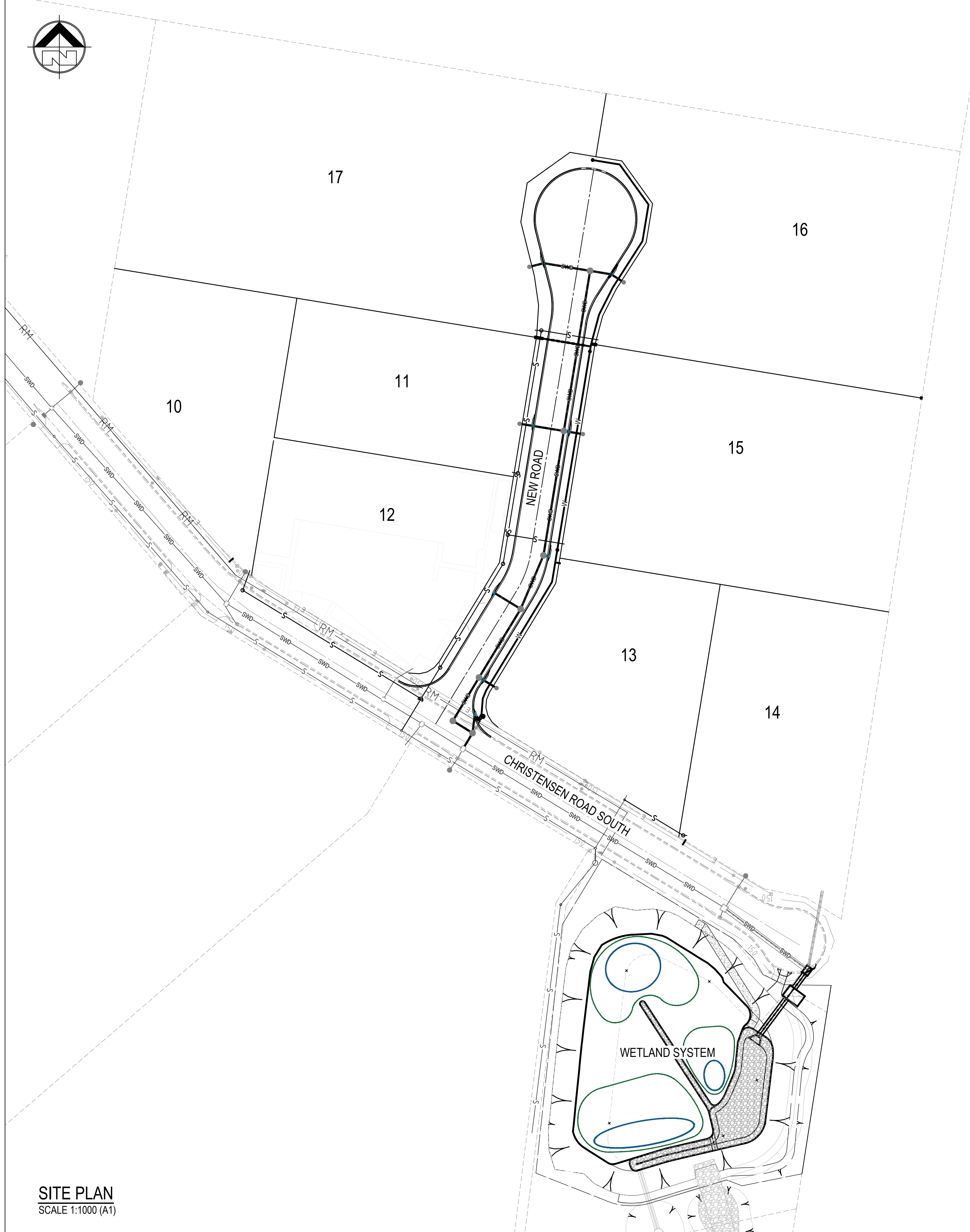


8 LOT INDUSTRIAL SUBDIVISION

86-160 CHRISTENSEN ROAD SOUTH, STAPYLTON

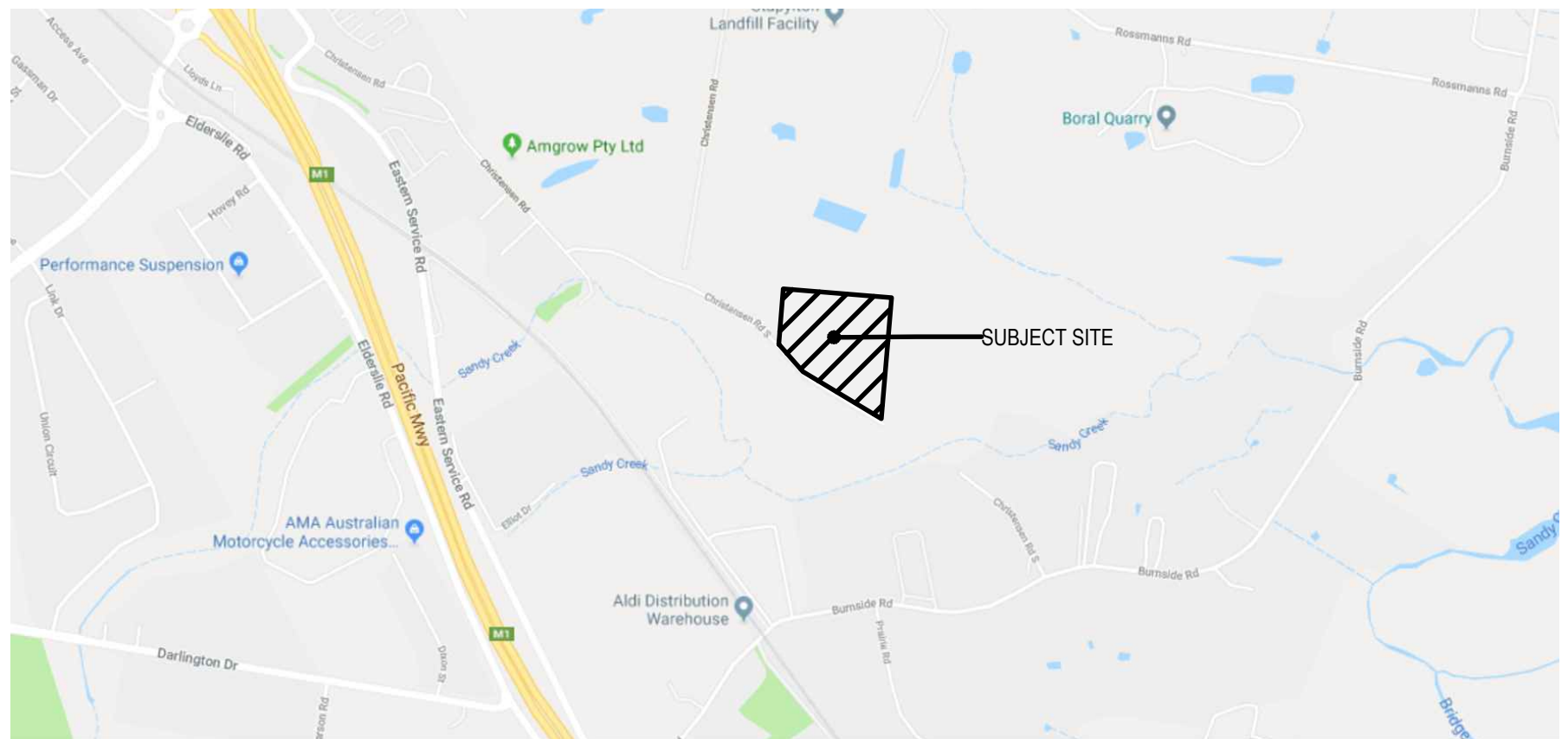
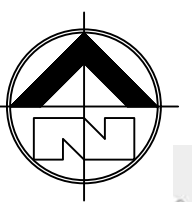


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LOCALITY PLAN
NTS

WARNING
NO GUARANTEE IS GIVEN THAT SERVICES SHOWN ARE COMPLETE AND CORRECT. CONTRACTOR SHALL VERIFY EXACT POSITION OF SERVICES ON SITE BY HAND DIGGING OR OTHER NON DESTRUCTIVE MEANS PRIOR TO CONSTRUCTION AND SHALL MAINTAIN AND PROTECT THE SAME FOR THE DURATION OF THE CONTRACT.

