



CIVIL

# Stormwater Management Strategy

for

## 42 Honeysuckle Drive, Newcastle

## Contents

1. Introduction.....	3
2. Proposed Stormwater Management Strategy .....	4
2.1. Site Data.....	4
3. Stormwater Quantity Assessment.....	5
4. Stormwater Quality Assessment .....	6
4.1. Rainwater Tank .....	6
5. Stream Erosion Index Determination .....	8
6. Conclusions.....	9

## 1. Introduction

Northrop Consulting Engineers have been engaged to prepare a stormwater management strategy for the proposed development of 42 Honeysuckle Dr, Newcastle (Lot 22 DP 1072217). The existing site in total is approximately 3728m<sup>2</sup>, and is currently undeveloped land containing an existing fill pad, herein known as 'the site'. In 2018, construction works for the previous DA commenced, resulting in regrading of the site and the installation of piling. This has since ceased

The existing site contains a flat fill pad which currently drains away from a central point in the pad towards the northern, southern and western boundaries. The northern boundary drains to two existing council stormwater pits, the southern boundary drains to the redundant Newcastle light rail corridor and the western boundary drains across a small parcel of undeveloped land towards an existing floodway known as Cottage Creek Floodway. A retaining wall present on the eastern boundary currently inhibits flows from entering the adjacent lot.

The site is generally elevated in comparison to the adjacent Honeysuckle Dr roadway. The existing site levels vary between approximately 4.0m AHD at the ridge point, to approximately 2.0m-2.4m AHD at the boundary.

The existing Council owned stormwater line that currently fronts the site in Honeysuckle Dr drains to the North across Honeysuckle Dr and into Throsby Basin. Additionally, an existing 450mm diameter stormwater pipe runs from the site directly into Cottage Creek via part Lot 40 DP 1238761. Council have confirmed that the existing pipe is a suitable connection point, as included in Appendix D.

The proposed development consists primarily of a mixed-use ground floor level which covers the majority of the site and seven hotel levels. The proposed development includes a multi-level above ground car park incorporated into the first four levels. In addition to this there is a communal courtyard, a gym, various lobby and storage rooms and external landscaping.

The development also includes a new vehicular access point to Honeysuckle Drive, a drop-off zone on Honeysuckle Dr and various pedestrian access points. A concept design plan of the ground floor is included as an attachment to this correspondence.

This stormwater design has been developed in accordance with City of Newcastle (CN) Development Control Plan (DCP) 2012 and the CN Technical Manual (2013). This report intends to discuss stormwater issues relating to the site at a level appropriate for a Development Application submission and should be read in conjunction with Northrop drawing NL171278-04 DA-C01.01 to DA-C04.01.

		Date
Prepared by	GW	24/01/2020
Checked by	CP	24/01/2020
Admin	HB	24/01/2020

## 2. Proposed Stormwater Management Strategy

The proposed stormwater management strategy for the 0.37ha development site can be summarised as follows:

- Runoff from new roof areas will be collected and diverted to an above ground re-use tank of minimum 7m<sup>3</sup> storage volume. This will enable the re-use of water through podium level landscape irrigation.
- All downpipes reporting to the tank will be connected to a first flush device located prior to the tank inlet.
- Overflow from the re-use tank and runoff from the podium level will be collected and conveyed through a proprietary water quality treatment system, before connecting to the existing stormwater line that discharges directly into Cottage Creek.
- Approximately 491m<sup>2</sup> of pedestrian pavement and landscaping from various parts of the site will bypass the treatment system.
- Pit and pipe networks shall be designed to convey all storms up to and including the 1% Annual Exceedance Probability (AEP) event.

### 2.1. Site Data

- Site Area: 3,728 m<sup>2</sup>.
- Roof Area: 1,471 m<sup>2</sup>.
- Other Impervious Area: 1659 m<sup>2</sup>.
- Landscaped Area: 598 m<sup>2</sup>.
- Site Impervious Fraction: 84%.
- Treated Catchment: 3237 m<sup>2</sup>.
- Un-treated Catchment: 491 m<sup>2</sup>.

### 3. Stormwater Quantity Assessment

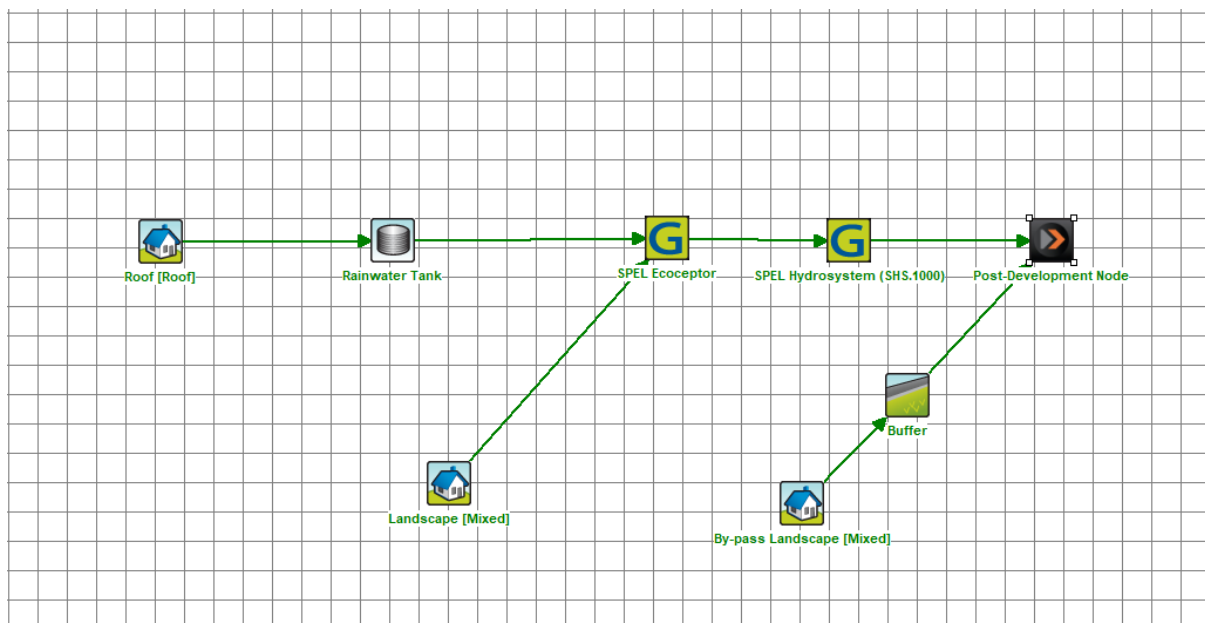
As per discussions with Councils Senior Development Officer Rajnesh Prakash, no detention storage has been proposed for this development due to the site discharging directly into Cottage Creek and to the harbour (Throsby Basin). However, re-use storage volume is proposed to be provided (see Section 4 below for detail).

