

7 June 2021

**APPLICATION TO MODIFY DA CONSENT
38 -40 ENTERPRISE CRESCENT MUSWELLBROOK NSW 2333**

Attn Muswellbrook Council

Re : Application to Modify Development Consent Under Section 4.55
Summary of Marked Up Drawing Notes and Documents Submitted

- Muswellbrook Shire Council form – Application Modify Development Consent under Section 4.55 – form filled out and signed .
- Report from RHM Consulting reviewing and commenting on the completed Hardstand including photos to support comments.
- Various photos of the hardstand during construction.
- Drg No 19-027-C00 Rev D This is a legend showing drawings that have a comment on them relating to the drawing content
- Drg No 19-027- C03 Rev C explanation for the basis for changing levels versus the proposed construction method which involved multiple material handling and reduced area to work.
- Drg No 19-027-C03.1 The retention basin has been installed as per the design intent
- Drg No 19-027-C03.2 The drive access across the footpath and the layback have been installed to the property boundary. The rest of the concrete drive has not been installed as the approach angle for vehicles has been reduced by half plus this was an opportunity to save on some costs.
- Drg No 19-027-C05 Comments around removal of fill from the site instead of employing the cut and fill method. By reducing finished levels by approx. 1 m the entry from next door no longer required a ramp and the front access the street was improved significantly.
- Drg No 19-027-C06 – Reduced levels negated the need for retention berm on the east side of the block but it was installed on the west side of the block to catch any run off.
- Drg No 19-027-C06.1 Relative profile height differences are unchanged
- Drg No 19-027-C06.2 Relative profile height differences are unchanged
- Drg No 19-027-C07 Overall hardstand plan has not changed it just not as high out of the ground.
- Drg No 19-027-C08 Long sections remain the same but are at a reduced level.
- Drg No 19-027-C08.1 Long sections remain the same but are at a reduced level.
- Drg No 19-027-C09 The changed extent of the drive on the block is explained as well as the significantly reduced change in grade. Layback and concrete drive across the footpath is as per the design.

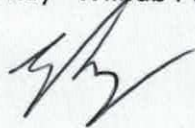
- Drg No 19-027-C10 Turning circle area remains as per design
- Drg No 19-027-C11 All relative levels remain unchanged with the overall design philosophy being maintained. The drain discharge line from the water retention basin has been installed as per design.
- Drg No 19-027-C13 Only drive and layback across the footpath have been installed.
- Drg No 19-027-C12 All relative levels remain unchanged ie The overall design philosophy has been maintained.
- Drg No 19-027-C15 Landscaping has been installed as per design. Front batter plant selection has been changed after advise from horticulturalist due to local weather conditions.

Please do not hesitate to contact the under signed should you require further information or discussion in relation to this Drawing Comment Summary.

Yours faithfully

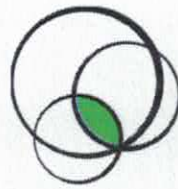
Name - Graeme Ray Willfab Pty Ltd

Signature -

 7/6/24

Ph 0418 653 818

Email willfab1@bigpond.com



RHM Consulting Engineers

Civil & Structural Consulting Engineers
ABN 82 153 018 800

PO Box 312, Scone NSW 2337
Ph: 02 6545 2800

www.rhmce.com.au

19 March 2021

Job Number: 19-027
Reference: 2021-03-19 bh

Mr Graeme Ray
PO Box 136
LAMBTON NSW 2299

Attention: Mr Graeme Ray
Email: willfab1@bigpond.com

Dear Sir,

**PROPOSED HARDSTAND AREA AT 38-40 ENTERPRISE CRESCENT, MUSWELLBROOK.
LOT 20 OF DP 1119843.**

Further to your request, RHM consulting Engineer (RHMCE) senior design engineer Mr Brett Hails inspected the constructed works on the March 2021 for the purpose of:

1. Assess the constructed works to include the hardstand area and stormwater for compliance with respect to the documentation prepared by this office.
2. To review amendments to the access ramp and associated driveway that provides vehicular access directly off Enterprise Crescent.

Observations at the time of the inspection were as follows:

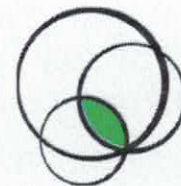
- The constructed gravel hardstand as noted in Photograph 1.0, appeared flat and compacted, with the pad falling in a southerly direction toward the detention basin.
- The concrete crossover and access ramp have been altered to reflect the revised hardstand levels. The concrete driveway extends to the boundary gates, as noted in Photograph 2.0. The observed grades would suggest that heavy vehicle access from the subject lot onto Enterprise Crescent can occur.
- The on-site earth detention basin has been constructed with dimensions reflective of the documentation prepared. Refer to Photograph 3.0 and 4.0. The outlet pit to the eastern end has been installed to the size as documented. The outlet pipe discharge from the basin to the existing kerb pit in Enterprise Crescent has been installed as documented. Refer to Photograph 5.0.
- Vegetation works has commenced.

Our observations of the constructed works, particular the works associated with the stormwater detention basin and the access ramp, would suggest that the works generally complies with the design intent as documented by RHM Consulting in our drawings 19-027 C00 to C15 Rev D dated 12 August 2020 and the proposed site usage.

CIVIL ENGINEERING

STRUCTURAL ENGINEERING

INFRASTRUCTURE



Should you have any queries, in relation to the above, please do not hesitate to contact the undersigned.

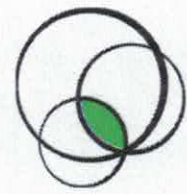
Yours faithfully

On Behalf of RHM Consulting Engineers Pty Ltd

Brett Hails
MIEAust CPEng, NPER
Director – Engineer



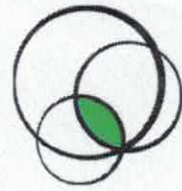
Photograph 1.0 – Constructed Hardstand



Photograph 2.0 – Access Driveway & Ramp off Enterprise Crescent



Photograph 3.0 – Constructed Detention Basin



Photograph 4.0 – Grated Pit Outlet to the Detention Basin



Photograph 5.0 – Site Outlet Pipe Connected into Existing Street Pit

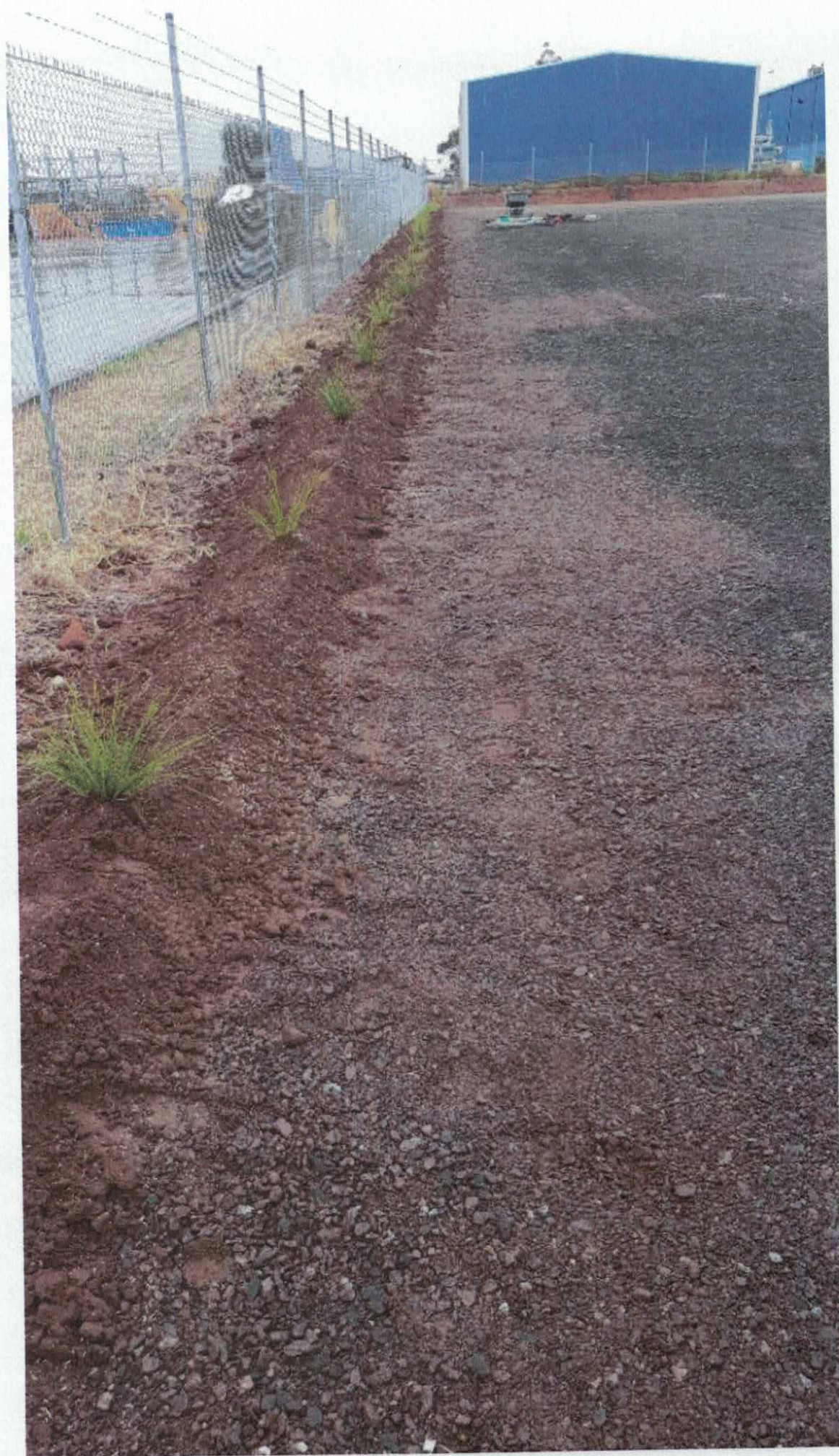








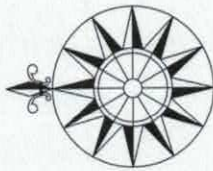








PROPOSED HARDSTAND AND AREA FOR WILLFAB SUPER FUND 38-40 ENTERPRISE CRESCENT MUSWELLBROOK, NSW 2333



LOCALITY PLAN
REFERENCE SIXMAPS

MUSWELLBROOK SHIRE COUNCIL
DEVELOPMENT CONSENT
This document forms part of
Council's Notice of Determination
DA 2022-23
Approval Table: 22-Sep-26
Delegated Officer: ALESA EVANS

NOTES HAVE BEEN MADE ON
DRAWINGS WITH ARROW AGAINST
ON THE LIST

DRAWING SCHEDULE:

DWG No	DRAWING TITLE	REV	DATE
19-027-C00	COVER SHEET, LOCALITY PLAN & INDEX SCHEDULE	D	05/08/20
19-027-C01	GENERAL NOTES SHEET 1 OF 1	A	10/01/20
19-027-C02	EXISTING SITE FEATURES	B	05/08/20
19-027-C03	SEDIMENTATION AND EROSION PLAN - STAGE 1.0 & 2.0 WORKS	C	05/08/20
19-027-C03.1	SEDIMENTATION AND EROSION PLAN - STAGE 3.0 - 4.0 WORKS	A	05/08/20
19-027-C03.2	SEDIMENTATION AND EROSION PLAN - STAGE 5.0 WORKS	A	05/08/20
19-027-C04	SEDIMENTATION AND EROSION CONTROL	A	10/01/20
19-027-C05	PROPOSED EARTHWORKS PLAN	C	05/08/20
19-027-C06	PROPOSED GRAVEL PLAN AND LEVELS	D	05/08/20
19-027-C06.1	HARDSTAND CROSS SECTIONS SHEET 1 OF 1	A	05/08/20
19-027-C06.2	HARDSTAND CROSS SECTIONS SHEET 1 OF 2	A	05/08/20
19-027-C07	PROPOSED HARDSTAND PLAN	D	05/08/20
19-027-C08	TYPICAL SECTIONS - SHEET 1	D	05/08/20
19-027-C08.1	TYPICAL SECTIONS - SHEET 2	A	05/08/20
19-027-C09	DRIVEWAY PLAN AND LONGSECTION	D	05/08/20
19-027-C10	TURNING TEMPLATE	B	04/02/20
19-027-C11	BASEIN PLAN AND LONGSECTION	D	05/08/20
19-027-C12	BASEIN CROSS SECTIONS SHEET 1 OF 1	C	05/08/20
19-027-C13	PIPE PLAN AND LONGSECTIONS	C	05/08/20
19-027-C14	PIPE DETAILS AND SECTIONS	D	05/08/20
19-027-C15	LANDSCAPE PLAN	B	05/08/20

