Application for Planning Approval

Land Use Planning and Approvals Act 1993

APPLICATION NO.

SA2025/011

LOCATION OF AFFECTED AREA

115 COVE HILL ROAD, BRIDGEWATER; 131 COVE HILL ROAD, BRIDGEWATER; LOT 105 WALKER CRESCENT, BRIDGEWATER & ROAD RESERVE CT 7884/1368

DESCRIPTION OF DEVELOPMENT PROPOSAL

SUBDIVISION (8 LOTS)

A COPY OF THE DEVELOPMENT APPLICATION MAY BE VIEWED AT www.brighton.tas.gov.au AND AT THE COUNCIL OFFICES, 1 TIVOLI ROAD, OLD BEACH, BETWEEN 8:15 A.M. AND 4:45 P.M, MONDAY TO FRIDAY OR VIA THE QR CODE BELOW. ANY PERSON MAY MAKE WRITTEN REPRESENTATIONS IN ACCORDANCE WITH S.57(5) OF THE LAND USE PLANNING AND APPROVALS ACT 1993 CONCERNING THIS APPLICATION UNTIL 4:45 P.M. ON **08/09/2025**. ADDRESSED TO THE CHIEF EXECUTIVE OFFICER AT 1 TIVOLI ROAD, OLD BEACH, 7017 OR BY EMAIL AT development@brighton.tas.gov.au. REPRESENTATIONS SHOULD INCLUDE A DAYTIME TELEPHONE NUMBER TO ALLOW COUNCIL OFFICERS TO DISCUSS, IF NECESSARY, ANY MATTERS RAISED.

JAMES DRYBURGH
Chief Executive Officer

SCAN ME

Brighton
going places

PLAN OF SUBDIVISION

LEGEND

- Title/Proposed Boundary
- Easement
- TasWater Sewer
- TasWater Water
- Design Sewer
- Design Water
- Design Stormwater

LOT 4 TO CONTAIN A RIGHT OF WAY IN FAVOUR OF LOTS 1, 5, 6, 7 & 8

LOT 7 TO CONTAIN A RIGHT OF WAY IN FAVOUR OF LOTS 1, 4, 5, 6 & 8

LOT 5 TO CONTAIN A RIGHT OF WAY IN FAVOUR OF LOT 6

ALL STORMWATER, SEWER, WATER, AND ACCESSES TO BE CONSTRUCTED TO RELEVANT STANDARDS

PROPOSED RIGHT OF WAY IN FAVOUR OF LOT 6

POWER AND NBN CONNECTIONS AT COWLE ROAD

EX. WATER PROPERTY CONNECTION

PROPOSED RIGHT OF WAY

PROPOSED ACCESS TO LOT 6 OVER 131 COVE HILL ROAD. BRIDGEWATER

COVE HILL ROAD

113 Covehill Road

LOT 7 6563m²±

LOT 6 1.046ha±

FR 31616/1697

PROPOSED RIGHT OF WAY AND SERVICES EASEMENT 8.5±m WIDE

PROPOSED RECIPRICAL RIGHT OF WAY AND SERVICES EASEMENT VARIABLE WIDTH

PROPOSED DRAINAGE EASEMENT 3.00 WIDE

EXISTING DRAINAGE EASEMENT & PIPELINE AND SERVICES EASEMENT 3.00 WIDE

LOT 5 WATER CONNECTION

LOT 1 8025m²±

LOT 5 7508m²±

PROPOSED PROPERTY CONNECTIONS FOR LOT 1

PROPOSED UNDERGROUND DETENTION TANK

PROPOSED DRAINAGE EASEMENT 3.00 WIDE

PROPOSED CROSSOVER AND ACCESS FOR LOT 1

LOT 2 4782m²±

LOT 8 4368m²± Stormwater reserve

FR 177664/105

PROPOSED PIPELINE AND SERVICES EASEMENT 3.00 WIDE

WATER, POWER AND NBN CONNECTIONS AT COWLE ROAD

LOT 4 7931m²±

LOT 3 7219m²±

EXISTING DRAINAGE EASEMENT & PIPELINE AND SERVICES EASEMENTS

PROPOSED PIPELINE AND SERVICES EASEMENT VARIABLE WIDTH -Pipe to be physically located on site with easement boundary 1.00m from pipe edge if within subject title

TALYOR CRESCENT

COWLE ROAD

LOT 1 = STAGE 1
LOT 2 = STAGE 2
LOT 3 = STAGE 3
LOT 4 = STAGE 4
LOT 5 + 8 = STAGE 5
LOT 6 = STAGE 6
LOT 7 = STAGE 7
OR AS MARKET DEMANDS AND/OR PROVISION OF INFRASTRUCTURE REQUIRES.

DRAFT

DRAFT

DRAFT

Owners
COVE HILL ROAD PTY LTD; BRIGHTON COUNCIL

Title References
FR 176216/103; FR 177664/105; FR31616/1697

Address
115 Cove Hill Road, Bridgewater;
LOT 5 Taylor Crescent, Bridgewater

Council
Brighton Council

Brighton Local Provisions Schedule

Zone
18 Light Industrial

Zone Code and General Overlay
9 Attenuation Code
13 Bushfire-prone Areas Code

Brighton Industrial Hub
Specific Area Plan
Bridgewater Quarry
Specific Area Plan

PID
9945127

Point of interest GDA2020 MGA55
520860E, 5268378N

Schedule of Easements
Existing (SEE PLAN)
Proposed (SEE PLAN)

NOTES

This plan has been prepared only for the purpose of obtaining preliminary subdivision approval from the Council and the information shown hereon should be used for no other purpose. All measurements and areas are subject to final survey.

Entire site is subject to the Bushfire Code Overlay &
Attenuation Code.
These are not shown for plan clarity purpose.

LIST Cadastral Parcels
by State of Tasmania
www.thelist.tas.gov.au
CC BY 3.0

1.0m Contours:
GreaterHobartLiDAR2013 DEM
https://elevation.fsdf.org.au/
CC BY 4.0

Digital Aerial Photo:
Brighton 10CM 2019
by State of Tasmania
https://nre.tas.gov.au/land-tasmania/aerial-photography
CC BY 3.0
Modified by Vignette

REV	AMENDMENTS	DRAWN	DATE	APPR.
D				
C				
B				
A	Amend lots 4 and 7. Add staging information. Move lot 5 water connection.	MS	07.05.24	-
0	DRAFT PLAN OF SUBDIVISION	MK	01.05.24	MS

NOTES:

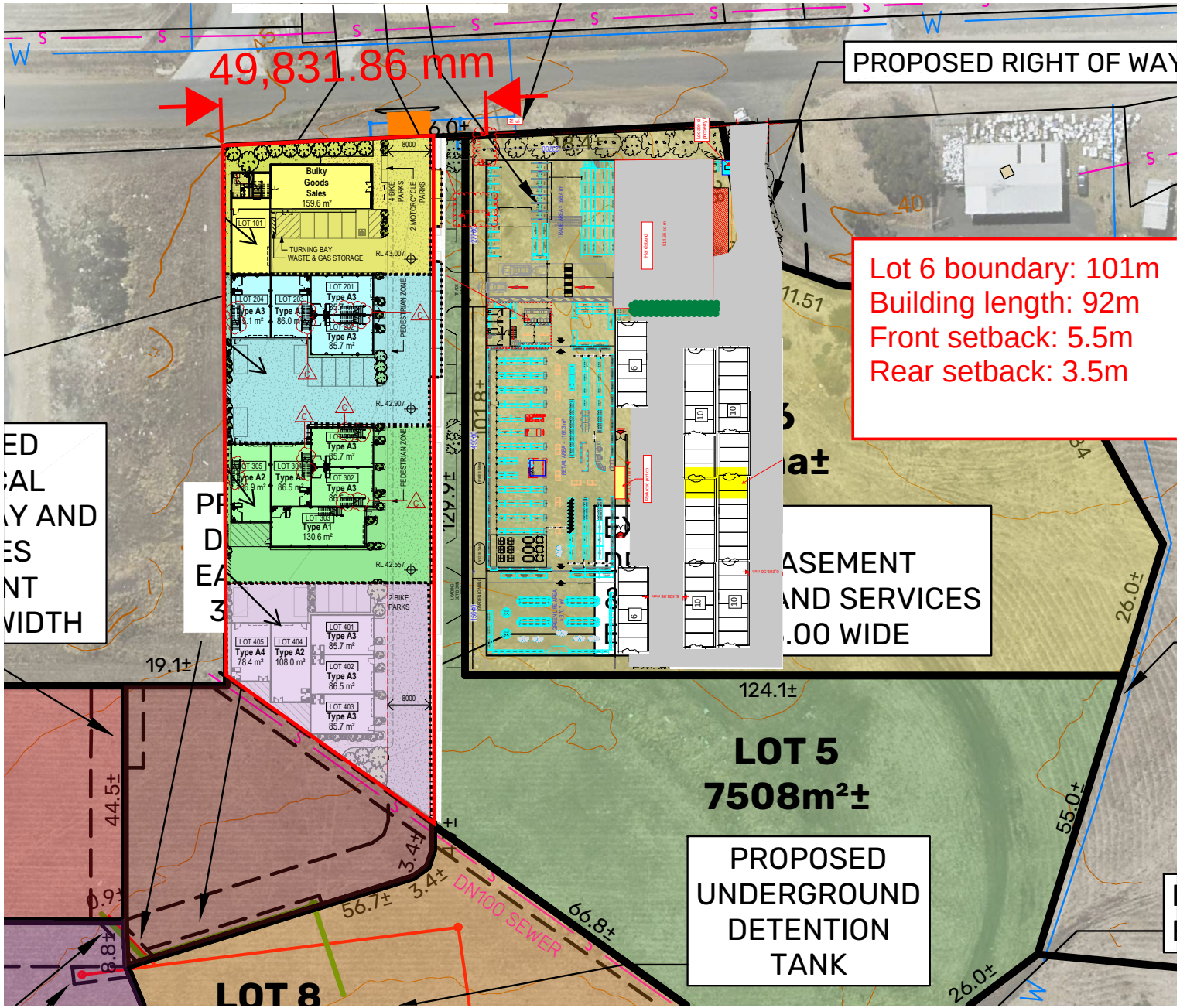
DRAFT

SURVEYOR	GEOCIVIL
-	-
DRAWN	CHECKED
MK/MS	MS
DATE	
1 MAY 2024	

PLAN OF SUBDIVISION
115 COVEHILL ROAD, BRIDGEWATER
for THE YOUNG GROUP

PDA
SURVEYORS, ENGINEERS & PLANNERS
6 Freeman Street
Kingston, Tasmania, 7050
PHONE: +61 03 6229 2131
FAX: +61 03 6229 3901
EMAIL: pda.ktn@pda.com.au
www.pda.com.au
Also at: Hobart, Launceston, Burnie & Devonport

SCALE	PAPER
1:2000	(A3)
JOB NUMBER	DRAWING
52176MS-P3-A	


49,831.86 mm
PROPOSED RIGHT OF WAY
Lot 6 boundary: 101m
Building length: 92m
Front setback: 5.5m
Rear setback: 3.5m
Bulky Goods Sales 159.6 m²
TURNING BAY
WASTE & GAS STORAGE
RL 43.007
RL 42.907
RL 42.557
PEDESTRIAN ZONE
2 BIKE PARKS
2 MOTORCYCLE PARKS
LOT 5
7508m²±
PROPOSED UNDERGROUND DETENTION TANK
LOT 8
DN100 SEWER
124.1±
101.8±
19.1±
44.5±
56.7±
66.8±
55.0±
26.0±
3.4±
8.8±
6.0±

TasWater

Infrastructure Plan

8/4/2025

TasWater Infrastructure

- Water Reticulation Main
- Stormwater Rising Main
- Stormwater Gravity Reticulation Main
- Sewer Pressure Reticulation Main
- Sewer Rising Main
- Sewer Gravity Reticulation Main
- Recycled Water Distribution Main

Private Infrastructure

- Water Mains - Private
- Stormwater Gravity Main - Private
- Sewer Pressurised Main - Private
- Sewer Gravity Main - Private
- Recycled Water Main - Private

Abandoned Infrastructure

- Water Abandoned Line
- Sewer Abandoned Line
- Recycled Water Abandoned Line

NOTE:

The representation of the TasWater assets shown on this map was derived from data supplied by TasWater. TasWater makes no representation as to the accuracy or completeness of the assets shown on this map.

1: 500

N

25.00 Meters 0 12.50 25.00

CIVIL DRAWINGS
COVE HILL SUBDIVISION
COVE HILL ROAD
BRIDGEWATER

C001	COVER	K	13/08/2025
C101	SITE PLAN	H	18/03/2025
C102	ROAD AND STORMWATER PLAN - SHEET 1	I	23/06/2025
C103	ROAD AND STORMWATER PLAN - SHEET 2	I	23/06/2025
C104	ROAD AND STORMWATER PLAN - SHEET 3	I	23/06/2025
C105	ROAD AND STORMWATER PLAN - SHEET 4	J	13/08/2025
C106	ROAD AND STORMWATER PLAN - SHEET 5	H	18/03/2025
C107	DETENTION DETAIL PLAN - SHEET 1	B	13/08/2025
C108	DETENTION DETAIL PLAN - SHEET 2	A	23/06/2025
C109	TAYLOR CRESCENT SERVICES DETAIL SHEET	A	31/07/2025
C110	OVERLAND FLOW PATH PLAN	A	31/07/2025
C201	SEWER AND WATER PLAN - SHEET 1	I	23/06/2025
C202	SEWER AND WATER PLAN - SHEET 2	H	18/03/2025
C203	SEWER AND WATER PLAN - SHEET 3	H	18/03/2025
C204	SEWER AND WATER PLAN - SHEET 4	H	18/03/2025
C205	SEWER AND WATER PLAN - SHEET 5	H	18/03/2025
C206	TAYLOR CRESCENT SERVICES DETAIL SHEET	A	29/07/2025
C301	STORMWATER LONG SECTIONS - SHEET 1	G	9/01/2025
C302	STORMWATER LONG SECTIONS - SHEET 2	G	9/01/2025
C303	STORMWATER LONG SECTIONS - SHEET 3	H	31/07/2025
C304	STORMWATER LONG SECTIONS - SHEET 4	H	31/07/2025
C305	STORMWATER LONG SECTIONS-LOT 6 CONTROL	A	23/06/2025
C306	STORMWATER LONG SECTIONS-LOT 6 CONTROL	A	23/06/2025
C401	CROSS SECTIONS - TABLE DRAIN CL	A	13/08/2025

REV	ISSUE	DATE	APPROVAL
K	COUNCIL RFI RESPONSE	13/08/2025	DRAWN: NM
J	COUNCIL RFI RESPONSE	31/07/2025	CHECKED: DE
I	COUNCIL RFI RESPONSE	23/06/2025	DESIGN: NM
H	DEVELOPMENT APPROVAL	18/03/2025	CHECKED: DE
G	COUNCIL REVIEW	9/01/2025	VERIFIED: MG

ALDANMARK CONSULTING ENGINEERS
Lower Ground
199 Macquarie Street
Hobart TAS 7000
03 6234 8666
mail@aldanmark.com.au
www.aldanmark.com.au

PROJECT: COVE HILL SUBDIVISION
ADDRESS: COVE HILL ROAD BRIDGEWATER
CLIENT: THE YOUNG GROUP
SHEET: COVER
SCALE: AS INDICATED
TOTAL SHEETS: 23
SIZE: A1
PROJECT No: 24E99-38
SHEET: C001
REV: K

SITE PLAN

SCALE 1:1000 (A1)

			DRAWN:	NM
			CHECKED:	DE
H	DEVELOPMENT APPROVAL	18/03/2025	DESIGN:	NM
G	COUNCIL REVIEW	9/01/2025	CHECKED:	DE
F	PLANNING APPROVAL	13/09/2024	VERIFIED:	MG
REV	ISSUE	DATE	APPROVAL	

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CONSULTING ENGINEERS

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www.aldanmark.com.au

PROJECT: COVE HILL SUBDIVISION

0 10 20 30 40 50 60 70 80 90 100m

ADDRESS: COVE HILL ROAD
BRIDGEWATER

CLIENT: THE YOUNG GROUP

SHEET: SITE PLAN

SCALE: 1:1000

TOTAL SHEETS: 23

SIZE: A1

PROJECT No: 24E99-38

SHEET: C101

REV: H

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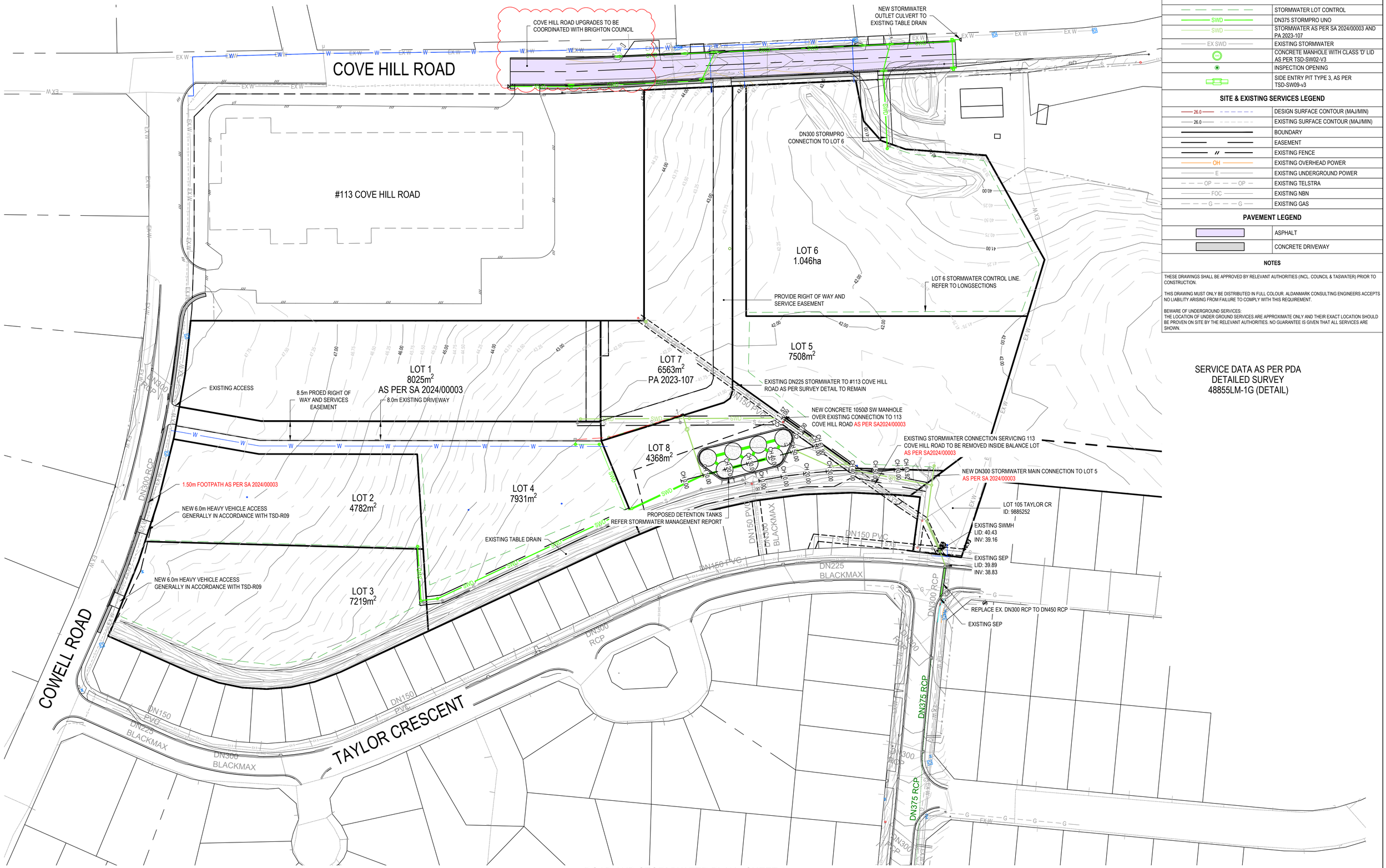