## 4. Stormwater Quality Assessment

In order to minimise any adverse impacts upon the ecology of the downstream watercourses; stormwater treatment devices have been incorporated into the design of the development.

Council's DCP 7.06 (2012) identifies the level of stormwater quality treatment to be provided for the proposed development (refer to Treatment Targets in Table 1). The performance of the proposed proprietary stormwater management strategy was assessed against these targets using the conceptual software MUSIC (Version 6.3.0). The MUSIC model was developed using recommended parameters presented in the document "Draft NSW MUSIC Modelling Guidelines" (WBM, 2010) as recommended in the CN Technical Manual (2013) and MUSIC LINK.

The catchment area was broken down into three sub-catchments to effectively simulate the proposed treatment measures along the treatment train. A schematic of the MUSIC model can be seen below in Figure 1. A catchment plan is included in Appendix C.



**Figure 1 – MUSIC Model Layout Schematic**

The treatment train incorporates:

- Primary treatment provided via a rainwater tank and gross pollutant trap (SPEL Ecoceptor or approved equivalent).
- Tertiary treatment provided by a proprietary cartridge treatment system (SPEL Hydrosystem SHS.1000 or approved equivalent).

### 4.1. Rainwater Tank

A 7kL above ground rainwater tank will be located on the podium level. It has been assumed within the MUSIC model that 100% of the roof areas will be connected to the tank.

A re-use demand based on the podium level landscape irrigation was used for the MUSIC model. The data presented in CN's "Stormwater and Water Efficiency for Development" technical manual suggests 55kL/year for external use for a typical residential dwelling. Based on the area of the podium level landscaping (approximately 2 x urban backyards), a re-use demand of 110kL/year was adopted for modelling.



The proposed system satisfies 94% of re-use demand which is considered an acceptable design outcome, and accords to the CN DCP 2012.

The results from the MUSIC modelling are presented in Table 1.

**Table 1 – MUSIC Model Result Summary (outlet node)**

	<b>Source Load (kg/yr)</b>	<b>Residual Loads (kg/yr)</b>	<b>Percentage Reduction</b>	<b>Target Objectives</b>
<b>Total Suspended Solids (TSS)</b>	405	33.5	87 %	85 %
<b>Total Phosphorous (TP)</b>	0.999	0.208	71.9 %	65 %
<b>Total Nitrogen (TN)</b>	8.82	4.05	47.1 %	45 %
<b>Gross Pollutants</b>	96.2	6.64	90.4 %	90 %

Table 1 shows that the proposed stormwater management strategy is predicted to achieve the load reduction targets set out in the CN DCP 2012, as estimated by MUSIC.

A MUSIC-link report has been included in Appendix B. The MUSIC Model can be provided upon request.

## 5. Stream Erosion Index Determination

The Stream Erosion Index (SEI) has not been quantified for this development due to the close proximity to the harbour. We note the proposed system will connect to in-ground stormwater infrastructure which drain directly to the harbour, therefore the SEI calculation has been deemed irrelevant in this application.



## 6. Conclusions

Given the results of the above investigations, it is reasoned that the development meets CN's requirements. In particular:

- No detention storage is proposed due to the close proximity to the harbour.
- The treatment of stormwater runoff for waterborne pollutants is achieved through the proposed treatment train. This includes the use of a rainwater tank, a proprietary gross pollutant trap or and cartridge treatment system or sand filter.
- The stream erosion index for the site was not quantified due to the site discharging to an existing stormwater network which connects directly to the harbour.

# Appendix A

## Concept Design Plans

# PROPOSED DEVELOPMENT

42 HONEYSUCKLE DRIVE, NEWCASTLE NSW  
CIVIL ENGINEERING PACKAGE



LOCALITY PLAN


IMAGE SOURCE : HEARMAPS

DRAWING LIST

DWG No.	DRAWING TITLE
DA-C01.01	COVER SHEET, DRAWING LIST AND LOCALITY PLAN
DA-C02.01	EROSION AND SEDIMENT CONTROL PLAN
DA-C02.11	EROSION AND SEDIMENT CONTROL DETAILS
DA-C04.01	CIVIL WORKS PLAN

DESIGNED: G. WOOD  
DRAWN: B. DUGGAN  
JOB MANAGER: C. PIER  
VERIFIER:

NOT FOR CONSTRUCTION

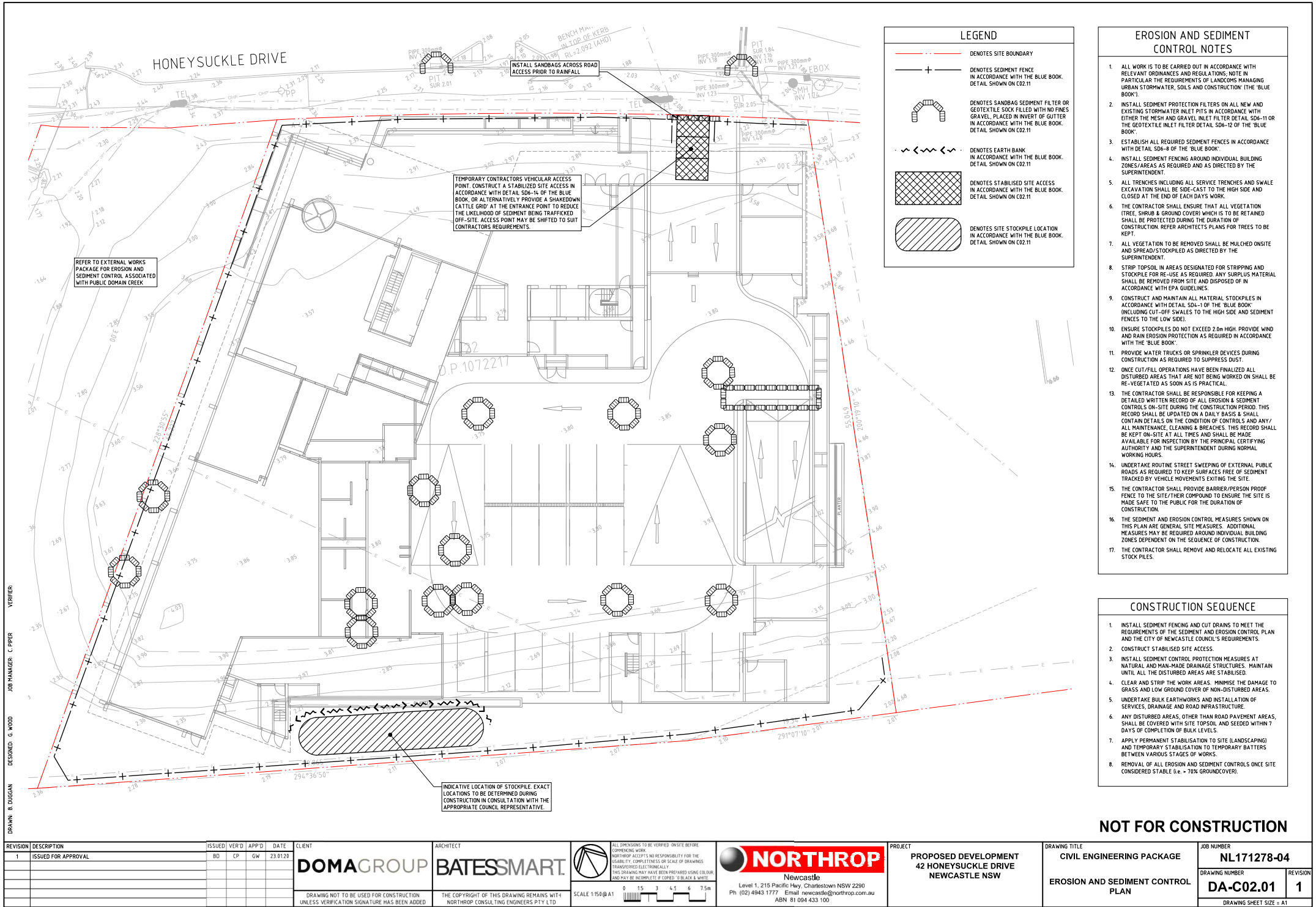
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1	ISSUED FOR APPROVAL	BD	CP	GW	230120	DOMAGROUP	BATESSMART		PROPOSED DEVELOPMENT 42 HONEYSUCKLE DRIVE NEWCASTLE NSW	CIVIL ENGINEERING PACKAGE	NL171278-04
										COVER SHEET, DRAWING LIST AND LOCALITY PLAN	DRAWING NUMBER DA-C01.01
											REVISION 1
											DRAWING SHEET SIZE = A1

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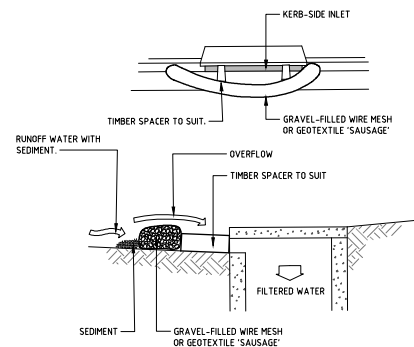
Level 1, 215 Pacific Hwy, Charlestown NSW 2290  
Ph (02) 4943 1777 Email newcastle@northrop.com.au  
ABN 81 094 433 100



THE SITE IS LOCATED WITHIN THE HAMILTON SOIL LANDSCAPE AND PRIMARILY CONSISTS OF TYPE F SEDIMENT, WHICH HAS THE FOLLOWING PROPERTIES (IN ACCORDANCE WITH TABLE C1 OF THE "BLUE BOOK").

