

# PROPOSED INDUSTRIAL DEVELOPMENT

## STAGE 1 - 117 SOMERSET ROAD

### GRACEMERE, QLD, 4702

#### GENERAL NOTES

1. THIS IS A CAD DRAWING. DO NOT SCALE. TAKE FIGURED DIMENSIONS ONLY.
2. ALL DIMENSIONS GIVEN ON THESE DRAWINGS ARE IN METERS UNLESS NOTED OTHERWISE.
3. ALL WORK AND MATERIALS SHALL COMPLY WITH THE PROJECT DRAWINGS, SPECIFICATION AND CURRENT COUNCIL STANDARDS AND SPECIFICATIONS.
4. ALL WORK IS TO BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF THE WORKPLACE HEALTH AND SAFETY ACT.
5. PROVIDE TRAFFIC MANAGEMENT FOR THE DURATION OF CONSTRUCTION IN ACCORDANCE WITH "THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES"
6. THE CONTRACTOR IS TO LOCATE, IDENTIFY AND ESTABLISH THE CONNECTIVITY OF ALL EXISTING SERVICES WITHIN THE LIMITS OF PROPOSED WORKS AND CONFIRM THIS INFORMATION WITH THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.
7. PROPERTY BOUNDARIES ARE SUBJECT TO CONFIRMATION BY FIELD SURVEY CARRIED OUT BY A REGISTERED SURVEYOR.
8. ALL WORK SHALL BE JOINED NEATLY TO EXISTING FEATURES.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL MEASURING DEVICES, SAFETY EQUIPMENT AND MACHINERY REQUIRED TO CARRY OUT INSPECTIONS/MEETINGS AS SPECIFIED OR REQUESTED BY THE ENGINEER.
10. PROOF ROLLING NOMINATED SHALL BE CARRIED OUT USING A SINGLE AXLE HIGHWAY TRUCK WITH A REAR AXLE LOAD NOT LESS THAN 8 TONNES AND TYRES INFLATED TO 550kPa OR APPROVED EQUIVALENT. EQUIPMENT LABOUR AND LOADING REQUIRED FOR PROOF ROLLING IS TO BE PROVIDED BY THE CONTRACTOR.
11. THE CONTRACTOR SHALL RESTORE ALL EXISTING AREAS TO BE MAINTAINED, TO THEIR ORIGINAL CONDITION UPON COMPLETION OF THE WORKS.
12. THESE NOTES SHALL APPLY TO ALL PORTIONS OF THE WORKS.
13. FOR SETOUT REFER TO CONSULTING ENGINEER FOR DIGITAL DATA.

#### Sheet List Table

Sheet Number	Sheet Title
000	COVER SHEET, SITE PLAN, LOCALITY PLAN, SCHEDULE OF DRAWINGS & GENERAL NOTES
SE001	EROSION AND SEDIMENT CONTROL PLAN
SE002	EROSION AND SEDIMENT CONTROL DETAILS
BE001	BULK EARTHWORKS PLAN
BE002	BULK EARTHWORKS SECTIONS
R001	SWEPT PATH ANALYSIS & VEHICLE ACCESS PLAN
SW001	STORMWATER DRAINAGE PLAN
SW002	STORMWATER DRAINAGE DETAILS
C001	PRE DEVELOPMENT STORMWATER CATCHMENT PLAN
C002	POST DEVELOPMENT STORMWATER CATCHMENT PLAN

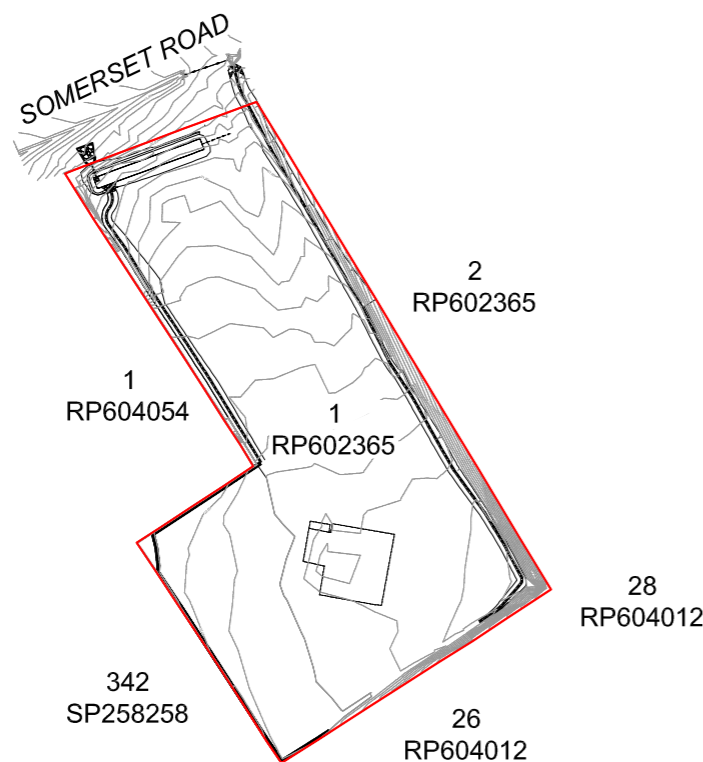
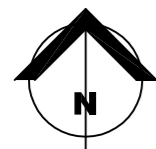
#### ROCKHAMPTON REGIONAL COUNCIL

#### APPROVED PLANS

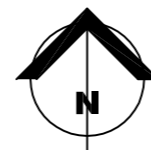
These plans are approved subject to the current conditions of approval associated with

**Development Permit No.: D/194-2016**




**Dated: 25 February 2019**

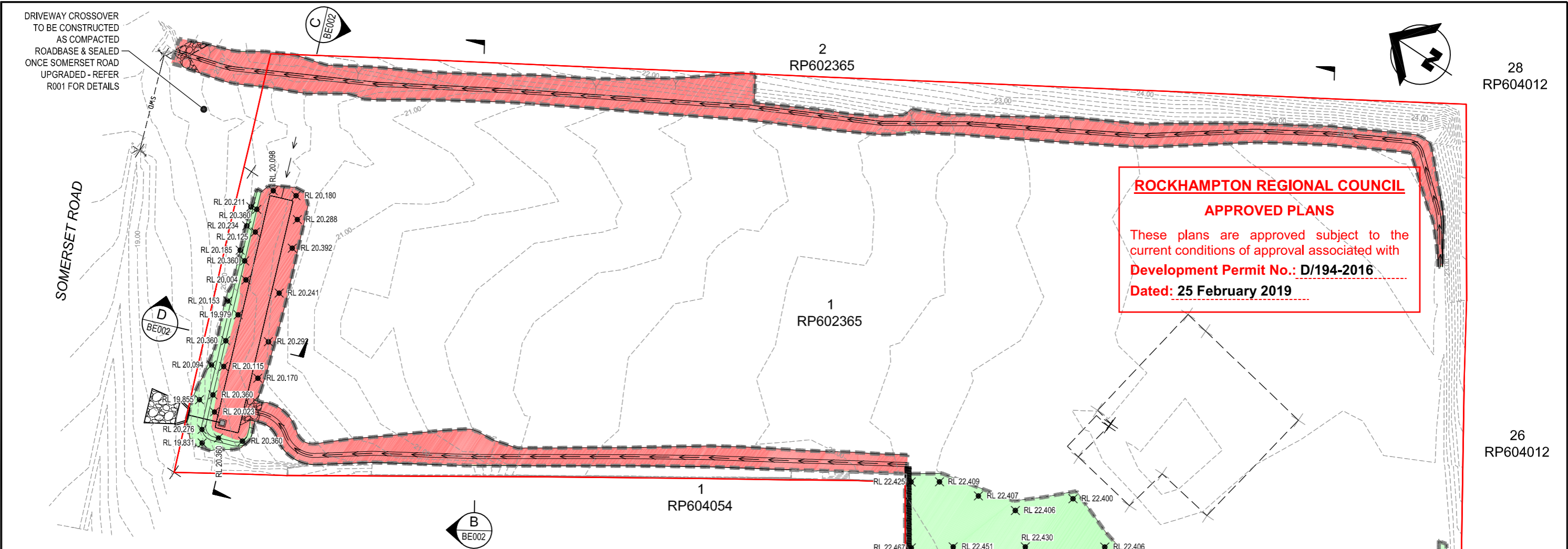


**SITE PLAN**  
SCALE 1:1000 (A1)



**LOCALITY PLAN**  
N.T.S

			<div><b>KNOBEL CONSULTING</b> CIVIL ENGINEERS + HYDRAULIC ENGINEERS + PROJECT MANAGERS</div> <div>Level 6, 34 East Street Rockhampton City Q 4700 Phone: 07 4922 5019 Fax: 07 5580 9133 Email: admin@knobelconsulting.com.au</div> <div>PO Box 5364 Red Hill, Rockhampton Q 4701 ABN: 33 071 435 202 W: www.knobelconsulting.com.au</div>	CLIENT EARTHWORX AUSTRALIA WIDE PTY LTD			DESIGN JH	DRAWN JP	APPROVED AP	TITLE COVER SHEET, SITE PLAN, LOCALITY PLAN, SCHEDULE OF DRAWINGS & GENERAL NOTES			PROJECT NO. <b>K2696</b>	
				PROJECT PROPOSED INDUSTRIAL DEVELOPMENT 117 SOMERSET ROAD GRACEMERE, QLD, 4702	A.R.PIANTA - R.P.E.Q. NUMBER 10423			<div>SCALE 1:1000 AT A1 1:2000 AT A3</div> <div></div>			DWG NO. 000	ISSUE A		
					<div> 13.12.16</div> <div>SIGNEDDATE</div>									
A	13.12.16	ISSUED FOR OPERATIONAL WORKS APPROVAL												
ISSUE No.	DATE	AMENDMENT												