SITE PLAN
SCALE 1:1000 (A1)

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REV	DESCRIPTION	DATE	BY

Engineers Certification:

Travis Smith MIE Aust. CPEng.
RPEQ 16400

Signature:

Date: 05.02.2019

Project

PROPOSED SUBDIVISION AT
86-160 CHRISTENSEN ROAD
SOUTH, STAPYLTON

for
BURNSIDE DEVELOPMENTS P/L &
YELLOWSTONE INVESTMENTS P/L

Title

COVER SHEET, LOCALITY PLAN
DRAWING INDEX

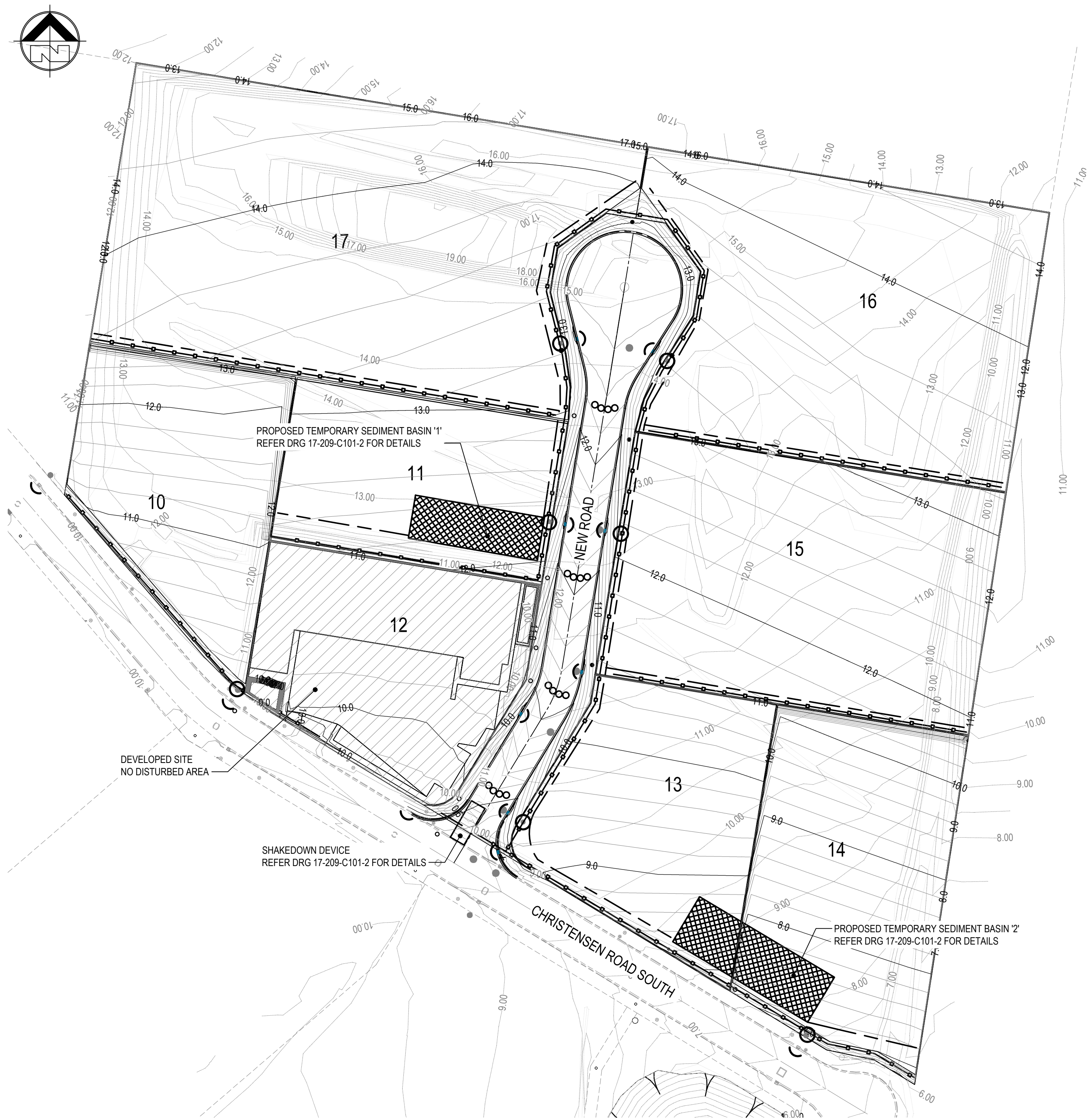
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Project No.	17-209	Dwg. No.	C100-01
		Rev.	B

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EROSION AND SEDIMENTATION CONTROL NOTES

1. CONTRACTOR TO NOMINATE SITE REPRESENTATIVE TO BE RESPONSIBLE FOR THE IMPLEMENTATION AND UP KEEP OF THE SILTATION AND EROSION MANAGEMENT CONTROL PLAN.
2. CONSTRUCTION OF ALL SEDIMENT MANAGEMENT DEVICES SHALL BE COMPLETED AND EFFECTIVE PRIOR TO:
 - STRIPPING OF TOPSOIL AND GRASS
 - BULK EARTHWORKS
 - SERVICE INSTALLATION
3. WHERE THE CONTRACTOR IS REQUIRED TO SLASH EXISTING VEGETATION, THE SLASHED HEIGHT SHALL BE AT LEAST 75mm, SO THAT THE STUBS CAN ASSIST IN PREVENTING EROSION.
4. ENSURE NO RUN OFF OR SEDIMENT DISCHARGES TO STREET OR ADJOINING PROPERTIES.
5. SHOULD THE SUPERINTENDENT, OR COUNCIL'S DESIGNATED REPRESENTATIVE, REQUEST THE CONTRACTOR TO IMPLEMENT AN EROSION AND SEDIMENT CONTROL MEASURE, THE CONTRACTOR SHALL IMPLEMENT IT WITHIN 24 HOURS.
6. BOTH TEMPORARY AND PERMANENT SEDIMENT MANAGEMENT DEVICES SHALL BE MAINTAINED. AT A SUITABLE LEVEL/CONDITION THROUGHOUT CONSTRUCTION.
7. SEDIMENT FENCES ARE TO BE CLEANED OUT WHEN CAPACITY IS REDUCED BY 30%.
8. IF EROSION AND SEDIMENT CONTROL DEVICES HAVE BEEN FOUND TO BE DEFICIENT OR FAILED IN SERVICE. DUE TO UNFORESEEN CIRCUMSTANCES, CORRECTIVE ACTION IS TO BE UNDERTAKEN IMMEDIATELY WHICH MAY INCLUDE AMENDMENTS/ADDITIONS TO THE ORIGINAL APPROVED EROSION CONTROL PLANS. SUCH ADDITIONS OR AMENDMENTS ARE TO BE APPROVED BY RELEVANT LICENSING AND COMPLIANCE OFFICER.
9. THE CONTRACTOR SHALL PROVIDE ONE VEHICLE ACCESS POINT TO SERVE THE SITE. ITS LOCATION, AND THE ASSOCIATED EROSION AND SEDIMENT CONTROL MEASURES, SHALL BE AS AGREED WITH COUNCIL'S DESIGNATED REPRESENTATIVE. THE PURPOSE OF THE ACCESS POINT AND CONTROL MEASURES IS TO MINIMIZE THE AMOUNT OF SEDIMENT TAKEN OFF SITE BY VEHICLE TYRES.
10. THE CONTRACTOR SHALL PROVIDE INLET PROTECTION TO ANY EXISTING GULLIES DIRECTLY DOWNSTREAM OF THE SITE OF WORKS.
11. THE CONTRACTOR SHALL TURF ALL DISTURBED AREAS OF VERGES, PRIOR TO ON MAINTENANCE INSPECTION.
12. ALL REMAINING BATTERS AND DISTURBED AREAS SHALL BE GRASS SEEDED WITHIN 7 DAYS OF FINAL TRIMMING AND ESTABLISHMENT OF 70 PERCENT GROUND COVER WITHIN 30 CALENDAR DAYS.

