ROCK
- THE RATIO OF THE MAXIMUM DIMENSION TO THE MINIMUM DIMENSION, MEASURED AT RIGHT ANGLES TO THE MAXIMUM DIMENSION, SHALL NOT EXCEED 2.5x
- THE ROCK UNITS SHALL BE PLACED SUCH THAT THE SPECIFIED REQUIREMENTS FOR SIZE, FINISHED SURFACE SIDE SLOPES, TOP AND TOE LEVELS AND DENSITY REQUIREMENTS ARE SATISFIED. IN ADDITION, ROCKS SHALL BE WEDGED AND LOCKED TOGETHER SUCH THAT THEY ARE NOT FREE TO MOVE. ROCK UNITS SHALL NOT BE ROLLED OR DROPPED IN TO POSITION, THEY SHALL BE PLACED.
- THE METHOD OF ROCK PLACEMENT SHALL BE SUCH AS TO MINIMISE ITS BREAKDOWN ON HANDLING AND THE PRODUCTION OF FINES.
- A NON-WOVEN SHALL BE PLACED UNDERNEATH AND BEHIND ALL ROCK ARMOUR AND EXTEND 0.5m ABOVE THE EXTENT OF THE WORKS, OR AS OTHERWISE SHOWN ON THE DRAWINGS. THE GEOTEXTILE IS TO BE LAID ON A HEAVILY TRIMMED BATTER THAT IS FREE OF HOLLOWES OR SHARP OBJECTS
- GEOTEXTILE LAYERS SHALL EITHER OVERLAP ONE ANOTHER BY 1000mm OR BE SEWN TOGETHER (WITH A NON-BIODEGRADABLE THREAD) WITH AN OVERLAP OF 100mm
- ROCK AND SUB-ARMOUR SHALL BE PLACED UPON THE GEOTEXTILE IN A LAYER NO LESS THAN 150mm THICK U.N.O. ON DRAWINGS
- ROCK ARMOUR SHALL BE SELECTIVELY HAND PLACED UPON THE SUB-ARMOUR TO ENSURE A SNUG FIT SUCH THAT INDIVIDUAL ROCKS ARE NOT FREE TO MOVE. THE PLACING OF ANY ARMOUR ROCK SHALL BE COMPLETED IN SUCH A MANNER AS TO MINIMISE THE DISTURBANCE OR DISLODGEEMENT OF THE SUB-ARMOUR.
- THE ARMOUR ROCK AND SUB-ARMOUR ROCK SHALL BE PLACED TO THE CONSTRUCTION TOLERANCES SHOWN ON THE DRAWINGS
- AT LEAST FOURTEEN (14) DAYS PRIOR TO THE SUPPLY OF ANY ROCK, THE CONTRACTOR SHALL PROVIDE DOCUMENTATION TO DEMONSTRATE THAT THE ROCK TO BE SUPPLIED COMPLIES WITH THE REQUIREMENTS OF THIS SPECIFICATION

EARTH WORKS

- THE CONTRACTOR SHALL PROVIDE PROPER FENCING, GUARDING & LIGHTING AND OBSERVATION OF ALL EARTHWORKS, TEMPORARY ROADWAYS, FOOTWAYS, GUARDS & FENCES AS MAY BE RENDERED NECESSARY FOR THE ACCOMMODATION AND PROTECTION OF PEDESTRIANS, VEHICLES, ANIMALS & THE PUBLIC
- ALL EARTHWORKS SHALL BE CARRIED OUT IN THE LOCATIONS SHOWN AND TO THE LEVELS, WIDTHS AND BATTER SLOPES INDICATED ON THE DRAWINGS

- EXCAVATED MATERIAL NOT MEETING THE SPECIFICATIONS FOR FILL MATERIAL SHALL BE DISPOSED OFF SITE IN AN APPROPRIATE MANNER
- WHERE EARTHWORKS ARE REQUIRED IN THE VICINITY OF EXISTING SERVICES, THE CONTRACTOR SHALL SUPPORT ALL SERVICES DURING THE WORKS
- THE CONTRACTOR SHALL, AT ITS OWN EXPENSE, DO ALL THINGS NECESSARY TO DIVERT ANY WATER INTERFERING WITH THE PROCESS OF WORKS. KEEP THE EXCAVATIONS AND TRENCHES FREE FROM WATER WHILE THE WORKS ARE IN PROGRESS AND PREVENT ANY DAMAGE TO THE WORKS BY WATER DUE TO FLOODS OR OTHER CAUSES. THE CONTRACTOR SHALL HAVE PUMPING EQUIPMENT FOR KEEPING THE EXCAVATION OR TRENCHES CONSTANTLY DEWATERED DURING THE TIMES THE WORKS ARE IN PROGRESS. ANY WORK OR MATERIAL DAMAGED BY WATER SHALL BE MADE GOOD BY THE CONTRACTOR.
- WHERE DIRECTED BY THE SUPERINTENDENT THE BOTTOM OF TRENCHES OR EXCAVATIONS SHALL BE COMPACTED PRIOR TO THE PLACING OF ANY BEDDING OR CONCRETE MATERIALS. SHOULD, IN THE OPINION OF THE SUPERINTENDENT, THE FOUNDATION MATERIAL BE INCAPABLE OF EFFECTIVE COMPACTION, THE MATERIAL SHALL BE REMOVED AND REPLACED WITH APPROPRIATE MATERIAL

EXCAVATIONS

- ALL TOPSOIL TO BE STRIPPED AND STOCKPILED FOR FUTURE USE. STRIPPED SURFACES ARE TO BE ROLLED AND INSPECTED BY A GEOTECHNICAL ENGINEER PRIOR TO CONTINUING WORKS. DEPTH OF TOPSOIL STRIPPING TO BE BETWEEN 125mm AND 200mm (TO BE CONFIRMED BY THE SUPERINTENDENT PRIOR TO CONSTRUCTION)
- WHERE ROCK IS EXPOSED DURING EXCAVATION, THE CONTRACTOR SHALL CEASE EXCAVATION AT THIS LOCATION AND CONTACT THE SUPERINTENDENT WHO WILL THEN ADVISE ON THE LEVEL TO WHICH THE EXCAVATION IS TAKEN