EARTHWORKS NOTES

1. STRIP THE CONSTRUCTION AREA OF ALL GRASS, SHRUBS, RUBBISH, DELETERIOUS MATERIAL AND UNSUITABLE TOPSOIL AS NOMINATED BY THE ENGINEER. DISPOSE OF ALL SUCH MATERIAL OFF SITE.
2. TOPSOIL APPROVED BY THE ENGINEER FOR REUSE, IS TO BE STOCKPILED ON SITE AS DIRECTED BY THE SUPERINTENDENT.
3. BULK EARTHWORKS IS TO BE CARRIED OUT IN ACCORDANCE WITH CAPRICORN MUNICIPAL DEVELOPMENT GUIDELINES AND THE REQUIREMENTS OF AS3798. GEOTECHNICAL SUPERVISION OF EARTHWORKS IS TO BE CARRIED OUT IN ACCORDANCE WITH LEVEL 1 OF AS3798 BY A N.A.T.A. REGISTERED GEOTECHNICAL TESTING AUTHORITY AT THE CONTRACTORS COST. THE CONTRACTOR SHALL PROVIDE DETAILS OF ALL TESTING TO THE ENGINEER PROGRESSIVELY THROUGH THE WORKS AND NOTIFY THE ENGINEER OF ANY NON-CONFORMANCES. ALL NON CONFORMING WORK IS TO BE RECTIFIED AS DIRECTED BY THE ENGINEER.
4. A MINIMUM RELATIVE COMPACTION OF 98% FOR FILLING IS TO BE ACHIEVED IN ACCORDANCE WITH TABLE 5.1 OF AS3798-2007.
5. PRIOR TO FILL OPERATIONS AND IN THE PRESENCE OF THE ENGINEER, PROOF ROLL THE FILL AREA SUBGRADE. REMOVE SOFT AND OR COMPRESSIBLE ZONES AND REPLACE WITH SELECT SITE MATERIAL COMPACTED TO A DENSITY CONSISTENT WITH THAT PRESCRIBED FOR PROPOSED FILLING ABOVE.
6. THE MAJORITY OF MATERIAL WON FROM PROPOSED EXCAVATIONS SHOULD BE SUITABLE FOR REUSE AS FILL MATERIAL APART FROM ANY OVERSIZE MATERIAL. SUITABLE MATERIALS FOR FILLING SHOULD GENERALLY HAVE A MAXIMUM PARTICLE SIZE NOT EXCEEDING 150mm. OVERSIZE MATERIAL IS TO BE EITHER CRUSHED TO A PARTICLE SIZE  $\leq 150\text{mm}$  FOR REUSE AS FILL MATERIAL OR DISPOSED OF OFF SITE.
7. PLACE FILL IN LAYERS OF LOOSE THICKNESS APPROPRIATE TO THE TYPE OF COMPACTION EQUIPMENT BEING USED AND NOT GREATER THAN 250mm. COMPACT EACH FILLING LAYER TO THE MINIMUM DRY DENSITY SPECIFIED. THE MOISTURE CONTENT OF FILL MATERIAL SHOULD BE MAINTAINED WITHIN THE RANGE OF +/- 2% OF THE OPTIMUM MOISTURE CONTENT.
8. EARTHWORKS PROFILES ARE TO BE TRANSITIONED UNIFORMLY BETWEEN PRESCRIBED SLOPES.
9. FOLLOWING COMPLETION OF BULK EARTHWORKS OPERATIONS THE CONTRACTOR IS TO NOTIFY THE SUPERINTENDENT. THE FINISHED SURFACE IS TO BE PROOF ROLLED IN THE PRESENCE OF THE ENGINEER PRIOR TO TOPSOILING.
10. STOCKPILED TOPSOIL IS TO BE SPREAD TO AN EVEN 100mm THICKNESS OVER ALL BATTERS AND SURROUNDING AREAS DISTURBED BY CONSTRUCTION ACTIVITIES. THE CONTRACTOR IS TO DISPOSE OF EXCESS TOPSOIL OFF SITE.
11. 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 CONTRACTOR'S NEGLIGENCE IN NOT PROVIDING ADEQUATE PROTECTION.
12. IMPORTED FILL MATERIAL IF ORDERED, SHALL BE LOW PLASTICITY GRANULAR FILL HAVING THE FOLLOWING CHARACTERISTICS:  
MINIMUM CBR 15%  
PLASTICITY INDEX <15%  
% PASSING 0.0075mm SIEVE <25%
13. EXCESS SPOIL MATERIAL GENERATED DURING CONSTRUCTION IS TO BE DISPOSED OF AS DIRECTED BY THE SUPERINTENDENT.
14. 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 (EPA) 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.
15. THE MOVEMENT OF MATERIAL TO AND FROM THE SITE IS TO BE IN ACCORDANCE WITH RELEVANT EPA POLICIES, IN PARTICULAR THOSE ADDRESSING PRESENCE AND TREATMENT OF FIRE ANTS.

**ROCKHAMPTON REGIONAL COUNCIL**  
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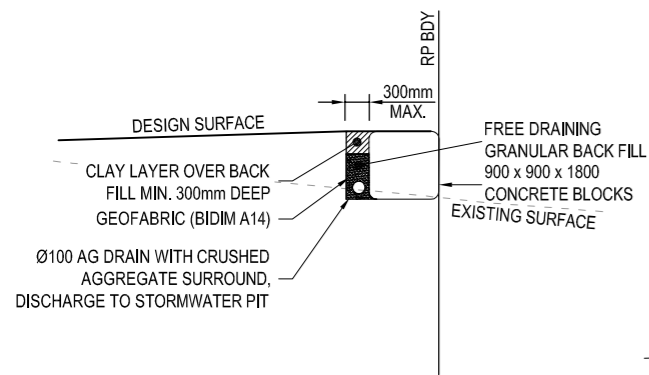
- LEGEND**
- ✕ RL 0.000 DESIGN SURFACE LEVEL
  - X.X — DESIGN CONTOUR MAJOR
  - - - X.X - - - DESIGN CONTOUR MINOR
  - - - X.X - - - NATURAL SURFACE CONTOUR
  - — — — — EXTENT OF EARTHWORKS

- LEGEND**
- AREA OF FILL (TO FINISHED SURFACE)
  - AREA OF CUT (TO FINISHED SURFACE)

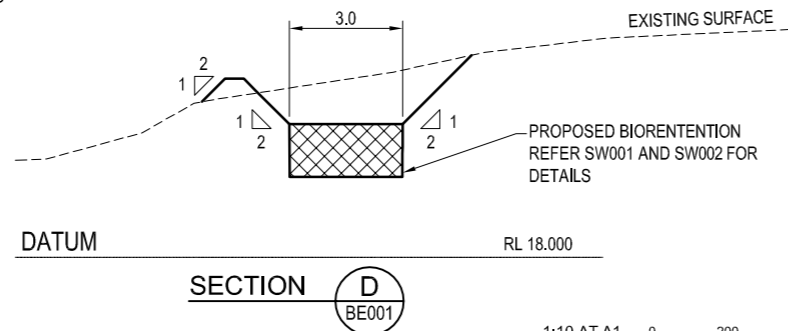
EARTHWORKS VOLUMES	
	VOLUME (m³)
CUT	-350
FILL	620
TOTAL	270

**ROCKHAMPTON REGIONAL COUNCIL**  
**AMENDED PLANS APPROVED**  
**27 June 2025**  
**DATE**  
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**Dated: 25 February 2019**

 Level 6, 34 East Street Rockhampton City Q.4701 Phone: 07 4922 5019 Fax: 07 5580 9133 Email: admincq@knobelconsulting.com.au			CLIENT EARTHWORX AUSTRALIA WIDE PTY LTD		DESIGN JH	DRAWN JP	APPROVED AP	TITLE BULK EARTHWORKS PLAN		PROJECT NO. K2696	
PROJECT PROPOSED INDUSTRIAL DEVELOPMENT 117 SOMERSET ROAD GRACEMERE, QLD, 4702			A.R.PIANTA - R.P.E.Q. NUMBER 10423		SIGNED 		DATE 13.12.16	SCALE 1:250 AT A1 1:500 AT A3		DWG NO. BE001	ISSUE A
A 13.12.16 ISSUED FOR OPERATIONAL WORKS APPROVAL											
ISSUE No. DATE AMENDMENT											

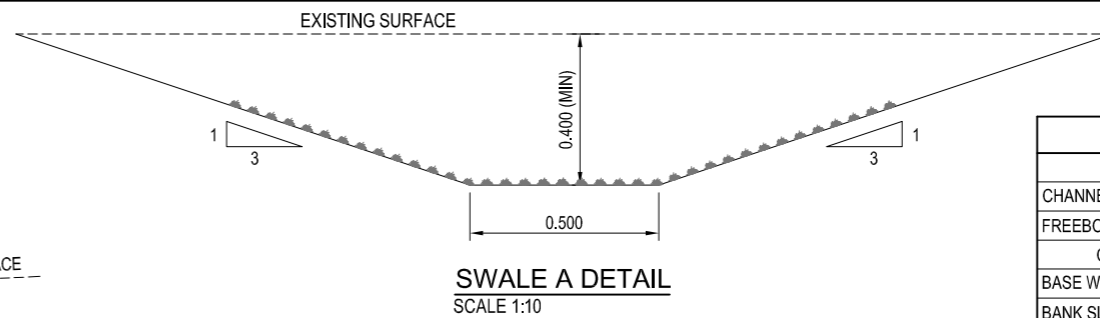


DETAIL C  
N.T.S.

