






854 HUNTER STREET, NEWCASTLE WEST, NSW, 2302
CIVIL ENGINEERING PACKAGE



DWG NO.	DRAWING TITLE
DA-C01.01	COVER SHEET, DRAWING LIST AND LOCALITY PLAN
DA-C02.01	EROSION AND SEDIMENT CONTROL PLAN
DA-C03.01	CIVIL WORKS PLAN - PODIUM LEVEL
DA-C03.02	CIVIL WORKS PLAN - GROUND LEVEL
DA-C04.01	CIVIL DETAILS & STORMWATER MANAGEMENT PLAN

DRAWN: R.HUTCHISON	DESIGNED: G.WOODS	JOB MANAGER: C.PIPER	VERIFIER: C.PIPER
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NOT FOR CONSTRUCTION

REVISION	DESCRIPTION	ISSUED	VER'D	APP'D	DATE	CLIENT	ARCHITECT	 <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 & WHITE.</div> <div><div>Newcastle Level 1, 215 Pacific Hwy, Charlestown NSW 2290 Ph (02) 4943 1777 Email: newcastle@northrop.com.au ABN 81 094 433 100</div></div>	PROJECT	DRAWING TITLE	JOB NUMBER
1	ISSUED FOR COORDINATION	RH		CP	23.07.21	 <div>DOMAGROUP</div>	 <div>BATESSMART</div>		 <div>THE STORE - NEWCASTLE 854 HUNTER STREET, NEWCASTLE WEST, NSW, 2302</div>	CIVIL ENGINEERING PACKAGE	NL151730-01
2	ISSUED FOR APPROVAL	RH	CP	GW	7.10.21						
3	ISSUED FOR APPROVAL	JS	CP	GW	19.04.22						
						DRAWING NOT TO BE USED FOR CONSTRUCTION UNLESS VERIFICATION SIGNATURE HAS BEEN ADDED	THE COPYRIGHT OF THIS DRAWING REMAINS WITH NORTHROP CONSULTING ENGINEERS PTY LTD		COVER SHEET, DRAWING LIST AND LOCALITY PLAN	DRAWING NUMBER DA-C01.01	REVISION 3
DRAWING SHEET SIZE - A1											

DRAWN: R. HUTCHISON
DESIGNED: G. WOODS
JOB MANAGER: C. PIPER
VERIFIER: C. PIPER

REFER TO LANDSCAPE ARCHITECTS PLANS FOR DETAILS OF PROPOSED ROOFTOP LANDSCAPING

ALL ROOF AREA TO FALL TOWARDS EXISTING SYPHONIC DRAINAGE SYSTEM.

TOWER ROOF ENVELOPE ABOVE

EXISTING BUS INTERCHANGE

TOWER ROOF ENVELOPE ABOVE

HUNTER STREET

10kL RAINWATER TANK. CONNECT ALL ROOF WATER RUNOFF VIA FIRST FLUSH DEVICE. REUSE FOR PODIUM LEVEL AND BUS STOP ROOF LANDSCAPE IRRIGATION OVERFLOW TO BE CONNECTED TO GROUND LEVEL DRAINAGE NETWORK. EXACT LOCATION TO BE CONFIRMED AS PART OF DETAILED DESIGN.

ALL BALCONY AND PODIUM LEVEL DRAINAGE TO BE DIRECTED TO GROUND LEVEL STORMWATER TREATMENT DEVICE. REFER TO DA-C03.02 FOR CONTINUATION.

10kL RAINWATER TANK. CONNECT ALL ROOF WATER RUNOFF VIA FIRST FLUSH DEVICE. REUSE FOR PODIUM LEVEL AND BUS STOP ROOF LANDSCAPE IRRIGATION OVERFLOW TO BE CONNECTED TO GROUND LEVEL DRAINAGE NETWORK. EXACT LOCATION TO BE CONFIRMED AS PART OF DETAILED DESIGN.