WILLFAB SUPERFUND c/o GRAEME RAY PO BOX 136 LAMBERTON, NSW, 2099				PROPOSED HARDSTAND 38-40 ENTERPRISE CRESCENT MUSWELLBROOK, NSW 2333				MUSWELLBROOK SHIRE COUNCIL COVER SHEET, LOCALITY PLAN AND INDEX				CIVIL DRAWING			
REV	DESCRIPTION	DATE	BY	REV	DESCRIPTION	DATE	BY	REV	DESCRIPTION	DATE	BY	REV	DESCRIPTION	DATE	BY
D	ORIGINAL APPROVAL	05/08/20	CE	D	COVER SHEET, LOCALITY PLAN & INDEX SCHEDULE	05/08/20	CE	D	COVER SHEET, LOCALITY PLAN & INDEX SCHEDULE	05/08/20	CE	D	COVER SHEET, LOCALITY PLAN & INDEX SCHEDULE	05/08/20	CE
C	REVISIONS	10/01/20	CE	C	GENERAL NOTES SHEET 1 OF 1	10/01/20	CE	C	GENERAL NOTES SHEET 1 OF 1	10/01/20	CE	C	GENERAL NOTES SHEET 1 OF 1	10/01/20	CE
B	REVISIONS	05/08/20	CE	B	EXISTING SITE FEATURES	05/08/20	CE	B	EXISTING SITE FEATURES	05/08/20	CE	B	EXISTING SITE FEATURES	05/08/20	CE
A	REVISIONS	05/08/20	CE	A	SEDIMENTATION AND EROSION PLAN - STAGE 1.0 & 2.0 WORKS	05/08/20	CE	A	SEDIMENTATION AND EROSION PLAN - STAGE 1.0 & 2.0 WORKS	05/08/20	CE	A	SEDIMENTATION AND EROSION PLAN - STAGE 1.0 & 2.0 WORKS	05/08/20	CE
A	REVISIONS	05/08/20	CE	A	SEDIMENTATION AND EROSION PLAN - STAGE 3.0 - 4.0 WORKS	05/08/20	CE	A	SEDIMENTATION AND EROSION PLAN - STAGE 3.0 - 4.0 WORKS	05/08/20	CE	A	SEDIMENTATION AND EROSION PLAN - STAGE 3.0 - 4.0 WORKS	05/08/20	CE
A	REVISIONS	05/08/20	CE	A	SEDIMENTATION AND EROSION PLAN - STAGE 5.0 WORKS	05/08/20	CE	A	SEDIMENTATION AND EROSION PLAN - STAGE 5.0 WORKS	05/08/20	CE	A	SEDIMENTATION AND EROSION PLAN - STAGE 5.0 WORKS	05/08/20	CE
A	REVISIONS	05/08/20	CE	A	SEDIMENTATION AND EROSION CONTROL	05/08/20	CE	A	SEDIMENTATION AND EROSION CONTROL	05/08/20	CE	A	SEDIMENTATION AND EROSION CONTROL	05/08/20	CE
A	REVISIONS	05/08/20	CE	A	PROPOSED EARTHWORKS PLAN	05/08/20	CE	A	PROPOSED EARTHWORKS PLAN	05/08/20	CE	A	PROPOSED EARTHWORKS PLAN	05/08/20	CE
A	REVISIONS	05/08/20	CE	A	PROPOSED GRAVEL PLAN AND LEVELS	05/08/20	CE	A	PROPOSED GRAVEL PLAN AND LEVELS	05/08/20	CE	A	PROPOSED GRAVEL PLAN AND LEVELS	05/08/20	CE
A	REVISIONS	05/08/20	CE	A	HARDSTAND CROSS SECTIONS SHEET 1 OF 1	05/08/20	CE	A	HARDSTAND CROSS SECTIONS SHEET 1 OF 1	05/08/20	CE	A	HARDSTAND CROSS SECTIONS SHEET 1 OF 1	05/08/20	CE
A	REVISIONS	05/08/20	CE	A	HARDSTAND CROSS SECTIONS SHEET 1 OF 2	05/08/20	CE	A	HARDSTAND CROSS SECTIONS SHEET 1 OF 2	05/08/20	CE	A	HARDSTAND CROSS SECTIONS SHEET 1 OF 2	05/08/20	CE
A	REVISIONS	05/08/20	CE	A	PROPOSED HARDSTAND PLAN	05/08/20	CE	A	PROPOSED HARDSTAND PLAN	05/08/20	CE	A	PROPOSED HARDSTAND PLAN	05/08/20	CE
A	REVISIONS	05/08/20	CE	A	TYPICAL SECTIONS - SHEET 1	05/08/20	CE	A	TYPICAL SECTIONS - SHEET 1	05/08/20	CE	A	TYPICAL SECTIONS - SHEET 1	05/08/20	CE
A	REVISIONS	05/08/20	CE	A	TYPICAL SECTIONS - SHEET 2	05/08/20	CE	A	TYPICAL SECTIONS - SHEET 2	05/08/20	CE	A	TYPICAL SECTIONS - SHEET 2	05/08/20	CE
A	REVISIONS	05/08/20	CE	A	DRIVEWAY PLAN AND LONGSECTION	05/08/20	CE	A	DRIVEWAY PLAN AND LONGSECTION	05/08/20	CE	A	DRIVEWAY PLAN AND LONGSECTION	05/08/20	CE
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A	REVISIONS	05/08/20	CE	A	LANDSCAPE PLAN	05/08/20	CE	A	LANDSCAPE PLAN	05/08/20	CE	A	LANDSCAPE PLAN	05/08/20	CE

GENERAL

- G1 IF IN DOUBT ASK.
- G2 THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANT DRAWINGS TO INCLUDE SURVEY & GEOTECHNICAL REPORTS AND SPECIFICATIONS AND SHOWN WITHIN.
- G3 INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ANY DOCUMENTATION SHALL BE REFERRED TO THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK.
- G4 MATERIAL & WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE RELEVANT S.A.A. CODES AND RELEVANT AUTHORITIES.
- G5 ALL DIMENSIONS AND REDUCED LEVELS MUST BE VERIFIED ON SITE PRIOR TO THE COMMENCEMENT OF WORK.
- G6 SUBSTITUTIONS MUST BE APPROVED BY THE ENGINEER.
- G7 UNLESS NOTED OTHERWISE ALL LEVELS SHOWN ARE TO THE AUSTRALIAN HEIGHT DATUM (GSD) UNLESS TO THE CONTRARY IS SPECIFICALLY NOTED.
- G8 SERVICE INFORMATION SHOWN IS BASED ON PLANS SUPPLIED BY AUTHORITIES AND IS NOT TO BE USED FOR ANY OTHER PURPOSES. THE ENGINEER'S RESPONSIBILITY IS TO ENSURE THAT ALL UNDERGROUND SERVICES AND COMPLY WITH ALL REQUIREMENTS OF THE AUTHORITIES.
- G9 EXISTING SURFACE CONDITIONS, WHERE SHOWN, ARE INTERPOLATED AND MAY NOT BE ACCURATE PRIOR TO THE PLACEMENT OF ANY FILL, PAVEMENT OR BUILDING. THE EXPOSED SURFACE SHALL BE COMPACTED TO A MINIMUM OF 100% STANDARD COMPACTION IN ACCORDANCE WITH TEST 11.17 OF S.A. 1989 FOR THE TOP 300MM. ANY SOFT SPOTS SHALL BE REMOVED AND REPLACED WITH GRANULAR FILL TO THE ENGINEER'S APPROVAL AND COMPACTED IN ACCORDANCE WITH THE COMPACTION REQUIREMENTS SET OUT BELOW.
- G10 GRADE EVENLY BETWEEN FINISHED SURFACE SPOT LEVELS. FINISHED SURFACE CONDITIONS ARE SHOWN FOR CLARITY, WHERE FINISHED SURFACE LEVELS ARE NOT SHOWN, THE SURFACE SHALL BE GRADED SMOOTHLY SO THAT IT WILL DRAIN AND MATCH ADJACENT SURFACES OR STRUCTURES.
- G11 UNLESS NOTED OTHERWISE, ALL DOWNPIPS SHALL BE CONNECTED TO PITS OR MAIN STORMWATER DRAINS WITH UPVC PIPES OF THE FOLLOWING SIZES LAID AT A MINIMUM GRADE OF 1 IN 100:
 - A. 100 DIA. FOR DOMESTIC CONSTRUCTION.
 - B. 150 DIA. FOR COMMERCIAL/INDUSTRIAL CONSTRUCTION.
- G12 CONNECTION TO BE PRESSURED.
- G13 CONNECTIONS TO BE PRESSURED. ALL DOWNPIPS SHALL BE CONSTRUCTED USING ONE OF THE FOLLOWING TYPES OF PIPES WITH ADJACENT JOINTS:
 - A. CLASS 2 PIPES IN ACCORDANCE WITH S.A. 1989.
 - B. UPVC IN ACCORDANCE WITH S.A. 1989.
- G14 ANY OTHER TYPES OF PIPE MUST BE REFERRED TO CONTRACT FOR APPROVAL. PRIOR TO USE, IF UPVC, OR OTHER TYPES ARE TO BE USED, APPROVAL MUST BE GIVEN BY THE ENGINEER FOR CLASS, BEARING AND BACKFILL REQUIREMENTS.
- G15 GENERALLY FOR TRENCHING WORKS THE CONTRACTOR MUST:
 - A. COMPLY WITH THE GENERAL PROVISIONS OF THE OCCUPATIONAL HEALTH & SAFETY ACT 2008.
 - B. COMPLY WITH THE OCCUPATIONAL HEALTH & SAFETY CODE OF PRACTICE FOR SAFETY PRECAUTIONS IN TRENCHING OPERATIONS.
 - C. FULFIL ALL WORK COVER REQUIREMENTS.
- G16 UNDESIRABLE DUE TO CONSTRUCTION WORK SHALL BE RENOVATED TO THE SATISFACTION OF THE ENGINEER.
- G17 THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES TO REMAIN TO APPLY.
- G18 MINIMUM BEARING PRESSURE TO SUBGRADE 100KPa.

FILL TYPES

- F11 GENERAL FILL: WELL GRADED MATERIAL MAX PARTICLE SIZE 75MM.
 - PLASTIC INDEX LESS THAN OR EQUAL TO 5%.
 - SELECT FILL: MAX PARTICLE SIZE 75MM.
 - FILL SHALL BE PLACED IN 150MM LAYERS.
 - FILL SHALL BE COMPACTED TO 95% LESS THAN OR EQUAL TO 15%.
- F12 TRENCHES OVER 1.5M DEEP SHALL ALWAYS BE 30% SHORDED. TRENCHES LESS THAN 1.5M DEEP SHALL BE SHORED IF UNSTABLE OR IF DEEMED NECESSARY BY RELEVANT AUTHORITY.
- F13 IF FILL PLACED ON SURFACE WHICH IS MORE THAN 1.5M DEEP THE FILL SHALL BE BENCHED.
- F14 TOLERANCES. THE FINISHED SURFACE LEVELS SHALL HAVE THE FOLLOWING TOLERANCES:
 - UNDER SLABS AND LOAD-BEARING ELEMENTS: ± 0.025 MM.
 - OTHER GROUND SURFACES: ± 0.050 MM.
- F15 REMAINS FREE DRAINING AND MATCHES ADJACENT CONSTRUCTIONS.
- F16 FILL SHALL BE PLACED IN LAYERS TO THICKNESS NOMINATED BY THE ENGINEER. EACH LAYER SHALL OBTAIN SPECIFIED COMPACTION BEFORE THE NEXT IS PLACED. DURING PLACEMENT OF FILL, THE SURFACE SHALL ALWAYS REMAIN FREE DRAINING.
- F17 FILL AGAINST STRUCTURES SHALL BE PLACED AND COMPACTED SMALLER THAN 1.5M DEEP SHALL BE SHORED IF UNSTABLE OR IF DEEMED NECESSARY BY RELEVANT AUTHORITY.
- F18 FILL SHALL NOT BE PLACED AGAINST CONCRETE FOR FOURTEEN DAYS AFTER CONCRETE PLACEMENT.
- F19 FILL AGAINST CONCRETE SHALL BE IN BETWEEN 60-110% OF OPTIMUM MOISTURE.

1. ALL EROSION CONTROL MEASURES TO BE INSTALLED PRIOR TO THE COMMENCEMENT OF ANY SITE WORK.
2. ALL EROSION CONTROL MEASURES MUST BE RESPECTED AFTER EACH RAINFALL EVENT. SET SHALL BE REMOVED TO AN APPROVED LOCATION.
3. SEEDING FENCES, TRAPS & BATTER SHALL BE INSTALLED IN ACCORDANCE WITH THE APPROVED EROSION CONTROL PLANS PREPARED BY THE CONTRACTOR.
4. SEEDING FENCES, TRAPS & BATTER SHALL BE MAINTAINED IN THE LOCATION SHOWN ON THE DRAWING UNTIL SUCH TIME THAT ALL WORK IS COMPLETED AND A SUITABLE GRASS COVER IS ESTABLISHED.

REINFORCED CONCRETE

- RC1 ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 3600 CURRENT EDITION WITH AMENDMENTS EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.
- RC2 READY-MIX CONCRETE SUPPLY SHALL COMPLY WITH AS 1379.
- RC3 CONCRETE QUALITY - MINIMUM - REFER TO RELEVANT DRAWINGS.
- RC4 ALL THE REQUIREMENTS OF THE ASCE CONCRETE SPECIFICATION DOCUMENT 1 (LATEST EDITION) SHALL APPLY TO THE FOLLOWING: REINFORCEMENT AND CONCRETE ELEMENTS NOTED OTHERWISE.
- RC5 ELEMENTS NOTED OTHERWISE SHALL BE IN ACCORDANCE WITH THE FOLLOWING:

STRENGTH	SLAB	MAX AGG. SIZE	TYPE
FOUNDATION	32	20	Portland
PIERS	25	20	Portland
- RC6 COMPRESSION STRENGTH.
- RC7 SAMPLE TEST AND ASSESS TO AS 1379 ALL TESTING TO BE CONDUCTED BY A NATA REGISTERED LABORATORY.
- RC8 THE MINIMUM FREQUENCY OF SAMPLING OF THE CONCRETE AT EACH STAGE SHALL BE IN ACCORDANCE WITH THE FOLLOWING:

NO. OF BATCHES SUPPLIED	NO. OF SAMPLES TAKEN
1 to 5	2
6 to 10	3
11 to 20	4
For each additional 10 samples	1
- RC9 A SAMPLE SHALL CONSIST OF FOUR CYLINDERS, TWO OF WHICH SHALL BE TESTED AT 28 DAYS AFTER CASTING. THE OTHER TWO SHALL BE TESTED AT 7 DAYS AFTER CASTING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES TO REMAIN TO APPLY.
- RC10 OTHER QUALITY PARAMETERS.
- RC11 THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES TO REMAIN TO APPLY.
- RC12 THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES TO REMAIN TO APPLY.
- RC13 THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES TO REMAIN TO APPLY.
- RC14 NO ADMIXTURES SHALL BE USED IN CONCRETE UNLESS APPROVED IN WRITING.
- RC15 DEPTH OF BEAMS ARE GIVEN FIRST AND INCLUDE SLAB THICKNESSES. SLABS AND BEAMS SHALL BE CONSTRUCTED TO THE FOLLOWING TOLERANCES:

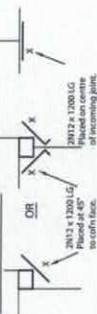
CONCRETE	MAX. TOLERANCE
SLABS	± 10 MM
BEAMS	± 10 MM
- RC16 NO HOLE, CHASE OR EMBEZZLEMENT OTHER THAN THOSE SHOWN ON THE DRAWINGS SHALL BE MADE IN CONCRETE ELEMENTS WITHOUT THE PROJECT ENGINEER'S APPROVAL.
- RC17 ALL CONCRETE SHALL BE CASTED IN ONE LIFT UNLESS OTHERWISE NOTED OTHERWISE.
- RC18 ALL CONCRETE SHALL BE CASTED IN ONE LIFT UNLESS OTHERWISE NOTED OTHERWISE.
- RC19 SLABS SHALL BE CASTED IN ONE LIFT UNLESS OTHERWISE NOTED OTHERWISE.
- RC20 SLABS SHALL BE CASTED IN ONE LIFT UNLESS OTHERWISE NOTED OTHERWISE.
- RC21 PROVIDE UPWARD CAMBER TO COMPENSATE FOR DEFLECTION OF CONCRETE CANTILEVERS OF 1:200.
- RC22 THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES TO REMAIN TO APPLY.
- RC23 THE FINISHED CONCRETE SHALL BE A LARGE HOMOGENEOUS MASS. COMPLETELY FILLING THE FORMWORK THOROUGHLY EMBEDDING THE REINFORCEMENT AND FREE OF STONE, COMPACTION WITH MECHANICAL VIBRATOR.
- RC24 SLABS AND BEAMS SHALL BE CONSTRUCTED TO BEAR ONLY ON THE BEAMS, COLUMNS, WALLS AND OTHER STRUCTURAL MEMBERS. LONG ELEMENTS SHALL BE KEPT MINIMUM CLEAR FROM SUPPORTS OF STRUCTURE.
- RC25 CURING OF ALL CONCRETE IS TO BE ACHIEVED BY KEEPING SURFACES CONTINUOUSLY WET FOR A PERIOD OF 7 DAYS. CURING SHALL BE BY SPRAYING OR COVERING WITH A CURING COMPOUND. CURING SHALL BE BY SPRAYING OR COVERING WITH A CURING COMPOUND. CURING SHALL BE BY SPRAYING OR COVERING WITH A CURING COMPOUND.
- RC26 CONSTRUCTION SUPPORT PROPPING IS TO BE LEFT IN PLACE WHERE NEEDED TO AVOID WALLS ARE TO BE CONSTRUCTED ON SUPPORTED LEVELS UNTIL ALL PROPPING IS REMOVED AND THE SLAB IS GRADUALLY LOWERED TO ITS DEAD LOAD DEFLECTION.