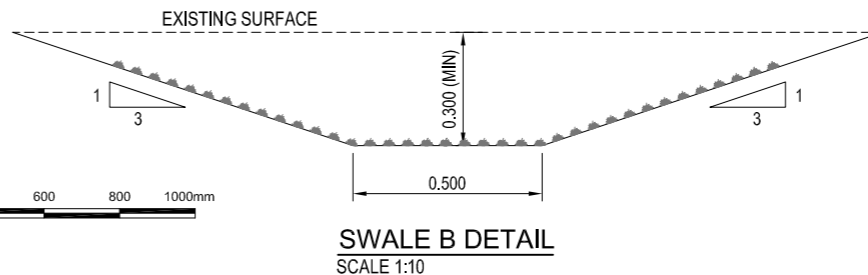


SECTION D  
BE001

1:10 AT A1  
1:20 AT A3

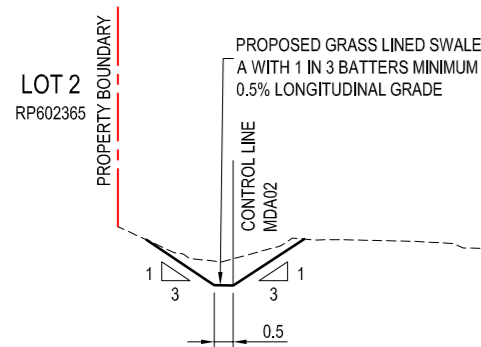


SWALE A DETAIL  
SCALE 1:10

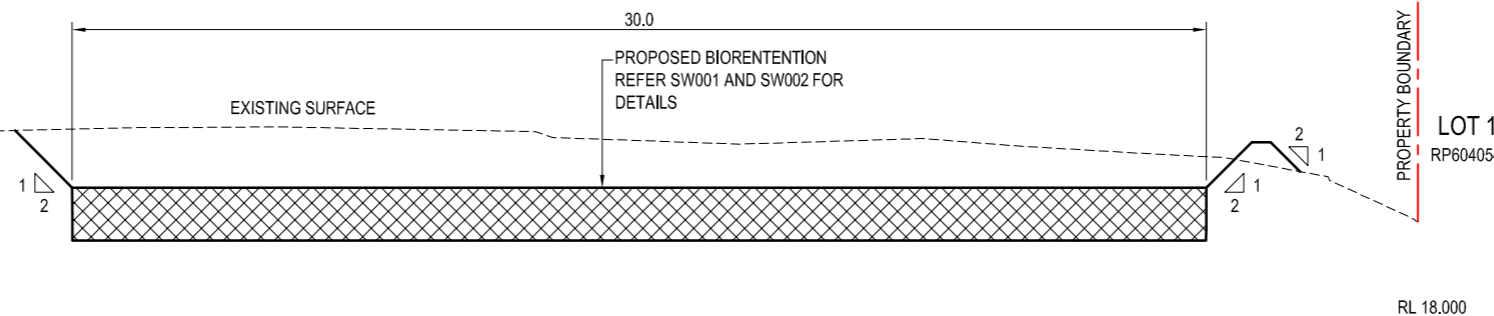


SWALE B DETAIL  
SCALE 1:10

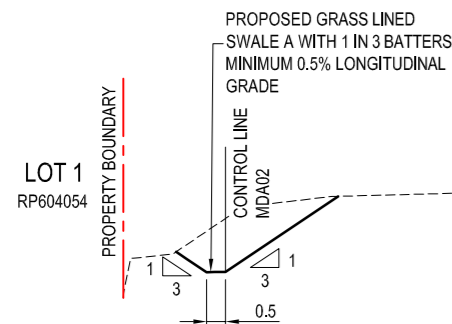
MANNINGS - SWALE A	
VARIABLE	
CHANNEL DEPTH, d	0.40 m
FREEBOARD	0
CHANNEL CONFIGURATION	
BASE WIDTH, W	0.50 m
BANK SLOPE	1 in 3
MANNINGS ROUGHNESS, n	0.045
LONGITUDINAL GRADE, S	0.015 m/m
CALCULATED FLOW CHARACTERISTICS	
DISCHARGE, Q	0.683 m³/s
FLOW AREA, A	0.680 m²
WETTED PERIMETER, Wp	3.030 m
HYDRAULIC RADIUS, R	0.224 m
AVERAGE VELOCITY, V	1.004 m/s
CHANNEL WIDTH	2.900 m



DATUM



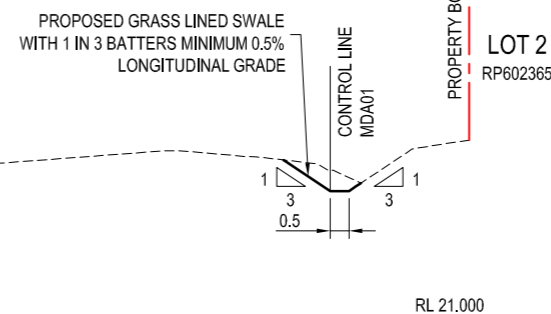
SECTION C  
BE001



DATUM

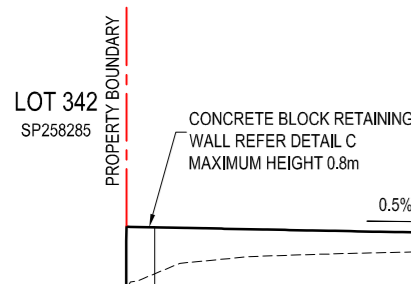
EXISTING SURFACE

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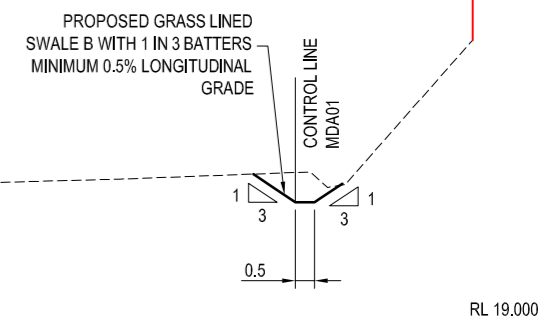
CONCRETE BLOCK RETAINING WALL REFER DETAIL C  
MAXIMUM HEIGHT 0.8m