SITE PARAMETERS		STAGE 2 VALUES
CONSTRAINT	F (FINE SOIL)	
SEDIMENT TYPE	A	
SOIL HYDROLOGY GROUP	0.0%	
K = SOIL ERODIBILITY (K-FACTOR)	25.90	
R = RAINFALL EXROSIVITY (R-FACTOR)	10.9mm/yr	
S = 2 YEAR, 6 HOUR STORM INTENSITY	0.36 (60in SLOPE @ 1% GRADE)	
L = SOLE LENGTH/GRADIENT	13 (TYPICAL)	
P = EROSION CONTROL PRACTICE (P-FACTOR)	10 (TYPICAL FOR STRIPPED SITE)	
C = GROUND COVER (RADFAC) SOIL LOSS (RUSLE METHOD) (tonnes/ha/yr)	VERY LOW	
EROSION DRAINAGE TABLE (4.2 BLUE BOOK)	0.38ha	
DISTURBANCE AREA	6m <sup>3</sup> /yr	
SOIL LOSS		

NOTE: SOIL LOSS IS LESS THAN  $150\text{m}^3/\text{yr}$ . THEREFORE BASIN IS NOT REQUIRED

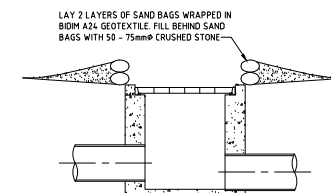
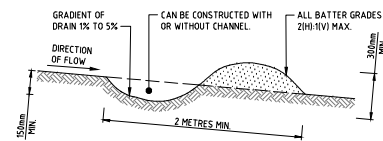


NOTE: THIS PRACTICE ONLY TO BE USED WHERE SPECIFIED IN APPROVED SWMP/ESCP

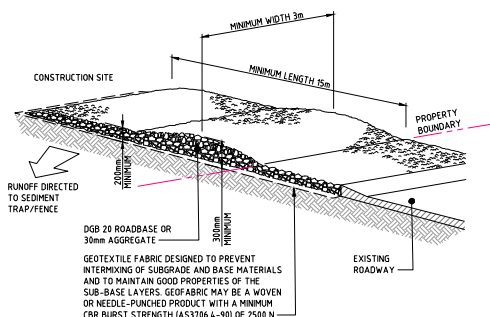
1. INSTALL FILTERS TO KERB INLETS ONLY AT SAG POINTS.
2. FABRICATE A SLEEVE MADE FROM GEOTEXTILE OR WIRE MESH LONGER THAN THE LENGTH OF THE INLET PIT AND FILL IT WITH 25mm TO 50mm GRAVEL.
3. FORM AN ELLIPTICAL CROSS-SECTION ABOUT 150mm HIGH x 400mm WIDE.
4. PLACE THE FILTER AT THE OPENING LEAVING AT LEAST A 100mm SPACE BETWEEN IT AND THE KERB INLET. MAINTAIN THE OPENING WITH SPACER BLOCKS.
5. COVER THE KERB WITH THE KERB TO PREVENT SEDIMENT BYPASSING THE FILTER.
6. SANDBAGS FILLED WITH GRAVEL CAN SUBSTITUTE FOR THE MESH OR GEOTEXTILE PROVIDING THEY ARE PLACED SO THAT THEY FIRMLY ABUT EACH OTHER AND THE SEDIMENT-LADEN WATERS CANNOT PASS BETWEEN THEM.

NOTE: ONLY TO BE USED AS TEMPORARY BANK  
WHERE MAXIMUM UPSLOPE LENGTH IS 80 METRES

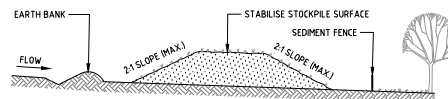
1. BUILD WITH GRADIENTS BETWEEN 1 AND 5 PERCENT.
2. AVOID REMOVING TREES AND SHRUBS IF POSSIBLE - WORK AROUND THEM.
3. ENSURE THE STRUCTURES ARE FREE OF PROJECTIONS OR OTHER IRREGULARITIES THAT COULD IMPEDE WATER FLOW.
4. BUILD THE DRAINS WITH CIRCULAR, PARABOLIC OR TRAPEZOIDAL CROSS SECTIONS, NOT V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



INSTALL PIT PROTECTION TO ALL  
NEW & EXISTING STORMWATER PITS

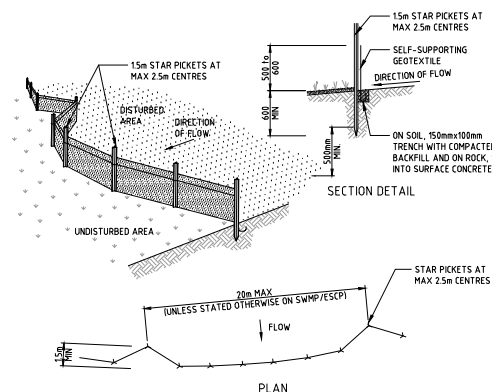


1. STRIP THE TOPSOIL, LEVEL THE SITE AND COMPACT THE SUBGRADE.
2. COVER THE AREA WITH NEEDLE-PUNCHED GEOTEXTILE.
3. CONSTRUCT A 200mm THICK PAD OVER THE GEOTEXTILE USING ROAD BASE OR 30mm AGGREGATE.
4. ENSURE THE STRUCTURE IS AT LEAST 15 METRES LONG OR TO BUILDING ALIGNMENT AND AT LEAST 3 METRES WIDE.
5. WHERE A SEDIMENT FENCE JOINS ONTO THE STABILISED ACCESS, CONSTRUCT A HUMP IN THE STABILISED ACCESS TO DIVERT WATER TO THE SEDIMENT FENCE.



1. ALL STOCKPILES MORE THAN 2m (PREFERABLY 5m) FROM EXISTING VEGETATION, CONCENTRATED WATER FLOW, ROADS AND HAZARD AREAS.
2. CONSTRUCT ON THE CONTOUR AS LOW, FLAT, ELONGATED MOUNDS.
3. WHERE THERE IS SUFFICIENT AREA, TOPSOIL STOCKPILES SHOULD BE LESS THAN 2m IN HEIGHT.
4. WHERE THEY ARE TO BE IN PLACE FOR MORE THAN 10 DAYS, STABILISE FOLLOWING THE APPROVED ESCP OR SWMP TO REDUCE THE C-FACTOR TO LESS THAN 0.0.
5. CONSTRUCT EARTH BANKS (STANDARD DRAWING 5-51) ON THE UPSLOPE SIDE TO DIVERT WATER AROUND STOCKPILES AND SEDIMENT FIELDS (STANDARD DRAWING 6-81) TO DOWNSLOPE.