ROAD AND STORMWATER PLAN - SHEET 1

SCALE 1:750 (A1)

STORMWATER LEGEND

	STORMWATER LOT CONTROL
SWD	DN375 STORMPRO UNO
SWD	STORMWATER AS PER SA 2024/00003 AND PA 2023-107
EX SWD	EXISTING STORMWATER
	CONCRETE MANHOLE WITH CLASS 'D' LID AS PER TSD-SW02-V3
	INSPECTION OPENING
	SIDE ENTRY PIT TYPE 3, AS PER TSD-SW09-v3

SITE & EXISTING SERVICES LEGEND

26.0	DESIGN SURFACE CONTOUR (MAJ/MIN)
26.0	EXISTING SURFACE CONTOUR (MAJ/MIN)
	BOUNDARY
	EASEMENT
	EXISTING FENCE
OH	EXISTING OVERHEAD POWER
E	EXISTING UNDERGROUND POWER
OP OP	EXISTING TELSTRA
FOC	EXISTING NBN
G G	EXISTING GAS

PAVEMENT LEGEND

	ASPHALT
	CONCRETE DRIVEWAY

NOTES

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BEWARE OF UNDERGROUND SERVICES:
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SERVICE DATA AS PER PDA
DETAILED SURVEY
48855LM-1G (DETAIL)

REV	ISSUE	DATE	APPROVAL
			DRAWN: NM
I	COUNCIL RFI RESPONSE	23/06/2025	CHECKED: DE
H	DEVELOPMENT APPROVAL	18/03/2025	DESIGN: NM
G	COUNCIL REVIEW	9/01/2025	CHECKED: DE
F	PLANNING APPROVAL	13/09/2024	VERIFIED: MG

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Hobart TAS 7000
03 6234 8666
mail@aldanmark.com.au
www.aldanmark.com.au

PROJECT: COVE HILL SUBDIVISION

AS INDICATED

ADDRESS: COVE HILL ROAD
BRIDGEWATER

CLIENT: THE YOUNG GROUP

SHEET: ROAD AND STORMWATER PLAN - SHEET 1

SCALE: 1:750 | TOTAL SHEETS: 23 | SIZE: A1

PROJECT No: 24E99-38 | SHEET: C102 | REV: I

STORMWATER LEGEND

	STORMWATER LOT CONTROL
SWD	DN375 STORMPRO UNO
SWD	STORMWATER AS PER SA 2024/00003
EX SWD	EXISTING STORMWATER
	CONCRETE MANHOLE WITH CLASS 'D' LID AS PER TSD-SW02-V3
	INSPECTION OPENING
	SIDE ENTRY PIT TYPE 3, AS PER TSD-SW09-v3

SITE & EXISTING SERVICES LEGEND

26.0	DESIGN SURFACE CONTOUR (MAJ/MIN)
26.0	EXISTING SURFACE CONTOUR (MAJ/MIN)
	BOUNDARY
	EASEMENT
	EXISTING FENCE
OH	EXISTING OVERHEAD POWER
E	EXISTING UNDERGROUND POWER
OP OP	EXISTING TELSTRA
FOC	EXISTING NBN
G G	EXISTING GAS

NOTES

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LOT 1
8025m²
AS PER SA 2024/00003

LOT 6
1.046ha

LOT 5
7508m²

LOT 7
INTERNAL STORMWATER AS PER
ALDANAMRK DRGS 24E128-2
PA 2023-107

LOT 8
4368m²

LOT 4
7931m²

EXISTING SW MANHOLE
RL 42.84
INV. 41.89

NEW 1050Ø SW MANHOLE CLASS 'D' LID
AS PER TSD-SW02-V3

PROED RECIPRICAL RIGHT OF
WAY AND SERVICES
EASEMENT

8.50m PROED RIGHT OF WAY AND SERVICES EASEMENT

8.00m EXISTING DRIVEWAY AS PER PA 2023-107

DN150 STORMWATER @ 1.2% AND MIN.
450mm COVER FOR LOT CONTROL, TYP.

EXISTING STORMWATER CONNECTION
TO #113 COVE HILL ROAD TO REMAIN

NEW CONCRETE 1050Ø SW MANHOLE
OVER EXISTING CONNECTION TO 113
COVE HILL ROAD AS PER SA2024/00003

EXISTING SW MANHOLE AND DN225 SW MAIN TO
BE REMOVED AS PER SA2024/00003

NEW DN300 STORMWATER MAIN CONNECTION TO LOT 1
TERMINATING IN 1050Ø CONCRETE MANHOLE
AS PER SA2024/00003

SEP TO ACT AS CONNECTION TO LOT 7 AS PART OF STAGE 1A WORKS
PLUMBING PERMIT PA 2023-107

4.00m WIDE DRAINAGE & PIPELINE AND SERVICES EASEMENT

PROED NEW DN375 SN8 STORMWATER MAIN TO LOT 1
4.0m PIPELINE AND DRAINAGE EASEMENT
AS PER SA2024/00003

SERVICE DATA AS PER PDA
DETAILED SURVEY
48855LM-1E (DETAIL)

NEW DN300 STORMWATER MAIN CONNECTION TO LOT 5
AS PER SA2024/00003

STORMWATER CONSTRUCTED TO SW 4/1
AS PER SA2024/00003

EXISTING STORMWATER CULVERT

EXISTING STORMWATER CONNECTION SERVICING 113
COVE HILL ROAD TO BE REMOVED INSIDE BALANCE LOT
AS PER SA 2024/00003

LOT 105 TAYLOR CR
ID: 9885252

APPROX. SEWER ALIGNMENT.
NO SURFACE DETAIL FOUND BY SURVEYOR

EXISTING SINGLE ACCESS CROSSOVER
TO LOT 105 TAYLOR CR
ID: 9885252

EXISTING SWMH
LID: 40.43
INV: 39.16

STORMWATER WORKS COMPLETED
AS PER SA2024/00003

EXISTING SEP
LID: 39.89
INV: 38.83

EXISTING DN300 BLACKMAX

EXISTING DN225 BLACKMAX

REFER TO 24E128-3 SHEET
C109 FOR DETAILS

REFER TO 24E128-3 SHEET
C206 FOR DETAILS

DN150 PVC

DN300 RCP

DN300 BLACKMAX

DN225 BLACKMAX

90 KL

01

04

ROAD AND STORMWATER PLAN - SHEET 2

SCALE 1:250 (A1)

REV	ISSUE	DATE	APPROVAL
		DRAWN:	NM
I	COUNCIL RFI RESPONSE	23/06/2025	CHECKED: DE
H	DEVELOPMENT APPROVAL	18/03/2025	DESIGN: NM
G	COUNCIL REVIEW	9/01/2025	CHECKED: DE
F	PLANNING APPROVAL	13/09/2024	VERIFIED: MG

ALDANMARK CONSULTING ENGINEERS
Lower Ground
199 Macquarie Street
Hobart TAS 7000
03 6234 8666
mail@aldanmark.com.au
www.aldanmark.com.au

PROJECT: COVE HILL SUBDIVISION

0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25m

ADDRESS: COVE HILL ROAD
BRIDGEWATER

CLIENT: THE YOUNG GROUP

SHEET: ROAD AND STORMWATER PLAN - SHEET 2

SCALE: 1:250 | TOTAL SHEETS: 23 | SIZE: A1

PROJECT No: 24E99-38 | SHEET: C103 | REV: I

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STORMWATER OUTLET CULVERT AS PER PA 2023-107