0.5%

EXISTING SURFACE

SECTION B  
BE001

SECTION A  
BE001



DATUM

**KNOBEL CONSULTING**  
CIVIL ENGINEERS + HYDRAULIC ENGINEERS + PROJECT MANAGERS  
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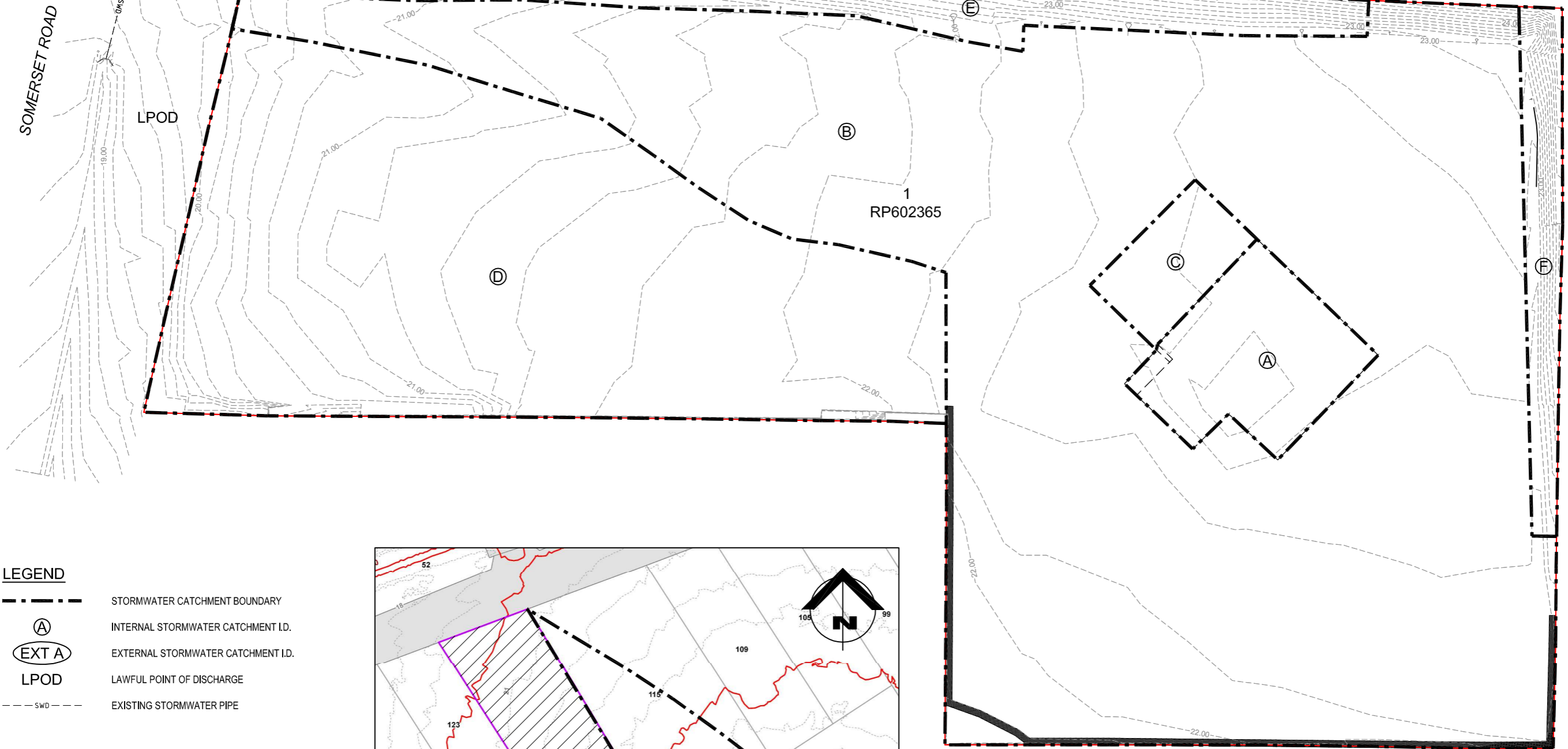
CLIENT  
EARTHWORX AUSTRALIA WIDE PTY LTD  
PROJECT  
PROPOSED INDUSTRIAL DEVELOPMENT  
117 SOMERSET ROAD  
GRACEMERE, QLD, 4702

DESIGN  
JH  
DRAWN  
JP  
APPROVED  
AP  
A.R.PIANTA - R.P.E.Q. NUMBER 10423  
13.12.16  
SIGNED  
DATE

TITLE  
BULK EARTHWORKS SECTIONS  
SCALE 1:100 AT A1 (1:200 AT A3)  
1:50 AT A1 (1:100 AT A3)  
0 2.5 5 7.5 10m HOR  
0 1.25 2.5 3.75 5m VERT

PROJECT NO.  
K2696  
DWG NO.  
BE002  
ISSUE  
A

ISSUE No.	DATE	AMENDMENT
A	13.12.16	ISSUED FOR OPERATIONAL WORKS APPROVAL

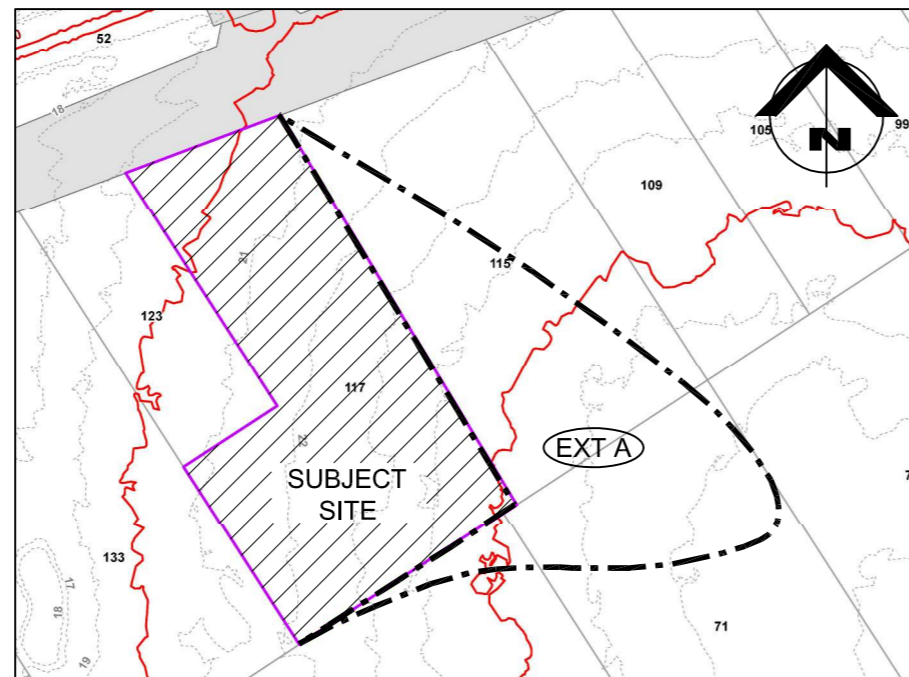


LEGEND

- STORMWATER CATCHMENT BOUNDARY
- (A) INTERNAL STORMWATER CATCHMENT I.D.
- (EXT A) EXTERNAL STORMWATER CATCHMENT I.D.
- LPOD LAWFUL POINT OF DISCHARGE
- SWD --- EXISTING STORMWATER PIPE

STORMWATER CATCHMENT TABLE

STORMWATER CATCHMENT I.D.	CATCHMENT TYPE	AREA (m <sup>2</sup> )
A	EXISTING BUILDING	383
B	GRAVEL	6301
C	TURF	172
D	DIRT	2905
E	DIRT	605
F	DIRT	244
TOTAL		10610
EXT A		9501



EXTERNAL CATCHMENT PLAN  
1:1250 AT A1

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DESIGN  
JH

DRAWN  
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A.R.PIANTA - R.P.E.Q. NUMBER 10423

SIGNED  
13.12.16

DATE

TITLE  
PRE DEVELOPMENT STORMWATER CATCHMENT PLAN

SCALE  
1:250 AT A1  
1:500 AT A3

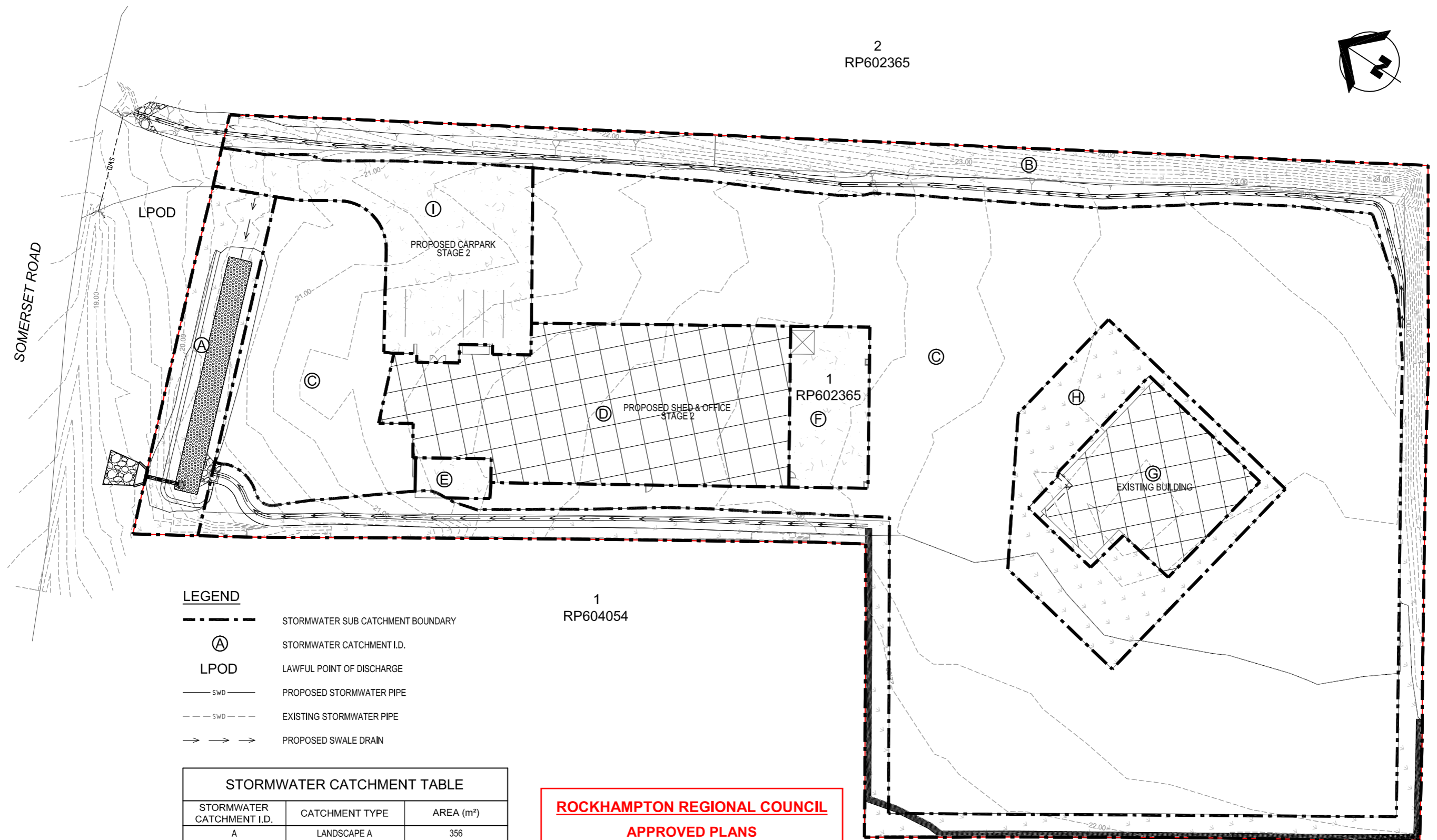
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PROJECT NO.  
K2696