## STABILISED SITE ACCESS (SD 6-14)



5. **ANCHORING:** ANCHOR PEGS AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE, BUT WITH SMALL TRENCHES AS SHOWN IN THE DRAWING TO LIFT THE CATCHMENT AREA OR ANY ONE SECTION OF THE CATCHMENT AREA FROM THE GROUND SURFACE. ANCHOR PEGS TO BE PLACED AT ONE POINT TO 50 LITRES PER SECOND IN THE DESIGN STORM EVENT, USUALLY THE 10-YEAR EVENT.

6. **CLIP:** A 150mm deep TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE TIED TO.


7. **DOVE:** 15 METRE LONG STAR PEGS INTO GROUND AT 25 METRE INTERVALS (MAX) AT THE DOWNSLOPE END OF THE TRENCH ENSURE ANY STAR PEGS ARE FILLED WITH SAFETY CAPS.

8. **FIX:** SELF-SUPPORTING GEOTEXTILE TO THE UPSLOPE SIDE OF THE POSTS ENSURING IT GOES TO THE BASE OF THE TRENCH AND TO THE TOP OF THE POSTS. THE MANUFACTURER ONLY USES GEOTEXTILE SPECIFICALLY PRODUCED FOR SEDIMENT FENCING. THE USE OF SHADe CLOTH FOR THIS PURPOSE IS NOT SATISFACTORY.

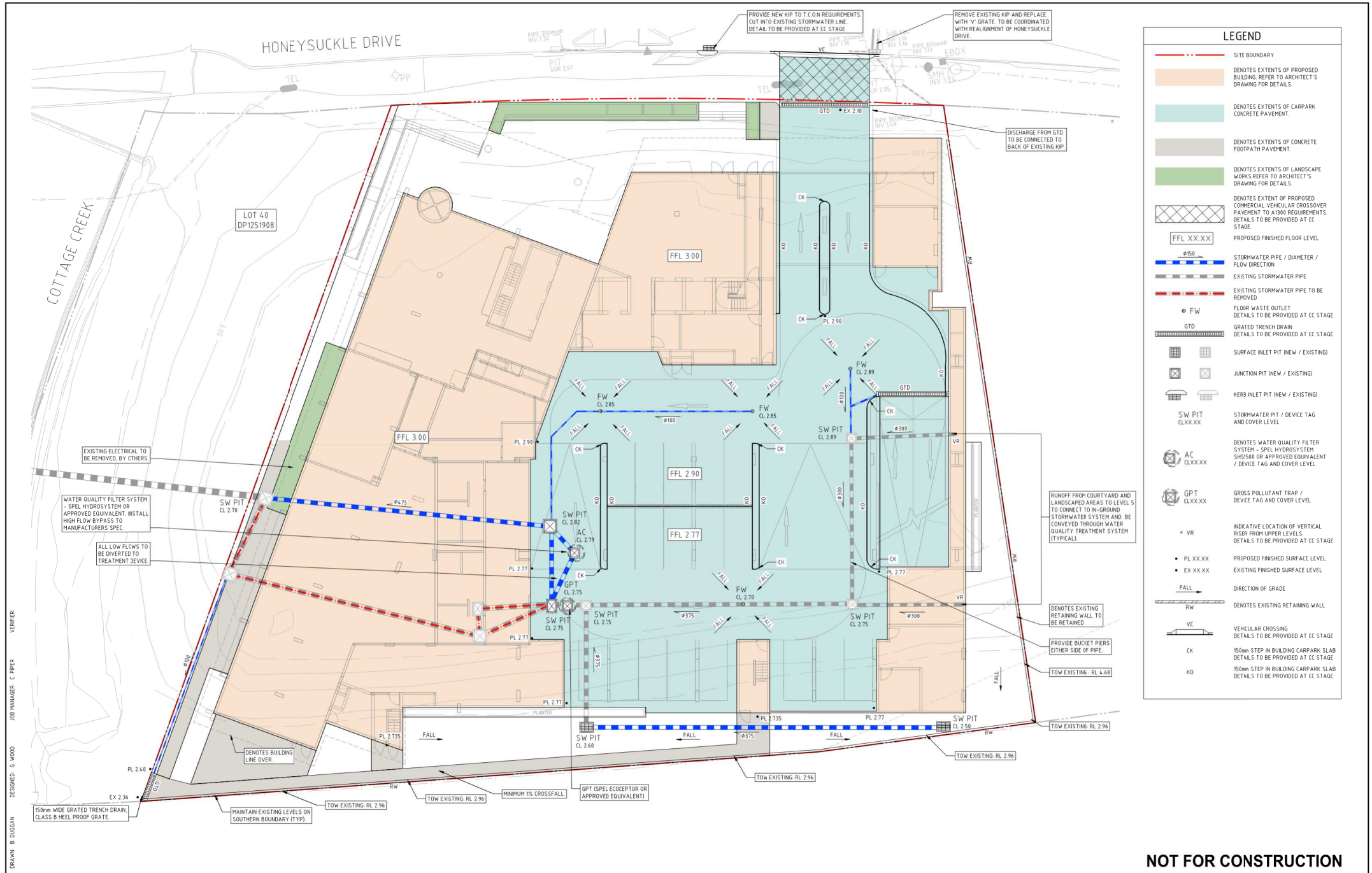
9. **ON SECTIONS:** FABRIC AT A SUPPORT POST WITH A 150mm overlap.