FILL

- FOUNDATION MATERIAL DEEMED BY THE SUPERINTENDENT AS UNSUITABLE TO BE REMOVED AS DIRECTED BY THE SUPERINTENDENT AND REPLACED WITH APPROVED MATERIAL SATISFYING THE REQUIREMENTS LIST BELOW
- UNLESS OTHERWISE APPROVED OR SPECIFIED, ALL FILL MATERIAL SHALL BE FROM A SOURCE APPROVED BY THE SUPERINTENDENT AND SHALL COMPLY WITH THE FOLLOWING:-
 - FREE FROM ORGANIC & PERISHABLE MATTER
 - MAXIMUM PARTICLE SIZE 75mm
 - PLASTICITY INDEX BETWEEN 2% AND 20%
 - CBR > 10
- SELECT FILL MATERIAL SHALL BE PLACED IN MAXIMUM 200MM LOOSE THICK LAYERS AND COMPACTED AT OPTIMUM MOISTURE CONTENT (±2%) TO ACHIEVE A DRY DENSITY DETERMINED IN ACCORDANCE WITH AS1289E3.1 (LATEST EDITION) OF NOT LESS THAN THE STANDARD DRY DENSITY ON ACCORDANCE WITH AS1289E3.1 (LATEST EDITION) SHOWN ON THE DRAWING
- COMPACTION CONTROL TESTING SHALL BE CARRIED OUT BY & AT THE COST OF THE CONTRACTOR TO CONFORM WITH LEVEL 1 AS DEFINED IN AS3798 (LATEST EDITION)
- REPLACEMENT SUBGRADE MATERIAL MAY COMPRISE GRANULAR FILL MATERIAL & SHOULD HAVE A CBR OF AT LEAST 10% REPLACEMENT. SUBGRADE SHALL BE PLACED ON PROOF ROLLED SUBGRADE IN HORIZONTAL LAYERS OF 200mm TO 250mm MAXIMUM LOOSE THICKNESS DEPENDING ON THE SIZE OF EQUIPMENT) AND COMPACTED TO A MINIMUM DRY DENSITY OF (MDDR) OF 98% STANDARD, AT MOISTURE CONTENT WITHIN 2% OF OPTIMUM MOISTURE CONTENT
- WHERE EXCAVATED MATERIAL IS TO BE USED FOR FILLING, THE MATERIAL SHALL BE INSPECTED & APPROVED BY THE SUPERINTENDENT PRIOR TO USE.

DEVELOPMENT APPLICATION

1					
D	26.05.23	ISSUED FOR DEVELOPMENT CONSENT	S.Y.	N.M.	
C	18.05.23	ISSUED FOR DEVELOPMENT CONSENT	L.Mc.	K.S.	
B	04.05.23	ISSUED FOR DEVELOPMENT APPLICATION	L.Mc.	N.M.	
A	14.04.23	ISSUED FOR DEVELOPMENT APPLICATION	L.Mc.	L.Mc.	
REV.	DATE	AMENDMENT DESCRIPTION	DES.	DRN.	



Authorised for issue by: _____
Signature: _____

Principal:
IPM PROPERTIES
L.G.A.
NORTHERN BEACHES COUNCIL

Project:
PROPOSED SUBDIVISION OF
LOT 4 D.P. 553816
16 MACPHERSON STREET, WARRIEWOOD



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Drawing Title	COVER SHEET, LOCALITY PLAN & INDEX	Revision	D
C&R Ref.	048-22	Drawing Ref.	048-22C-CK-0001

LEGEND - CIVIL

DESCRIPTION	PROPOSED	EXISTING
LIMIT OF CONSTRUCTION		
CIVIL WORKS BOUNDARY		
SITE WORKS BOUNDARY		
DESIGN CONTOUR - MAJOR		
DESIGN CONTOUR - MINOR		
MASONRY RETAINING WALL		
ROCK RETAINING WALL		
FENCE		
LOCKABLE GATE		
BOLLARD		
GUIDE POST		
SITE FENCE		
GUARD RAIL		
BATTER (EARTHWORKS)		
CENTRELINE / CHAINAGE		
KERB LINE		
KERB LINE (FUTURE)		
KERB RETURN LABEL		
SURFACE LEVEL		
VEHICULAR CROSSING		
DRIVEWAY		

LEGEND - PAVEMENT

DESCRIPTION	PROPOSED	EXISTING
ROAD		
TEMPORARY		
FOOTPATH		

LEGEND - SURVEY

DESCRIPTION	PROPOSED	EXISTING
TREES		
EXISTING TREES TO BE REMOVED (MUST BE CONCORDANT WITH ARBORIST REPORT)		

LEGEND - DRAINAGE

DESCRIPTION	PROPOSED	EXISTING	FUTURE	TEMPORARY
SUBSOIL DRAINAGE LINE				
SUBSOIL DRAINAGE FLUSHING POINT				
STORMWATER DRAINAGE LINE				
RCBC CULVERT LINE				
FLOW DIRECTION AND PIPE SIZE				
STUB, CAP AND BURY FOR FUTURE CONNECTION				
TEMPORARILY BLOCK PIPE				
STRUCTURAL STORMWATER PIT (LINTEL/GRATE VARIABLE)				
STORMWATER PIT - ONGRADE				
STORMWATER PIT - SAG				
STORMWATER PIT - SURFACE INLET				
STORMWATER PIT - JUNCTION PIT				
STORMWATER PIT LABEL (DRAINAGE LINE No. \ DRAINAGE PIT No.)				
CONCRETE HEADWALL WITH RIPRAP SCOUR PROTECTION				
STACKED ROCK HEADWALL WITH RIPRAP SCOUR PROTECTION				
OVERLAND FLOW PATH				
CATCHMENT DIRECTION				
EARTH BANK (LOW FLOW)				
SWALE				
ROOF WATER OUTLET TO KERB				
ROOF WATER CONNECTION TO REAR OF LINTEL				
BASIN FENCE				
BASIN BIO FILTER				

LEGEND - SERVICES

DESCRIPTION	PROPOSED	EXISTING	FUTURE
O/H ELECTRICAL LINE			
ELECTRICAL LINE			
ELECTRICAL PILLAR			
STREET LIGHT			
POWER POLE			
ELECTRICAL SUBSTATION			
WATER LINE			
WATER HYDRANT			
WATER STOP VALVE			
RECYCLE WATER			
COMMUNICATION LINE			
GAS LINE			
SEWER LINE			
SEWER RISING MAIN			
SEWER LINE CONCRETE ENCASED			
SEWER MAINTENANCE HOLE			
SEWER MS/TMS			
NBN LINE			
TELECOMS LINE			
FIBRE OPTIC LINE			
COMBINED SERVICES TRENCH			

ABBREVIATIONS

RKG	ROLL KERB AND GUTTER
K&G	KERB AND GUTTER
KO	KERB ONLY
ES	EDGE STRIP
DD	DISH DRAIN
PR	PRAM RAMP
VC	VEHICULAR CROSSING
RW	RETAINING WALL
S.G.G.P.	STANDARD GRATED GULLY PIT
G.S.I.P.	GRATED SURFACE INLET PIT
JP	JUNCTION PIT
HW	HEADWALL
GPT	GROSS POLLUTANT TRAP
TOW	TOP OF WALL
BOW	BOTTOM OF WALL
TFSL	TOP FINISHED SURFACE LEVEL
BFSL	BOTTOM FINISHED SURFACE LEVEL
RCP	STEEL REINFORCED CONCRETE PIPE
RRJ	RUBBER RING JOINT
C1 or C2	PIPE CLASS
MH	MAINTENANCE HOLE
MS	MAINTENANCE SHAFT
TMS	TERMINAL MAINTENANCE SHAFT
RP	RODDING POINT
HYD	HYDRANT
SV	STOP VALVE
SAG	LOW POINT
CREST	HIGH POINT
PP	POWER POLE