DWG NO.  
C001

ISSUE  
A

ISSUE No.	DATE	AMENDMENT
A	13.12.16	ISSUED FOR OPERATIONAL WORKS APPROVAL



LEGEND

- STORMWATER SUB CATCHMENT BOUNDARY
- Ⓐ STORMWATER CATCHMENT I.D.
- LPOD LAWFUL POINT OF DISCHARGE
- SWD — PROPOSED STORMWATER PIPE
- - - SWD - - - EXISTING STORMWATER PIPE
- → → PROPOSED SWALE DRAIN

STORMWATER CATCHMENT TABLE		
STORMWATER CATCHMENT I.D.	CATCHMENT TYPE	AREA (m²)
A	LANDSCAPE A	356
B	LANDSCAPE B	1958
C	COMPACTED GRAVEL	5731
D	PROPOSED BUILDING	887
E	PROPOSED CONCRETE	47
F	PROPOSED CONCRETE	202
G	EXISTING BUILDING	383
H	EXISTING GRASS	487
I	PROPOSED CONCRETE	559
TOTAL		10610

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PROJECT  
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JH

DRAWN  
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TITLE  
POST DEVELOPMENT STORMWATER CATCHMENT PLAN

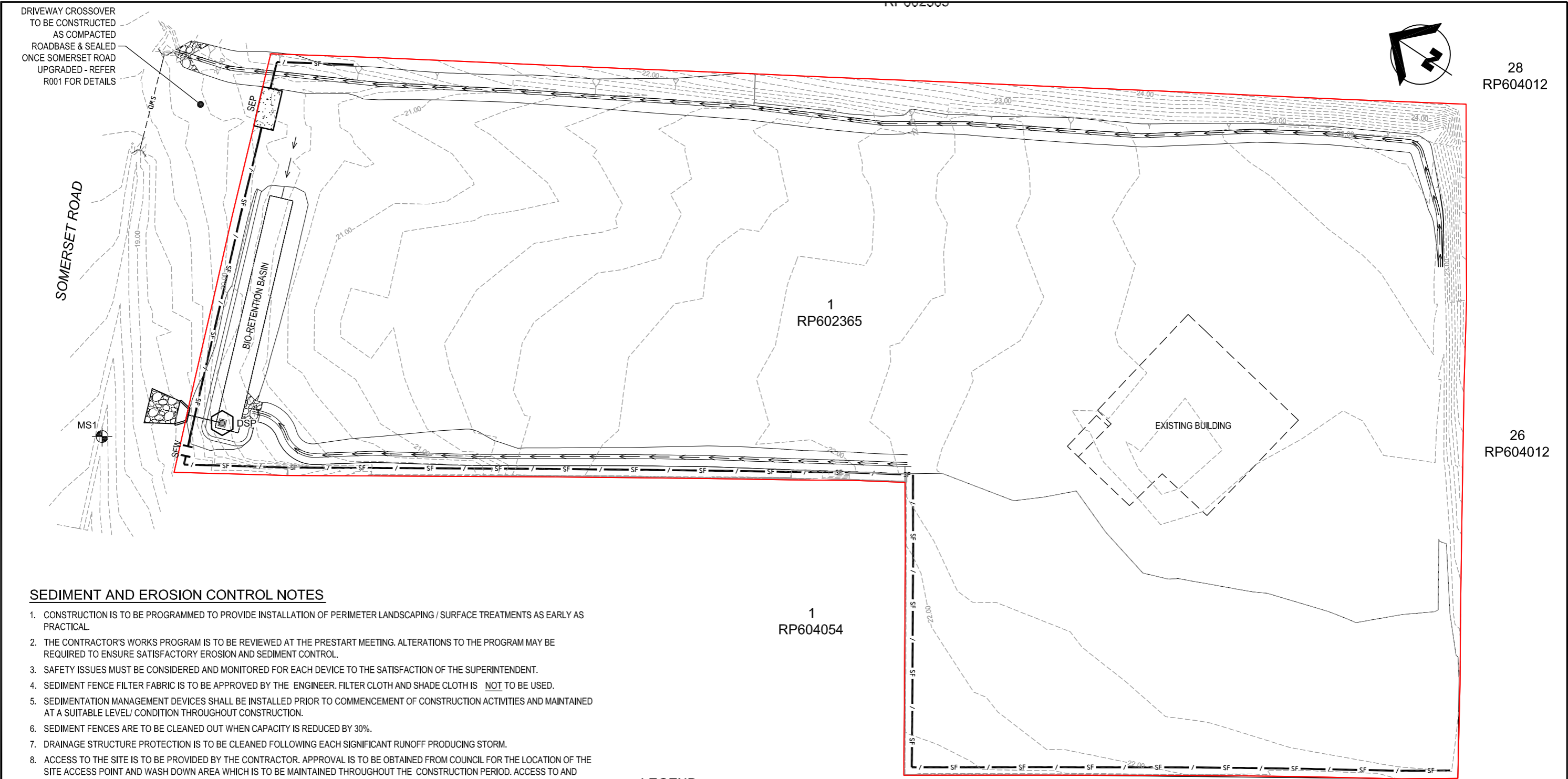
SCALE  
1:250 AT A1  
1:500 AT A3

0 5 10 15 20m

PROJECT NO.  
K2696

DWG NO.  
C002

ISSUE  
A



SEDIMENT AND EROSION CONTROL NOTES

- CONSTRUCTION IS TO BE PROGRAMMED TO PROVIDE INSTALLATION OF PERIMETER LANDSCAPING / SURFACE TREATMENTS AS EARLY AS PRACTICAL.
- THE CONTRACTOR'S WORKS PROGRAM IS TO BE REVIEWED AT THE PRESTART MEETING. ALTERATIONS TO THE PROGRAM MAY BE REQUIRED TO ENSURE SATISFACTORY EROSION AND SEDIMENT CONTROL.
- SAFETY ISSUES MUST BE CONSIDERED AND MONITORED FOR EACH DEVICE TO THE SATISFACTION OF THE SUPERINTENDENT.
- SEDIMENT FENCE FILTER FABRIC IS TO BE APPROVED BY THE ENGINEER. FILTER CLOTH AND SHADE CLOTH IS NOT TO BE USED.
- SEDIMENTATION MANAGEMENT DEVICES SHALL BE INSTALLED PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES AND MAINTAINED AT A SUITABLE LEVEL/ CONDITION THROUGHOUT CONSTRUCTION.
- SEDIMENT FENCES ARE TO BE CLEANED OUT WHEN CAPACITY IS REDUCED BY 30%.
- DRAINAGE STRUCTURE PROTECTION IS TO BE CLEANED FOLLOWING EACH SIGNIFICANT RUNOFF PRODUCING STORM.
- ACCESS TO THE SITE IS TO BE PROVIDED BY THE CONTRACTOR. APPROVAL IS TO BE OBTAINED FROM COUNCIL FOR THE LOCATION OF THE SITE ACCESS POINT AND WASH DOWN AREA WHICH IS TO BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. ACCESS TO AND FROM THE SITE IS TO BE VIA THE SHAKEDOWN FACILITY ONLY. ALL VEHICLES ARE TO BE WASHED DOWN PRIOR TO LEAVING THE SITE.
- THE CONTRACTOR SHALL PROVIDE TEMPORARY DRAINAGE CONTROLS TO DIVERT FLOW FROM UNDISTURBED AREAS AROUND DISTURBED AREAS AND DIRECT FLOW FROM DISTURBED AREAS TOWARD CONTROL DEVICES.
- PONDED RAINFALL SHALL BE PUMPED THROUGH A SEDIMENT FENCE LOCATED ON THE SITE BEFORE DISCHARGING INTO THE DOWNSTREAM STORMWATER SYSTEM.
- STRAW BALES USED IN SEDIMENT DEVICES ARE TO BE REPLACED AFTER A MAXIMUM SERVICE PERIOD OF 6 WEEKS.
- A PHOTOGRAPHIC RECORD OF SEDIMENT AND EROSION CONTROL DEVICES AND THE IMMEDIATE DOWNSTREAM STORMWATER SYSTEM, IS TO BE CARRIED OUT ON A FORTNIGHTLY CYCLE AND AFTER EACH MAJOR STORM EVENT. CARRY OUT CORRECTIVE AND PREVENTATIVE ACTION, AS REQUIRED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSPECTION AND MAINTENANCE OF SEDIMENT AND EROSION CONTROL DEVICES. ALL DEVICES ARE TO BE INSPECTED AT LEAST WEEKLY AND AFTER SIGNIFICANT RUNOFF PRODUCING STORMS.
- 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 BY THE CONTRACTOR IMMEDIATELY, WHICH MAY INCLUDE AMENDMENTS/ADDITIONS TO THE ORIGINAL EROSION CONTROL PLANS. SUCH ADDITIONS OR AMENDMENTS ARE TO BE APPROVED BY THE SUPERINTENDENT.
- SEDIMENTATION MANAGEMENT DEVICES ARE TO BE MAINTAINED BY THE CONTRACTOR, AS NOTED AND DETAILED, UNTIL APPROVAL HAS BEEN GRANTED BY THE ENGINEER FOR THEIR REMOVAL. THE CONTRACTOR IS TO REMOVE AND DISPOSE OF THESE DEVICES OFF SITE.