10. **BACKFILL:** THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.

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REVISION	DESCRIPTION	ISSUED	VER D	APP'D	DATE	CLIENT	ARCHITECT		PROJECT	DRAWING TITLE	JOB NUMBER						
1	ISSUED FOR APPROVAL	BO	CP	GW	23.01.20	DOMAGROUP	BATESSMART.	<div><div>ALL DIMENSIONS TO BE VERIFIED ON-SITE BEFORE COMMENCING WORK.</div><div>NORTHROP ACCEPTS NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR SCALE OF DRAWINGS TRANSFERRED ELECTRONICALLY.</div><div>THIS DRAWING MAY HAVE BEEN PREPARED USING COLOUR, AND MAY BE INCOMPLETE IF COPIED TO BLACK &amp; WHITE.</div></div>	<div><div></div><div>Newcastle</div><div>Level 1, 215 Pacific Hwy, Charlestown NSW 2290 Ph (02) 4943 1777 Email: newcastle@northrop.com.au ABN 81 094 433 100</div></div>	PROPOSED DEVELOPMENT 42 HONEYSUCKLE DRIVE NEWCASTLE NSW	CIVIL ENGINEERING PACKAGE  EROSION AND SEDIMENT CONTROL DETAILS	NL171278-04					
																DRAWING NUMBER DA-C02.11	REVISION 1





LEGEND	
	SITE BOUNDARY
	DENOTES EXTENTS OF PROPOSED BUILDING. REFER TO ARCHITECT'S DRAWING FOR DETAILS.
	DENOTES EXTENTS OF CARPARK CONCRETE PAVEMENT.
	DENOTES EXTENTS OF CONCRETE FOOTPATH PAVEMENT.
	DENOTES EXTENTS OF LANDSCAPE WORKS. REFER TO ARCHITECT'S DRAWING FOR DETAILS.
	DENOTES EXTENT OF PROPOSED COMMERCIAL VEHICULAR CROSSOVER PAVEMENT TO A1300 REQUIREMENTS. DETAILS TO BE PROVIDED AT CC STAGE.
	PROPOSED FINISHED FLOOR LEVEL
	STORMWATER PIPE / DIAMETER / FLOW DIRECTION
	EXISTING STORMWATER PIPE
	EXISTING STORMWATER PIPE TO BE REMOVED
	FLOOR WASTE OUTLET DETAILS TO BE PROVIDED AT CC STAGE
	GRADED TRENCH DRAIN DETAILS TO BE PROVIDED AT CC STAGE
	SURFACE INLET PIT (NEW / EXISTING)
	JUNCTION PIT (NEW / EXISTING)
	KERB INLET PIT (NEW / EXISTING)
	STORMWATER PIT / DEVICE TAG AND COVER LEVEL
	DENOTES WATER QUALITY FILTER SYSTEM - SPEL HYDROSYSYSTEM SH51500 OR APPROVED EQUIVALENT / DEVICE TAG AND COVER LEVEL
	GROSS POLLUTANT TRAP / DEVICE TAG AND COVER LEVEL
	INDICATIVE LOCATION OF VERTICAL RISER FROM UPPER LEVELS. DETAILS TO BE PROVIDED AT CC STAGE.
	PROPOSED FINISHED SURFACE LEVEL
	EXISTING FINISHED SURFACE LEVEL
	DIRECTION OF GRADE
	DENOTES EXISTING RETAINING WALL
	VEHICULAR CROSSING DETAILS TO BE PROVIDED AT CC STAGE
	150mm STEP IN BUILDING CARPARK SLAB DETAILS TO BE PROVIDED AT CC STAGE
	150mm STEP IN BUILDING CARPARK SLAB DETAILS TO BE PROVIDED AT CC STAGE

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REVISION	DESCRIPTION	ISSUED	VER'D	APP'D	DATE	CLIENT	ARCHITECT		PROJECT	DRAWING TITLE	JOB NUMBER	
1	ISSUED FOR APPROVAL	BD	CP	GW	230120	<div>DOMAGROUP</div>	<div>BATESSMART</div>	<div><div>ALL DIMENSIONS TO BE VERIFIED ON SITE BEFORE COMMENCING WORK. NORTHROP ACCEPTS NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR SCALE OF DRAWINGS TRANSFERRED ELECTRONICALLY. THIS DRAWING MAY HAVE BEEN PREPARED USING COLOUR AND MAY BE INCOMPLETE IF COPIED TO BLACK &amp; WHITE</div></div>	<div><div>Level 1, 215 Pacific Hwy, Charlestown NSW 2290 Ph (02) 4943 1777 Email newcastle@northrop.com.au ABN 81 094 433 100</div></div>	PROPOSED DEVELOPMENT 42 HONEYSUCKLE DRIVE NEWCASTLE NSW	NL171278-04	
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## Appendix B

### MUSIC Link Report



## MUSIC-*link* Report

Project Details		Company Details	
<b>Project:</b>	NL171278-04_42 HD	<b>Company:</b>	Northrop Consulting Engineers
<b>Report Export Date:</b>	10/01/2020	<b>Contact:</b>	Chris Piper
<b>Catchment Name:</b>	NL171278-04_42 HD_GW	<b>Address:</b>	Level 1, 215 Pacific Highway Charlestown NSW 2290
<b>Catchment Area:</b>	0.373ha	<b>Phone:</b>	4943 1777
<b>Impervious Area*:</b>	83.79%	<b>Email:</b>	cpiper@northrop.com.au
<b>Rainfall Station:</b>	61078 WILLIAMTOWN		
<b>Modelling Time-step:</b>	6 Minutes		
<b>Modelling Period:</b>	1/01/1995 - 31/12/2008 11:54:00 PM		
<b>Mean Annual Rainfall:</b>	1125mm		
<b>Evapotranspiration:</b>	1735mm		
<b>MUSIC Version:</b>	6.3.0		
<b>MUSIC-link data Version:</b>	6.32		
<b>Study Area:</b>	Newcastle		
<b>Scenario:</b>	Newcastle		