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Signature

Principal: **IPM PROPERTIES**

LGA: **NORTHERN BEACHES COUNCIL**

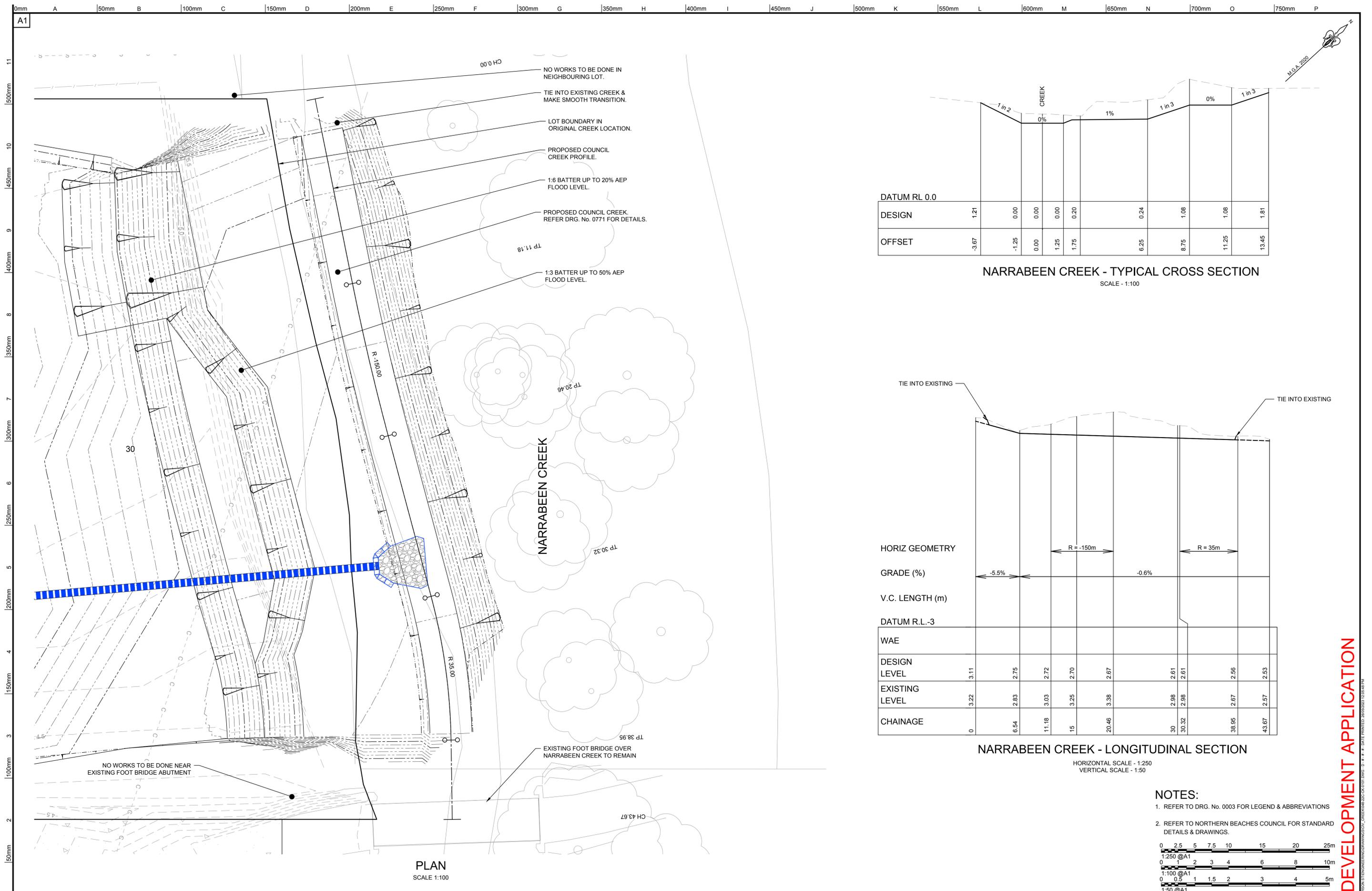
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Project: **PROPOSED SUBDIVISION OF LOT 4 D.P. 553816**
16 MACPHERSON STREET, WARRIEWOOD

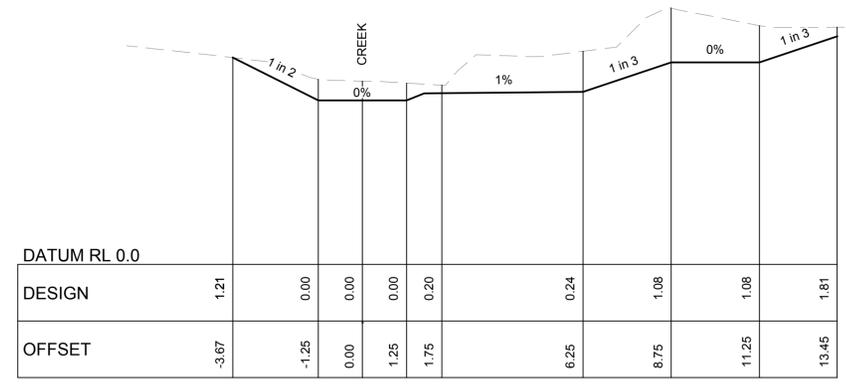
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TAKE THE LEAD

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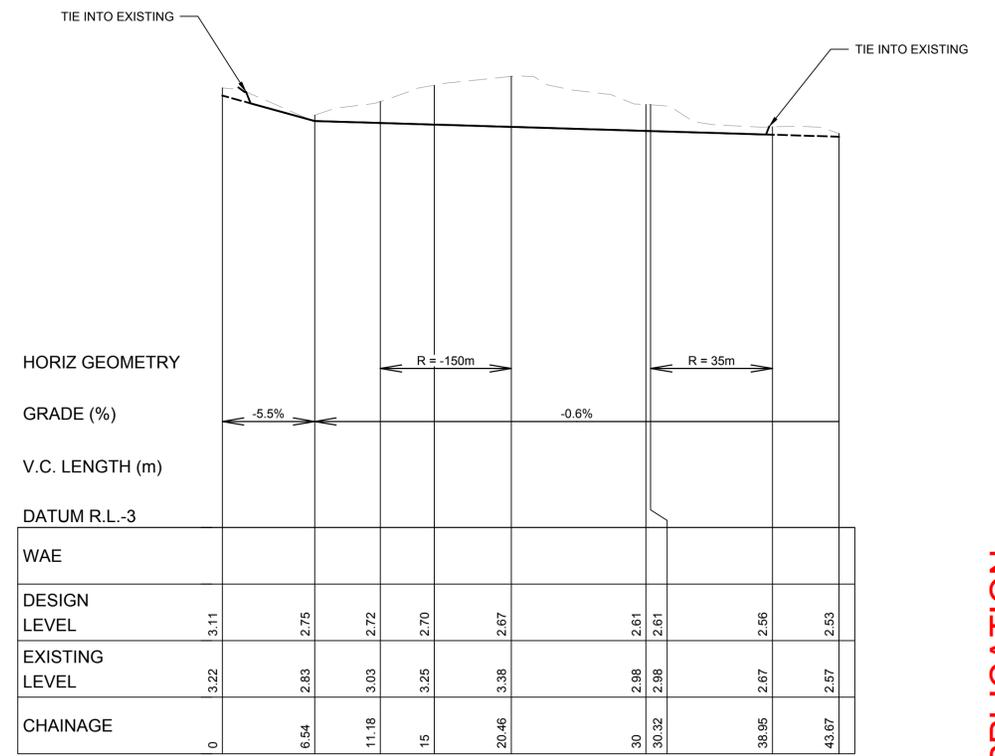
DEVELOPMENT APPLICATION



PLAN
SCALE 1:100



NARRABEEN CREEK - TYPICAL CROSS SECTION
SCALE - 1:100



NARRABEEN CREEK - LONGITUDINAL SECTION
HORIZONTAL SCALE - 1:250
VERTICAL SCALE - 1:50

NOTES:
1. REFER TO DRG. No. 0003 FOR LEGEND & ABBREVIATIONS
2. REFER TO NORTHERN BEACHES COUNCIL FOR STANDARD DETAILS & DRAWINGS.