LEGEND

- EXISTING CONTOURS
- BULK EARTHWORKS CONTOURS
- SEDIMENT FENCE
- GULLY PIT INLET PROTECTION
- FIELD INLET PROTECTION
- ENTRY / EXIT SHAKE DOWN DEVICE
- STORMWATER CUT OFF / DIVERSION DRAIN
- TEMPORARY SEDIMENT BASIN - REFER DRG 17-209-C101-2 FOR DETAILS
- SAND BAG WEIR

WARNING

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EROSION & SEDIMENT CONTROL PLAN
SCALE 1:1000 (A1)

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Project No.	17-209	Dwg. No.	Rev.
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Engineers Certification:

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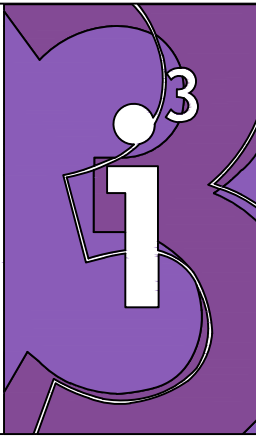
Signature: *T. Smith*

Date: 05.02.2019

Project
PROPOSED SUBDIVISION AT
86-160 CHRISTENSEN ROAD
SOUTH, STAPYLTON
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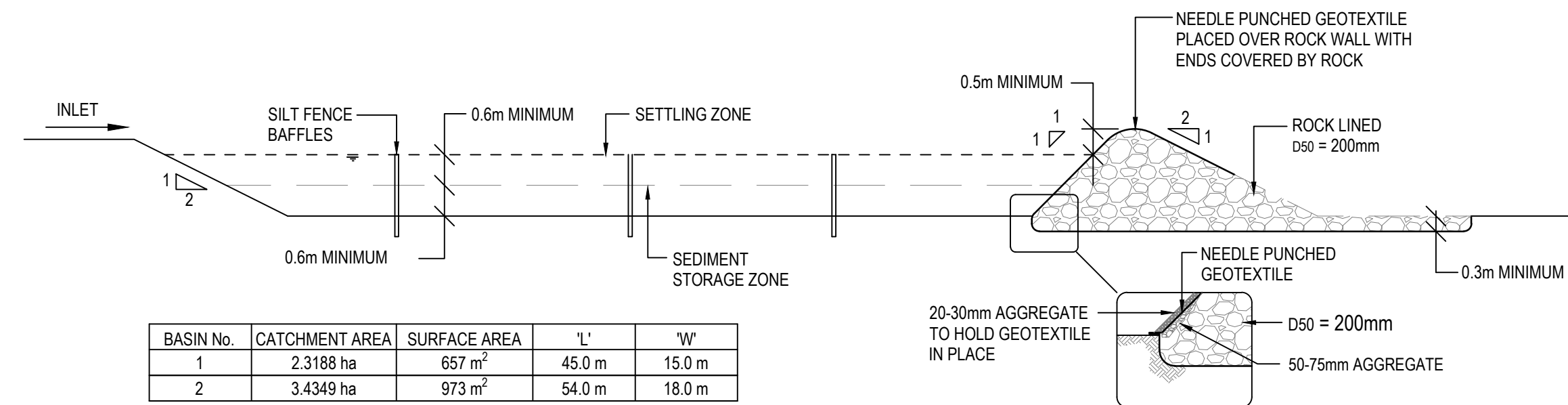
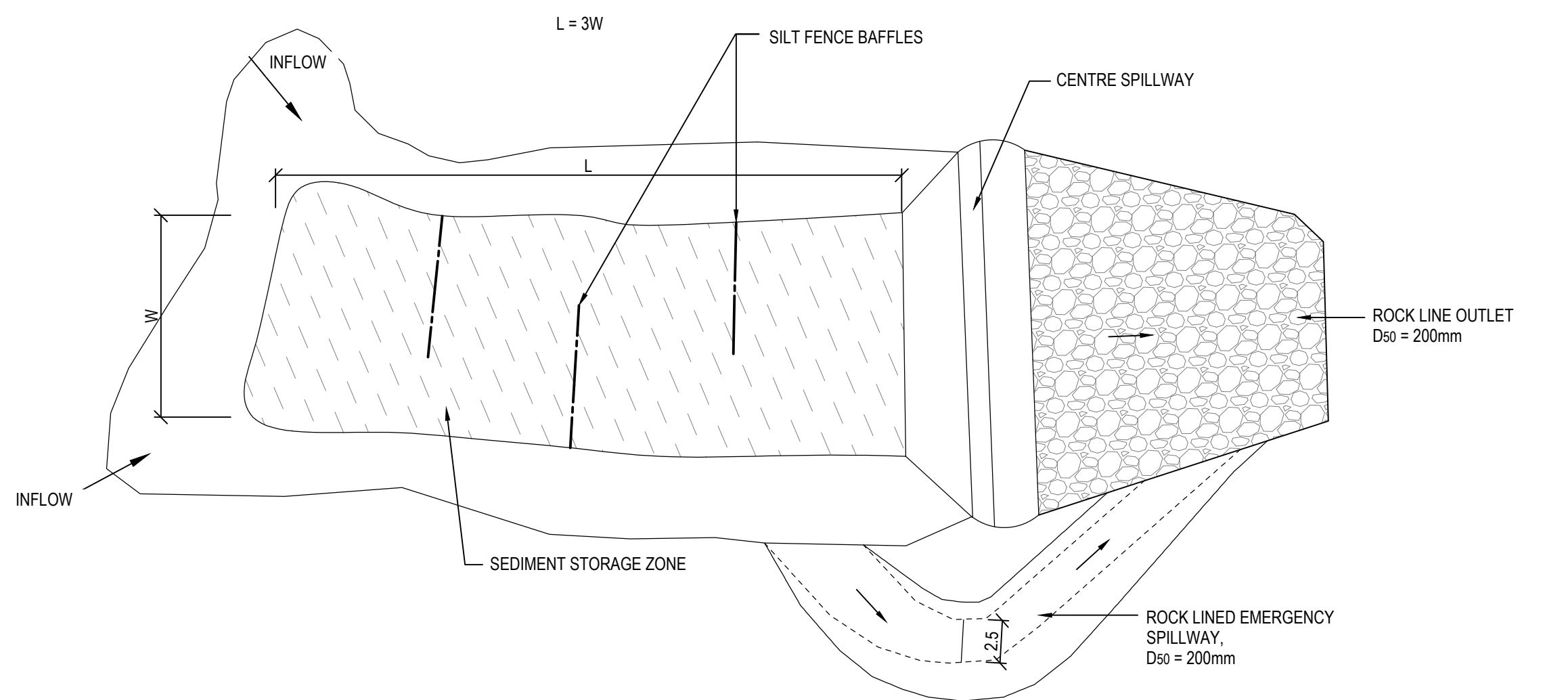
Title
EROSION & SEDIMENT CONTROL
PLAN