LEGEND

- PROPOSED BOUNDARY LINE
- EXISTING BOUNDARY LINE
- FOOTPATH PAVEMENT
- LANDSCAPING
- BUILDING EXTENT
- RAINWATER TANK
- BUILDING OVER
- EXISTING STORMWATER PIPE

NOTES

- EXISTING DRAINAGE NETWORK IS INDICATIVE ONLY. BASED ON GHD DESIGN DRAWINGS. LOCATION AND INVERT LEVELS TO BE CONFIRMED AT DETAILED DESIGN.
- REFER TO DRAWING C04.01 FOR DETAILS OF THE STORMWATER MANAGEMENT PLAN.

NOT FOR CONSTRUCTION

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1	ISSUED FOR COORDINATION	RH	CP	CP	23.07.21
2	ISSUED FOR APPROVAL	RH	CP	GW	7.10.21
3	ISSUED FOR APPROVAL	JS	CP	GW	19.04.22

CLIENT
DOMAGROUP
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ARCHITECT
BATESSMART
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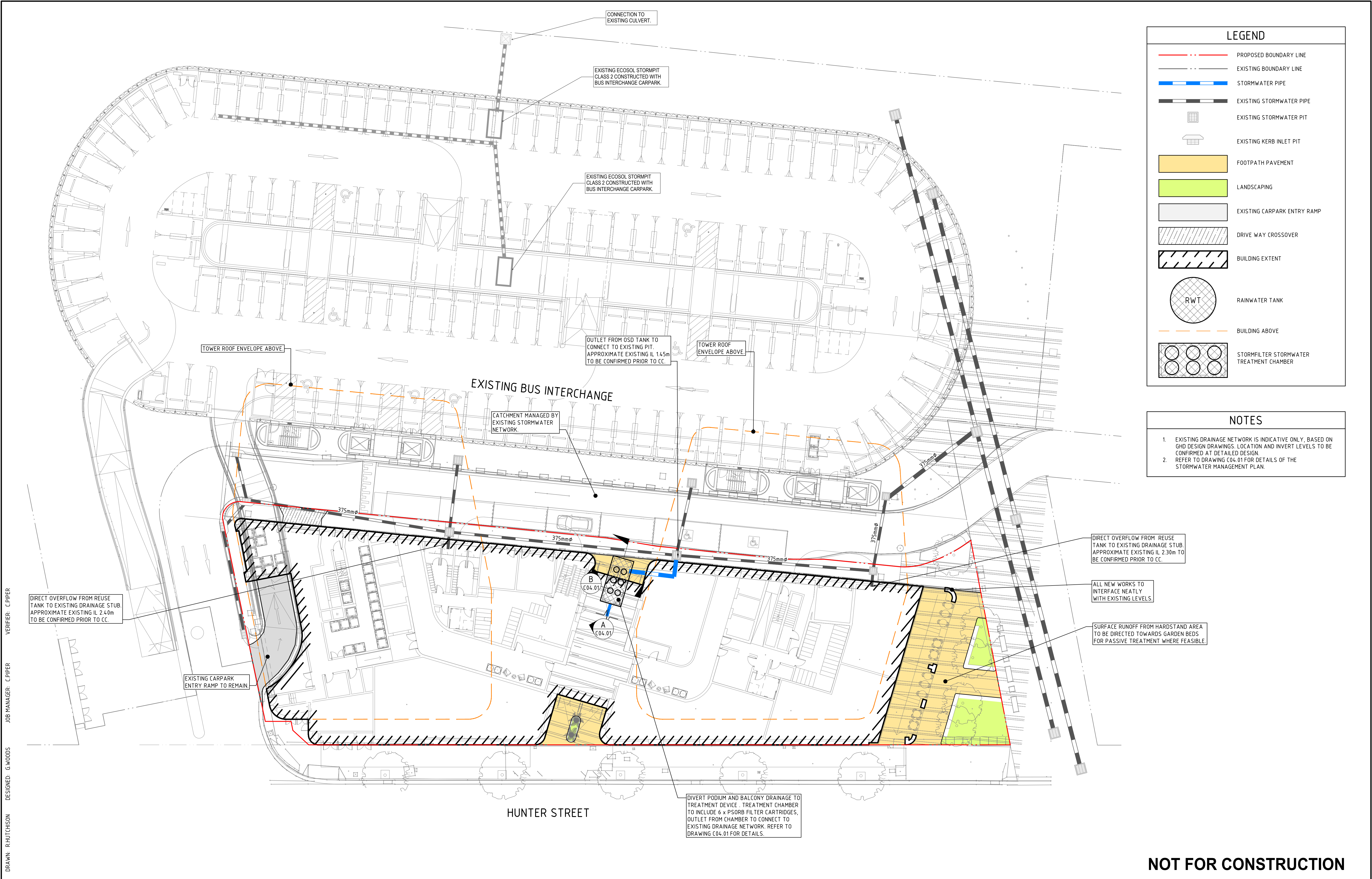
SCALE
1:200 @ A1
0 2 4 6 8 10m