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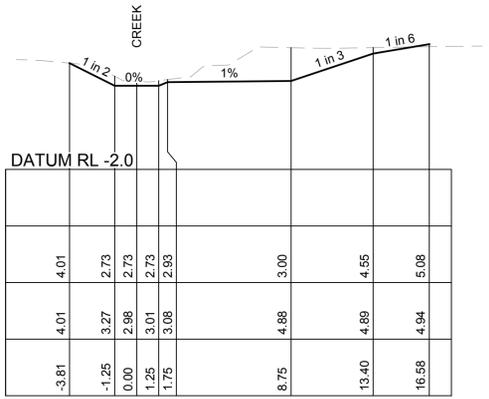
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Drawing Title:
NARRABEEN CREEK PLAN,
LONGITUDINAL SECTION &
TYPICAL CROSS SECTION

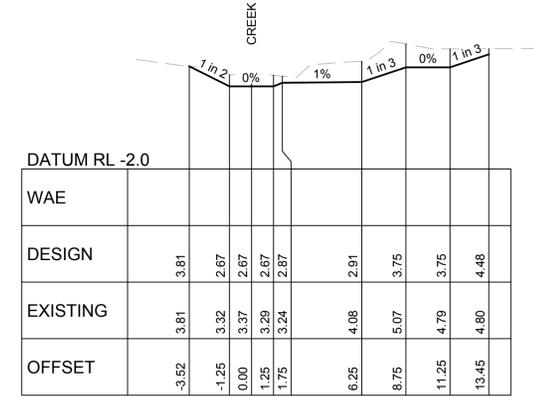
C&R Ref: 048-22
Drawing Ref: 048-22C-CK-0101

Revision: D

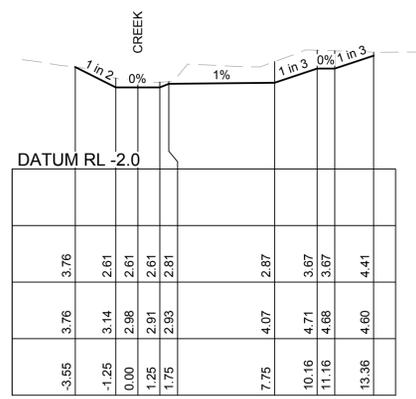
DEVELOPMENT APPLICATION



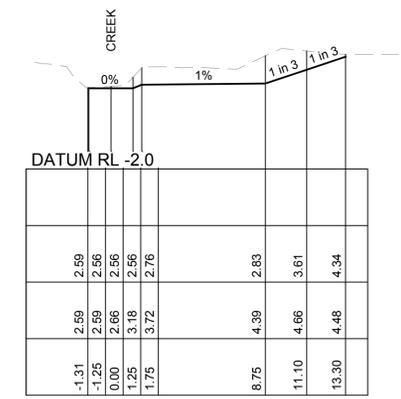
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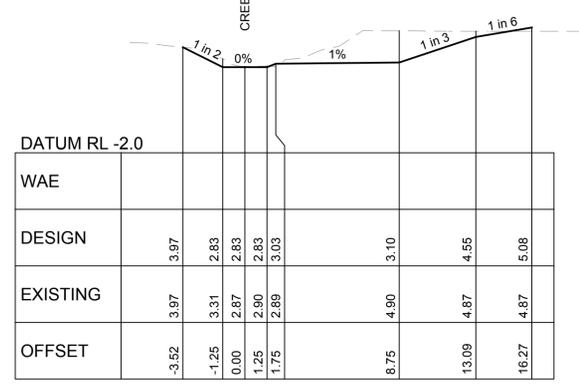
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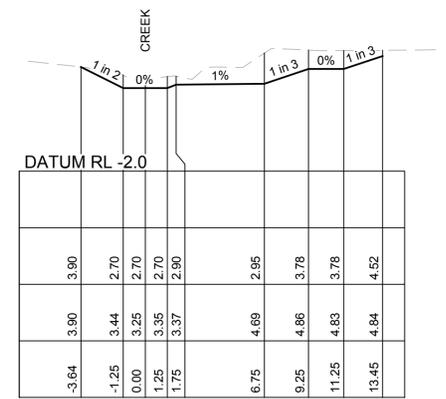
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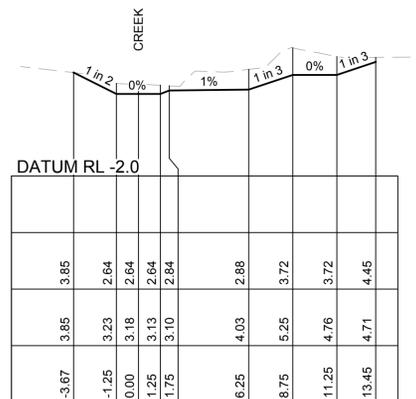
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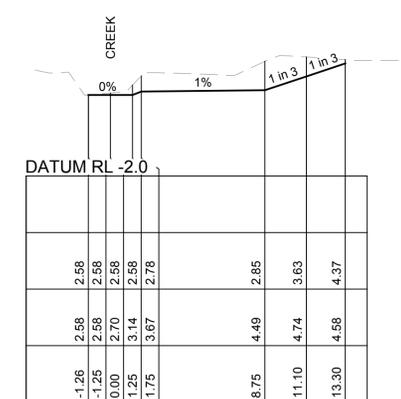
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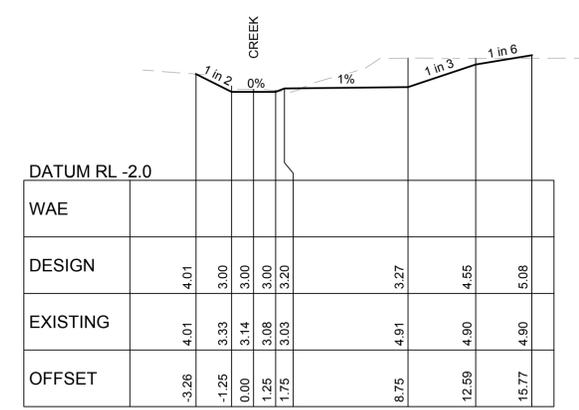
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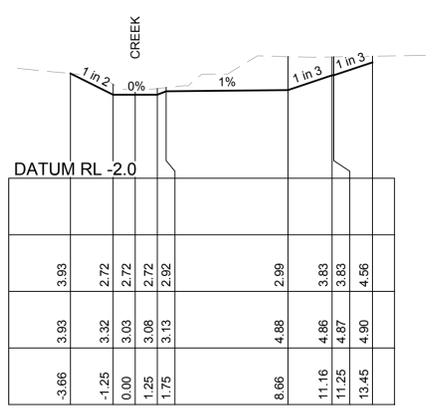
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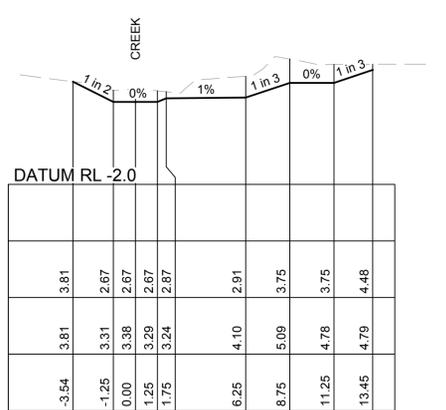
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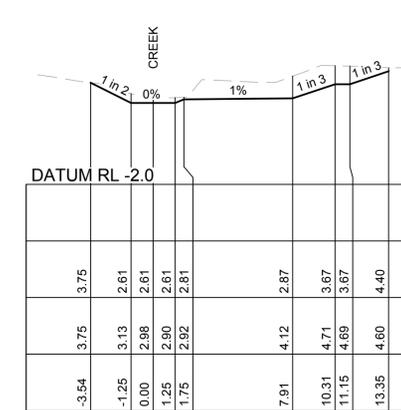
CHAINAGE 2.00