1. NO EARTHWORKS SHALL BE CARRIED OUT DURING HIGH WINDS OR AS DIRECTED BY THE CONTRACTOR'S PROJECT MANAGER.
2. DURING EARTHWORKS THE CONTRACTOR SHALL HAVE A WATER CART OR SIMILAR APPROVED ON SITE AND MUST PROGRESSIVELY WATER DOWN EXCAVATION AND FILL AREAS TO MINIMIZE DUST.
3. ALL VEHICLE TRAVEL PITS AND PADS SHALL BE MAINTAINED IN THE LOCATION SHOWN ON THE DRAWING UNTIL SUCH TIME THAT ALL WORK IS COMPLETED AND A SUITABLE GRASS COVER IS ESTABLISHED.

SLABS ON GRADE

- S01 ALL REINFORCEMENT CORNERS AT PENETRATIONS FOR Sumps, PITS, COLUMN BLOCKOUTS AND THE LIKE TO HAVE 90° THIMBLE BARS PLACED AT 45 DEGREES TO CORNER OR IN EACH DIRECTION AT CORNERS UNLESS NOTED IN A DIFFERENT ARRANGEMENT ON PLAN.

THIMBLE BARS IN SLAB



- PROVIDE SURFACE DRAINAGE TO HYDRAULIC ENGINEERS DETAILS.
- Prior to placement of slab, subgrade shall be compacted to a minimum of 100% STANDARD COMPACTION IN ACCORDANCE WITH TEST 11.17 OF S.A. 1989.
- IF THE SUBGRADE IS NOT SUITABLE FOR PLACING CONCRETE, IT SHALL BE REMOVED AND REPLACED WITH SFT 100 MATERIAL TO THE ENGINEER'S APPROVAL.

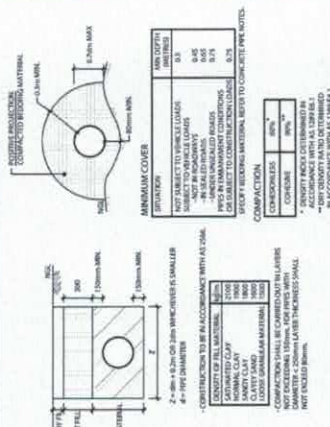
- ENGINEER SLABS ARE CLUED AS PER BENCHING.

- SAMPLES TO BE INSTALLED AS SHOWN WITHIN 12 HOURS OF POURING.

EARTHWORK NOTES

1. IF IN DOUBT, THEN ASK.
2. ALL WORK IN ACCORDANCE TO AS 1989.000 GUIDELINES ON EARTHWORKS FOR COMMERCIAL & RESIDENTIAL DEVELOPMENT.
3. ANY CONSTRUCTION TO ALL FILL AREAS TO BE INSTALLED UNLESS NOTED OTHERWISE CONSTRUCTION UNLESS BUILDING SUPERVISOR TO BE 100% STD.
4. ALL CUT MATERIAL TO BE LAID IN ROW ON THE SITE FOR DUMPING. THE MATERIAL SHOULD BE LAID IN ROW ON THE SITE FOR DUMPING. THE MATERIAL SHOULD BE LAID IN ROW ON THE SITE FOR DUMPING. THE MATERIAL SHOULD BE LAID IN ROW ON THE SITE FOR DUMPING.
5. THE CONTRACTOR MUST ENSURE ADEQUATE TEMPORARY DRAINAGE DURING THE WORKS TO MINIMIZE THE IMPACT OF WET WEATHER. SUCH METHODS AS TO BE DETERMINED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES TO REMAIN TO APPLY.
6. SEWERAGE AND EROSION CONTROL MUST BE PUT IN PLACE PRIOR TO CONSTRUCTION AND MAINTAINED THROUGHOUT THE WORKS.
7. ADOPTED BENCHING DEPTHS ARE TABULATED BELOW.
8. FREQUENCY OF COMPACTION TESTING IN ACCORDANCE WITH AS 3798 TABLE A. ASSOCIATED SPECIFICATION.
9. FINISHED GRADE SHALL BE INSPECTED AND INSPECTED IN THE PRESENCE OF A GEOTECHNICAL ENGINEER WITH ALL SIGNIFICANT DEFLECTION TO BE EITHER EXCAVATED AND REPLACED WITH SUITABLE FILL TO A MINIMUM OF 100% STANDARD COMPACTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES TO REMAIN TO APPLY.
10. FINAL BATTER TO BE NO STEEPER THAN 4:1 (HORIZONTAL TO VERTICAL).

SUPPORT FOR PLASTIC & PVC PIPES



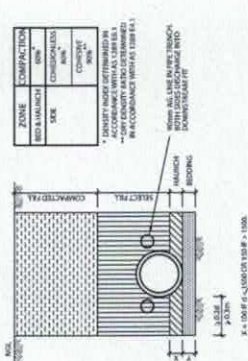
GRADING SPECIFICATION OF PIPE BACKFILL

BED & HAUNCH		SELECT	
SIZE	WT PASSING %	SIZE	WT PASSING %
19	100	19	100
2.36	100	2.36	100
4.75	100	4.75	100
9.5	100	9.5	100
19	100	19	100
37.5	100	37.5	100
75	100	75	100
150	100	150	100
300	100	300	100
600	100	600	100
1200	100	1200	100
2400	100	2400	100
4800	100	4800	100

SUPPORT FOR CONCRETE PIPES

GRADING SPECIFICATION OF PIPE BACKFILL

BED & HAUNCH		SELECT	
SIZE	WT PASSING %	SIZE	WT PASSING %
19	100	19	100
2.36	100	2.36	100
4.75	100	4.75	100
9.5	100	9.5	100
19	100	19	100
37.5	100	37.5	100
75	100	75	100
150	100	150	100
300	100	300	100
600	100	600	100
1200	100	1200	100
2400	100	2400	100
4800	100	4800	100

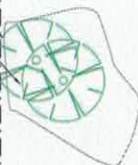


MUSWELLBROOK SHIRE COUNCIL
DEVELOPMENT & CONSERVATION
Engineering Department
Council's Notice of Determination

DA 2009-23
Approved Date: 22-Sep-20
Designated Officer: ALISA EVANS

GENERAL NOTES SHEET		PROPOSED HARDSTAND		WILLFAB SUPERFUND		CIVIL DRAWING	
1 OF 1		38-40 ENTERPRISE CRESCENT MUSWELLBROOK, NSW 2333		C/O GRAEME RAY PO BOX 136 LAMINGTON, NSW, 2099		Approved on behalf of PMM Consulting Engineers	
Designated	By	Designated	By	Designated	By	Designated	By
Drawn	CH	Drawn	CH	Drawn	CH	Drawn	CH
Checked	CH	Checked	CH	Checked	CH	Checked	CH
Date	22-Sep-20	Date	22-Sep-20	Date	22-Sep-20	Date	22-Sep-20
Scale	Horizontal	Scale	Horizontal	Scale	Horizontal	Scale	Horizontal
MUSWELLBROOK SHIRE COUNCIL DEVELOPMENT & CONSERVATION Engineering Department Council's Notice of Determination				MUSWELLBROOK SHIRE COUNCIL DEVELOPMENT & CONSERVATION Engineering Department Council's Notice of Determination			
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DA 2009-23 Approved Date: 22-Sep-20 Designated Officer: ALISA EVANS				DA 2009-23 Approved Date: 22-Sep-2			

LOT 21
DP 1119843



EXISTING SITE
FEATURES

PROPOSED HARDSTAND
38-40 ENTERPRISE CRESCENT



RHM Consulting Engineers
Civil & Structural Consulting Engineers

Designed by	BN	Approved on behalf of BMM Consulting Engineers ES/08/20
Drawn by	CH	
Checked by	REL	Project Engineer/Director DME
Date	JULY 20	Drawing No: 19-027-C02
		Rev B

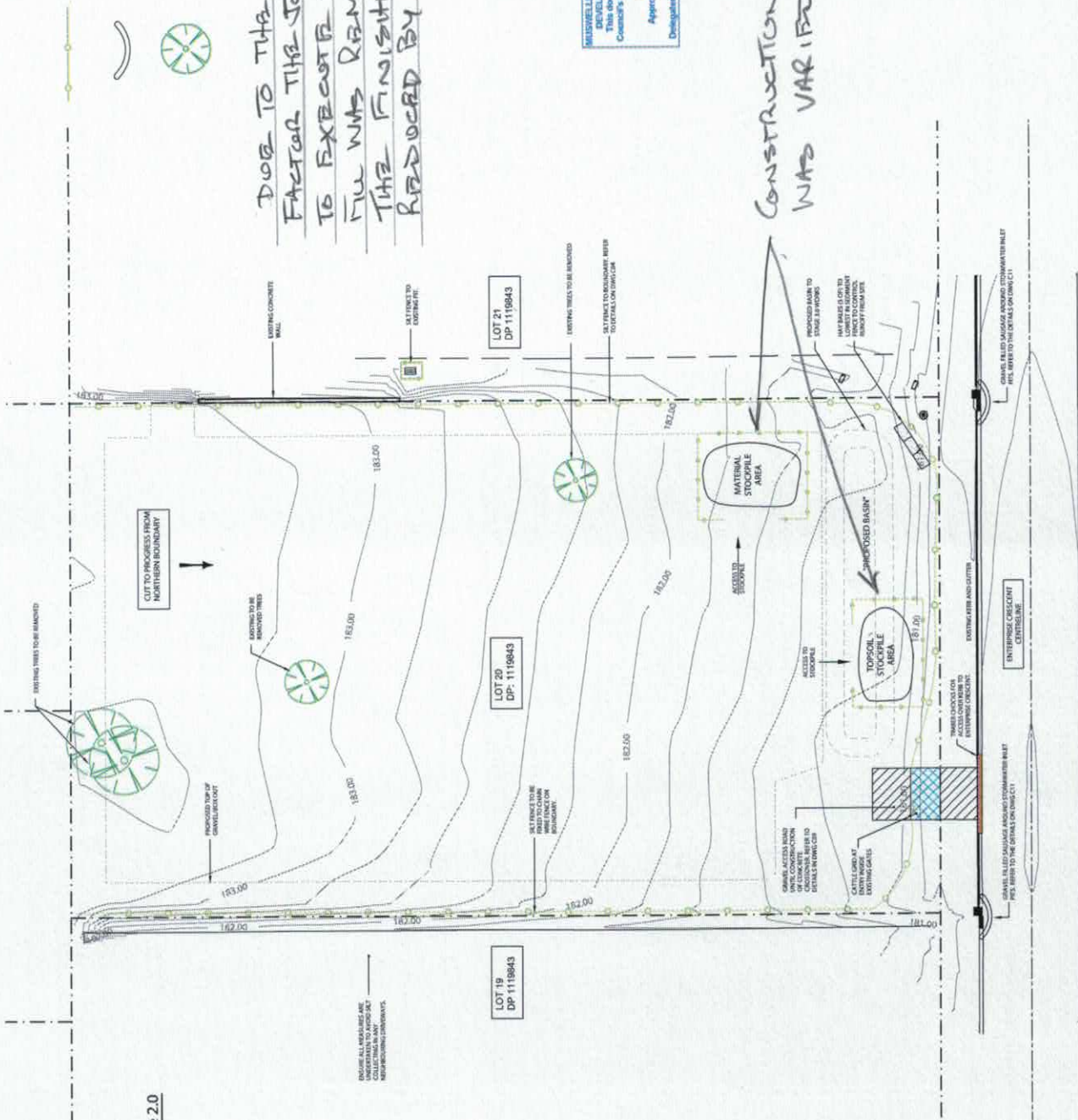
[illegible]

SUGGESTED CONSTRUCTION PHASE TO INCLUDE

- a. CONSTRUCT TEMPORARY CROSSOVER WITH TIMBER BOARDS. REEF AT EXISTING ENTRY.
- b. INSTALL TEMPORARY GRAVEL DRIVEWAY.
- c. INSTALL CATTLE GRID AT ENTRY.
- d. INSTALL SEDIMENTATION AND EROSION CONTROLS AS PER DRAWING.

MAINTAIN EXISTING
2x3m GATE AT
CURRENT LOCATION
UNTIL DRIVEWAY IS
COMPLETED

ENSURE ALL MEASURES ARE
NECESSARY TO AVOID SALT
COLLECTING IN ANY
SURROUNDING ENVIRONMENT.



CONSTRUCTION METHOD WAS VARIED.

LEGEND:

- DENOTES SILT FENCE. REFER TO DETAILS.
- DENOTES GRAVEL FILLED SOCKETS TO STORMWATER INLET PITS WITHIN ENTERPRISE CRESCENT.
- DENOTES TREES TO BE REMOVED

DUE TO THE BUILDING FACTOR THE JOB WAS DIFFICULT TO EXECUTE IN THE MANNER IT WAS REMOVED FROM SITE. THE FINISHED LIFT WAS RECOVERED BY APPROX 1 M.