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PROJECT
THE STORE - NEWCASTLE 854 HUNTER STREET, NEWCASTLE WEST, NSW, 2302

DRAWING TITLE
CIVIL ENGINEERING PACKAGE CIVIL WORKS PLAN - PODIUM LEVEL

JOB NUMBER
NL151730-01
DRAWING NUMBER
DA-C03.01
REVISION
3
DRAWING SHEET SIZE = A1



VERIFIER: C. PIPER
JOB MANAGER: C. PIPER
DESIGNED: G. WOODS
DRAWN: R. HUTCHISON

REVISION	DESCRIPTION	ISSUED	VER'D	APP'D	DATE
1	ISSUED FOR COORDINATION	RH	CP	CP	23.07.21
2	ISSUED FOR APPROVAL	RH	CP	GW	7.10.21
3	ISSUED FOR APPROVAL	JS	CP	GW	19.04.22
4	ISSUED FOR APPROVAL	JS	CP	GW	25.04.22

DOMAGROUP

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ARCHITECT

BATESSMART

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SCALE 1:200 @ A1

0

2

4

6

8

10m

NORTHROP

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PROJECT

THE STORE - NEWCASTLE
854 HUNTER STREET,
NEWCASTLE WEST, NSW, 2302

DRAWING TITLE

CIVIL ENGINEERING PACKAGE
CIVIL WORKS PLAN - GROUND LEVEL

JOB NUMBER

NL151730-01

DRAWING NUMBER

DA-C03.02

REVISION

4

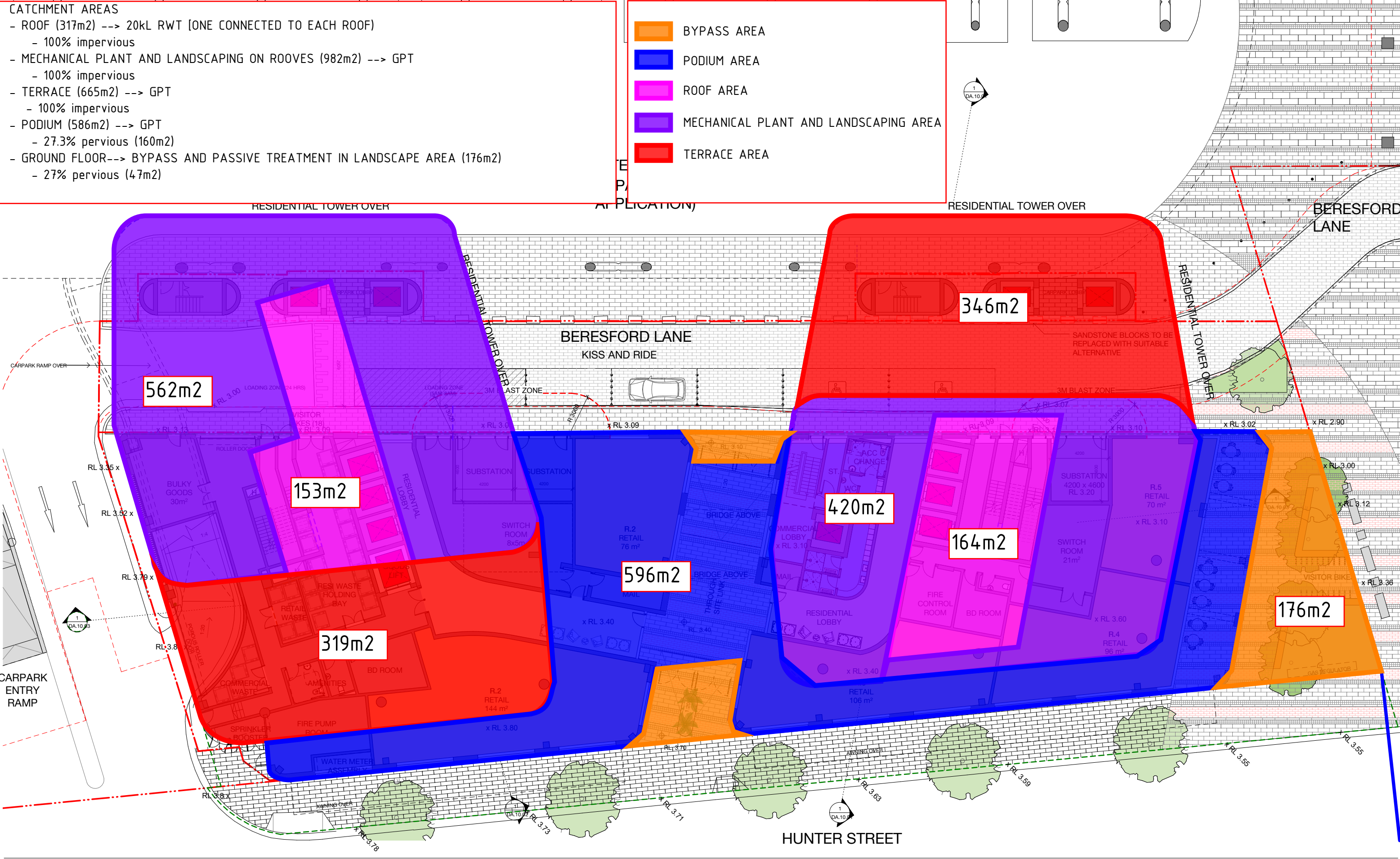