CHAINAGE 11.18



CHAINAGE 20.46



CHAINAGE 30.32



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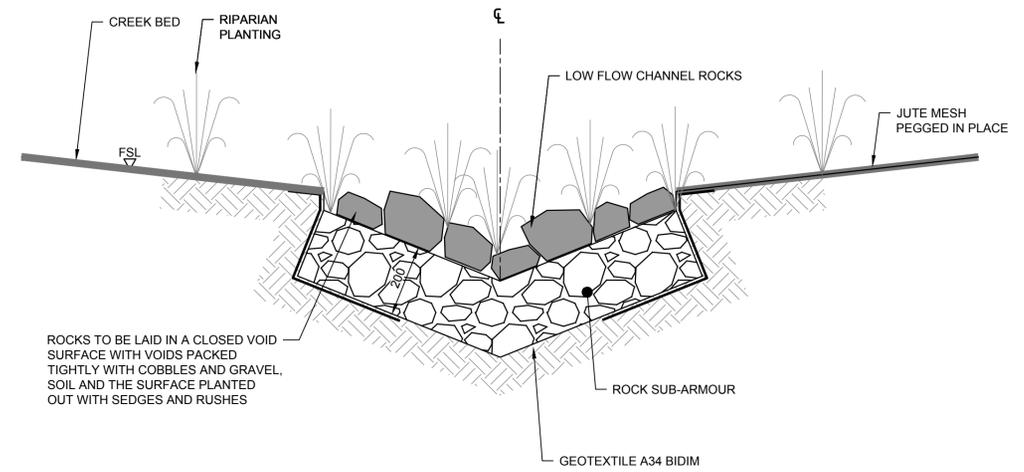
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Drawing Title:	NARRABEEN CREEK CROSS SECTIONS
C&R Ref:	048-22
Drawing Ref:	048-22C-CK-0741
Revision:	D

DEVELOPMENT APPLICATION

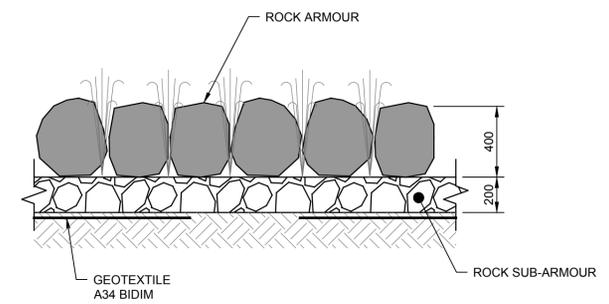
NOTE
STORMWATER OUTLETS TO BE ORIENTATED IN THE DIRECTION OF NATURAL FLOW OF THE RECEIVING WATER COURSE AND NOT OBSTRUCTING FLOW FROM UPSTREAM. OUTLETS TO BE INSTALLED IN ACCORDANCE WITH NSW OFFICE OF WATER REQUIREMENTS

NOTE
ROCK SIZES AND DEPTH ARE SHOWN AS INDICATIVE ONLY. TO BE CONFIRMED IN DESIGNED DURING DETAIL DESIGN.

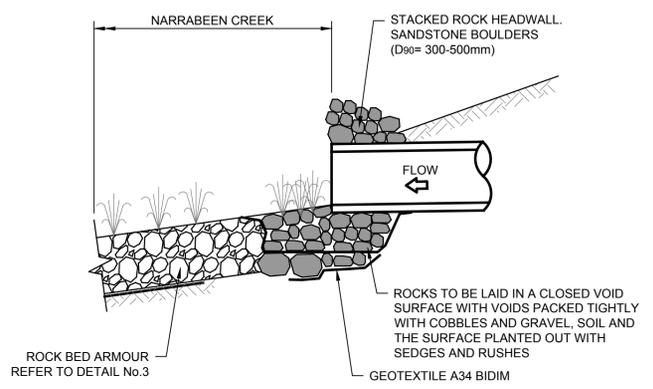


ROCKS TO BE LAID IN A CLOSED VOID SURFACE WITH VOIDS PACKED TIGHTLY WITH COBBLES AND GRAVEL, SOIL AND THE SURFACE PLANTED OUT WITH SEDGES AND RUSHES

LOW FLOW CHANNEL
DETAIL A
NTS



STANDARD ARMOUR
DETAIL C
NTS



STORMWATER OUTLET
DETAIL B
NTS

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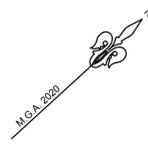
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16 MACPHERSON STREET, WARRIEWOOD