MUSWELLBROOK SHIRE COUNCIL
DEVELOPMENT CONSENT
This document forms part of
Council's Notice of Determination

DA 2020-22
Approval Date: 22-Sep-20
Delegated Officer: ALISA EVANS

[illegible]

TABLE 10

- REMOVE TOP SOIL FROM STOCKPILE AND PLACE ON BATTERS
- INSTALL DRAINAGE PITS
- LAY 8225 OUTLET PIPE AND PIT AT BASIN
- LAY 81150 OUT PIPE, PIT AND TRENCH GRATE ACCESS DRIVEWAY
- CONSTRUCT DETENTION BASIN WITH SURPLUS CUT

TABLE 11

- REMOVE TOP SOIL FROM STOCKPILE AND PLACE ON BATTERS
- INSTALL DRAINAGE PITS
- CREATE BUND TO PERIMETER
- REINSTATE SEGMENTATION FENCES TO BASIN AS SHOWN

MAINTAIN EXISTING
2x3m GATE AT
CURRENT LOCATION
UNTIL DRIVEWAY IS
COMPLETED

ENSURE ALL MEASURES ARE
UNINTERRUPTED TO AVOID DELT
COLLECTING IN ANY
SITUATION. (SEE PAGE 15)

SALE, FENCE TO BE
INSTALLED TO CHAIN —
WALL FENCE ON
each side.

LOT 19
DP 1119843

LOT 20
DP: 1119843

LOT 21
DP 1119843

CONSTRUCTION METHOD VARIETY

RETENTION BASIN HAS BEEN
INSTALLED AS PER DETAILS
REQUIRED

MUSKIEWELLBROOK SHIRE COUNCIL
DEVELOPMENT CONSENT
This document forms part of
Council's Notice of Determination

DA 2620-22
Approval Date: 22-Sep-20
Delegated Officer: ALISA EVANS

LEGEND:

DENOTES SILT FENCE. REFER TO DETAILS.

DENOTES GRAVEL FILLED SOCKETS TO
STORMWATER INLET PITS WITHIN
ENTERPRISE CRESCENT.

CATTLE GRID

TEMPORARY GRAVEL ACCESS
FRMWAY

A. FORSEDER APPROVAL	REVISION	DATE	BY	REASON	DATE	BY	REASON
WILLFAB SUPERFUND c/o GRAEME RAY PO BOX 136 LAMBTON, NSW, 2099							
PROPOSED HARDSTAND 38-40 ENTERPRISE CRESCENT MUSWELLBROOK, NSW 2333 20/09/2023 Approved on behalf of Willfab Superfund Pty Ltd Approved on behalf of Willfab Superfund Pty Ltd							
SEDIMENTATION AND EROSION PLAN STAGE 3.0 - 4.0 WORKS Willfab Consulting Engineers Civil & Structural Consulting Engineers, 10/11-12/13 The Arcade, Lambton NSW The City 2222, 2223 Email: info@willfab.com.au Phone: 02 9339 1234							
PROPOSED HARDSTAND 38-40 ENTERPRISE CRESCENT MUSWELLBROOK, NSW 2333 20/09/2023 Approved on behalf of Willfab Superfund Pty Ltd Approved on behalf of Willfab Superfund Pty Ltd							
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CIVIL DRAWING Approved on behalf of Willfab Consulting Engineers 05/08/20 Project Engineer/Director Drawing No. 19-027-C03.1 Date: 10/01/2020							
Scale: Horizontal: 1:100 Vertical: 1:10 Drawing No. 19-027-C03.1 Date: 10/01/2020							

SUGGESTED CONSTRUCTION PHASE TO INCLUDE

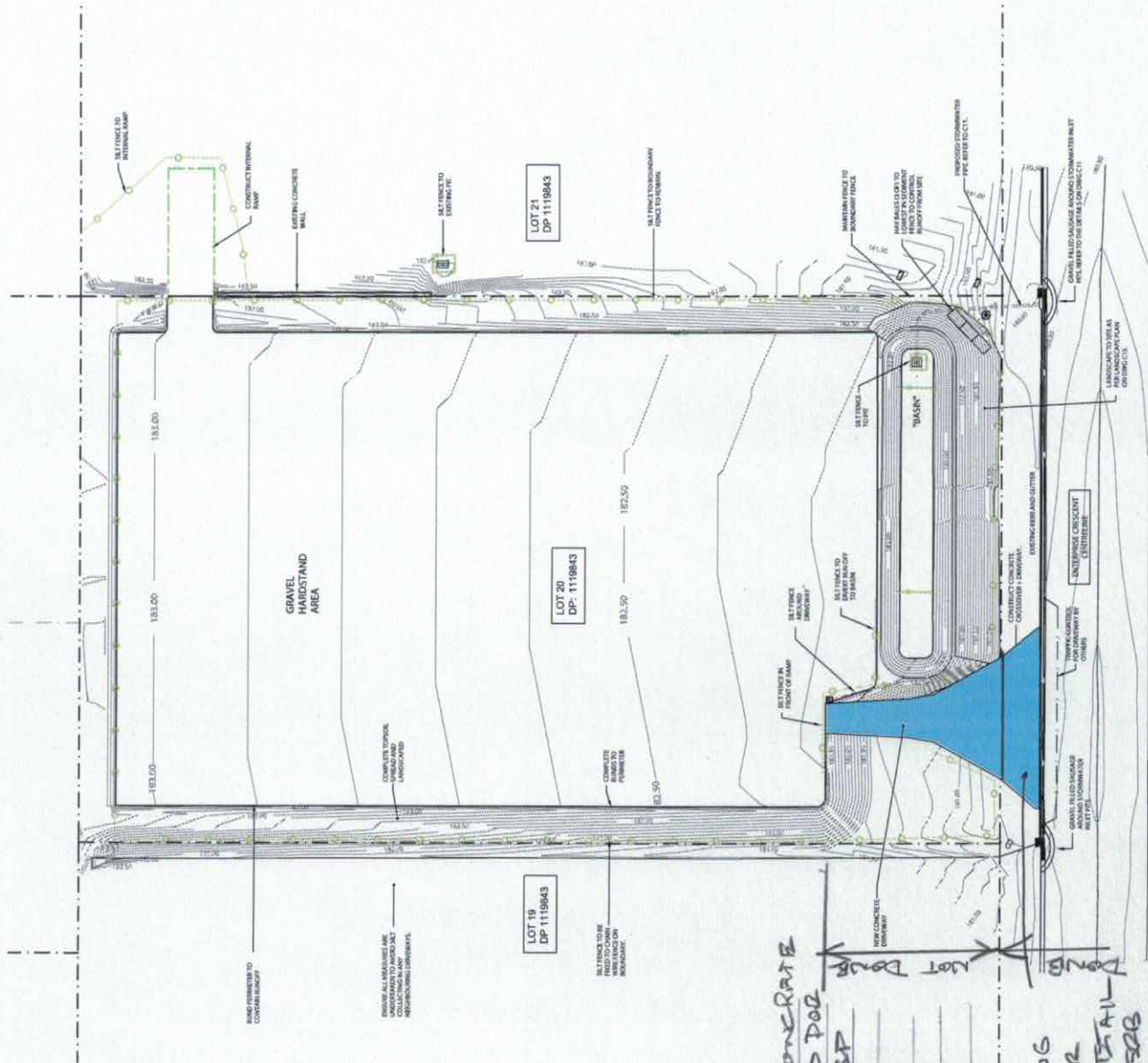
- STAGE 5.0
- a. CONSTRUCT CONCRETE DRIVEWAY
 - b. CONSTRUCT CONCRETE CROSSOVER
 - c. SPREAD TOP SOIL TO DETENTION BATTERS
 - d. UNDERLINE LANDSCAPING
 - e. CONSTRUCT INTERNAL RAMP

...and

1. SEDIMENT FENCE TO REMAIN UNTIL LANDSCAPE IS ESTABLISHED

THIS SECTION OF CONCRETE
DRIVE WAS OMITTED DUE
TO COST & RUDUCE
FRICTIONS DUE TO
FLATTER RATHER
ANGLES.

FOOTPATH CROSSING
INSTALLED AS PER
CONCRETING DETAIL
IN SUDING KIRDS
LAYBACK



MUSWELLBROOK SHIRE COUNCIL
DEVELOPMENT CONSENT
This document forms part of
Council's Notice of Determination

DA 2028-22
Approval Date: 22-Sep-20
Delegated Officer: ALISA EVANS

LEGEND:

2. DENOTES SILT FENCE. REFER TO DETAILS.

• DENOTES GRAVEL FILLED SOCKETS TO STORMWATER INLET PITS WITHIN ENTERPRISE CRESCENT.

DEMOTTE'S NEW DRIVEWAY SLAB

WILLFAB SUPERFUND
c/o GRAEME RAY
PO BOX 136
LAMBTON, NSW, 2099

PROPOSED HARDSTAND
38-40 ENTERPRISE CRESCENT
MUSWELLBROOK, NSW 2333

CONCLUSION
This study has implications for the design of health communication programs and requires further research.

RHM Consulting Engineers

**SEDIMENTATION AND
EROSION PLAN
STAGE 5.0 WORKS**

CIVIL DRAWING

Designed	BA	Approved on behalf of MEM Consulting Engineers 05/08/20
Drawn	CH	
Checked	ML	
Date	15.5.20	Project Engineer/Director Drawing No: 19-027-C03.2 Rev: A

GENERAL INSTRUCTIONS

- 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.
- THE SITE SUPERINTENDENT WILL ENSURE THAT ALL SOIL AND WATER MANAGEMENT WORKS ARE LOCATED AS INSTRUCTED IN THIS SPECIFICATION.
- 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

- THE SOIL EROSION POTENTIAL ON THIS SITE IS TO BE MINIMISED.
- CONSTRUCTION ACTIVITIES ARE TO BE UNDERTAKEN IN THE FOLLOWING SEQUENCE:
 - INSTALL SEDIMENT FENCES
 - CONSTRUCT OPEN SWALES AND CHANNELS AS NECESSARY AND DIRECTED BY THE SITE SUPERINTENDENT
 - CONSTRUCT STABILISED CONSTRUCTION ENTRANCE TO LOCATION AS DETERMINED BY SUPERINTENDENT
 - 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

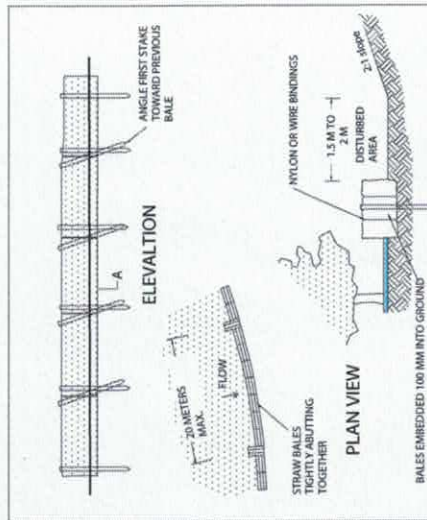
- DURING WINDY WEATHER, LARGE UNPROTECTED AREAS WILL BE KEPT MOIST (NOT WET) BY SPRINKLING WITH WATER TO KEEP DUST UNDER CONTROL.
- FINAL SITE LANDSCAPING WILL BE UNDERTAKEN AS SOON AS POSSIBLE AND WITHIN 20 WORKING DAYS FROM COMPLETION OF CONSTRUCTION ACTIVITIES.

SEDIMENT CONTROL

- STOCKPILES WILL NOT BE LOCATED WITHIN 2 METRES OF HAZARDOUS AREAS, INCLUDING LIKELY AREAS OF CONCENTRATED OR HIGH VELOCITY FLOWS SUCH AS WATERWAYS, WHERE THEY ARE BETWEEN 2 AND 5 METRES OF A WATERWAY OR WATERWAY. STOCKPILES WILL BE REMOVED AS SOON AS POSSIBLE TO PREVENT POLLUTION TO DOWNSLOPE WATER, E.G. THROUGH INSTALLATION OF SEDIMENT FENCING.
- 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.
- 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.
- TEMPORARY SOIL AND WATER MANAGEMENT STRUCTURES WILL BE REMOVED ONLY AFTER THE LANDS THEY ARE PROTECTING ARE REHABILITATED.

OTHER MATTERS

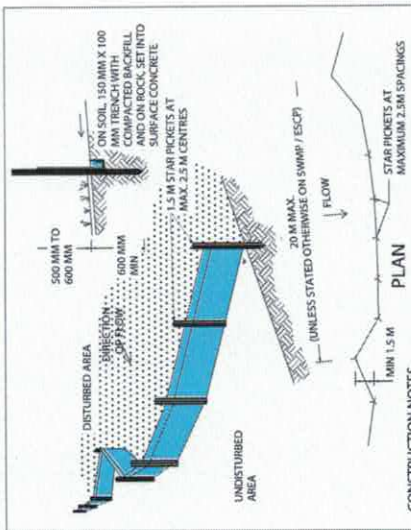
- ACCEPTABLE RECEPTIONS WILL BE PROVIDED FOR CONCRETE, MORTAR, SLURRIES, PAINTS, ACID WASHINGS, LIGHT-WEIGHT WASTE MATERIALS AND LITTER.
- ANY EXISTING TREES WHICH FORM PART OF THE FINAL LANDSCAPING PLAN WILL BE PROTECTED FROM CONSTRUCTION ACTIVITIES BY:
 - PROTECTING THEM WITH BARRIER FENCING OR SIMILAR MATERIALS INSTALLED OUTSIDE THE DRIP LINE.
 - ENSURING THAT NOTHING IS NAILLED TO THEM, OR BRUSH OR PLACING OF STOCKPILES WITHIN THE DRIP LINE EXCEPT UNDER THE FOLLOWING CONDITIONS:
 - ENCROACHMENT ONLY OCCURS ON ONE SIDE AND NO CLOSER TO THE TRUNK THAN EITHER 1.5 METRES OR HALF THE DISTANCE BETWEEN THE OUTER EDGE OF THE DRIP LINE AND THE TRUNK, WHICHEVER IS THE GREATER.
 - A DRAINAGE SYSTEM THAT ALLOWS AIR AND WATER TO CIRCULATE THROUGH THE ROOT ZONE (E.G., A GRAVEL BED) IS PLACED UNDER ALL LAYERS OF MORE THAN 100 MILLIMETRES DEPTH.
 - CARE IS TAKEN NOT TO CUT ROOTS UNNECESSARILY AND NOT TO COMPACT THE SOIL AROUND THEM.
- SITE INSPECTION & MAINTENANCE
 - RECEPTIONS 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 SITE SUPERINTENDENT.