EXISTING ROAD TABLE DRAIN

COVE HILL ROAD UPGRADES TO BE COORDINATED WITH BRIGHTON COUNCIL

NEW OUTLET CULVERT TO ROAD TABLE DRAIN. PROVIDE ROCK SPALLS AND GEOFABRIC

EXISTING STORMWATER ROAD CROSSING AS PER PA 2023-107

STORMWATER INLET CULVERT

EXISTING ROAD TABLE DRAIN

EXISTING ACCESS

HEAVY DUTY GRATE/CHANNEL & GRATED PIT TO DRIVEWAY

NEW 8.0m HEAVY VEHICLE ACCESS TO LOT 6 PROPER

EXISTING INTERNAL DRIVEWAY ALREADY CONSTRUCTED

LOT 7
INTERNAL STORMWATER AS PER ALDANAMRK DRGS 24E128-2
PA 2023-107

LOT 6
1.046ha

LOT 6 STORMWATER CONTROL LINE. REFER TO LONGSECTION

SERVICE DATA AS PER PDA
DETAILED SURVEY
48855LM-1E (DETAIL)

STORMWATER LEGEND

	STORMWATER LOT CONTROL
SWD	DN375 STORMPRO UNO
SWD	STORMWATER AS PER SA 2024/00003
EX SWD	EXISTING STORMWATER
	CONCRETE MANHOLE WITH CLASS 'D' LID AS PER TSD-SW02-V3
	INSPECTION OPENING
	SIDE ENTRY PIT TYPE 3, AS PER TSD-SW09-v3

SITE & EXISTING SERVICES LEGEND

26.0	DESIGN SURFACE CONTOUR (MAJ/MIN)
26.0	EXISTING SURFACE CONTOUR (MAJ/MIN)
	BOUNDARY
	EASEMENT
	EXISTING FENCE
OH	EXISTING OVERHEAD POWER
E	EXISTING UNDERGROUND POWER
OP	EXISTING TELSTRA
FOC	EXISTING NBN
G	EXISTING GAS

NOTES

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ROAD AND STORMWATER PLAN - SHEET 3

SCALE 1:250 (A1)

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REV	ISSUE	DATE	APPROVAL
			DRAWN:
I	COUNCIL RFI RESPONSE	23/06/2025	CHECKED:
H	DEVELOPMENT APPROVAL	18/03/2025	DESIGN:
G	COUNCIL REVIEW	9/01/2025	CHECKED:
F	PLANNING APPROVAL	13/09/2024	VERIFIED:

ALDANMARK CONSULTING ENGINEERS
Lower Ground
199 Macquarie Street
Hobart TAS 7000
03 6234 8666
mail@aldanmark.com.au
www.aldanmark.com.au

PROJECT: COVE HILL SUBDIVISION

ADDRESS: COVE HILL ROAD
BRIDGEWATER

CLIENT: THE YOUNG GROUP

SHEET: ROAD AND STORMWATER PLAN - SHEET 3

SCALE: 1:250

TOTAL SHEETS: 23

SIZE: A1

PROJECT No: 24E99-38

SHEET: C104

REV: I

LOT 1
8025m²
AS PER SA 2024/00003

LOT 7
INTERNAL STORMWATER AS PER
ALDANAMRK DRGS 24E128-2
PA 2023-107

LOT 2
4782m²

LOT 4
7931m²

LOT 8
4368m²

LOT 3
7219m²

CONNECT EXISTING SIDE ENTRY PIT ON
PRIVATE ROAD TO LOT 4 STORMWATER

EXISTING STORMWATER NOW REDUNDANT

INTERNAL STORMWATER CONTROL FOR LOT 2
DN150 @ MIN. 1.0% ALLOWED FOR IN DESIGN OF
NEW COUNCIL STORMWATER MAIN

NEW CONCRETE 1050Ø
SW MANHOLE

INTERNAL STORMWATER CONTROL FOR LOT 4
DN150 @ MIN. 1.0% ALLOWED FOR IN DESIGN OF
NEW COUNCIL STORMWATER MAIN

NEW CONCRETE 1050Ø
SW MANHOLE

INTERNAL STORMWATER CONTROL FOR LOT 3
DN150 @ MIN. 1.0% ALLOWED FOR IN DESIGN OF
NEW COUNCIL STORMWATER MAIN

EXISTING TABLE DRAIN
TO BE RESHAPED. REFER CROSS SECTIONS

BOUNDARY

SERVICE DATA AS PER PDA
DETAILED SURVEY
48855LM-1E (DETAIL)

DN150 PVC

DN300
RC.

TAYLOR CRESCENT

STORMWATER LEGEND

	STORMWATER LOT CONTROL
SWD	DN375 STORMPRO UNO
SWD	STORMWATER AS PER SA 2024/00003
EX SWD	EXISTING STORMWATER
	CONCRETE MANHOLE WITH CLASS 'D' LID AS PER TSD-SW02-V3
	INSPECTION OPENING
	SIDE ENTRY PIT TYPE 3, AS PER TSD-SW09-v3

SITE & EXISTING SERVICES LEGEND

26.0	DESIGN SURFACE CONTOUR (MAJ/MIN)
26.0	EXISTING SURFACE CONTOUR (MAJ/MIN)
	BOUNDARY
	EASEMENT
	EXISTING FENCE
OH	EXISTING OVERHEAD POWER
E	EXISTING UNDERGROUND POWER
OP	EXISTING TELSTRA
FOC	EXISTING NBN
G	EXISTING GAS

NOTES

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ROAD AND STORMWATER PLAN - SHEET 4

SCALE 1:250 (A1)

REV	ISSUE	DATE	APPROVAL
J	COUNCIL RFI RESPONSE	13/08/2025	DRAWN:
I	COUNCIL RFI RESPONSE	23/06/2025	CHECKED:
H	DEVELOPMENT APPROVAL	18/03/2025	DESIGN:
G	COUNCIL REVIEW	9/01/2025	CHECKED:
F	PLANNING APPROVAL	13/09/2024	VERIFIED:

ALDANMARK
CONSULTING ENGINEERS
Lower Ground
199 Macquarie Street
Hobart TAS 7000
03 6234 8666
mail@aldanmark.com.au
www.aldanmark.com.au

PROJECT: COVE HILL SUBDIVISION

ADDRESS: COVE HILL ROAD
BRIDGEWATER

CLIENT: THE YOUNG GROUP

SHEET: ROAD AND STORMWATER PLAN - SHEET 4

SCALE: 1:250 | TOTAL SHEETS: 23 | SIZE: A1

PROJECT No: 24E99-38 | SHEET: C105 | REV: J

STORMWATER LEGEND

	STORMWATER LOT CONTROL
SWD	DN375 STORMPRO UNO
SWD	STORMWATER AS PER SA 2024/00003
EX SWD	EXISTING STORMWATER
	CONCRETE MANHOLE WITH CLASS 'D' LID AS PER TSD-SW02-V3
	INSPECTION OPENING
	SIDE ENTRY PIT TYPE 3, AS PER TSD-SW09-v3

SITE & EXISTING SERVICES LEGEND

26.0	DESIGN SURFACE CONTOUR (MAJ/MIN)
26.0	EXISTING SURFACE CONTOUR (MAJ/MIN)
	BOUNDARY
	EASEMENT
W	EXISTING FENCE
OH	EXISTING OVERHEAD POWER
E	EXISTING UNDERGROUND POWER
OP	EXISTING TELSTRA
FOC	EXISTING NBN
G	EXISTING GAS

NOTES

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LOT 1
8025m^2

LOT 2

LOT 3

LOT 4

EXISTING ACCESS

8.0m WIDE EXISTING DRIVEWAY

8.50m PROED RIGHT OF WAY AND SERVICES EASEMENT

EXISTING FIRE PLUG

DN300 RCP

DN300 RCP

COWELL ROAD

NEW 1.50m WIDE CONCRETE FOOTPATH AS PER SA 2024/00003

NEW 6.0m HEAVY VEHICLE ACCESS GENERALLY IN ACCORDANCE WITH TSD-R09

NEW 6.0m HEAVY VEHICLE ACCESS GENERALLY IN ACCORDANCE WITH TSD-R09

NEW 1.50m WIDE CONCRETE FOOTPATH MATCH INTO EXISTING FOOTPATH AS PER SA 2024/00003

EXISTING FIRE PLUG

INTERNAL STORMWATER CONTROL FOR LOT 4
DN150 @ MIN. 1.0% ALLOWED FOR IN DESIGN OF NEW COUNCIL STORMWATER MAIN

INTERNAL STORMWATER CONTROL FOR LOT 4
DN150 @ MIN. 1.0% ALLOWED FOR IN DESIGN OF NEW COUNCIL STORMWATER MAIN

INTERNAL STORMWATER CONTROL FOR LOT 3
DN150 @ MIN. 1.0% ALLOWED FOR IN DESIGN OF NEW COUNCIL STORMWATER MAIN

-4.95%

SERVICE DATA AS PER PDA
DETAILED SURVEY
48855LM-1E (DETAIL)

SW5/4

SW5/3

SW5/2

CH 250.00

ROAD AND STORMWATER PLAN - SHEET 5

SCALE 1:250 (A1)