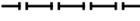
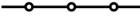
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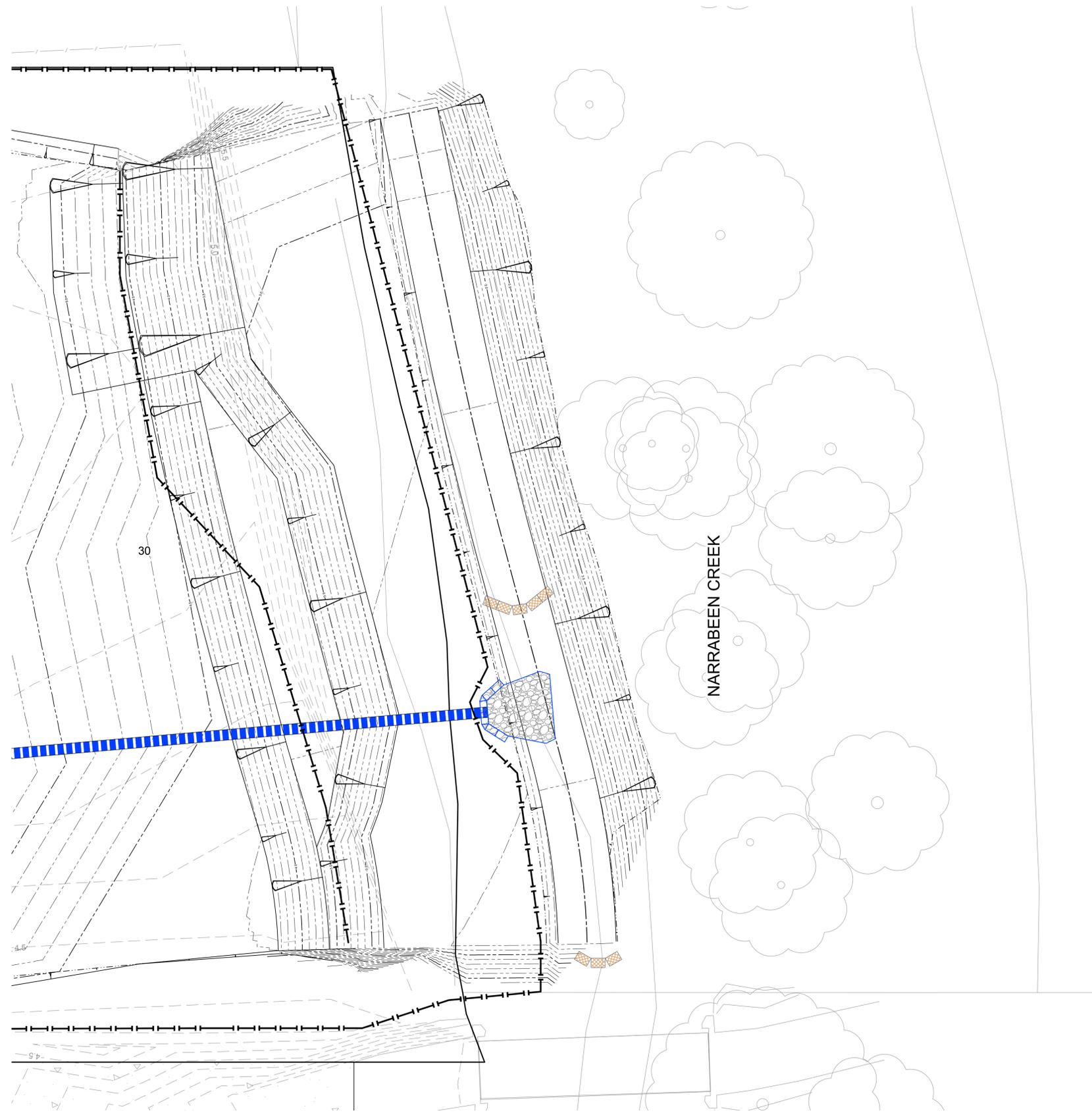
Drawing Title	C&R Ref.	Drawing Ref.	Revision
DRAINAGE DETAILS	048-22	048-22C-CK-0771	D

DEVELOPMENT APPLICATION



LEGEND

-  SEDIMENT FENCE
-  SITE FENCE
-  GEOTEXTILE INLET FILTER
-  KERB INLET SEDIMENT TRAP
-  STRAW BALE FILTERS
-  EXISTING TREES TO BE RETAINED



PLAN
SCALE 1:100

NOTE:

1. REFER TO DRG. No. 0902 FOR DETAILS.



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Drawing Title	C&R Ref.	Drawing Ref.	Revision
SEDIMENT & EROSION CONTROL PLAN	048-22	048-22C-CK-0901	D

DEVELOPMENT APPLICATION

- ### STABILISED SITE ACCESS
- COVER THE EXISTING SANDSTONE SUBGRADE AREA WITH NEEDLE-PUNCHED GEOTEXTILE.
 - CONSTRUCT A 200mm THICK PAD OVER THE GEOTEXTILE USING ROAD BASE OR 30mm AGGREGATE.
 - ENSURE THE STRUCTURE IS AT LEAST 15 METERS LONG OR TO BUILDING ALIGNMENT AND AT LEAST 3 METERS WIDE.
 - WHERE A SEDIMENT FENCE JOINS ONTO THE STABILISED ACCESS, CONSTRUCT A HUMP IN THE STABILISED ACCESS TO DIVERT WATER TO THE SEDIMENT

- ### SEDIMENT FENCE
- CONSTRUCT SEDIMENT FENCES AS CLOSE AS POSSIBLE TO BE PARALLEL TO THE CONTOURS OF THE SITE, BUT WITH SMALL RETURNS AS SHOWN IN THE DRAWING, TO LIMIT THE CATCHMENT AREA OF ANY ONE SECTION. THE CATCHMENT AREA SHOULD BE SMALL ENOUGH TO LIMIT WATER FLOW IF CONCENTRATED AT ONE POINT TO 50 LITRES/SEC IN THE DESIGN STORM EVENT, USUALLY THE 10 YEAR EVENT.
 - CUT A 150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
 - DRIVE 1.5 METER LONG STAR PICKETS INTO GROUND AT 2.5 METER INTERVALS (MAX.) AT THE DOWNSLOPE EDGE OF THE TRENCH. ENSURE ANY STAR PICKETS ARE FITTED WITH SAFETY CAPS.
 - FIX SELF-SUPPORTING GEOTEXTILE TO THE UPSLOPE SIDE OF THE POSTS, ENSURING IT GOES TO THE BASE OF THE TRENCH. FIX THE GEOTEXTILE WITH WIRE TIES, OR AS RECOMMENDED BY THE MANUFACTURER. ONLY USE GEOTEXTILE SPECIFICALLY PRODUCED FOR SEDIMENT FENCING. THE USE OF SHADE CLOTH FOR THIS PURPOSE IS NOT SATISFACTORY.
 - JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150mm OVERLAP.
 - BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.