- SECTION A - A**
- CONSTRUCTION NOTES**
- CONSTRUCT THE BALE FILTER AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE.
 - PLACE BALES LENGTHWISE IN A ROW WITH ENDS TIGHTLY ADJUTING. USE STRAW TO FILL ANY GAP BETWEEN BALES. STRAWS ARE TO BE PLACED PARALLEL TO GROUND.
 - ENSURE THAT THE MAXIMUM HEIGHT OF THE FILTER IS ONE BALE.
 - EMBED EACH BALE IN THE GROUND 75MM TO 100MM AND ANCHOR WITH TWO 12 METRE STAR PICKETS. ENSURE THE PICKETS ARE PLACED AT REGULAR INTERVALS IMMEDIATELY DOWN SLOPE OF ALL UNPROTECTED DISTURBED LANDS.
 - WHERE A STRAW BALE FILTER IS CONSTRUCTED DOWNSLOPE FROM A DISTURBED BATTER, ENSURE THE BALES ARE PLACED 1 TO 1.5 METRES DOWNSLOPE FROM THE TOP.
 - ESTABLISH A MAINTENANCE PROGRAM THAT ENSURES THE INTEGRITY OF THE BALES IS RETAINED - THEY COULD REQUIRE REPLACEMENT EACH TWO TO FOUR MONTHS.

SEDIMENTATION AND EROSION CONTROL

- LAND DISTURBANCE SHALL BE LIMITED TO THAT NECESSARY FOR IMPLEMENTATION OF THE PLANS OF WORK AND LANDS NOT TO BE DISTURBED SHALL BE CLEARLY MARKED WITH BARRIER FENCES, SEDIMENT FENCING AND STRAW BALE FILTERS. SEDIMENT FENCES SHALL BE PLACED AT REGULAR INTERVALS IMMEDIATELY DOWN SLOPE OF ALL UNPROTECTED DISTURBED LANDS.
 - INSTALL SEDIMENT FENCING AND STRAW BALE FILTER IN ACCORDANCE WITH DETAILS ABOVE AND LOCAL COUNCIL REQUIREMENTS.
 - THE LOCATION OF "SILT" FENCES, SEDIMENT FENCES, STRAW BALE FILTER AND OTHER DEVICES SHALL BE DETERMINED ON SITE IN CONJUNCTION WITH THE SUPERINTENDENT. VARIATIONS ARE PERMITTED TO BEST SUIT THE CIRCUMSTANCES.
 - INSTALL TEMPORARY CONSTRUCTION VEHICLE EXIT IN ACCORDANCE WITH TYPICAL DETAILS.
 - STRIP VEGETATION FROM ALL CUT AREAS AND STOCKPILE ON SITE.
 - STRIP TOPSOIL FROM ALL CUT AREAS AND PLACE COMPACTED FILL WHERE REQUIRED.
 - EXCAVATE ALL CUT AREAS AND PLACE COMPACTED FILL WHERE REQUIRED.
 - ALL ADJACENT LANDSCAPE AREAS ARE TO BE STABILISED AND VEGETATED WITHIN 30 DAYS OF COMPLETION.
 - EXCAVATE ANY AND BACKFILL DRAINAGE LINES. OPEN TRENCH LENGTHS ARE NOT TO EXCEED 25 METRES. WHERE TRENCHES ARE NOT TO EXCEED 25 METRES, THEY ARE TO BE STABILISED AND VEGETATED WITHIN 30 DAYS OF COMPLETION. DRAINAGE LINES ARE TO BE STABILISED AND VEGETATED WITHIN 30 DAYS OF COMPLETION.
 - CONSTRUCT DRAINAGE PITS AND INSTALL PIT PROTECTION MEASURES IN ACCORDANCE WITH DETAILS ABOVE. LOCAL COUNCIL AND ROADS AND TRAFFIC AUTHORITY STANDARDS.
- NOTE: WHEREVER SEDIMENT AND EROSION CONTROL DEVICES ARE REMOVED EARLIER IN THE CONSTRUCTION SEQUENCE THAN AS SPECIFIED ABOVE, ENSURE THAT THE DISTURBED GROUND IS RE-VEGETATED TO REDUCE THE LIKELIHOOD OF EROSION AND SEDIMENT TRANSPORT FROM THE SITE. ENSURE ALSO THAT SEDIMENT LADEN WATER CAN STILL REACH SEDIMENTATION BASINS FOR TREATMENT.



- CONSTRUCTION NOTES**
- SEDIMENT FENCES AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE. BUT WITH SMALL RETURNING 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 PER SECOND IN THE DESIGN STORM EVENT, USUALLY THE 10-YEAR EVENT.
 - CUT A 150-MM DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE FABRIC TO BE ENTRENCHED.
 - DRIVE 1.5 METRE LONG STAR PICKETS INTO GROUND AT 2.5 METRE 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 PICKETS ENSURING IT GOES TO THE BASE OF THE TRENCH. FIX THE GEOTEXTILE TO THE 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 150-MM OVERLAP.
 - BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.

SEDIMENT FENCE (TYPICAL)

SEDIMENT RUN-OFF CONTROL

- THE CONTRACTOR SHALL INSTALL AND MAINTAIN SOIL EROSION AND SEDIMENT CONTROL MEASURES TO PREVENT SOIL EROSION AND SEDIMENT TRANSPORT FROM THE SITE. SUCH MEASURES SHALL ALSO COMPLY WITH REQUIREMENTS OF COUNCIL.
- GRADE FINISHED SURFACE TO SHED WATER AWAY WITHOUT CHANNELLING (UNTIL PAVED STORMWATER SYSTEM IS ADDED IN LATER STAGE).



REV	DESCRIPTION	DATE	BY	DATE	BY
A	ISSUED FOR FINAL	15/05/2019	CH		

PROPOSED HARDSTAND 38-40 ENTERPRISE CRESCENT MUSWELLBROOK, NSW 2333	DA 2830-22 22-Sep-20
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SEDIMENTATION AND EROSION CONTROL NOTES	DA 2830-22 22-Sep-20
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Scale Horizontal 1:100 (A1)	DA 2830-22 22-Sep-20
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CIVIL DRAWING Approved on behalf of MRM Consulting Engineers 15/05/2019	DA 2830-22 22-Sep-20
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DENOTES TREES TO BE REMOVED

122-150 —

DENOTES BATHWORKS CONTOURS

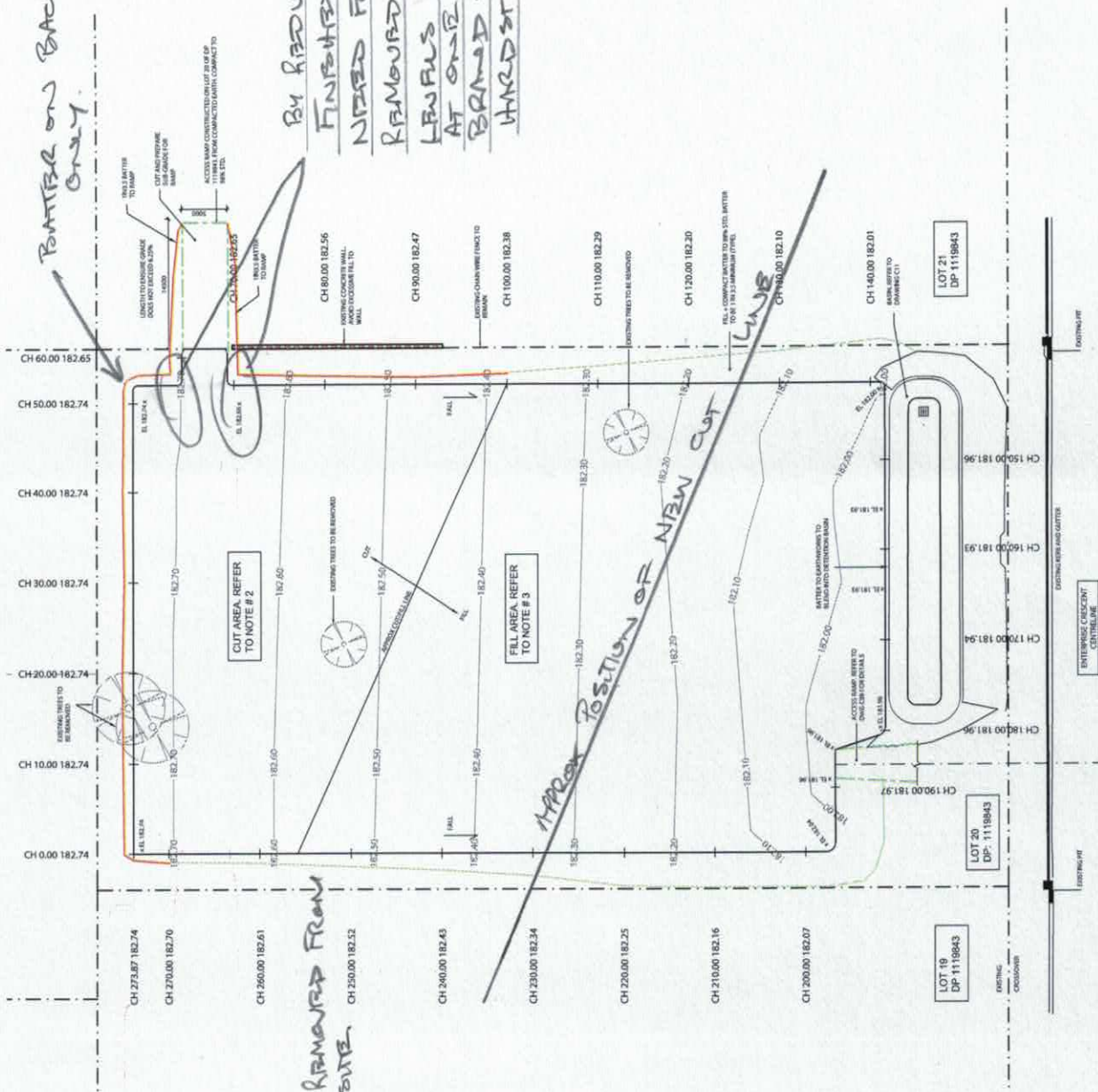
DENOTES PROPOSED INTERNAL ACCESS RAMP CHANGE IN GRADE 0.25%

DENOTES APPROXIMATE EXTENT OF FILL BATTER, BATTER 1:0.5

DENOTES APPROXIMATE EXTENT OF CUT BATTER, BATTER 1:0.5

BY REDUCING OVERALL FRICTION HEIGHT THE
NEEDED FOR RAMP WAS
REMOVED, THE IS CONSTRUCTED
LEAVES LEFT TRAFFIC DRIVE
AT ONE LEVEL FROM THE
BRAND SITE TO THE NEW
HANDSTAND SITE.

DA 20-20-22
Approval Date: 22-Sep-20
Delegated Officer: ALISA EVANS



1. LEVELS SHOW REFLECT BOWTIE LEVEL REFER TO DRAWING C07 FOR HANDBOOK DETAILS
2. CUT AREA SCARIFY EXISTING SUB-GRADE TO A DEPTH OF 100mm PRIOR TO ROLL TO REMOVE SOFT SPOTS. MOISTURE CONDITIONS AND COMPACT TO 98% STD. REFER TO DRAWING C07.
3. 100mm FILL LAYERS TO 125mm LAYERS IN COLETS. MOISTURE CONDITIONS AND COMPACT TO 98% STD. REFER TO DRAWING C07.
4. SUB-GRADE PREPARATION AS PER ITEM 2.0.
5. BATTERS TO BE IN 3:1 UNLESS NOTED OTHERWISE.
6. VEGGIE BATTERS AS REQUIRED. REFER TO LANDSCAPE

EARTHWORKS QUANTITIES

1. EXISTING SURFACE TO SUB-GRADE INCLUDES
BATTER, BASIN AND ACCESS RAMP.
CUT = 530m³
FILL = 300m³
(NO BULKING FACTORS)
2. SUB-GRADE TO TOP OF GRAVEL.
IMPORTED GRAVEL MATERIAL = 1275m³
(AREA = 4250m²)
(NO BULKING FACTORS)
- NOTE: QUANTITIES ARE ESTIMATES ONLY AND
MAY VARY SLIGHTLY.

NOTE: BASED ON 1 IN 1.5 BATTENS

[illegible]

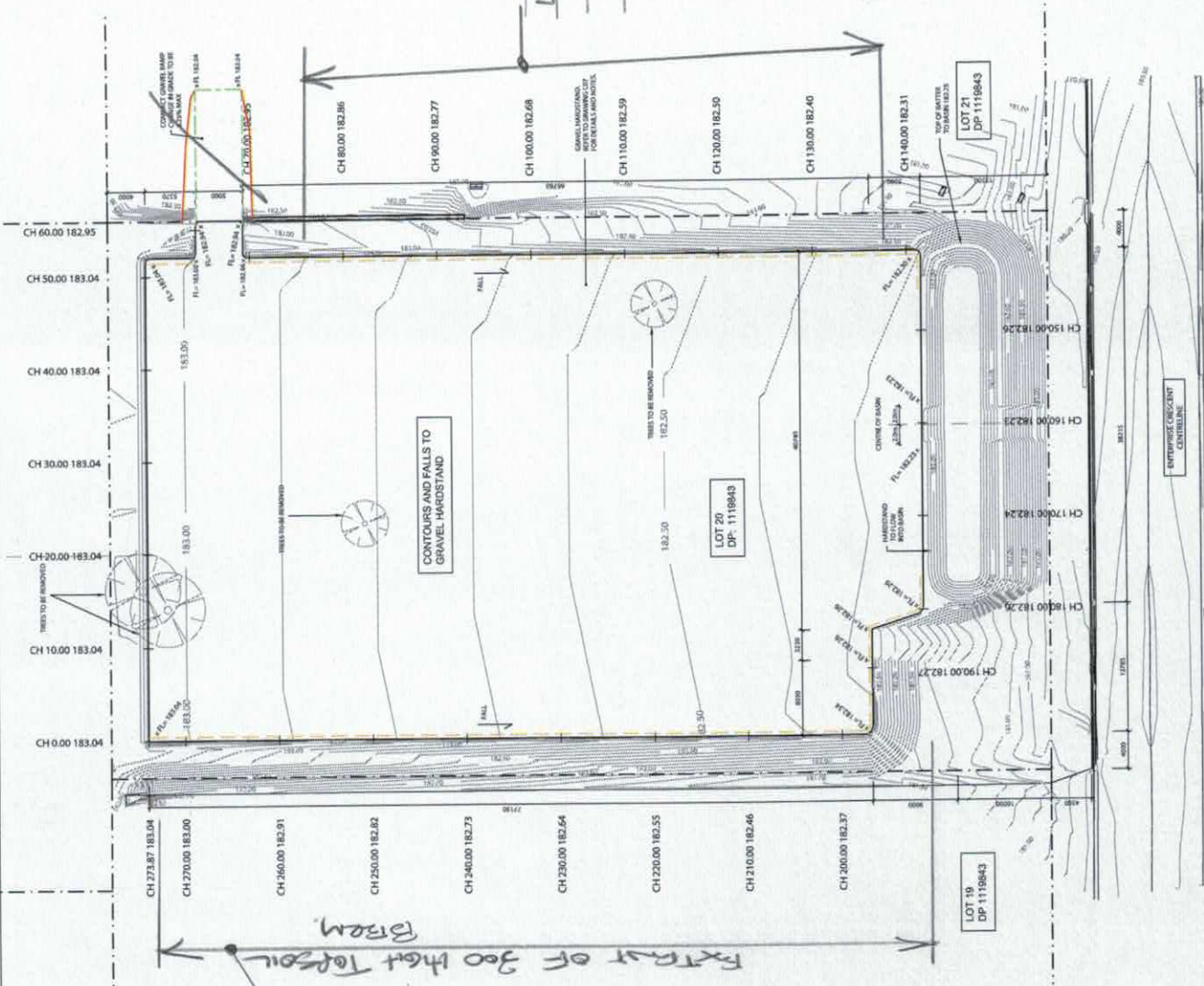
• DENOTES TREES TO BE REMOVED

REFER TO BATTER
SECTIONS ON
C06.1 & C06.2

THE NEW RECORD KNOWN AS
LEVEL NEGATED THE NARR
FOR A 300 HIGH BIRM
ON THIS SIDE TO STAL
RUN OFF.