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REV	ISSUE	DATE	APPROVAL
			DRAWN:
			CHECKED:
H	DEVELOPMENT APPROVAL	18/03/2025	DESIGN:
G	COUNCIL REVIEW	9/01/2025	CHECKED:
F	PLANNING APPROVAL	13/09/2024	VERIFIED:

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0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25m

PROJECT:	COVE HILL SUBDIVISION
ADDRESS:	COVE HILL ROAD BRIDGEWATER
CLIENT:	THE YOUNG GROUP
SHEET:	ROAD AND STORMWATER PLAN - SHEET 5
SCALE:	1:250
TOTAL SHEETS:	23
SIZE:	A1
PROJECT No:	24E99-38
SHEET:	C106
REV:	H

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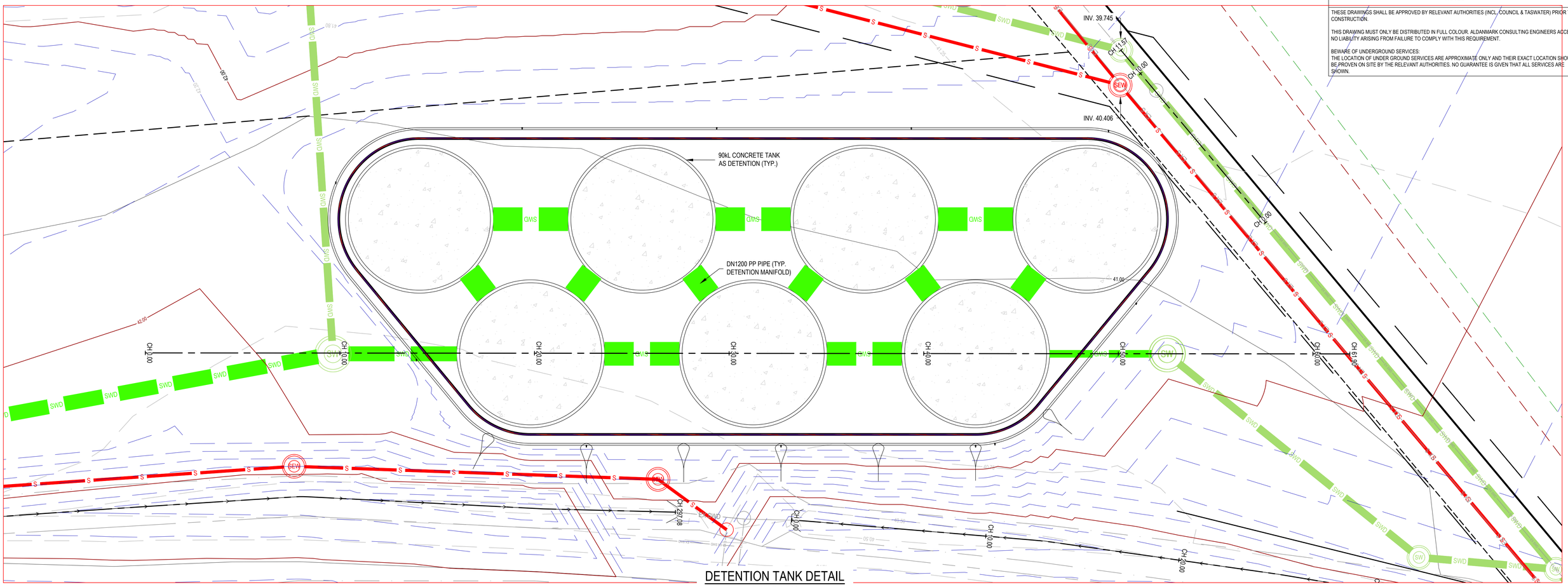
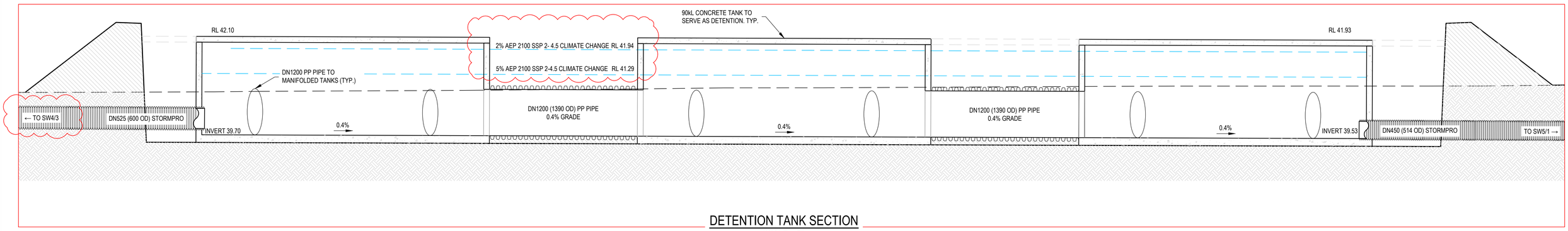


DETENTION TANK DETAIL
SCALE 1:100



DETENTION TANK SECTION
SCALE 1:50

DETENTION DETAIL PLAN - SHEET 1
SCALE 1:100 (A1)

REV	ISSUE	DATE	APPROVAL
			DRAWN:
			CHECKED:
			DESIGN:
B	COUNCIL RFI RESPONSE	13/08/2025	CHECKED:
A	DEVELOPMENT APPROVAL	18/06/2025	VERIFIED:

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PROJECT: COVE HILL SUBDIVISION

0 1 2 3 4 5 6 7 8 9 10m

ADDRESS: COVE HILL ROAD
BRIDGEWATER

CLIENT: THE YOUNG GROUP

SHEET: DETENTION DETAIL PLAN - SHEET 1

SCALE: 1:100 | TOTAL SHEETS: 23 | SIZE: A1

PROJECT No: 24E99-38 | SHEET: C107 | REV: B

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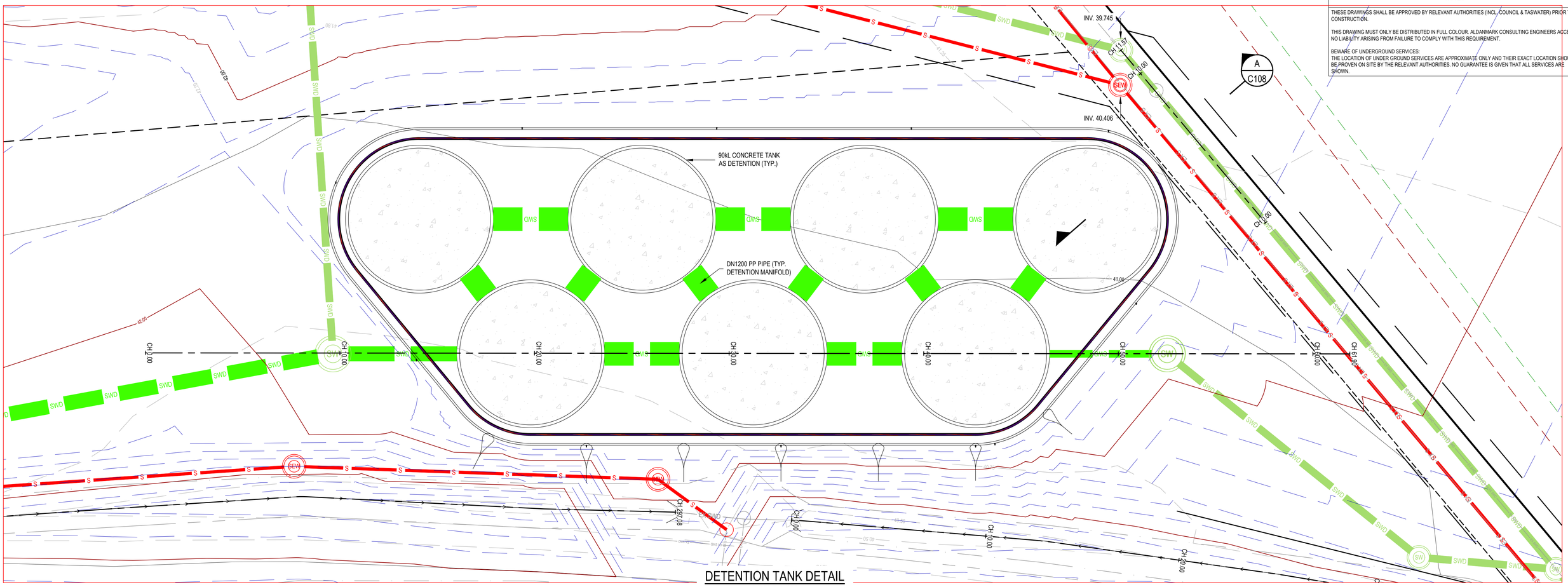
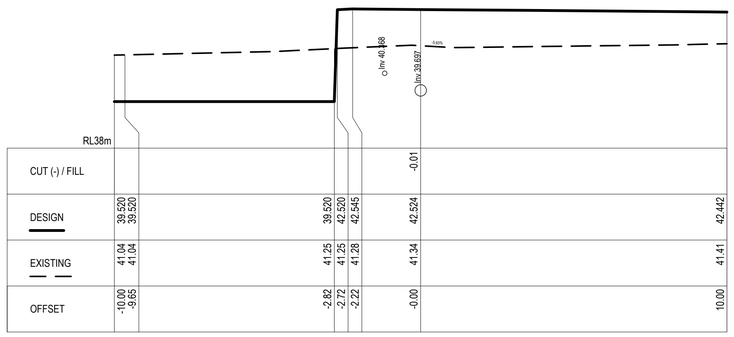