\* takes into account area from all source nodes that link to the chosen reporting node, excluding Import Data Nodes

Treatment Train Effectiveness		Treatment Nodes		Source Nodes	
Node: Post-Development Node	Reduction	Node Type	Number	Node Type	Number
Flow	2.98%	Rain Water Tank Node	1	Urban Source Node	3
TSS	87%	Buffer Node	1		
TP	71.9%	Generic Node	2		
TN	47.1%				
GP	90.4%				

### Comments

### Passing Parameters

Node Type	Node Name	Parameter	Min	Max	Actual
Buffer	Buffer	Proportion of upstream impervious area treated	None	None	1
Post	Post-Development Node	% Load Reduction	None	None	2.98
Post	Post-Development Node	GP % Load Reduction	90	None	90.4
Post	Post-Development Node	TN % Load Reduction	45	None	47.1
Post	Post-Development Node	TP % Load Reduction	65	None	71.9
Post	Post-Development Node	TSS % Load Reduction	85	None	87
Rain	Rainwater Tank	% Reuse Demand Met	70	None	93.62
Urban	By-pass Landscape	Area Impervious (ha)	None	None	0.024
Urban	By-pass Landscape	Area Pervious (ha)	None	None	0.024
Urban	By-pass Landscape	Total Area (ha)	None	None	0.049
Urban	Landscape	Area Impervious (ha)	None	None	0.141
Urban	Landscape	Area Pervious (ha)	None	None	0.035
Urban	Landscape	Total Area (ha)	None	None	0.177
Urban	Roof	Area Impervious (ha)	None	None	0.147
Urban	Roof	Area Pervious (ha)	None	None	0
Urban	Roof	Total Area (ha)	None	None	0.147

Only certain parameters are reported when they pass validation



THE CITY OF NEWCASTLE



# Appendix C

## Catchment Plan

# CATCHMENT PLAN

- By-passing Catchment
- Impervious Area
- Pervious Area
- Roof Catchment

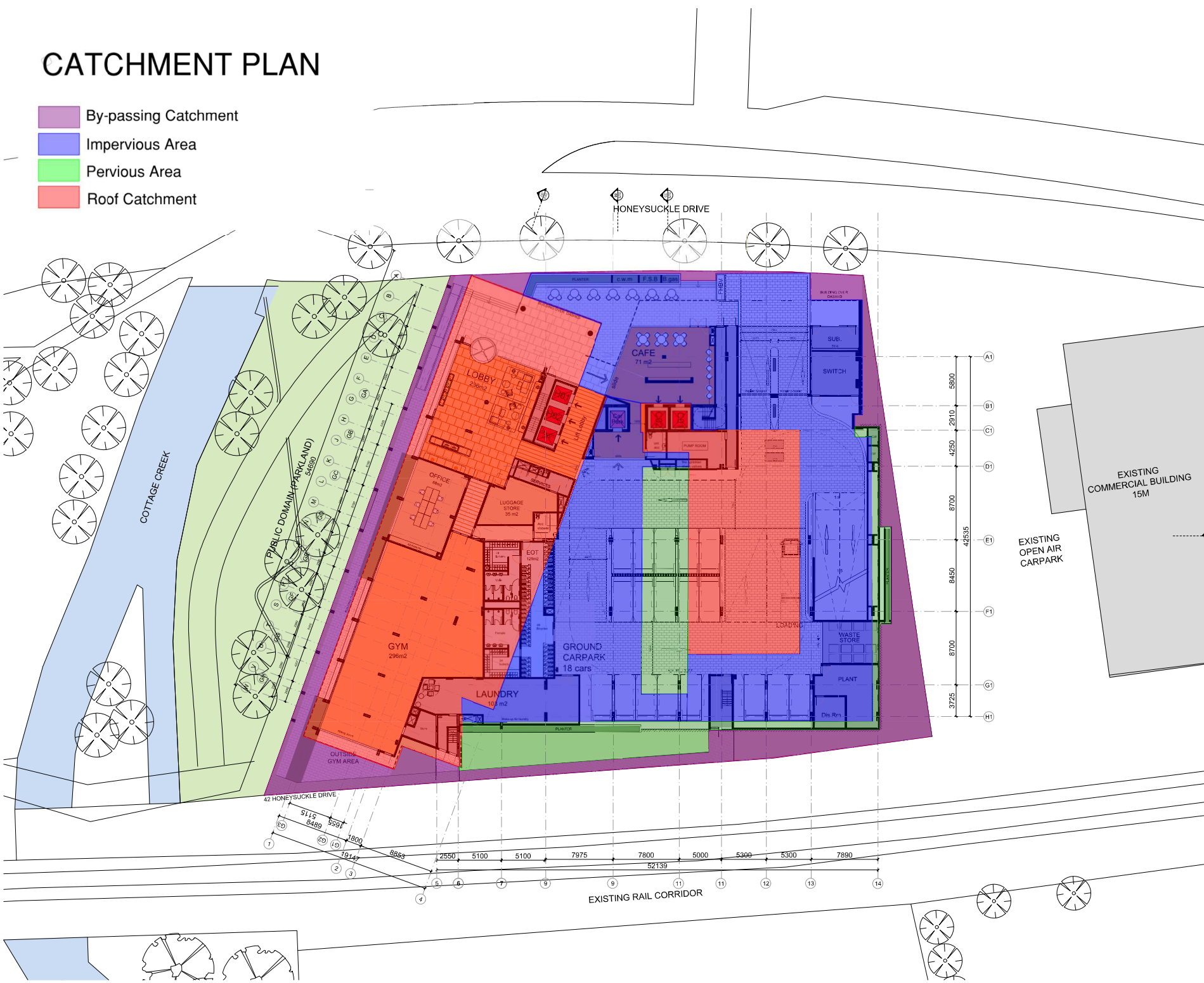
Check all dimensions and site conditions prior to commencement of any work, the purchase or ordering of any materials, fittings, plant, services or equipment and the preparation of any drawings and/or the fabrication of any components.