**MUSWELLBROOK SHIRE COUNCIL
DEVELOPMENT CONSENT**
This document forms part of
Council's Notice of Determination

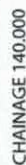
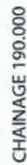
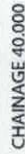
DA 2020-22
Approval Date: 22-Sep-20
Delegated Officer: ALISA EVANS



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Best Running
THE LANCET TO
REPAIRS RUN OFF
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RUNNING.
THAT'S ATTACHED

[illegible]

DENOTES FINISH SURFACE
LEVEL TO HARDSTAND

[illegible]

WILLFAB SUPERFUND 10 GRAEME RAY PO BOX 136 AMBITION, NSW, 2099	PROPOSED HARDSTAND 38-40 ENTERPRISE CRESCENT MUSWELLBROOK, NSW 2333	30-6/10/99 CONTRIBUTOR 1. The information contained in this advertisement is for general information only and is not intended to constitute an offer of any financial product or service.
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RUMI Consulting Engineers
Civil & Structural Consulting Engineers
14011 14th Avenue, Suite 100, Golden, CO 80401
Tel: 303-425-2800
Fax: 303-425-2801
Email: info@rumiconsulting.com

Scale	Horizontal	0	1	2	3	4	5
		SCALE 1/8"=1'-0"					
Vertical		0	0.5	1	1.5	2	2.5
		SCALE 1/4"=1'-0"					

CIVIL DRAWING

Approved on behalf of PWB Consulting Engineers
R03/02/20

Project Engineer/Designer _____ Date _____

Drawing No. **19-027-C06.1**

Rev. **A**

Designed: BH

Drawn: CH

Detail: NKL

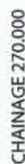
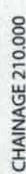
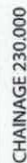
Date: JUL 20

RELATIVE PROFILE HEIGHT DIFFERENCE AS UNCHANGED

LEGEND

— : DENOTES FINISH SURFACE LEVEL TO HARDSTAND

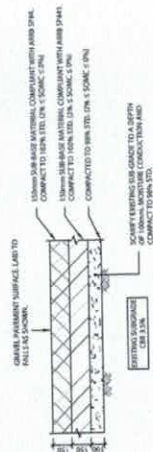
— : DENOTES EXISTING SURFACE LEVEL



GENERAL HARDEST AND AREA PAVEMENT BASED ON SUB-GRADE STRENGTH OF CBR=3.5%. TOTAL PAVEMENT THICKNESS 300mm. REFER TO DETAILS BELOW

MAINLINE SITE: CONCRETE THICKNESS BASED ON SUB-GRADE STRENGTH OF CBR=3.5%. TOTAL PAVEMENT THICKNESS 170mm. REFER TO DETAILS ON COR. MAXIMUM GRADIENT OF PAVEMENT TO ENTRY 6.25%

PROPOSED ACCESS RAMP TO LOT 20 OF DP 1119043

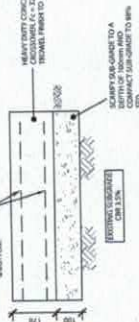


GENERAL HARDSTAND

(108) 864.3192

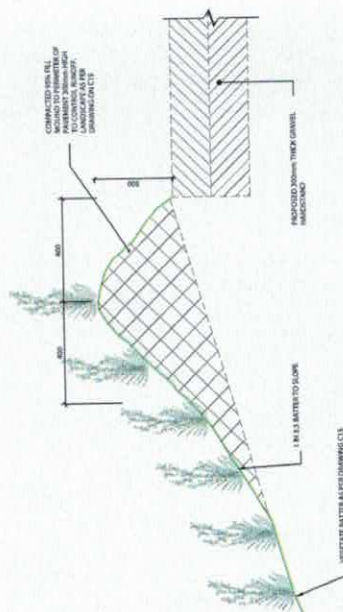
STANDARD FORM HAS NOT
CHANGED. TOP OF MODERN
LEAFES HAVE BEEN REDUCED WITH
E. TO. Q. ENV. LIMITED AGGREGATE

DA 2020-22
Approval Date: 22-Sep-20
Delegated Officer: ALISA EVANS



CONCRETE DRIVEWAY DETAILS

SCALE 1-10 (1=1)



GENERAL HARDSTAND

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WILLFAB SUPERFUND	
c/o GRAEME RAY	
PO BOX 136	
LAMBTON, NSW, 2099	

PROPOSED HARDSTAND
38-40 ENTERPRISE CRESCENT
MUSWELLBROOK, NSW 2333

BHM Consulting Engineers



RHM Consulting Engineers
 Civil & Structural Consulting Engineers
 158, Seaview Avenue, Borneo Highway
 Tel: 087-6032 280
 Fax: 087-6032 280
 Email: rhm@netcom.vt.net

PROPOSED HARDSTAND PLAN

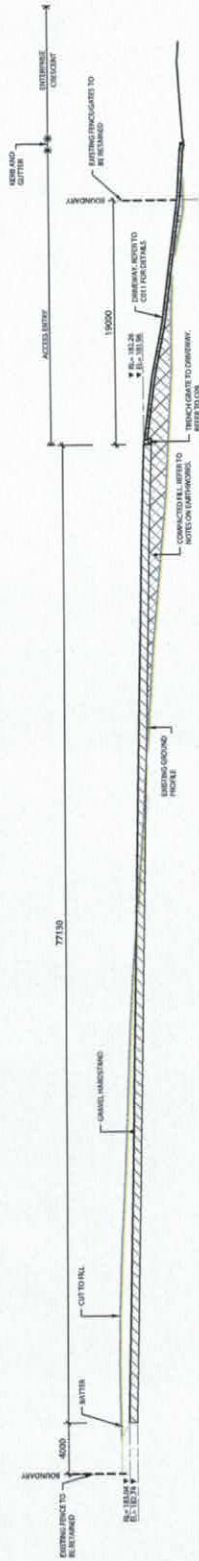
ROUNDING TREATMENT TO PERIMETER

CALL 1-800-451-1111

THE DRAWING

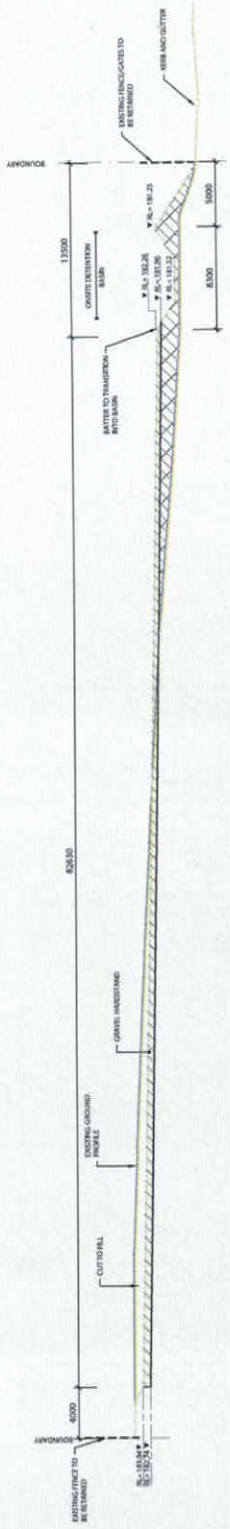
Designed By	BM	Approved on behalf of BEM Co
Checked By	CH	Project Engineer/Director
Drawing No.	19-027-C0	

[illegible]



SECTION S5 - HARDSTAND AREA

SCALE: 1:100
 DRAWN: J. LAMBERT
 CHECKED: J. LAMBERT

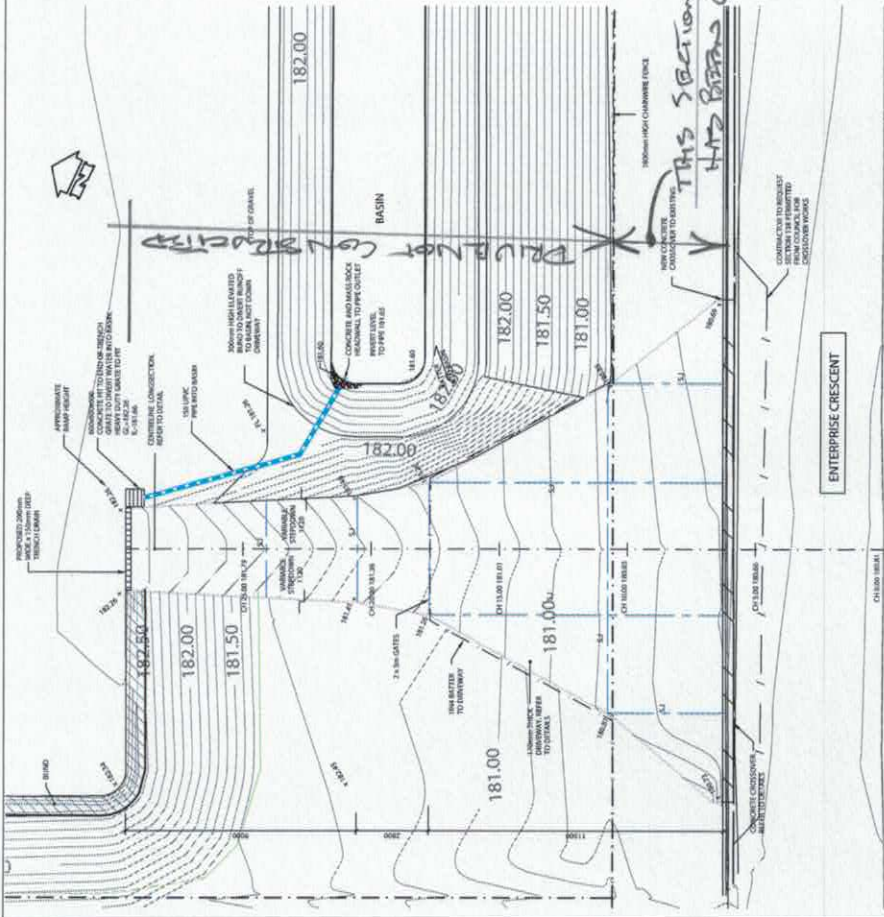


SECTION S6 - HARDSTAND AREA

SCALE: 1:100
 DRAWN: J. LAMBERT
 CHECKED: J. LAMBERT

*LONG SECTIONS REMAINING THE SAME
 BUT ARE AT REDUCED LEVELS.*

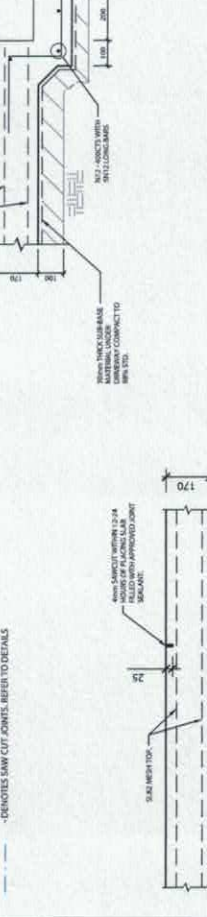
WILLFAB SUPERFUND										PROPOSED HARDSTAND										TYPICAL SECTIONS										CIVIL DRAWING									
C/O GRAEME RAY										38-40 ENTERPRISE CRESCENT										SHEET 2										Approved on behalf of FRM Consulting Engineers									
PO BOX 136										MUSWELLBROOK, NSW 2333																				Designed by IN									
LAMBTON, NSW, 2099																														Drawing No. CH									
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ACCESS ENTRY PATH
SCALE 1:100 (A1)

LEGEND:

- DENOTES 300mm HIGH x 800mm WIDE GRAVEL BUND TO PROTECT DRIVEWAY FROM OVERFLOWING WATER
- DENOTES SAW CUT JOINTS. REFER TO DETAILS



SAWCUT JOINT DETAIL
SCALE 1:10 (A1)