Consulting Engineer:



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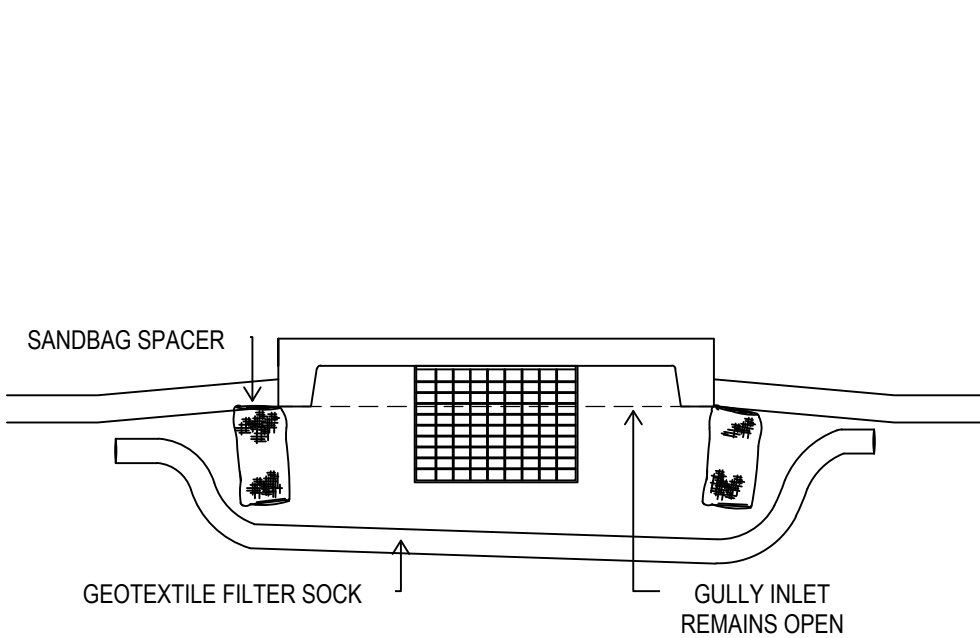


BASIN No.	CATCHMENT AREA	SURFACE AREA	L'	W'
1	2.3188 ha	657 m ²	45.0 m	15.0 m
2	3.4349 ha	973 m ²	54.0 m	18.0 m

BASIN SURFACE AREA = 3400*(0.25 Q_i) (m²)

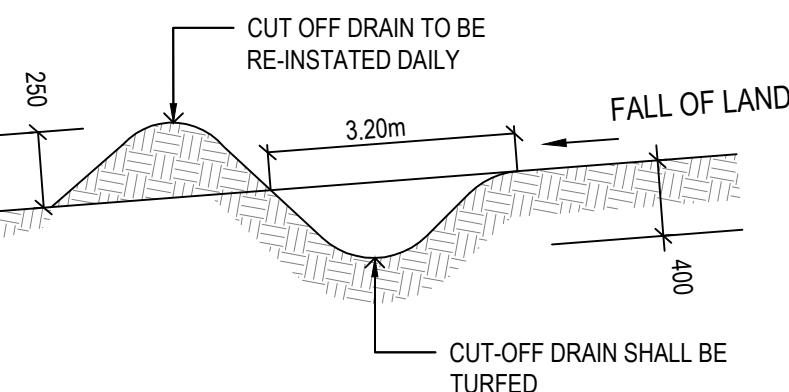
TYPE C SEDIMENT BASIN DETAILS

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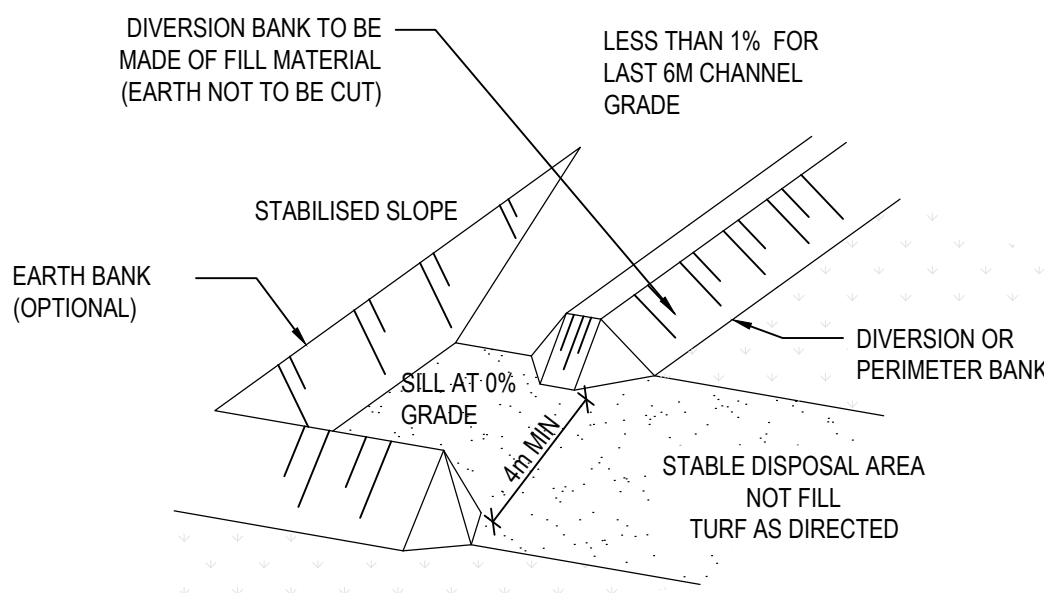
GULLY PIT SEDIMENT CONTROL