DRAWING SHEET SIZE = A1

NOT FOR CONSTRUCTION

- CATCHMENT AREAS
- ROOF (317m2) --> 20KL RWT (ONE CONNECTED TO EACH ROOF)
 - 100% impervious
 - MECHANICAL PLANT AND LANDSCAPING ON ROOVES (982m2) --> GPT
 - 100% impervious
 - TERRACE (665m2) --> GPT
 - 100% impervious
 - PODIUM (586m2) --> GPT
 - 27.3% pervious (160m2)
 - GROUND FLOOR--> BYPASS AND PASSIVE TREATMENT IN LANDSCAPE AREA (176m2)
 - 27% pervious (47m2)

LEGEND

- BYPASS AREA
- PODIUM AREA
- ROOF AREA
- MECHANICAL PLANT AND LANDSCAPING AREA
- TERRACE AREA



THE STORE
854 HUNTER STREET, NEWCASTLE

Level 00 Plan

Scale

CATCHMENT PLAN
PREPARED BY NORTHROP
19/04/2022

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Bates Smart Pty Ltd ABN 70 004 999 400

PROPOSED TREE (REFER LANDSCAPE DWG FOR DETAIL)

4	21.09.21	FOR COORDINATION	JW	
3	06.07.21	FOR COORDINATION	MT	
2	17.06.21	FOR COORDINATION		
1	04.06.21	FOR COORDINATION		
Revision	Date	Description	Initial	Checked

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 shop drawings and or the fabrication of any components.