LEGEND

- / — SF — SEDIMENT FENCE
- SFW — SEDIMENT FENCE WEIR
- SEP STABILISED ENTRY/EXIT POINT
- MS1 WATER QUALITY MONITORING STATION
- DSP DRAINAGE STRUCTURE PROTECTION REFER DWG SE002 FOR DETAILS

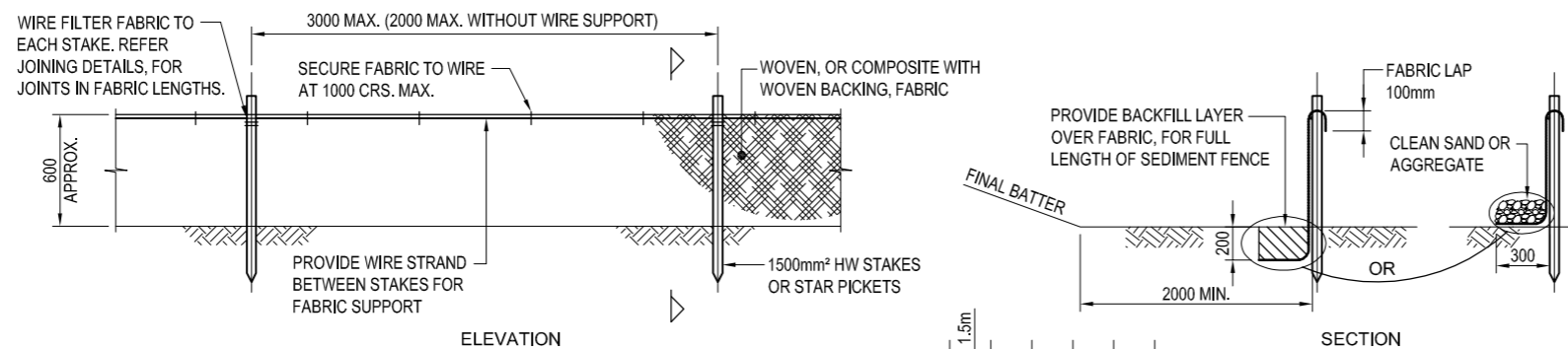
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ROCKHAMPTON REGIONAL COUNCIL

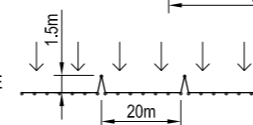
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These plans are approved subject to the current conditions of approval associated with Development Permit No.: D/194-2016  
Dated: 25 February 2019

			 CIVIL ENGINEERS + HYDRAULIC ENGINEERS + PROJECT MANAGERS		CLIENT EARTHWORX AUSTRALIA WIDE PTY LTD	DESIGN JH	DRAWN JP	APPROVED AP	TITLE EROSION AND SEDIMENT CONTROL PLAN	PROJECT NO. K2696
			Level 6, 34 East Street Rockhampton City Q.4701 Phone: 07 4922 5019 Fax: 07 5580 9133 Email: admin@knobelconsulting.com.au		PROJECT PROPOSED INDUSTRIAL DEVELOPMENT 117 SOMERSET ROAD GRACEMERE, QLD, 4702	A.R.PIANTA - R.P.E.Q. NUMBER 10423			SCALE 1:250 AT A1 1:500 AT A3	DWG NO. SE001
			PO Box 5364 Red Hill, Rockhampton Q.4701 ABN: 33 071 435 202 W: www.knobelconsulting.com.au			13.12.16			0 5 10 15 20m	ISSUE A
ISSUE No.	DATE	AMENDMENT				SIGNED				
A	13.12.16	ISSUED FOR OPERATIONAL WORKS APPROVAL				DATE				

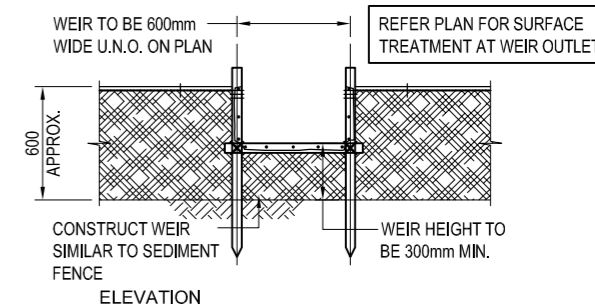


NOTE: INSTALL 1.5m (MIN.) DEEP 'RETURNS' AT 20m SPACING (MAX.) ON UPSLOPE SIDE OF FENCELINE (5-10m MAX SPACING IF FENCE ALIGNED AT ANGLE TO CONTOUR). EG:



### SEDIMENT FENCE DETAILS

N.T.S. DENOTES SEDIMENT FENCE. REFER PLAN FOR LOCATION AND EXTENTS.



### SEDIMENT FENCE WEIR

N.T.S. DENOTES SEDIMENT FENCE WEIR, REFER PLAN FOR LOCATION AND EXTENTS.

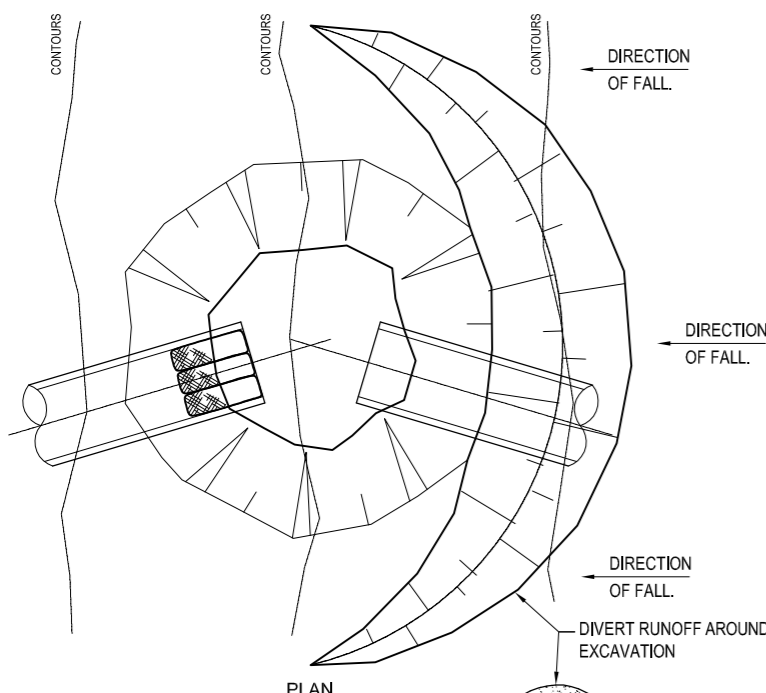
## ROCKHAMPTON REGIONAL COUNCIL

### APPROVED PLANS

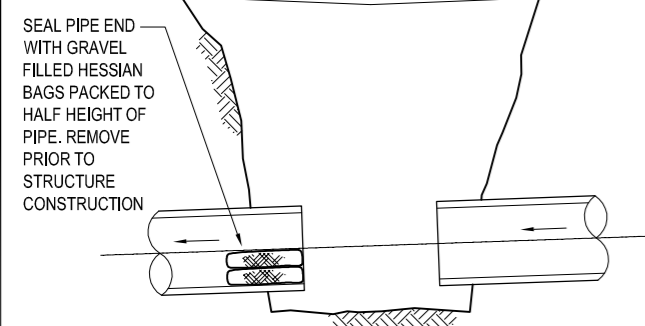
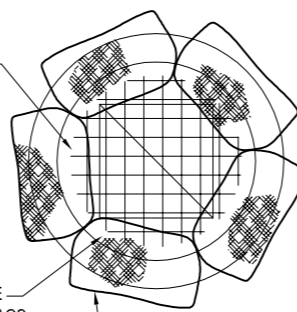
These plans are approved subject to the current conditions of approval associated with

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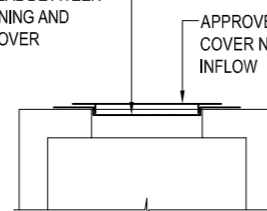
Dated: 25 February 2019



PROVIDE APPROVED GRATED COVER WITH MAXIMUM OPENINGS OF 100 x 100mm (OFFCUT REINFORCING MESH OR APPROVED EQUIVALENT)