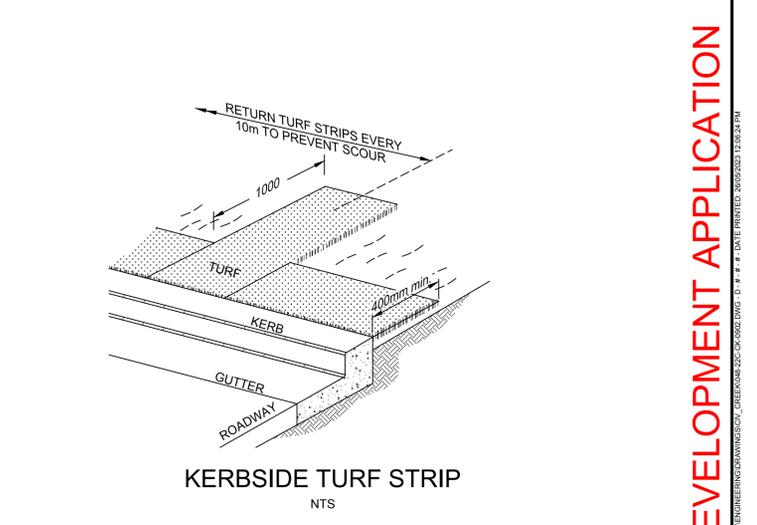
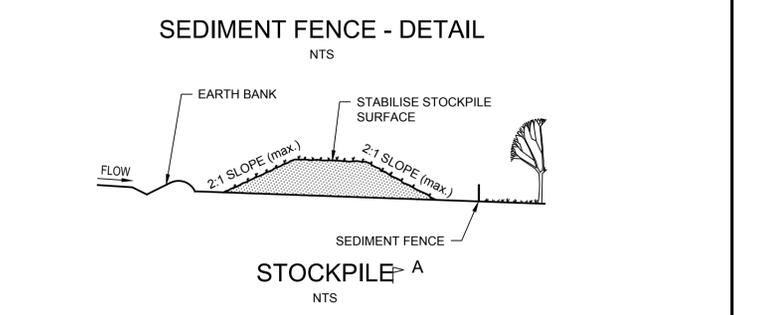
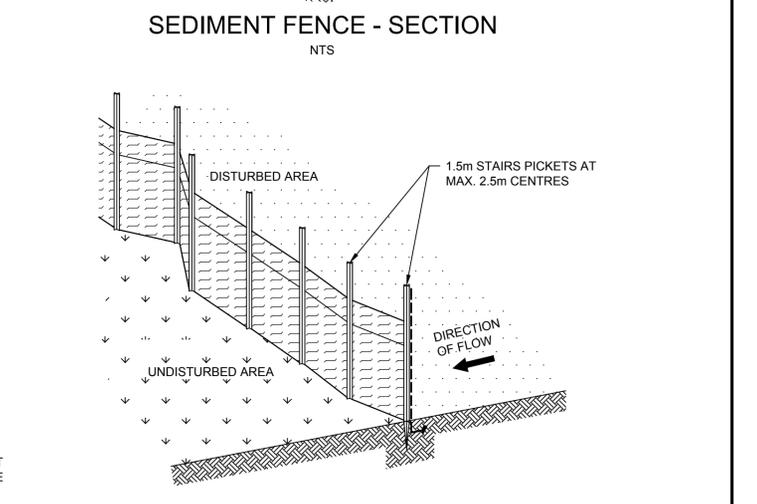
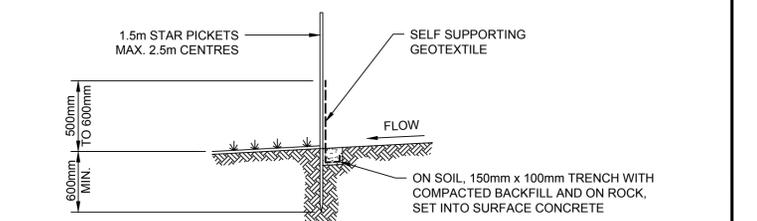
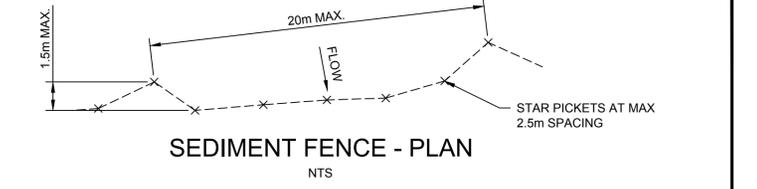
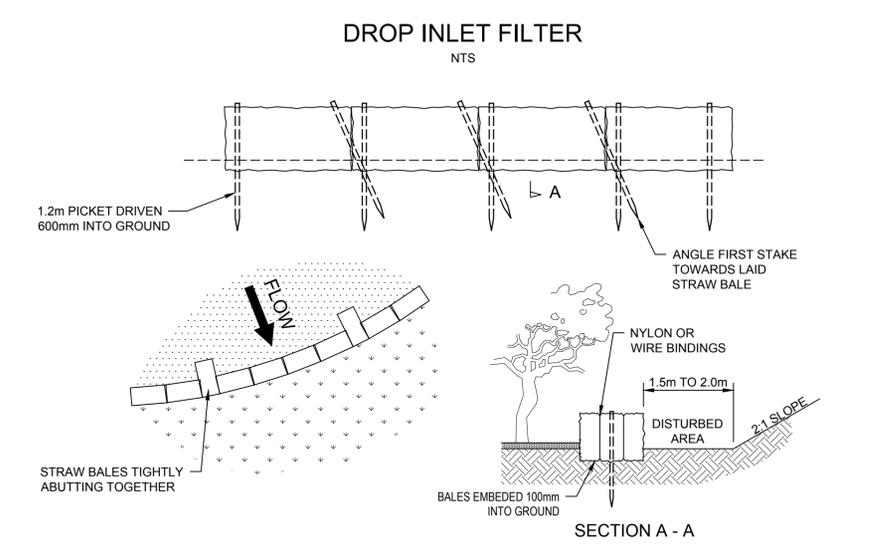
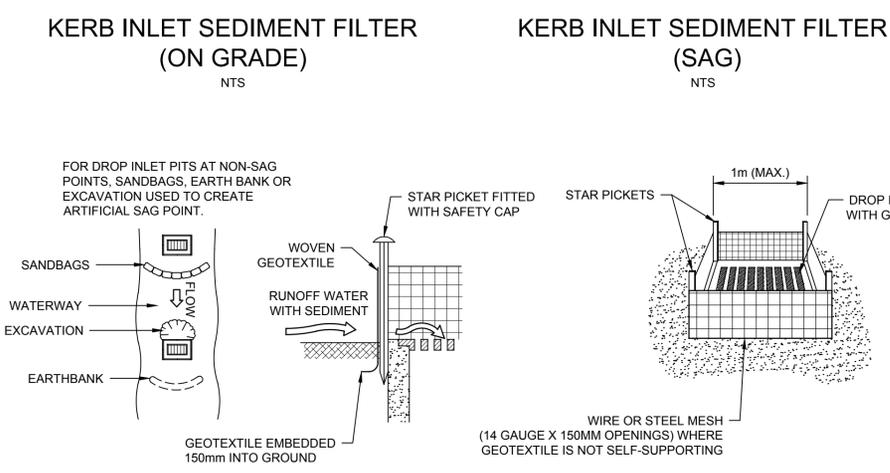
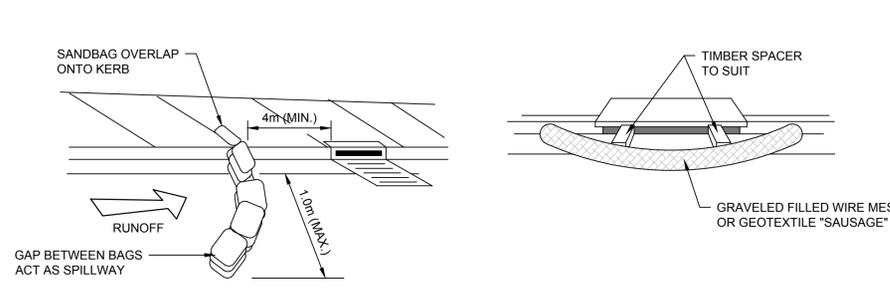
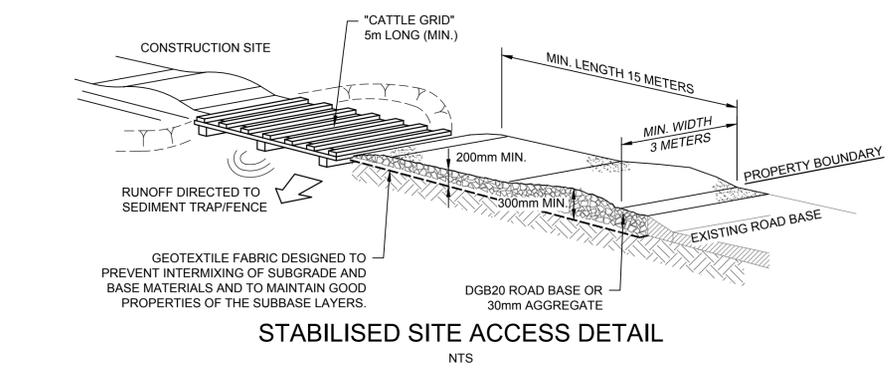
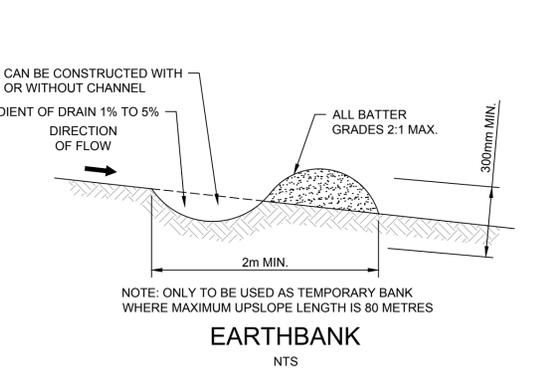
- ### KERB INLET SEDIMENT FILTER
- REFER TO APPROVED PLANS FOR LOCATION AND INSTALLATION DETAILS. IF THERE ARE QUESTIONS OR PROBLEMS WITH THE LOCATION, DIMENSIONS, OR METHOD OF INSTALLATION, CONTACT THE ENGINEER OR RESPONSIBLE ON-SITE OFFICER FOR ASSISTANCE.
 - ENSURE THAT THE INSTALLATION OF THE SEDIMENT TRAP WILL NOT CAUSE UNDESIRABLE SAFETY OR FLOODING ISSUES.
 - INSTALL SEDIMENT TRAP IN ACCORDANCE WITH STANDARD DRAWING SUPPLIED WITH THE APPROVED PLAN, OR AS DIRECTED BY THE SITE SUPERVISOR.
 - ENSURE THE SEDIMENT TRAP IS CONSTRUCTED UP-SLOPE OF AN ON-GRADE KERB INLET. THE SEDIMENT TRAP MUST NOT SURROUND THE KERB INLET UNLESS SPECIFICALLY DIRECTED BY THE SITE SUPERVISOR.
 - ENSURE THE SEDIMENT TRAP FULLY ENCLOSES THE KERB INLET. USE APPROPRIATE SPACERS TO ENSURE THE SEDIMENT TRAP DOES NOT BLOCK THE SIDE-ENTRY INLET.
 - TAKE ALL NECESSARY MEASURE TO MINIMISE THE SAFETY RISK CAUSED BY THE STRUCTURE