NTS



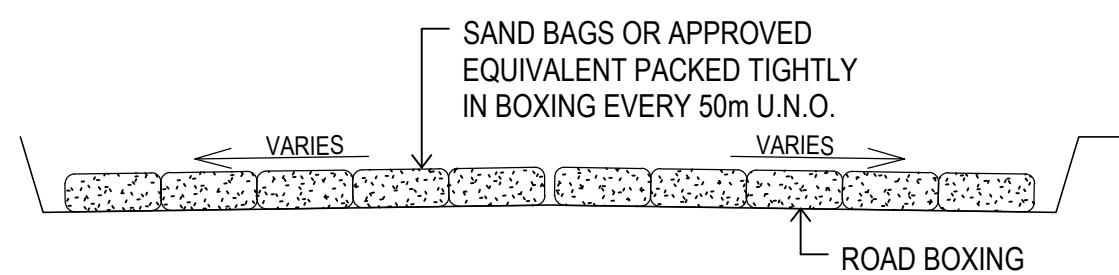
CUT OFF DRAIN / DIVERSION BERM

NTS



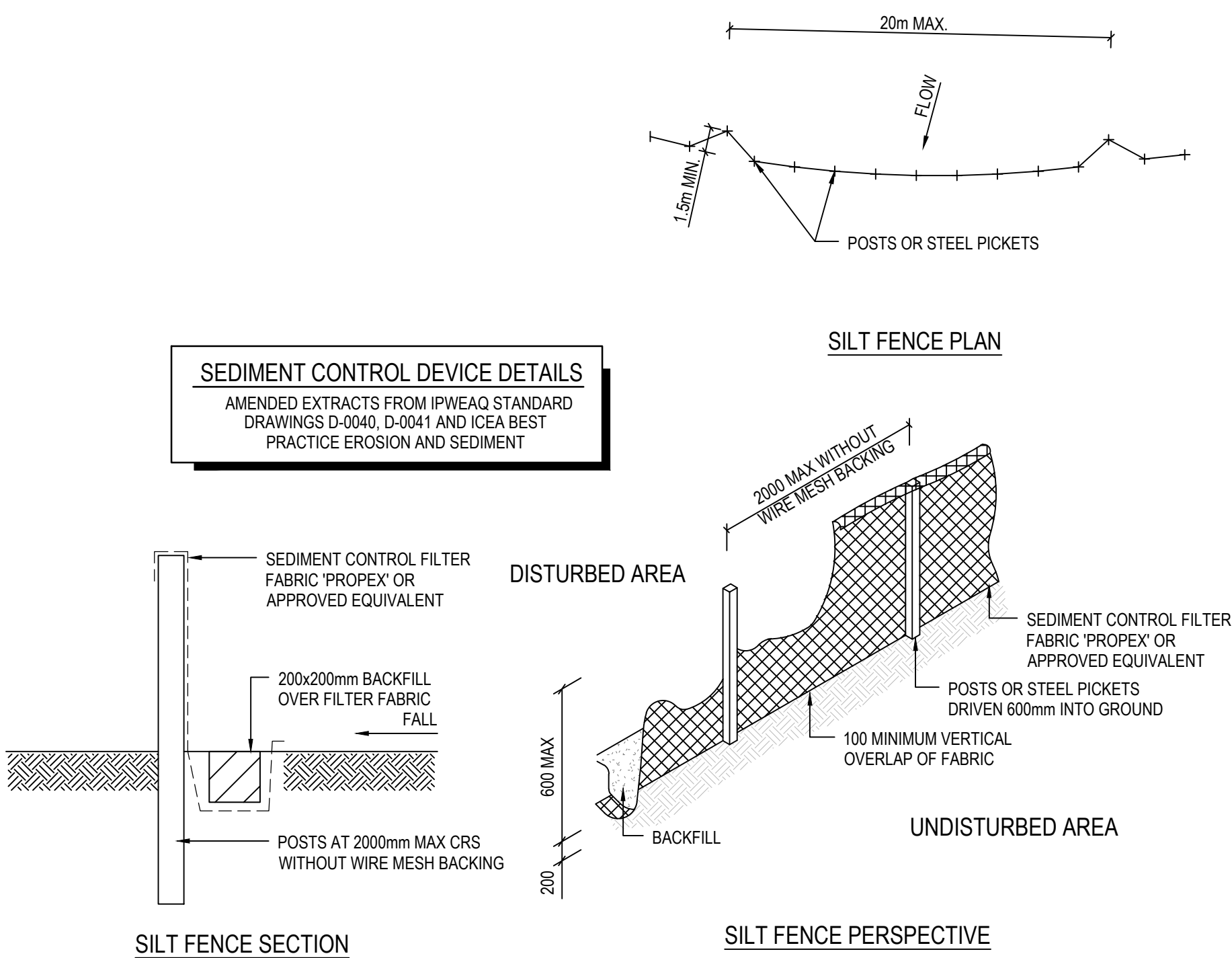
LEVEL SPREADERS

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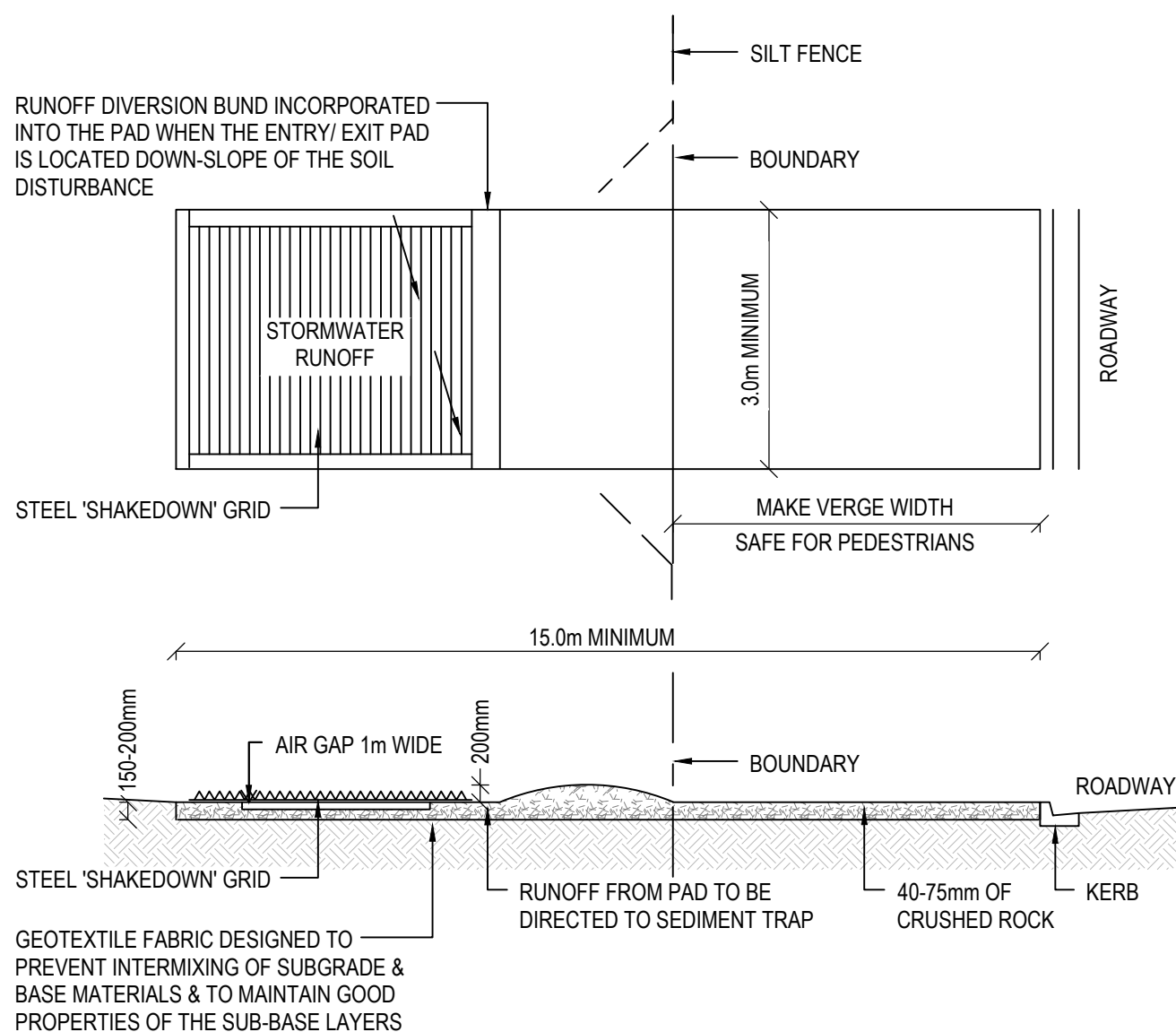
TYPICAL SANDBAG WEIR