GEOFABRIC OR APPROVED EQUIVALENT SEAL BETWEEN TOP SLAB OPENING AND TEMPORARY COVER



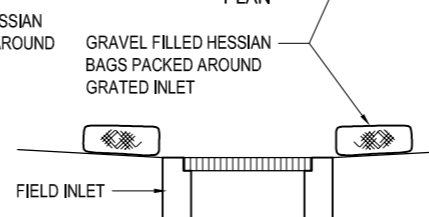
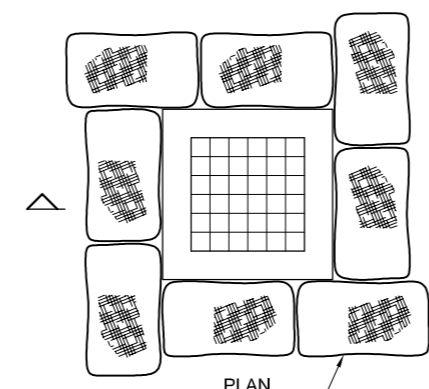
### STAGE 2

STRUCTURE COMPLETE UP TO TOP SLAB

### ACCESS CHAMBER / INLET STRUCTURE

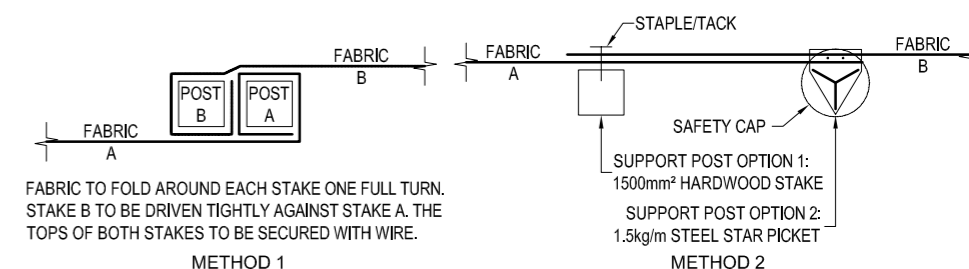
N.T.S.

DSP DENOTES DRAINAGE STRUCTURE PROTECTION, REFER PLAN FOR LOCATION & EXTENTS.



### STAGE 3

STRUCTURE COMPLETE

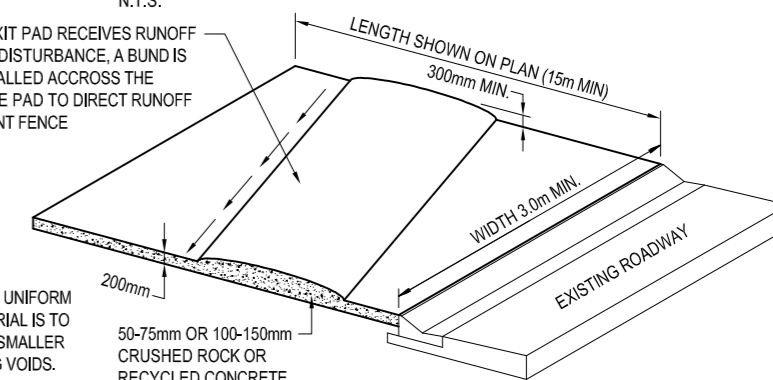


### SEDIMENT FENCE FABRIC JOINING DETAILS

N.T.S.

IF ENTRY/EXIT PAD RECEIVES RUNOFF FROM SOIL DISTURBANCE, A BUND IS TO BE INSTALLED ACROSS THE AGGREGATE PAD TO DIRECT RUNOFF TO SEDIMENT FENCE

NOTE: ROCK IS TO BE UNIFORM SIZE. IE. MATERIAL IS TO NOT CONTAIN SMALLER ROCKS FILLING VOIDS.



### STABILISED ENTRY/EXIT POINT

N.T.S. OR APPROVED EQUIVALENT

SEP DENOTES STABILISED ENTRY/EXIT POINT, REFER PLAN FOR LOCATIONS.



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CLIENT  
EARTHWORX AUSTRALIA WIDE PTY LTD

PROJECT  
PROPOSED INDUSTRIAL DEVELOPMENT  
117 SOMERSET ROAD  
GRACEMERE, QLD, 4702

DESIGN  
JH

DRAWN  
JP

APPROVED  
AP

A.R.PIANTA - R.P.E.Q. NUMBER 10423

SIGNED  
13.12.16  
DATE

TITLE  
EROSION AND SEDIMENT CONTROL DETAILS

SCALE  
1:5 AT A1  
1:10 AT A3

0 100 200 300 400 500mm

PROJECT NO.  
K2696

DWG NO.  
SE002

ISSUE  
A

ISSUE No.	DATE	AMENDMENT
A	13.12.16	ISSUED FOR OPERATIONAL WORKS APPROVAL

## Engineering Assessment Report

**Project Number:** 24-126  
**Client:** Hollywood Earthmoving Pty Ltd  
**Site:** 117 Somerset Road, Gracemere QLD, Australia  
**Scope:** Condition Report

**ROCKHAMPTON REGIONAL COUNCIL**

**AMENDED PLANS APPROVED**

**27 June 2025**

**DATE**

These plans are approved subject to the current conditions of approval associated with

**Development Permit No.:** D/194-2016

**Dated:** 25 February 2019

Rev No.	Revision	Author	RPEQ	Issue Date
0	Original Issue	Utkarsh Singh	Scott Thomas	31.07.2024
A	Revised Issue	Utkarsh Singh	Scott Thomas	24.01.2025
B	Revised Issue	Utkarsh Singh	Scott Thomas	12.02.2025



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## 1.0 INTRODUCTION

At the request of Hollywood Earthmoving, Patcol Group has completed an assessment of the Development Approved plans as directed. The following report highlights the steps taken for the revised proposed location of the shed to align all the below operational services similar to the previously approved plans:

- Proposed Stormwater Plan
- Proposed Bio-Retention Basin Plan
- Proposed Sediment and Erosion Control Plan

## 2.0 EXECUTIVE SUMMARY

Patcol Group had reviewed the supplied documentation by Hollywood Earthmoving. Please find the following, as well as described in Appendix B, our summation of the proposed location:

This report aims to:

- Establish the required performance criteria for the proposed stormwater quantity and quality improvement Systems;
- Provide a conceptual design of stormwater infrastructure including stormwater quality improvement devices and stormwater quantity management controls;
- Ensure the quality of stormwater discharging from the proposed development does not adversely impact on the water quality and ecological values of downstream watercourses; and
- Ensure stormwater runoff is conveyed through the site to a lawful point of discharge in accordance with QUDM.

### 2.1 Location

The subject site consists of an area of 10,610 m<sup>2</sup> at Lot 1 on RP602365; Figures 1 and 2 below show the approved and revised location of the proposed shed.

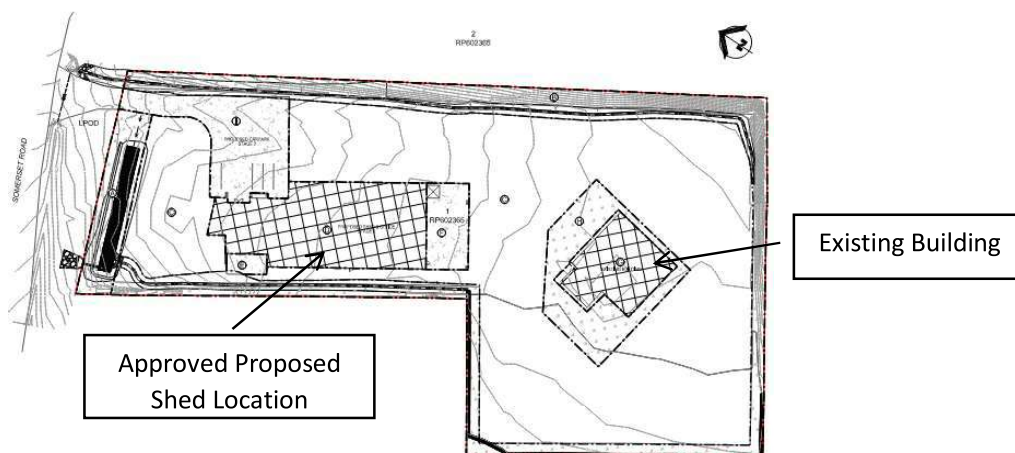


Figure 1 – Proposed Development Approved plan by Council

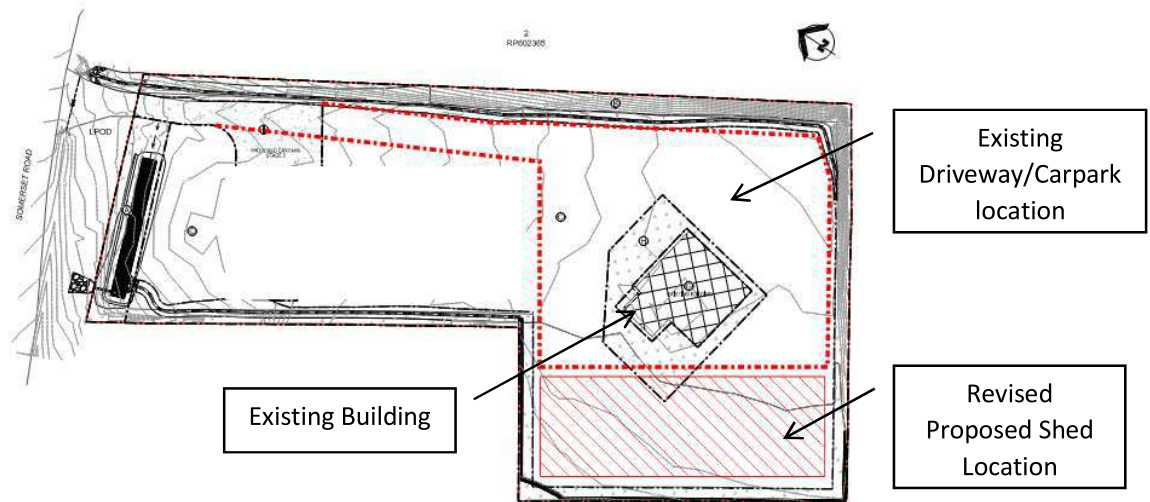


Figure 2 - Revised location of Proposed Shed

## 2.2 Site Topography

The site grades from the southern boundary towards Somerset Road at approximately 2.0%. The site batters up to neighbouring properties along the eastern and southern boundary and site levels range from 18.7mAH to 25.0mAH. For further details refer to the Hoffmann Surveyors, Detail Survey of Lot 1 RP602365, included in Appendix B.