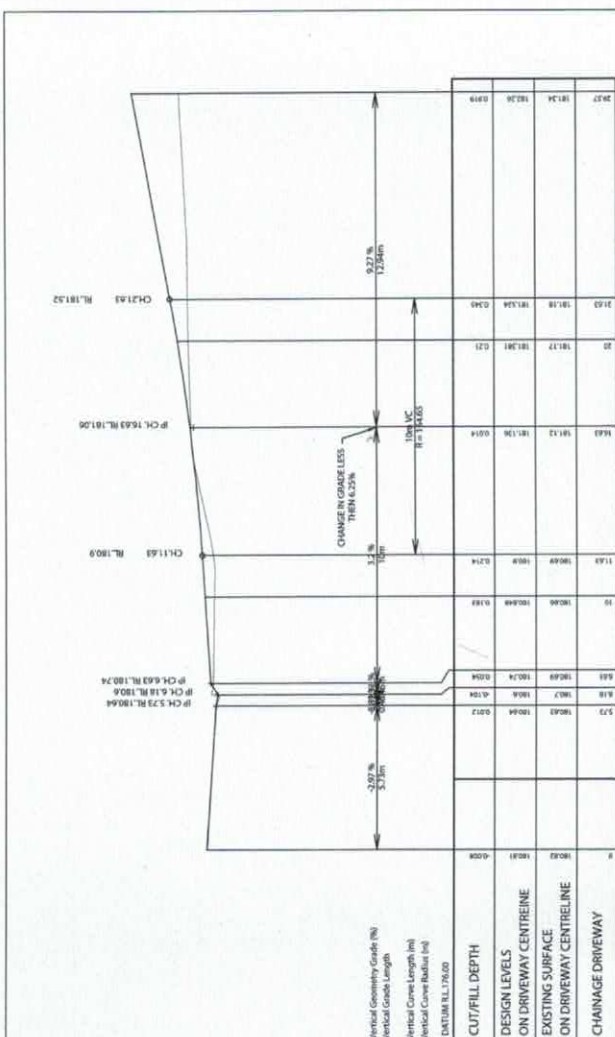
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4	GENERAL MANOUEVERING			
5	GENERAL MANOUEVERING			

PROPOSED HARDSTAND
38-40 ENTERPRISE CRESCENT
MUSWELLBROOK, NSW 2333

WILLFAB SUPERFUND
C/O GRAEME RAY
PO BOX 136
LAMINGTON, NSW, 2099

DRIVEWAY PLAN AND LONGSECTION

CIVIL DRAWING				
Designed by	DA	Drawn by	DA	Checked by
Project Engineer/Checker		Project Engineer/Checker		Project Engineer/Checker
Date	2023	Date	2023	Date
Drawing No.	19-027-C09	Drawing No.	19-027-C09	Drawing No.
Rev	D	Rev	D	Rev



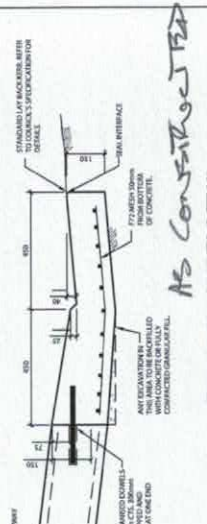
LONGSECTION CENTRELINE OF DRIVEWAY
SCALE 1:100 (A1)

CHANGES IN GRADE REDUCED BY HALF BY LOWERING THE SURFACE LEVEL



CONCRETE DRIVEWAY DETAILS
SCALE 1:10 (A1)

AS CONSTRUCTED



TYPICAL CROSSOVER DETAIL
SCALE 1:10 (A1)

CIVIL DRAWING				
Designed by	DA	Drawn by	DA	Checked by
Project Engineer/Checker		Project Engineer/Checker		Project Engineer/Checker
Date	2023	Date	2023	Date
Drawing No.	19-027-C09	Drawing No.	19-027-C09	Drawing No.
Rev	D	Rev	D	Rev

1. TOTAL SITE AREA = 1008m² DA 2020-22
2. PERMISSIBLE SITE COVERAGE = 100% (1008m²)
3. PERMISSIBLE SITE COVERAGE = 100% (1008m²)
4. PERMISSIBLE SITE COVERAGE = 100% (1008m²)
5. PROPOSED BASIN VOLUME: REFER TO TABLE 1.0
6. STORAGE AND WATER LEVELS IN BASIN WITH 8170 ORIFICE OUTLET TO ENSURE PSD IS NOT EXCEEDED, SHOWN IN TABLE 2.0. AN OVERFLOW WEIR HAS BEEN PROVIDED TO MAINTAIN THE HEIGHT OF THE WEIR IS RL 182.15 AT THE 100 ARI WATER LEVEL.
7. THE PROPOSED WEIR AND OPEN CHANNEL DOWN STREAM OF THE WEIR HAS BEEN DESIGNED FOR 0.244 m³/SEC.
8. WEIR DESIGN:
 - W = 4.0 (BASED ON 1 IN 3)
 - COEFF = 2.0
 - REQUIRED HEAD (H) = 195mm (182.25 TOP OF BANK)
 - WEIR HEIGHT = 182.15
 - WATER HEIGHT = 182.245

PROPOSED BASIN VOLUME: REFER TO TABLE 1.0
 STORAGE AND WATER LEVELS IN BASIN WITH 8170 ORIFICE OUTLET TO ENSURE PSD IS NOT EXCEEDED, SHOWN IN TABLE 2.0. AN OVERFLOW WEIR HAS BEEN PROVIDED TO MAINTAIN THE HEIGHT OF THE WEIR IS RL 182.15 AT THE 100 ARI WATER LEVEL.
 THE PROPOSED WEIR AND OPEN CHANNEL DOWN STREAM OF THE WEIR HAS BEEN DESIGNED FOR 0.244 m³/SEC.

WEIR DESIGN:
 - W = 4.0 (BASED ON 1 IN 3)
 - COEFF = 2.0
 - REQUIRED HEAD (H) = 195mm (182.25 TOP OF BANK)
 - WEIR HEIGHT = 182.15
 - WATER HEIGHT = 182.245

STORM EVENT	OUTLET FLOW (m ³ /SEC)	REQUIRED VOLUME (m ³)	CRITICAL STORM EVENT	WATER LEVEL	GENERATED FLOW RATE (m ³ /SEC)	PRE-DEVELOPMENT FLOW RATE (m ³ /SEC)
100 ARI	0.003	105m ³	25min	182.16	0.233	0.179
50 ARI	0.004	84m ³	25min	182.07	0.218	0.143
20 ARI	0.006	63m ³	25min	181.87	0.197	0.116
10 ARI	0.009	36m ³	25min	181.85	0.165	0.085
5 ARI	0.008	34m ³	25min	181.81	0.138	0.064

TABLE 2.0: STORMWATER CHARACTERISTICS

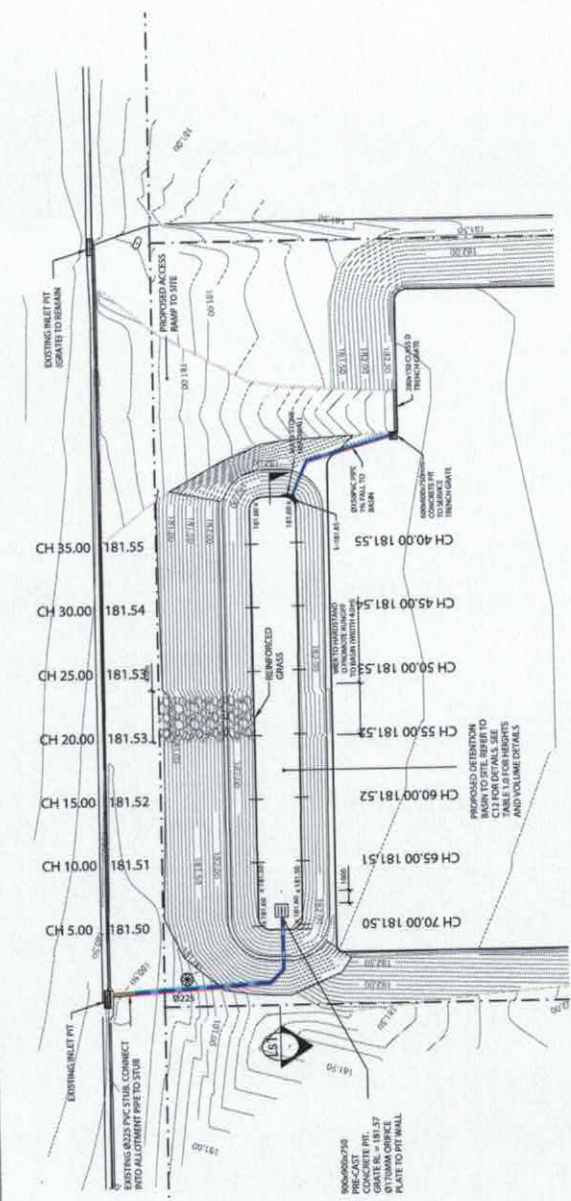
LEGEND



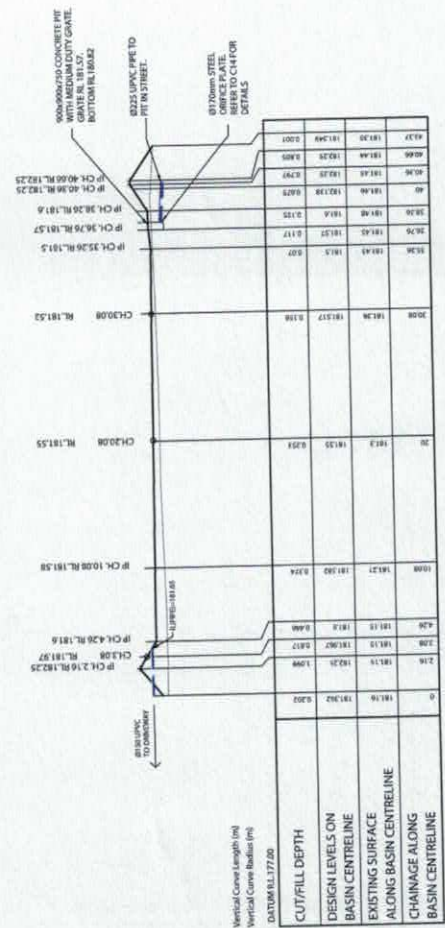
ALL RELATIVE LEVELS REMAIN UNCHANGED
 THE OVERALL DESIGN PHILOSOPHY HAS BEEN MAINTAINED

RL	AREA (m ²)	VOLUME (m ³)
181.50	0	0
181.60	118.83	8.35
181.70	118.27	21.23
181.80	100.68	36.22
181.90	100.37	53.38
182.00	204.95	72.75
182.10	227.81	94.38
182.20	206.01	118.32
182.25	261.85	131.13

TABLE 1.0: BASIN VOLUME



BASIN PLAN
 SCALE: 1:200 (A1)



LONGSECTION CENTRELINE OF DETENTION BASIN
 VERTICAL SCALE: 1:100 (A1)

WILLFAB SUPERFUND c/o GRAEME RAY PO BOX 136 LAMINGTON, NSW, 2099		PROPOSED HARDSTAND 38-40 ENTERPRISE CRESCENT MUSWELLBROOK, NSW 2333		BASIN PLAN AND LONGSECTION		CIVIL DRAWING	
D - GENERAL MANAGER C - GENERAL MANAGER C - GENERAL MANAGER C - GENERAL MANAGER C - GENERAL MANAGER	DA 2020-22 DA 2020-22 DA 2020-22 DA 2020-22 DA 2020-22	CH CH CH CH CH	CH CH CH CH CH	CH CH CH CH CH	CH CH CH CH CH	CH CH CH CH CH	CH CH CH CH CH
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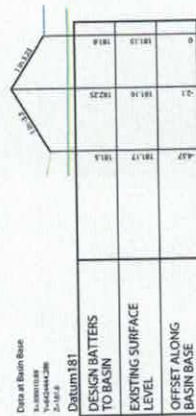
- GRAVEL HARDSTAND AREA
- EXISTING SURFACE LEVELS
- FLOOR TO DETENTION BASIN



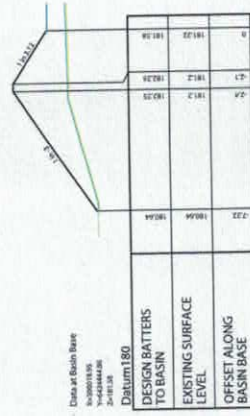
CHAINAGE 60.000



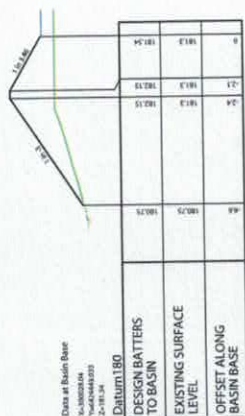
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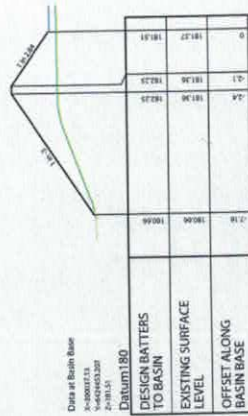
CHAINAGE 40.000



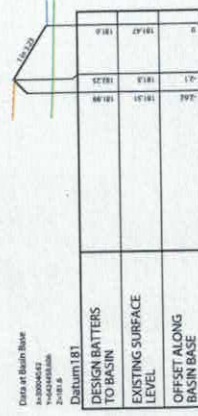
CHAINAGE 30.000



CHAINAGE 20.000

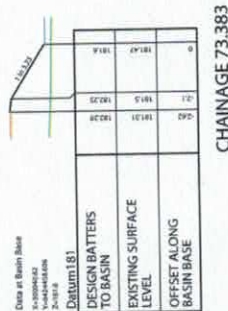


CHAINAGE 10.000



CHAINAGE 0.000

ALL RELATIVE LEVELS REMAIN
UNCHANGED, IE THE OVERALL DESIGN
PHILOSOPHY HAS BEEN MAINTAINED.