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.

BATESSMART

MUSIC-link Report

Project Details		Company Details	
Project:	NL151730-01 The Store	Company:	Northrop Consulting Engineers
Report Export Date:	19/04/2022	Contact:	Chris Piper
Catchment Name:	NL151730-01_RESI TOWERS_MUSIC_ED	Address:	Level 1, 215 Pacific Highway Charlestown NSW 2290 PO Box 180 Charlestown NSW 2290
Catchment Area:	0.273ha	Phone:	0407 940 481
Impervious Area*:	92.40%	Email:	CPiper@northrop.com.au
Rainfall Station:	61078 WILLIAMTOWN		
Modelling Time-step:	6 Minutes		
Modelling Period:	1/01/1995 - 31/12/2008 11:54:00 PM		
Mean Annual Rainfall:	1125mm		
Evapotranspiration:	1735mm		
MUSIC Version:	6.3.0		
MUSIC-link data Version:	6.34		
Study Area:	Newcastle		
Scenario:	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	7.22%	Rain Water Tank Node	1	Urban Source Node	4
TSS	87.1%	Sedimentation Basin Node	1		
TP	74.2%	Generic Node	1		
TN	55.3%	GPT Node	1		
GP	94.1%				

Comments

Invalid Results due to parameters set by proprietary StormFilter node.

Passing Parameters					
Node Type	Node Name	Parameter	Min	Max	Actual
GPT	1 x OceanGuard	Hi-flow bypass rate (cum/sec)	None	None	0.02
Post	Post-Development Node	% Load Reduction	None	None	7.22
Post	Post-Development Node	GP % Load Reduction	90	None	94.1
Post	Post-Development Node	TN % Load Reduction	45	None	55.3
Post	Post-Development Node	TP % Load Reduction	65	None	74.2
Post	Post-Development Node	TSS % Load Reduction	85	None	87.1
Rain	Rainwater Tank	% Reuse Demand Met	70	None	76.811
Sedimentation	SF Chamber	% Reuse Demand Met	None	None	0
Sedimentation	SF Chamber	Hi-flow bypass rate (cum/sec)	None	None	100
Sedimentation	SF Chamber	High Flow Bypass Out (ML/yr)	None	None	0
Urban	Ground Floor	Area Impervious (ha)	None	None	0.013
Urban	Ground Floor	Area Pervious (ha)	None	None	0.004
Urban	Ground Floor	Total Area (ha)	None	None	0.018
Urban	Mechanical Plant/Roof Terrace	Area Impervious (ha)	None	None	0.098
Urban	Mechanical Plant/Roof Terrace	Area Pervious (ha)	None	None	0
Urban	Mechanical Plant/Roof Terrace	Total Area (ha)	None	None	0.098
Urban	Podium & Terrace	Area Impervious (ha)	None	None	0.108
Urban	Podium & Terrace	Area Pervious (ha)	None	None	0.016
Urban	Podium & Terrace	Total Area (ha)	None	None	0.125
Urban	Roof	Area Impervious (ha)	None	None	0.032
Urban	Roof	Area Pervious (ha)	None	None	0
Urban	Roof	Total Area (ha)	None	None	0.032

Only certain parameters are reported when they pass validation

Failing Parameters

Node Type	Node Name	Parameter	Min	Max	Actual
Sedimentation	SF Chamber	Notional Detention Time (hrs)	8	12	0.146
Sedimentation	SF Chamber	Total Nitrogen - k (m/yr)	500	500	1
Sedimentation	SF Chamber	Total Phosphorus - k (m/yr)	6000	6000	1
Sedimentation	SF Chamber	Total Suspended Solids - k (m/yr)	8000	8000	1

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