DETENTION TANK DETAIL

SCALE 1:100



Ch 6.00 m

TANK/SERVICES SECTION A C108

1:100

DETENTION DETAIL PLAN - SHEET 2

SCALE 1:100 (A1)

REV	ISSUE	DATE	APPROVAL
			DRAWN:
			CHECKED:
			DESIGN:
			CHECKED:
A	COUNCIL RFI RESPONSE	23/06/2025	VERIFIED:

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PROJECT: COVE HILL SUBDIVISION

0 1 2 3 4 5 6 7 8 9 10m

ADDRESS: COVE HILL ROAD
BRIDGEWATER

CLIENT: THE YOUNG GROUP

SHEET: DETENTION DETAIL PLAN - SHEET 2

SCALE: 1:100 | TOTAL SHEETS: 23 | SIZE: A1

PROJECT No: 24E99-38 | SHEET: C108 | REV: A

STORMWATER LEGEND

	STORMWATER LOT CONTROL
SWD	DN375 STORMPRO UNO
SWD	STORMWATER AS PER SA 2024/00003
EX SWD	EXISTING STORMWATER
	CONCRETE MANHOLE WITH CLASS 'D' LID AS PER TSD-SW02-V3
	INSPECTION OPENING
	SIDE ENTRY PIT TYPE 3, AS PER TSD-SW09-v3

SITE & EXISTING SERVICES LEGEND

26.0	DESIGN SURFACE CONTOUR (MAJ/MIN)
26.0	EXISTING SURFACE CONTOUR (MAJ/MIN)
	BOUNDARY
	EASEMENT
//	EXISTING FENCE
OH	EXISTING OVERHEAD POWER
E	EXISTING UNDERGROUND POWER
OP	EXISTING TELSTRA
FOC	EXISTING NBN
G	EXISTING GAS

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50 PVC

EXISTING SIDE ENTRY PIT
RL. 39.89
EXISTING INV. OUT 38.83

MIN 35mm ASPHALT (AC7)

1,050m

NEW DN450 RCP

TRENCH BACKFILL AND PAVEMENT
RE-INSTATEMENT AS PER TSD-G01.v3

EXISTING LV POWER

EXISTING SIDE ENTRY PIT
RL. 39.73
DESIGN INV. IN 38.42
EXISTING INV. OUT 38.57

TAYLOR CRESCENT SERVICES DETAIL SHEET

SCALE 1:100 (A1)

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REV	ISSUE	DATE	APPROVAL
			DRAWN:
			CHECKED:
			DESIGN:
			CHECKED:
0	FOR CONSTRUCTION	8/08/2025	VERIFIED:

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PROJECT: COVE HILL SUBDIVISION

0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25m

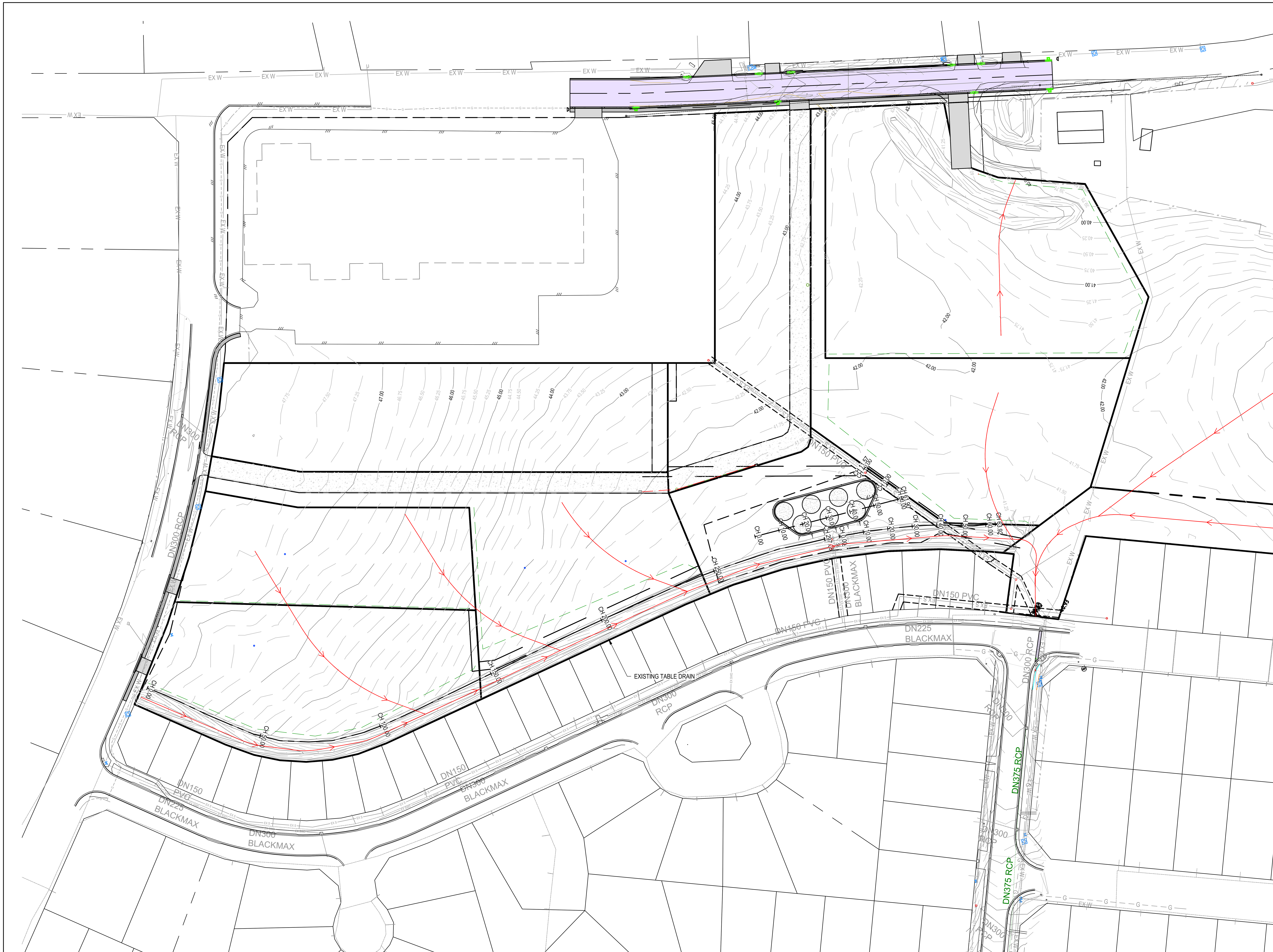
ADDRESS: COVE HILL ROAD
BRIDGEWATER

CLIENT: THE YOUNG GROUP

SHEET: TAYLOR CRESCENT SERVICES DETAIL SHEET

SCALE: 1:100 | TOTAL SHEETS: 23 | SIZE: A1

PROJECT No: 24E99-38 | SHEET: C109 | REV: 0



OVERLAND FLOW PATH PLAN

SCALE 1:750 (A1)

STORMWATER LEGEND

(red arrow line)	OVERLAND FLOW PATH

SITE & EXISTING SERVICES LEGEND

26.0	DESIGN SURFACE CONTOUR (MAJ/MIN)
26.0	EXISTING SURFACE CONTOUR (MAJ/MIN)
	BOUNDARY
	EASEMENT
//	EXISTING FENCE
OH	EXISTING OVERHEAD POWER
E	EXISTING UNDERGROUND POWER
OP — OP	EXISTING TELSTRA
FOC	EXISTING NBN
G — G	EXISTING GAS

PAVEMENT LEGEND

(lilac fill)	ASPHALT
(grey fill)	CONCRETE DRIVEWAY

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REV	ISSUE	DATE	APPROVAL	
			DRAWN:	
			CHECKED:	
			DESIGN:	
			CHECKED:	
A	COUNCIL RFI RESPONSE	31/07/2025	VERIFIED:	