## 2.3 External Catchment

The external catchment that contributes to the site will remain the same as per the development approved plan by the council.

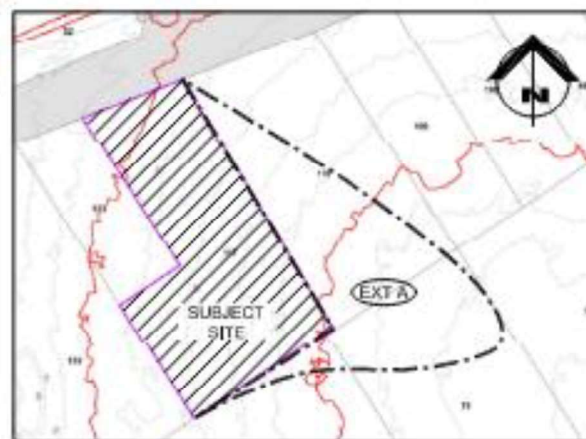


Figure 3 - External Catchment Plan

## 2.4 Vegetation and Land Use

The subject site currently consists of a single dwelling, gravel driveway and concrete slab. The remainder of the site is compacted soil. An aerial photo of the site is displayed in Figure 3. The existing land use will be the same for the proposed development.



Figure 4 - Existing Site Location as of June 03 2024

## 2.5 Description of Development

The development at the site remains unchanged as previously approved by the council which contains a proposed vehicle depot that shall consist of a shed, concrete driveway and car parking area, compacted road base for heavy vehicle manoeuvring & parking and landscape, refer to Appendix A.

### 3.0 PROPOSED STORMWATER PLAN

The proposed development will utilise the stormwater management plan previously approved by the council. The location of the proposed shed has been shifted from the front to the rear of the property. The Rational Method has been employed to determine the flow rates on and through the subject site, which remain consistent in the revised post-development scenario. Ground level and roof runoff from the revised shed location will be directed to an existing kerb on Somerset Road via a series of vegetated swales and the bio-retention basin.

Please refer to Appendix B for the approved stormwater management plan, which remains unchanged as the new location of the proposed shed does not alter the following parameters:

- Coefficient of Runoff
- Time of Concentration
- Design Flow Rates
- External Catchments: Coefficient of Runoff, Time of Concentration, and Design Flow Rates

## 4.0 PROPOSED BIO-RETENTION BASIN PLAN

The detention volume for the project has been increased with the volume previously approved by the council from 60m<sup>3</sup> to 90m<sup>3</sup> due to the increase in the sealed driveway area. The locations of the bio-retention basin, as well as the vegetated swales A and B along the eastern and western boundaries, will remain unchanged. For further details, please refer to Appendix B, which contains the stormwater quantity assessment.



Table 1: Detention Tank Parameters

Detention Surface Area	150 m <sup>2</sup>
Detention Basin Outlet Level	19.92 mAHD
Detention Depth	0.60m
Detention Volume	90m <sup>3</sup>
Base Outlet Pipe Diameter	4x Ø100mm

**\*Note-** The detention basin output level must be verified on-site, as the latest survey data following the installation of the kerb at the front of the site is not available.

## 5.0 PROPOSED SEDIMENT AND EROSION CONTROL PLAN

Sediment and erosion control devices (S&EC) employed on the site shall be designed and constructed in accordance with IECA Australasia Best Practice Erosion & Sediment Control Guidelines (2008).

Details of the proposed controls are shown on Knobel Consulting Pty Ltd, Erosion & Sediment Control Plan included in Appendix B.

### PRE-CONSTRUCTION

- Stabilised site access/exit on Somerset Road;
- Sediment fences to be located along the contour lines downstream of disturbed areas;
- Diversion drains to divert clean runoff around the construction site;
- Educate site personnel on the requirements of the Erosion and Sediment Control Plan.

### CONSTRUCTION

- Maintain construction access/exit, sediment fencing, catch drains and all other existing controls as required;
- Progressively surface and revegetate finished areas as appropriate.

During construction, all areas of exposed soils allowing dust generation are to be suitably treated. Treatments will include mulching the soil and watering. Road access is to be regularly cleaned to prevent the transmission of soil on vehicle wheels and eliminate any build-up of typical road dirt and tyre dust from delivery vehicles. Adequate waste disposal facilities are to be provided and maintained on the site to cater for all waste materials such as litter hydrocarbons, toxic materials, acids or alkaline substances.

A flow chart of the proposed stormwater quality treatment train is shown in Figure 4.

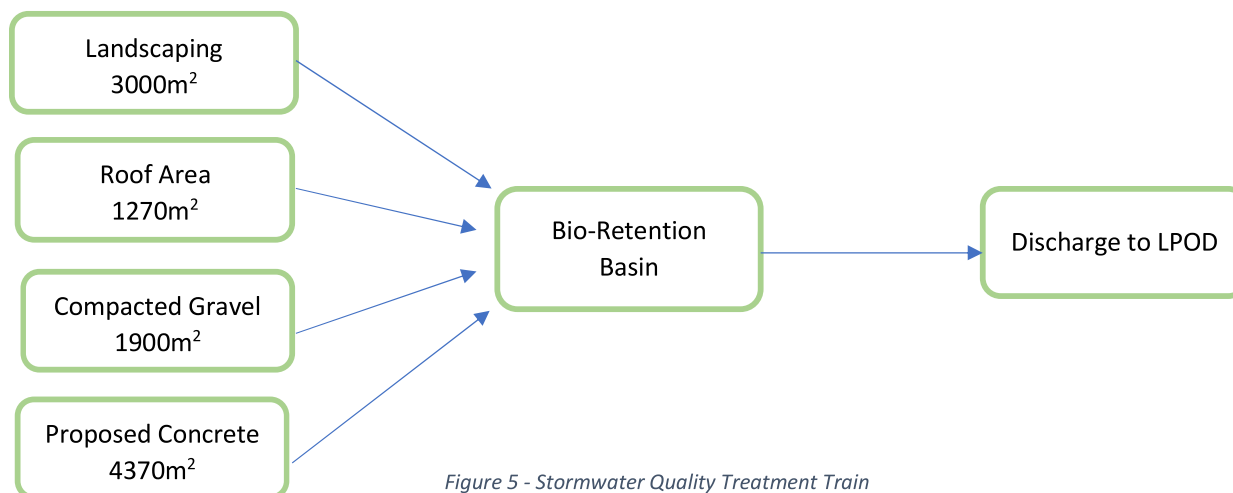


Figure 5 - Stormwater Quality Treatment Train



The proposed will reduce the amount of sediments and nutrients discharged from the proposed development. The previously approved concrete area of 808 m<sup>2</sup> has been increased to 4370 m<sup>2</sup> and the compacted gravel area has been reduced to 1900 m<sup>2</sup>. The roughness coefficient for both the concrete and compacted gravel surfaces is the same, ensuring that this change will not affect the discharge to the bio-retention basin. The design assumes a 100% impervious fraction for the concrete surface and a 50% impervious fraction for the compacted gravel area.

Table 2 illustrates the treatment train effectiveness of the proposed SQID's.

*Table 2 - Treatment train Effectiveness of Proposed SQID*

Parameter	Post	Post Mitigated	Reduction
Flow (ML/yr)	7.54	5.66	24.92%
TSS (kg/yr)	2141	146.3	93.17%
TP (kg/yr)	3.7	0.83	77.93%
TN (kg/yr)	15.7	5.75	63.54%
GP (kg/yr)	166	0	100%

## 6.0 CONCLUSION

The proposed development site is expected to result in a net zero increase in runoff compared to the previously approved post-development condition. The previously approved report presents a successful mitigation strategy for managing post-development flow rates, ensuring that there will be no adverse impacts on downstream properties.

The amount of filling at the rear portion of the property will be minimised as the majority of the area will be occupied by the proposed shed. The final filling levels are to be verified on-site by the site engineer.

Previously, Knobel Consulting Pty Ltd adopted a water-sensitive urban design (WSUD) approach to managing stormwater runoff from the proposed development. This includes treating stormwater runoff using Stormwater Quality Improvement Devices (SQIDs), which meet the performance outcomes specified in the Queensland Government State Planning Policy of April 2016.

For any queries please contact the undersigned at 0447 672 924 or [scott@patcol.com.au](mailto:scott@patcol.com.au)

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