CHAINAGE 73.383

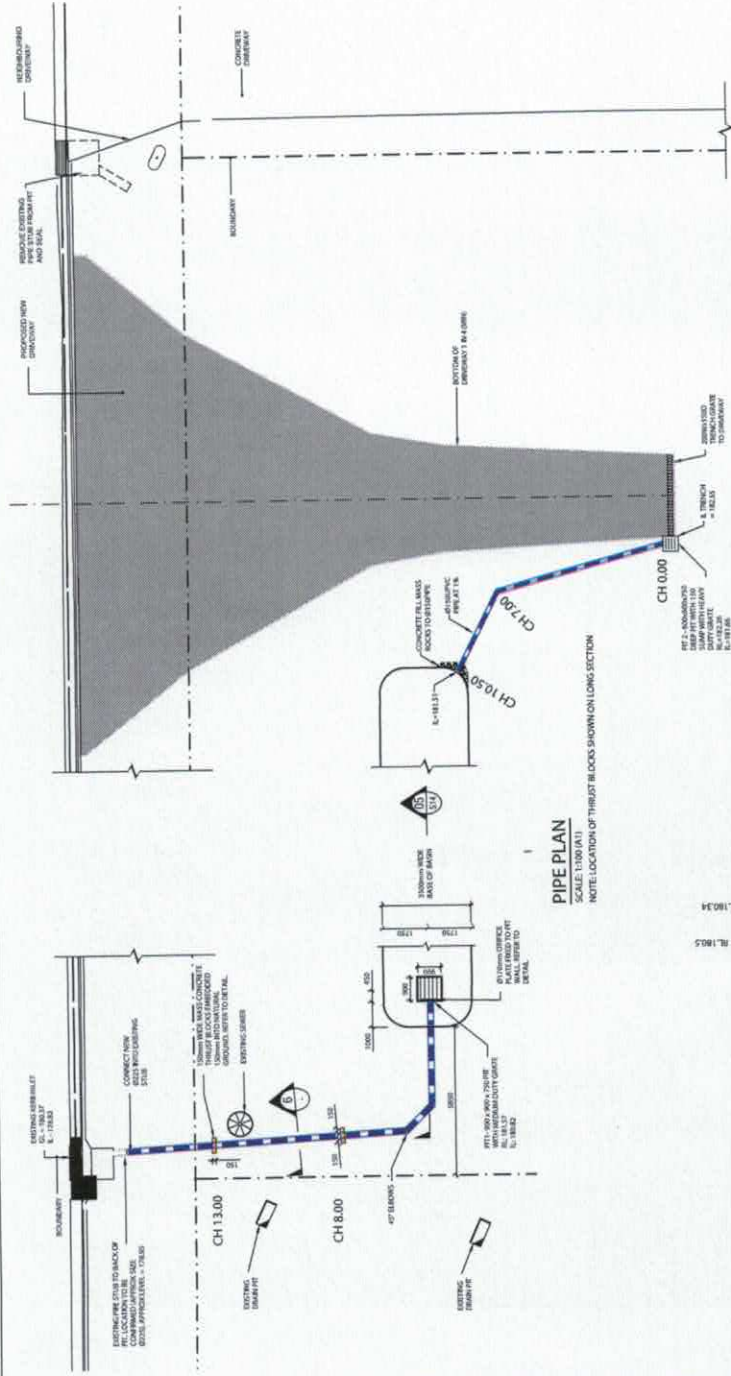


CHAINAGE 70.000

CIVIL DRAWING			
Designed by	CH	Approved on behalf of RBM Consulting Engineers	01/08/20
Drawn by	CH	Project Engineer/Designer	01/08/20
Checked by	CH	Project Engineer/Designer	01/08/20
Date	20/07/20	Drawing No.	19-027-C12
C			

BASIN CROSS SECTIONS SHEET 1			
Scale	Horizontal	Vertical	SCALE 1:100 (H) 1:5 (V)
Scale	Horizontal	Vertical	SCALE 1:100 (H) 1:5 (V)

PROPOSED HARDSTAND 38-40 ENTERPRISE CRESCENT MUSWELLBROOK, NSW 2333			
WILLFAB SUPERFUND	c/o GRAEME RAY	PO BOX 136	LAMINGTON, NSW, 2099
NO	DESCRIPTION	DATE	BY
1	DESIGN FOR APPROVAL	01/08/20	CH
2	DESIGN FOR APPROVAL	01/08/20	CH
3	DESIGN FOR APPROVAL	01/08/20	CH



MUSWELLBROOK SHIRE COUNCIL
DEVELOPMENT CONSENT
This document forms part of
Council's Notice of Determination
DA 2020-22
Approval Date: 22-Sep-20
Designated Officer: ALISA EVANS

over footpath closing
and lay back
waterward.

PIPE PLAN

SCALE: 1:100 (H)

NOTE: LOCATION OF THREAT BLOCKS SHOWN ON LONG SECTION



Vertical Geometry Grade (%)
Vertical Grade Length

DATUM: RL 76.00

DEPTH BELOW DESIGN

DESIGN LEVELS ON OUTLET PIPE CENTRELINE

DESIGN SURFACE ON OUTLET PIPE CENTRELINE

CULVERT CHAINAGE

LONGSECTION: Outlet Pipe (Ø225mm) From Basin

SCALE: 1:100 (V)

VERTICAL SCALE 1:100 (V)



Vertical Geometry Grade (%)
Vertical Grade Length

DATUM: RL 77.00

DEPTH BELOW DESIGN

DESIGN LEVELS ON OUTLET PIPE CENTRELINE

DESIGN SURFACE ON OUTLET PIPE CENTRELINE

CULVERT CHAINAGE

LONGSECTION: Outlet Pipe (Ø150mm) From DRIVEWAY

SCALE: 1:100 (V)

VERTICAL SCALE 1:100 (V)

PROPOSED HARDSTAND
38-40 ENTERPRISE CRESCENT
MUSWELLBROOK, NSW 2333

WILLFAB SUPERFUND
c/o GRAEME RAY
PO BOX 136
LAMINGTON, NSW, 2099

REV	DESCRIPTION	DATE	BY	DATE
C	DESIGN APPROVAL			
B	DESIGN APPROVAL			
A	DESIGN APPROVAL			



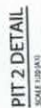
ARM Consulting Engineers
Civil & Environmental Engineering
10/10-12/12/2019
10/10-12/12/2019
10/10-12/12/2019
10/10-12/12/2019

PIPE PLAN AND LONGSECTIONS
SCALE: 1:100 (H)

SCALE: 1:100 (V)

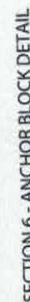
REV	DESCRIPTION	DATE	BY	DATE
C	DESIGN APPROVAL			
B	DESIGN APPROVAL			
A	DESIGN APPROVAL			

CIVIL DRAWING
Approved on behalf of ARM Consulting Engineers
Project Engineer/Designer
Drawing No.
Date
19-027-C13
C



MUSWELLBROOK SHIRE COUNCIL
DEVELOPMENT CONSENT
This document forms part of
Council's Notice of Determination
DA 2020-22
Approval Date: 12-Sep-20
Delegated Officer: ALISA EVANS

OVERFLOW PUT INSTALLED
GRANULAR IS FOR DESIGN.



SCALE 1"=10' (24)

NOTE:
1. DIMENSIONS MAY CHANGE TO REFLECT COLLAR LAYOUT AS ANCHOR BLOCK SHOULD BE
INSTALLED AROUND COLLAR FOR GREATER STRENGTH.
2. SEE DETAIL AT COLLAR AND CH 13.0.

[illegible]

LEGEND:

1. PRIOR TO PLANTING, THE LAYERS TOPSOIL, SOIL, FROM STOCKPILE MUST BE WETTED AND PAKED TO INSURE MATERIAL IS NOT COMPACTED.
2. AT LEAST 75% OF ORGANIC MULCH (FINE BARK) MUST BE LAID OUT BEFORE THE EXPLOST TOWN. THIS MULCH SHOULD BE WETTED PRIOR TO PLANTING. MULCH SHOULD BE KEPT FROM THE BASE OF PLANT.
3. MULCH AND TOPSOIL TO BE PRE-WETTED PRIOR TO PLANTING. MULCH SHOULD BE KEPT FROM THE BASE OF PLANT.
4. ALL PLANTS FOR THE PLANTING SHOULD BE OBLI EXCAVATED TO TWICE THE DIAMETERS OF THE POT AND AT LEAST 100MM SURPLUS IN DEPTH. THE ORGANIC HILL SHOULD BE FINALLY PLACED THE PLANT, WATERING UPON COMPLETION SHOULD OCCUR.
5. DRAINAGE HOLES SHOULD BE WETTED PRIOR TO AND UPON COMPLETION OF PLANTING. ROOT BALL MAY NEED TO BE DISPOSITIONED. REFER TO PLANTING RECOMMENDATIONS AS SUPPLIED.
6. REGULARLY WATER TWICE WEEKLY IN SPRING SHOULD OCCUR TO ESTABLISH PLANTS. TYPICALLY 5 LITERS PER PLANT. WATERING SHOULD BE STOPPED IN WINTER. PLANTS SHOULD BE WATERED ONCE WEEKLY IN SPRING AND ONCE WEEKLY IN SUMMER.
7. WEEDING WITHIN FOUR HRS WEEKS OF PLANTING IS SUGGESTED. ONGOING WEEDING THEREAFTER IS RECOMMENDED ONCE WEEDS BECOME A PROBLEM. SUGGESTED 10%.
8. SMALLER PARULUS SHOULD BE CLANDED.
9. PRUNING BRANNUA MAY BE REQUIRED TO DISPOSED UPON PLANTING GROWTH.
10. PLANTING BRANNUA TO BE IMPORTED SLOTTED TO GREENHOUSE AND TOP JARDS TO PRELECT RECOMMENDATIONS AS NOTED IN 644419.
11. FERTILIZING ON ESTABLISHMENT AND DURING SPRING IS RECOMMENDED. RATES OF APPLICATION TO BE DETERMINED BY SOIL ANALYSIS.
12. PLANT SURVIVAL RATES SHOULD EXCEED 90%. IF THE SURVIVAL RATE IS LESS THAN THIS, ADDITIONAL PLANTING AT THE APPROPRIATE SEASON WILL BE REQUIRED.



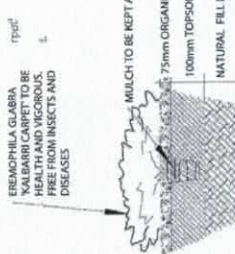
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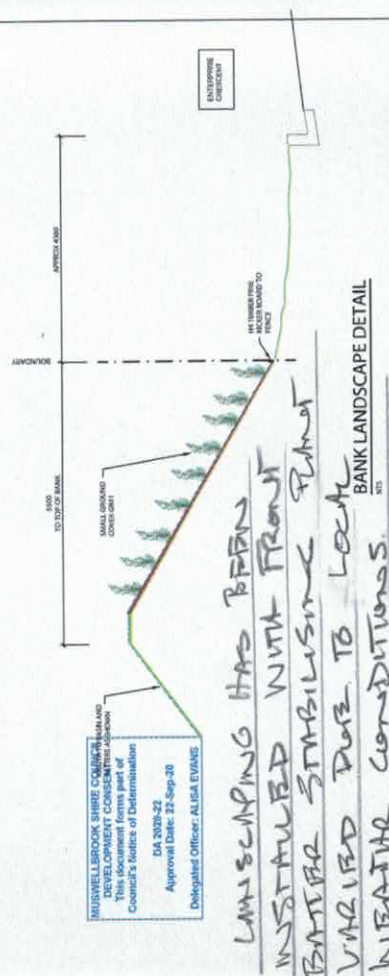
KIKUYA GRASS



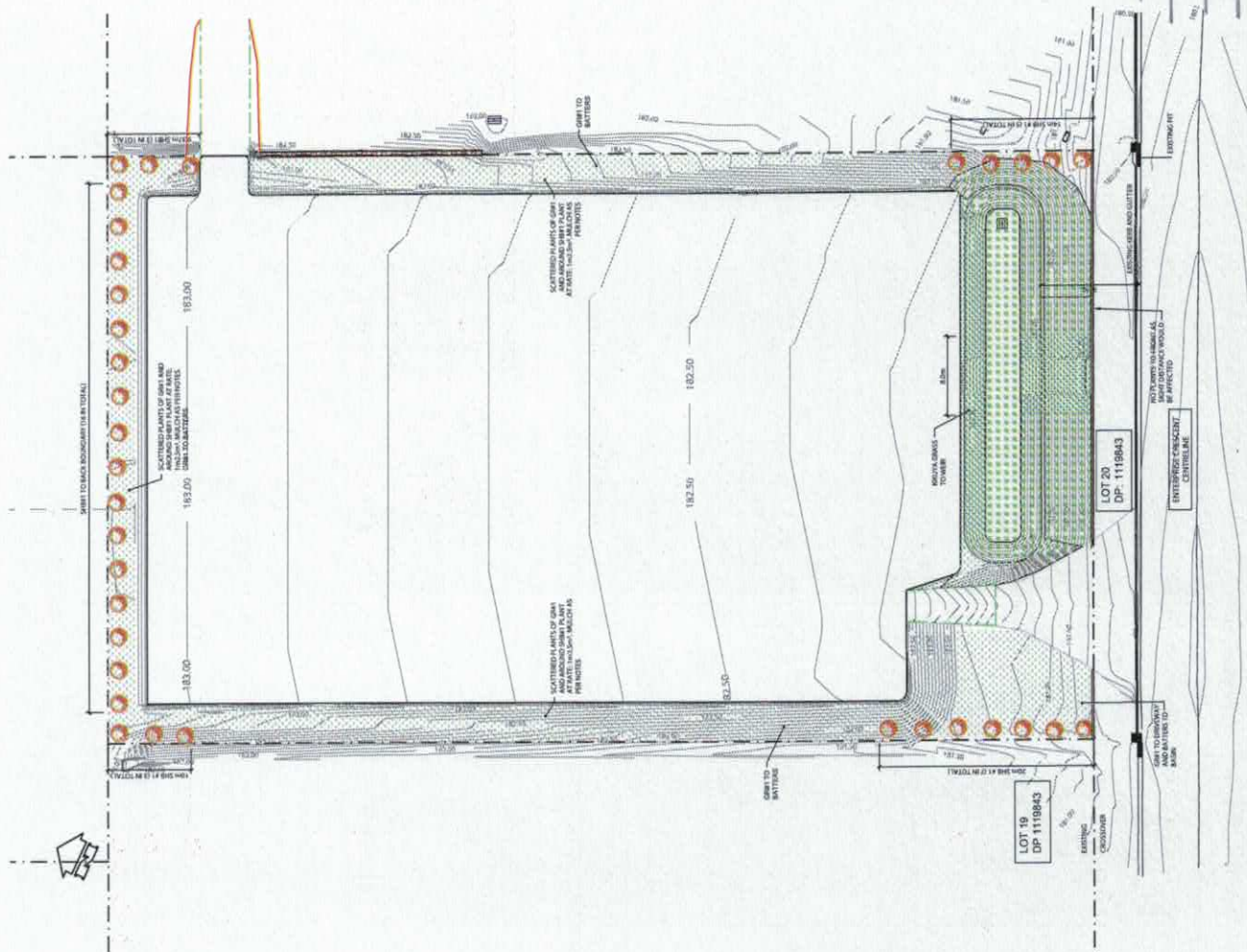
EREMOPHILA GLABRA "KALBARRI CARPET"



PLANT DETAIL



LANDSCAPING HAS BEEN
INSTALLED WITH FRONT
BATTERY STABILISING PLANT
UNRIED DUE TO LOCAL
WEATHER CONDITIONS.

[illegible]