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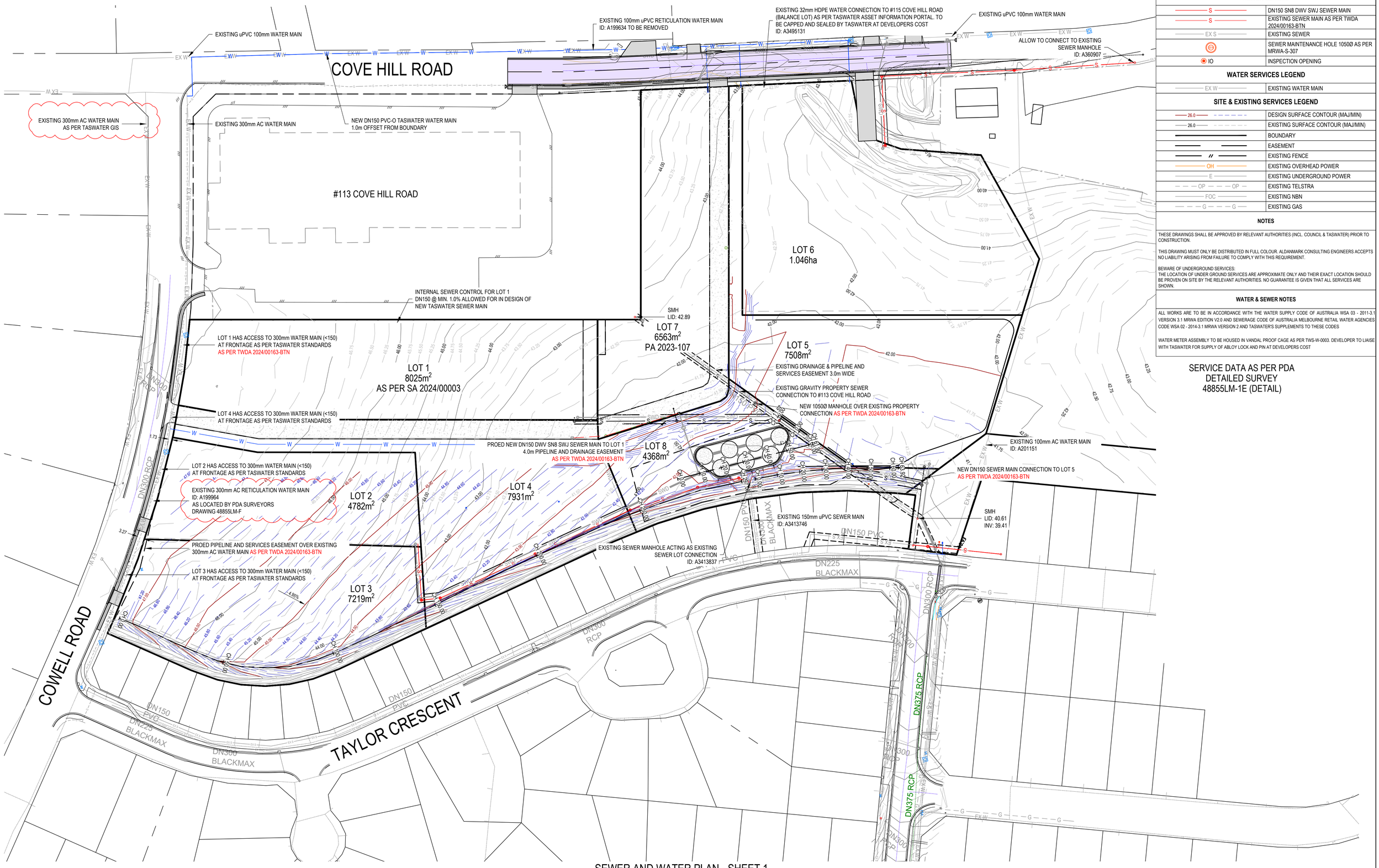
mail@aldanmark.com.au
www.aldanmark.com.au

PROJECT:	COVE HILL SUBDIVISION	ADDRESS:	COVE HILL ROAD BRIDGEWATER
	AS INDICATED	CLIENT:	THE YOUNG GROUP

SHEET:	OVERLAND FLOW PATH PLAN				
SCALE:	1:750	TOTAL SHEETS:	23	SIZE:	A1
PROJECT No:	24E99-38	SHEET:	C110	REV:	A



SEWER LEGEND

S	DN150 SN8 DWV SWJ SEWER MAIN
S	EXISTING SEWER MAIN AS PER TWDA 2024/00163-BTN
EX S	EXISTING SEWER
	SEWER MAINTENANCE HOLE 1050Ø AS PER MRWA-S-307
IO	INSPECTION OPENING

WATER SERVICES LEGEND

EX W	EXISTING WATER MAIN

SITE & EXISTING SERVICES LEGEND

26.0	DESIGN SURFACE CONTOUR (MAJ/MIN)
26.0	EXISTING SURFACE CONTOUR (MAJ/MIN)
	BOUNDARY
	EASEMENT
	EXISTING FENCE
OH	EXISTING OVERHEAD POWER
E	EXISTING UNDERGROUND POWER
OP	EXISTING TELSTRA
FOC	EXISTING NBN
G	EXISTING GAS

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WATER & SEWER NOTES

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WATER METER ASSEMBLY TO BE HOUSED IN VANDAL PROOF CAGE AS PER TWS-W-0003. DEVELOPER TO LIAISE WITH TASWATER FOR SUPPLY OF ABLOY LOCK AND PIN AT DEVELOPERS COST

SERVICE DATA AS PER PDA
DETAILED SURVEY
48855LM-1E (DETAIL)

SEWER AND WATER PLAN - SHEET 1

SCALE 1:750 (A1)

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REV	ISSUE	DATE	APPROVAL
			DRAWN: NM
I	COUNCIL RFI RESPONSE	23/06/2025	CHECKED: DE
H	DEVELOPMENT APPROVAL	18/03/2025	DESIGN: NM
G	COUNCIL REVIEW	9/01/2025	CHECKED: DE
F	PLANNING APPROVAL	13/09/2024	VERIFIED: MG

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PROJECT:	COVE HILL SUBDIVISION	ADDRESS:	COVE HILL ROAD BRIDGEWATER
	AS INDICATED	CLIENT:	THE YOUNG GROUP

SHEET:	SEWER AND WATER PLAN - SHEET 1		
SCALE:	1:750	TOTAL SHEETS:	23
PROJECT No:	24E99-38	SHEET:	C201
SIZE:	A1	REV:	I

LOT 1
8025m²
AS PER SA 2024/00003

LOT 7
6563m²
PA 2023-107

LOT 6
1.046ha

LOT 5
7508m²

LOT 4
7931m²

LOT 8
4368m²

EXISTING SEWER MANHOLE ON 113 COVE HILL ROAD
RL 42.89
INV. 41.92

TERMINAL MAINTENANCE SHAFT
AS PER MRWA-S-305

ALLOW TO CONNECT TO EXSTING 113 SEWER CONNECTION

1050Ø CONCRETE SEWER MANHOLE AS PER MRWA-S-307

NEW DN150 DWV SN8 SEWER PROPERTY CONNECTION TO SURFACE AS PER MRWA-S-301,302
AS PER TWDA 2024/00163-BTN

4.00m WIDE DRAINAGE & PIPELINE AND SERVICES EASEMENT
AS PER TWDA 2024/00163-BTN

1050Ø SEWER MANHOLE AS PER MRWA-S-307
AS PER TWDA 2024/00163-BTN

1050Ø SEWER MANHOLE AS PER MRWA-S-307
AS PER TWDA 2024/00163-BTN

EXISTING GRAVITY PROPERTY SEWER CONNECTION TO #113 COVE HILL ROAD

NEW 1050Ø MANHOLE OVER EXISTING SEWER MAIN. ALLOW TO REBENCH
AS PER TWDA 2024/00163-BTN

ALLOW TO SLEEVE SEWER MAINS WHERE ABOVE STORMWATER

1050Ø SEWER MANHOLE AS PER MRWA-S-307
AS PER TWDA 2024/00163-BTN

DN150 PVC

1050Ø SEWER MANHOLE AS PER MRWA-S-307 BY DEVELOPER AND DEVELOPERS COST

EXISTING SEWER MANHOLE ACTING AS EXISTING SEWER LOT CONNECTION
ID: A3413837
INV: 39.39

1050Ø SEWER MANHOLE AS PER MRWA-S-307 BY DEVELOPER AND DEVELOPERS COST

1050Ø SEWER MANHOLE AS PER MRWA-S-307 BY DEVELOPER AND DEVELOPERS COST

1050Ø SEWER MANHOLE AS PER MRWA-S-307 BY DEVELOPER AND DEVELOPERS COST

ALLOW SLEEVE SEWER MAINS WHERE ABOVE STORMWATER

EXISTING SEWER CONNECTION SERVICING 113 COVE HILL ROAD TO BE REMOVED INSIDE BALANCE LOT

DN150 TERMINAL MAINTENANCE SHAFT TO SURFACE AS PER SA 2024/00003

EXISTING 150mm uPVC SEWER MAIN
ID: A3413746

DN150 PVC

DN300 BLACKMAX

DN150 PVC

DN225 BLACKMAX

LOT 105 TAYLOR CRES
ID: 9885252

APPROX. SEWER ALIGNMENT. NO SURFACE DETAIL FOUND BY SURVEYOR

SMH
LID: 40.61
INV: 39.41

APPROX. SEWER ALIGNMENT. NO SURFACE DETAIL FOUND BY SURVEYOR

SMH
LID: 40.38
INV: 39.04

14.60m
13.16m

ALLOW TO REPLACE EXISTING DN150 AC MAIN WITH DN150 PVC-O WATER MAIN. MAINTAIN 150mm CLEARANCE TO NEW DN300 SW MAIN
AS PER TWDA 2024/00163-BTN

SEWER AND WATER PLAN - SHEET 2

SCALE 1:250 (A1)

SEWER LEGEND

S	DN150 SN8 DWV SWJ SEWER MAIN
S	EXISTING SEWER MAIN AS PER TWDA 2024/00163-BTN
EX S	EXISTING SEWER
	SEWER MAINTENANCE HOLE 1050Ø AS PER MRWA-S-307
IO	INSPECTION OPENING