- ### DROP INLET FILTERS
- FABRICATE A SEDIMENT BARRIER MADE FROM GEOTEXTILE OF STRAW BALES.
 - FOLLOW STANDARD DRAWINGS OF STRAW BALE FILTERS AND SEDIMENT FENCES FOR INSTALLATION PROCEDURES FOR THE STRAW BALES OR GEOFABRIC. REDUCE THE PICKET SPACING TO 1m CENTRES.
 - IN WATERWAYS, ARTIFICIAL SAG POINTS CAN BE CREATED WITH SANDBAGS OR EARTH BANKS AS SHOWN IN THE DRAWING.
 - DO NOT COVER THE INLET WITH GEOTEXTILE UNLESS THE DESIGN IS ADEQUATE TO ALLOW FOR ALL WATERS TO BYPASS IT.

- ### EARTH BANK (LOW FLOW)
- BUILD WITH GRADIENTS BETWEEN 1% AND 5%.
 - AVOID REMOVING TREES AND SHRUBS IF POSSIBLE - WORK AROUND THEM.
 - ENSURE THE STRUCTURES ARE FREE OF PROJECTIONS OR OTHER IRREGULARITIES THAT COULD IMPEDE WATER FLOW.
 - BUILD THE DRAINS WITH CIRCULAR, PARABOLIC OR TRAPEZOIDAL CROSS SECTIONS, NOT V SHAPED.
 - ENSURE BANKS ARE PROPERLY COMPACTED TO PREVENT FAILURE.
 - COMPLETE PERMANENT OR TEMPORARY STABILISATION WITHIN 10 DAYS OF CONSTRUCTION.

- ### STRAW BALE FILTERS
- CONSTRUCT THE STRAW BALE FILTER AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE, BUT WITH SMALL RETURNS AS SHOWN IN THE DIAGRAM TO LIMIT THE CATCHMENT AREA OF ANY ONE SECTION.
 - PLACE BALES LENGTHWISE IN A ROW WITH ENDS TIGHTLY ABUTTING. USE STRAW TO FILL ANY GAPS BETWEEN THE BALES. THE STRAWS IN EACH BALE ARE TO BE ALIGNED PARALLEL TO THE GROUND.
 - ENSURE THAT THE MAXIMUM HEIGHT OF THE FILTER IS ONE BALE.
 - EMBED EACH BALE IN THE GROUND 75mm TO 100mm AND ANCHOR WITH 1.2m STAR PICKETS OR STAKES. ANGLE THE FIRST STAR PICKET OR STAKE IN EACH BALE TOWARDS THE PREVIOUSLY LAID BALE. DRIVE THEM 600mm INTO THE GROUND AND, IF POSSIBLE, FLUSH WITH THE TOP OF THE BALES. WHERE STAR PICKETS ARE USED AND THEY PROTRUDE ABOVE THE BALES, ENSURE THEY ARE FITTED WITH SAFETY CAPS.
 - WHERE A STRAW BALE FILTER IS CONSTRUCTED DOWNSLOPE FROM A DISTURBED BATTER, ENSURE BALES ARE PLACED 1M TO 2m DOWNSLOPE FROM THE TOE.
 - ESTABLISH A MAINTENANCE PROGRAM THE ENSURES THE INTEGRITY OF THE BALES IS RETAINED - THEY COULD REQUIRE REPLACEMENT EACH TWO TO FOUR MONTHS.

- ### STOCKPILE
- MAINTAIN THE TRENCH FREE OF WATER AND RECOMPACT THE MATERIALS WITH EQUIPMENT AS SPECIFIED IN THE SWMP TO 95% STANDARD PROCTOR DENSITY.
 - SELECT FILL FOLLOWING THE SWMP THAT IS FREE OF ROOTS, WOOD, ROCK LARGE STONE OR FOREIGN MATERIAL.
 - SPREAD THE FILL IN 100mm TO 150mm LAYERS AND COMPACT IT AT OPTIMUM MOISTURE CONTENT FOLLOWING THE SWMP.



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D	26.05.23	ISSUED FOR DEVELOPMENT CONSENT	S.Y.	N.M.	
C	18.05.23	ISSUED FOR DEVELOPMENT CONSENT	L.Mc.	K.S.	
B	04.05.23	ISSUED FOR DEVELOPMENT APPLICATION	L.Mc.	N.M.	
A	14.04.23	ISSUED FOR DEVELOPMENT APPLICATION	L.Mc.	L.Mc.	
REV.	DATE	AMENDMENT DESCRIPTION	DES.	DRN.	



Authorised for issue by: _____
Signature: _____

Principal: **IPM PROPERTIES**
LGA: **NORTHERN BEACHES COUNCIL**

Scale: AS SHOWN Datum: AHD

Project: **PROPOSED SUBDIVISION OF LOT 4 D.P. 553816**
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Drawing Title: **SEDIMENT & EROSION CONTROL DETAILS**

C&R Ref: **048-22** Drawing Ref: **048-22C-CK-0902** Revision: **D**

DEVELOPMENT APPLICATION