NTS



SILT FENCE DETAIL

NTS



SHAKEDOWN DETAIL

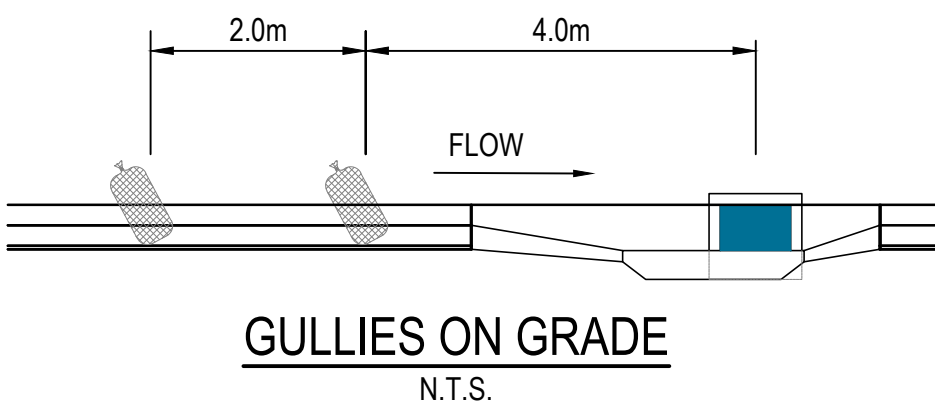
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OPERATION & MAINTENANCE NOTES

ALL ESC MEASURES MUST BE INSPECTED:
- AT LEAST DAILY (WHEN WORK IS OCCURRING ON SITE) OR WEEKLY (WHEN WORK IS NOT OCCURRING ON SITE);
- WITHIN 24 HOURS OF EXPECTED RAIN; AND
- WITHIN 18 HOURS OF A RAINFALL EVENT (ie AN EVENT OF SUFFICIENT INTENSITY AND DURATION TO MOBILISE SEDIMENT ON SITE).

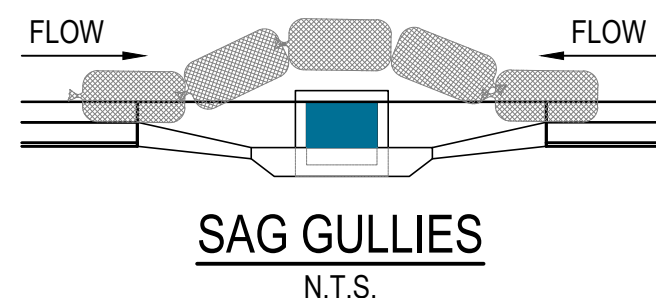
ESC MEASURE	MAINTENANCE TRIGGER	TIMEFRAME FOR COMPLETION OF MAINTENANCE
SEDIMENT BASINS	WHEN SETTLED SEDIMENT EXCEEDS THE VOLUME OF THE SEDIMENT STORAGE ZONE (SEE COUNCIL'S SEDIMENT BASIN DESIGN GUIDELINES).	WITHIN 7 DAYS OF THE INSPECTION.
OTHER ESC MEASURES	THE CAPACITY OF ESC MEASURES FALLS BELOW 30%.	BY THE END OF THE DAY

PRIOR TO LONG PERIOD OF SHUT DOWN ALL ESC MEASURES TO BE INSPECTED AND CLEANED. SEDIMENT BASIN CAPACITY TO BE CHECKED AND SIZE INCREASED IF REQUIRED FOR SHUT DOWN PERIOD.



GULLIES ON GRADE

N.T.S.



SAG GULLIES

N.T.S.

SANDBAGS AT GULLIES

NTS

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Engineers Certification:

Travis Smith MIE Aust. CPEng.
RPEQ 16400

Signature: *T. Smith*

Date: 05.02.2019

Project
PROPOSED SUBDIVISION AT
86-160 CHRISTENSEN ROAD
SOUTH, STAPYLTON
for
BURNSIDE DEVELOPMENTS P/L &
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Title
EROSION & SEDIMENT CONTROL
DETAILS AND NOTES

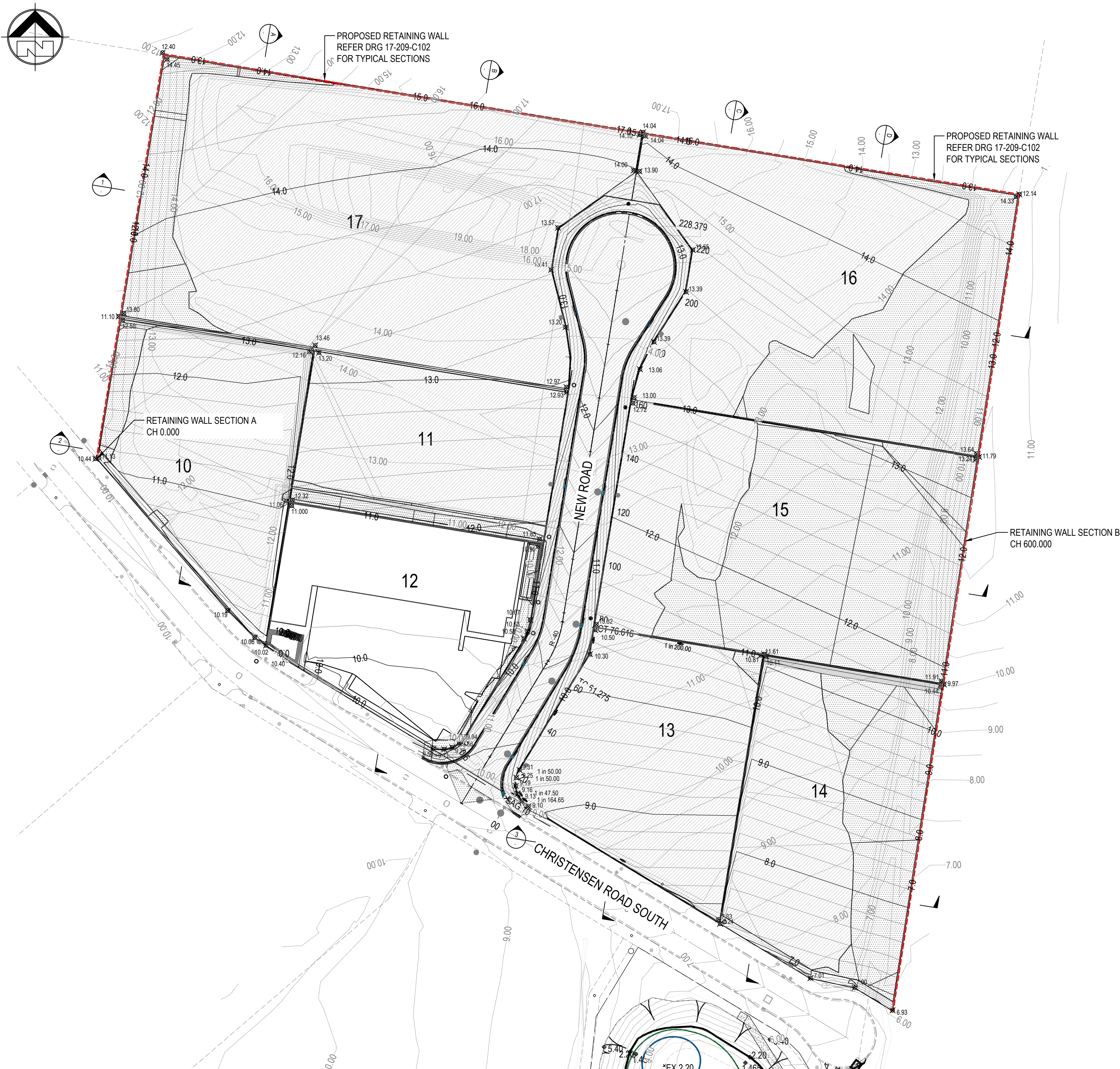
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AS SHOWN			
Project No.	Dwg. No.	Rev.	
17-209	C101-02	B	

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BULK EARTHWORKS PLAN
SCALE 1:1000 (A1)