All drawings to be read in conjunction with all architectural documents and all other consultants documents.

Do not scale drawings - refer to figured dimensions only. Any discrepancies shall immediately be referred to the architect for clarification.

All drawings may not be reproduced or distributed without prior permission from the architect.

	Carpark	ACC Carpark	Motorbike
GL	18		
L01	34	6	2
L02	34	6	2
L03	34	6	2
L04-CP	31		6
TOTAL	151	18	12
TOTAL Carpark Spaces	169		
TOTAL Motorbike Spaces	12		



2	08.01.20	For Information	DE	DE
1	10.12.19	For Information	EN	DE
Revision Date	Description	Initial	Checked	

S12109\_Doma  
Honeysuckle Drive, Newcastle

Ground Level Plan

Scale 1:200 @ A1 1:400 @ A3  
Drawn Checked

Project No. S12109  
Status FOR INFORMATION  
Plot Date 8/1/2020 8:49 PM  
Plot File S:\12109\12109\12109\_Doma\_honeysuckle\12109\_CAD\Plan\GL.dwg  
Drawing No. A03.000[2] (Revision)

A03.000[2]

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email syd@batesmart.com.au  
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Bates Smart Architects Pty Ltd ABN 68 094 740 986

BATESSMART

## Appendix D

### Council Consultation

## Chris Piper

---

**From:** Rajnesh Prakash <rprakash@ncc.nsw.gov.au>  
**Sent:** Monday, 13 May 2019 3:49 PM  
**To:** Chris Piper  
**Cc:** Rino Colaci; Elliott, Jordan  
**Subject:** Re: 42 HD - Drainage Design Solution

Hi Chris

The submission for the drainage connect is acceptable, subject to the following;

Consultant has been done with City Asset Team and it is noted that the existing drainage pipe on the west which discharge to the creek will only service the development at 42 Honeysuckle Dr. The pipe seems to be a stub which may have been provided for this form of development for drainage connection and does not provide any form of public benefit or services any public assets.

CN therefore recommend that the drainage pipe is handed over to 42 Honeysuckle Dr and consultation done with HCCDC in regards to any easements for the drainage.

Thanks

Raj

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### Rajnesh Prakash | Senior Development Officer - Engineering.

#### City of Newcastle | Governance

Regulatory, Planning & Assessment | Development Assessment

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**From:** Chris Piper <cpiper@northrop.com.au>  
**Sent:** Monday, May 13, 2019 2:42 pm  
**To:** Rajnesh Prakash  
**Cc:** Rino Colaci; Elliott, Jordan  
**Subject:** RE: 42 HD - Drainage Design Solution

Thanks Raj!

Please see drawing attached to include outlet to Cottage Creek, as well as a photo of the outlet.

Thanks,

**Chris Piper**

Senior Civil Engineer | Group Manager

**Northrop Consulting Engineers**

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**From:** Rajnesh Prakash <rprakash@ncc.nsw.gov.au>  
**Sent:** Monday, 13 May 2019 9:52 AM  
**To:** Chris Piper <CPiper@northrop.com.au>  
**Cc:** Rino Colaci <Rino.Colaci@bloc.com.au>; Elliott, Jordan <Jordan.Elliott@app.com.au>  
**Subject:** RE: 42 HD - Drainage Design Solution

Hi Chris

Have just looked at the plan.

Is there any plans and details for the outlet location to the Hunter Water Canal?

DOP will also require this detail.

Any chance if you can update the plan to include the outlet location.

Thanks

Raj

**Rajnesh Prakash | Senior Development Officer - Engineering.**

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**From:** Chris Piper <[CPiper@northrop.com.au](mailto:CPiper@northrop.com.au)>  
**Sent:** Friday, 10 May 2019 4:03 PM  
**To:** Rajnesh Prakash <[rprakash@ncc.nsw.gov.au](mailto:rprakash@ncc.nsw.gov.au)>  
**Cc:** Rino Colaci <[Rino.Colaci@bloc.com.au](mailto:Rino.Colaci@bloc.com.au)>; Elliott, Jordan <[Jordan.Elliott@app.com.au](mailto:Jordan.Elliott@app.com.au)>  
**Subject:** 42 HD - Drainage Design Solution

Hi Raj,

Thanks again for your time this morning. As discussed, BLOC have progressed to construction of the originally proposed drainage outlet from 42HD, but have found relocation of the existing services prohibitively expensive. We have found an opportunity adjacent the site which would result in a better outcome, which involves connecting our outlet to an existing stormwater pipe that drains directly to cottage creek. The drawing attached is what I present today, and shows approximately what we are proposing. As we discussed, with the opportunity presented by the

lower connection point, we may also consider a sand filter option, in accordance with Council's DCP, in lieu of the proprietary treatment devices.

From our discussion, I understand that Council are in support of the alternate drainage solution.

Thanks,

**Chris Piper**

Senior Civil Engineer | Group Manager

**Northrop Consulting Engineers**

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