BULK EARTHWORKS NOTES

- WORKS SHALL BE EXECUTED BY THE CONTRACTOR IN ACCORDANCE WITH AS3798 - 2007, 'GUIDELINES FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS' AND SHALL BE SUPERVISED BY AND APPROVED GEOTECHNICAL TESTING AUTHORITY, (GTA) AS DEFINED IN THE CODE TO A LEVEL 1 STANDARD.
- THE GEOTECHNICAL TESTING AUTHORITY SHALL PROVIDE A COMPLETED CONSTRUCTION PHASE REPORT INCLUDING AS A MINIMUM:
 - DAILY FIELD RECORD SHEETS INCLUDING ELEVATION AND LOCATION OF WHEEL LOAD TESTS COMPLETED AND THE NATURE OF REJECTED / ACCEPTED MATERIAL;
 - PHOTOGRAPHIC DIARY; AND
 - COMPACTION TEST RESULTS, INCLUDING X, Y, Z CO-ORDINATES OF SAMPLE;
 - RPEQ CERTIFICATION OF THE WORKS AND RE-CLASSIFICATION IN ACCORDANCE WITH AS2870.
- FOLLOWING INITIAL MOBILISATION AND PRIOR TO STRIPPING OF THE SITE, THE CONTRACTOR SHALL IMMEDIATELY UNDERTAKE THE EROSION AND SEDIMENT RUNOFF PREVENTION MEASURES.
- FOLLOWING THE STRIPPING OF THE UPPER ORGANIC SOIL, THE SITE SHALL BE PROOF ROLLED TO IDENTIFY ANY SOFT SPOTS OR FURTHER SIGNS OF UNSUITABLE MATERIAL. ANY SUCH AREAS SHALL BE RECTIFIED PRIOR TO COMMENCEMENT OF FILLING OPERATIONS.
- FILLING SHALL BE COMPLETED IN ACCORDANCE THE FOLLOWING REQUIREMENTS:
 - WORKS TO BE IN ACCORDANCE WITH AS3798 - 2007.
 - DEGREE OF COMPACTION TO BE AS FOLLOWS:
 - ALLOTMENT FILL = 95% STANDARD COMPACTION
 - VERGE = 95% STANDARD COMPACTION
 - SUBGRADE GREATER THAN 300mm BELOW TOP OF SUBGRADE = 95% STANDARD COMPACTION
 - SUBGRADE LESS THAN 300mm BELOW TOP OF SUBGRADE = 100% STANDARD COMPACTION
 - PAVEMENT 100% STANDARD COMPACTION
 - MATERIAL MOISTURE CONTENT TO BE IN THE RANGE OF 80% TO 100% OF OPTIMAL MOISTURE CONTENT (OMC).
 - FIELD DENSITY TESTING TO BE CARRIED OUT AS PER GOLD COAST CITY COUNCIL'S SUBDIVISION AND DEVELOPMENT GUIDELINES.
 - THE EXPENSE OF THE TESTING IS THE RESPONSIBILITY OF THE CONTRACTOR.
- IT IS THE CONTRACTORS RESPONSIBILITY TO PROTECT THE SITE AND SURROUNDING AREAS FROM DAMAGE RESULTING FROM STORMWATER RUNOFF. TEMPORARY DIVERSION DRAINS AND OR OTHER DRAINAGE CONTROL DEVICES ARE TO BE IMPLEMENTED BY THE CONTRACTOR DURING CONSTRUCTION TO MINIMISE THE EFFECTS OF WEATHER. NO EXTENSIONS OF TIME WILL BE GRANTED SHOULD DAMAGE TO THE WORKS AND SURROUNDING AREAS RESULT FROM THE CONTRACTORS NEGLIGENCE IN NOT PROVIDING ADEQUATE PROTECTION.
- EXCESS SPOIL MATERIAL GENERATED DURING CONSTRUCTION IS TO BE REMOVED FROM THE SITE BY THE CONTRACTOR.
- ALL FILL MATERIAL PLACED ON THE SITE COMPRISING ONLY NATURAL EARTH AND ROCK IS TO BE FREE OF CONTAMINANTS (AS DEFINED BY SECTION 11 OF THE ENVIRONMENTAL PROTECTION ACT 1994), NOXIOUS, HAZARDOUS, DELETERIOUS AND ORGANIC MATERIALS. SUITABLE FILL MATERIAL IS DEEMED TO COMPLY WITH THE REQUIREMENTS OF CLAUSE 4.3, AS3798, GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS
- TURF SHALL BE LAID TO FULFILL WITH OF VERGE UPON COMPLETION OF WORKS.
- SHOULD ANY ABORIGINAL, ARCHAEOLOGICAL OR HISTORIC SITES, ITEMS OR PLACES BE IDENTIFIED, LOCATED OR EXPOSED DURING THE COURSE OR CONSTRUCTION OR OPERATION OF THE DEVELOPMENT, ALL ACTIVITIES SHALL CEASE FORTHWITH, AND THE CONTRACTOR SHALL CONTACT THE SENIOR CULTURAL HERITAGE OFFICER (PH. 3225-1074) OF THE ENVIRONMENTAL PROTECTION AGENCY.

VEGETATION MANAGEMENT

CLEARED VEGETATION SHALL NOT BE BURNED ON SITE. THE CONTRACTOR SHALL DUMP CLEARED MATERIAL AT AN APPROVED WASTE DISPOSAL FACILITY, OR MULCH AND RETAIN IT ON SITE FOR LATER USE IN LANDSCAPING AND REVEGETATION WORKS.

IN GENERAL, THE CONTRACTOR SHALL MINIMIZE THE AREA OF CONSTRUCTION VEHICLE ACTIVITY.

THE CONTRACTOR SHALL PROTECT TREES WITHIN 4 METRES OF GENERAL MACHINE OPERATION WITH TREE GUARDS, MADE OF RUBBER OR HARDWOOD GIRDLES TO WHICH HAVE BEEN ATTACHED 1.8m HIGH BATTENS CLOSELY SPACED AND ARRANGED VERTICALLY FROM GROUND LEVEL. THE CONTRACTOR SHALL STRAP THE GUARDS TO THE TREES PRIOR TO CONSTRUCTION AND KEEP THEM IN PLACE UNTIL COMPLETION.

WHERE POSSIBLE, THE CONTRACTOR SHALL TUNNEL UNDER TREE ROOTS RATHER THAN SEVERING THEM. WHERE ROOTS HAVE BEEN DAMAGED, THE CONTRACTOR SHALL SEVER THEM CLEANLY AND TREAT THE CUT FACES WITH A SUITABLE FUNGICIDE.

DUST CONTROL NOTES

THE CONTRACTOR SHALL ALTER WORK PRACTICES TO AVOID OR MINIMISE DUST GENERATION. THIS CAN INCLUDE BUT IS NOT LIMITED TO:

- SCHEDULING DUST-GENERATING ACTIVITIES FOR TIMES AND WEATHER CONDITIONS THAT WILL AVOID IMPACTS ON SENSITIVE USES.
- SPRAYING WATER ON UNPAVED ROADS, ACCESS TRACKS AND STOCKPILES AT A SUFFICIENT LEVEL TO SUPPRESS DUST GENERATION.
- REMOVING MATERIALS SPILLED OR TRACKED ONTO PAVED ROADS THAT MAY CREATE DUST.
- RESTRICTING VEHICLE MOVEMENTS AND/ OR VEHICLE SPEEDS ON UNPAVED ROADS.
- COVERING LOADS ON HAULAGE VEHICLES.
- WASHING TYRES OF VEHICLES LEAVING SITE.
- COVERING OR ENCLOSING STOCKPILES.
- USING DUST COLLECTION DEVICES ON RELEVANT EQUIPMENT.
- MINIMISING THE AREA DISTURBED, AND REVEGETATING EXPOSED AREAS AS SOON AS PRACTICAL.
- USING WINDBREAKS AND SCREENS TO RESTRICT DUST MOVEMENT.
- STREET CLEANING

LEGEND

- EXISTING CONTOURS
- BULK EARTHWORKS CONTOURS
- BULK EARTHWORKS LEVEL
- AREA CUT
- AREA FILL
- RETAINING WALL, D&C BY OTHERS

PRELIMINARY BULK EARTHWORK QUANTITIES

	VOLUME (m3)
CUT	-54776
FILL	23841
BALANCE	-30935

EARTHWORKS QUANTITIES BASED ON:

- 100mm STRIP FROM THE EXISTING
- PRELIMINARY PAVEMENT DESIGN

NO BULKING FACTORS HAVE BEEN APPLIED.

WARNING

NO GUARANTEE IS GIVEN THAT SERVICES SHOWN ARE COMPLETE AND CORRECT. CONTRACTOR SHALL VERIFY EXACT POSITION OF SERVICES ON SITE BY HAND DIGGING OR OTHER NON DESTRUCTIVE MEANS PRIOR TO CONSTRUCTION AND SHALL MAINTAIN AND PROTECT THE SAME FOR THE DURATION OF THE CONTRACT.

GCCC REF: xxxx



FOR COUNCIL APPROVAL

Drawn	Date	Chkd	Date
K.J.L.	07.12.18	T.J.S.	07.12.18
Design	Date	Apprd	Date
T.J.S.	07.12.18		
Scale	A1	Certif	Date
AS SHOWN			
Project No.	Dwg. No.	Rev.	
17-209	C102-01	B	

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www.icubed.com.au mail@icubed.com.au
ABN 89 106 675 156 ACN 106 675 156
p 07 3870 8888

B	FOR COUNCIL APPROVAL	30.01.2019	K.J.L.
A	PRELIMINARY	07.12.2018	K.J.L.
REV	DESCRIPTION	DATE	BY

Engineers Certification:

Travis Smith MIE Aust. CPEng.
RPEQ 16400

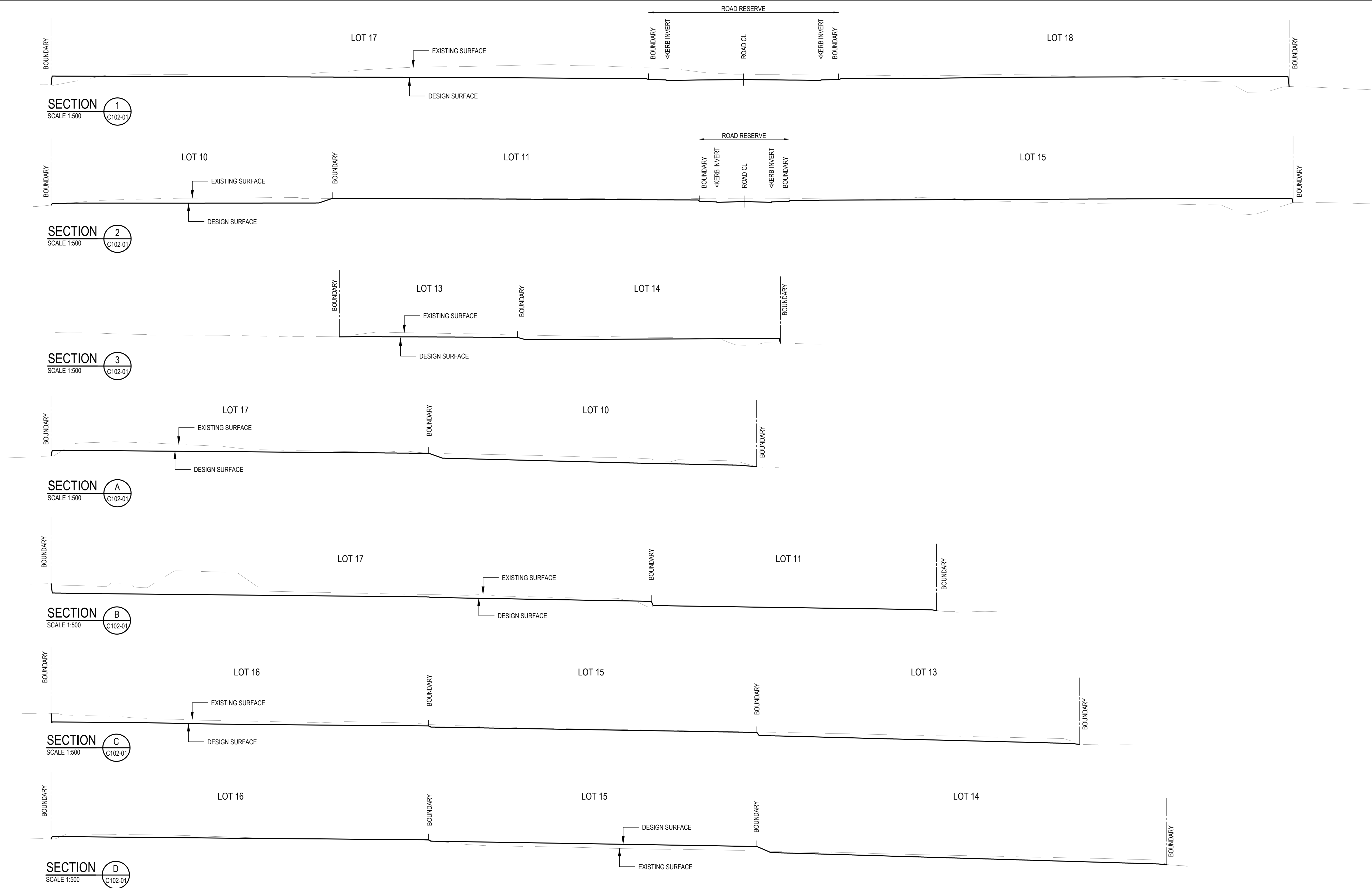
Signature: *T. Smith*

Date: 05.02.2019

Project
**PROPOSED SUBDIVISION AT
86-160 CHRISTENSEN ROAD
SOUTH, STAPYLTON**

for
**BURNSIDE DEVELOPMENTS P/L &
YELLOWSTONE INVESTMENTS P/L**

Title
BULK EARTHWORKS PLAN

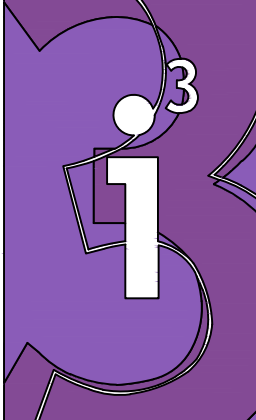


GCCC REF: xxxx



FOR COUNCIL APPROVAL			
B	30.01.2019	K.J.L.	
A	07.12.2018	K.J.L.	
REV	DESCRIPTION	DATE	BY

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RPEQ 16400

Signature: *T. Smith*

Date: *05.02.2019*

Project
**PROPOSED SUBDIVISION AT
86-160 CHRISTENSEN ROAD
SOUTH, STAPYLTON**

for
**BURNSIDE DEVELOPMENTS P/L &
YELLOWSTONE INVESTMENTS P/L**

Title
BULK EARTHWORKS SECTIONS

Status			
FOR COUNCIL APPROVAL			
Drawn	Date	Chkd	Date
K.J.L.	07.12.18	T.J.S.	07.12.18
Design	Date	Apprd	Date
T.J.S.	07.12.18		
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REV	DESCRIPTION	DATE	BY