WATER SERVICES LEGEND

EX W	EXISTING WATER MAIN

SITE & EXISTING SERVICES LEGEND

26.0	DESIGN SURFACE CONTOUR (MAJ/MIN)
26.0	EXISTING SURFACE CONTOUR (MAJ/MIN)
	BOUNDARY
	EASEMENT
	EXISTING FENCE
OH	EXISTING OVERHEAD POWER
E	EXISTING UNDERGROUND POWER
OP	EXISTING TELSTRA
FOC	EXISTING NBN
G	EXISTING GAS

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SERVICE DATA AS PER PDA
DETAILED SURVEY
48855LM-1E (DETAIL)

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REV	ISSUE	DATE	APPROVAL	
			DRAWN:	NM
			CHECKED:	DE
H	DEVELOPMENT APPROVAL	18/03/2025	DESIGN:	NM
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PROJECT: COVE HILL SUBDIVISION

ADDRESS: COVE HILL ROAD
BRIDGEWATER

CLIENT: THE YOUNG GROUP

0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25m

SHEET: SEWER AND WATER PLAN - SHEET 2

SCALE: 1:250

TOTAL SHEETS: 23

SIZE: A1

PROJECT No: 24E99-38

SHEET: C202

REV: H

LOT 1
8025m^2
AS PER SA 2024/00003

LOT 7
6563m^2
PA 2023-107

LOT 2
4782m^2

LOT 4
7931m^2

LOT 8
4368m^2

LOT 3
7219m^2

NEW DN150 DWV SN8 SEWER PROPERTY CONNECTION TO SURFACE AS PER MRWA-S-301,302
AS PER TWDA 2024/00163-BTN

1050Ø SEWER MANHOLE AS PER MRWA-S-307 BY DEVELOPER AND DEVELOPERS COST
AS PER TWDA 2024/00163-BTN

NEW DN150 DWV SN8 SEWER PROPERTY CONNECTION TO SURFACE AS PER MRWA-S-301,302

1050Ø SEWER MANHOLE AS PER MRWA-S-307 BY DEVELOPER AND DEVELOPERS COST

1050Ø SEWER MANHOLE AS PER MRWA-S-307 BY DEVELOPER AND DEVELOPERS COST

1050Ø SEWER MANHOLE AS PER MRWA-S-307 BY DEVELOPER AND DEVELOPERS COST

1050Ø SEWER MANHOLE AS PER MRWA-S-307 BY DEVELOPER AND DEVELOPERS COST

1050Ø SEWER MANHOLE AS PER MRWA-S-307 BY DEVELOPER AND DEVELOPERS COST

DN150

DN150 PVC

DN300 RCP

24.94

SEWER LEGEND

S	DN150 SN8 DWV SWJ SEWER MAIN
S	EXISTING SEWER MAIN AS PER TWDA 2024/00163-BTN
EX S	EXISTING SEWER
	SEWER MAINTENANCE HOLE 1050Ø AS PER MRWA-S-307
IO	INSPECTION OPENING

WATER SERVICES LEGEND

EX W	EXISTING WATER MAIN

SITE & EXISTING SERVICES LEGEND

26.0	DESIGN SURFACE CONTOUR (MAJ/MIN)
26.0	EXISTING SURFACE CONTOUR (MAJ/MIN)
	BOUNDARY
	EASEMENT
//	EXISTING FENCE
OH	EXISTING OVERHEAD POWER
E	EXISTING UNDERGROUND POWER
OP	EXISTING TELSTRA
FOC	EXISTING NBN
G	EXISTING GAS

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WATER & SEWER NOTES

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WATER METER ASSEMBLY TO BE HOUSED IN VANDAL PROOF CAGE AS PER TWS-W-0003. DEVELOPER TO LIAISE WITH TASWATER FOR SUPPLY OF ABLOY LOCK AND PIN AT DEVELOPERS COST

SEWER AND WATER PLAN - SHEET 3

SCALE 1:250 (A1)

DIAL BEFORE YOU DIG www.1100.com.au

REV	ISSUE	DATE	APPROVAL
			DRAWN:
			CHECKED:
H	DEVELOPMENT APPROVAL	18/03/2025	DESIGN:
G	COUNCIL REVIEW	9/01/2025	CHECKED:
F	PLANNING APPROVAL	13/09/2024	VERIFIED:

ALDANMARK CONSULTING ENGINEERS
Lower Ground
199 Macquarie Street
Hobart TAS 7000
03 6234 8666
mail@aldanmark.com.au
www.aldanmark.com.au

PROJECT: COVE HILL SUBDIVISION

ADDRESS: COVE HILL ROAD BRIDGEWATER

CLIENT: THE YOUNG GROUP

0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25m

SHEET: SEWER AND WATER PLAN - SHEET 3

SCALE: 1:250

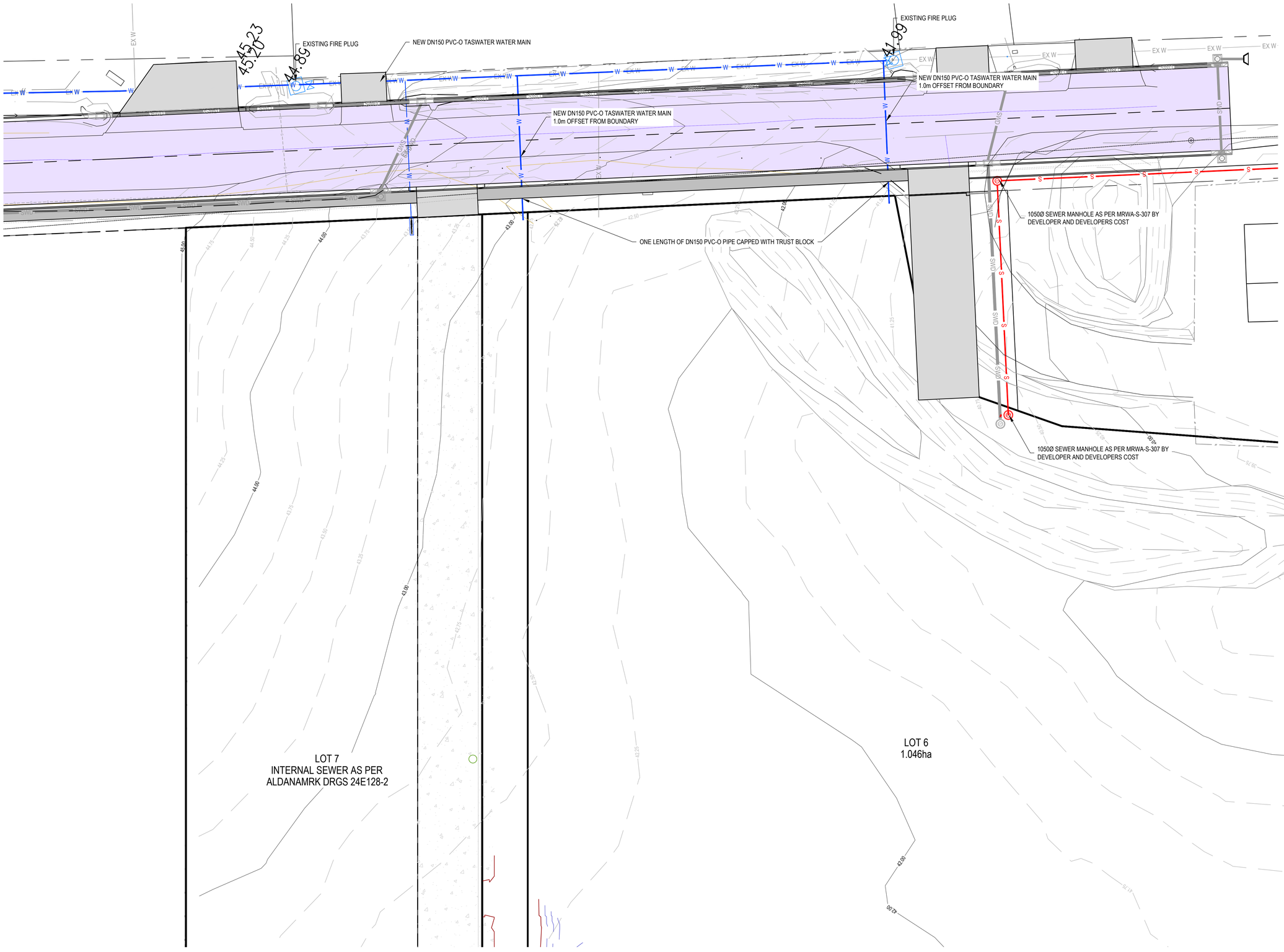
TOTAL SHEETS: 23

SIZE: A1

PROJECT No: 24E99-38

SHEET: C203

REV: H



SEWER LEGEND

S	DN150 SN8 DWV SWJ SEWER MAIN
S	EXISTING SEWER MAIN AS PER TWDA 2024/00163-BTN
EX S	EXISTING SEWER
	SEWER MAINTENANCE HOLE 1050Ø AS PER MRWA-S-307
IO	INSPECTION OPENING

WATER SERVICES LEGEND

EX W	EXISTING WATER MAIN

SITE & EXISTING SERVICES LEGEND

26.0	DESIGN SURFACE CONTOUR (MAJ/MIN)
26.0	EXISTING SURFACE CONTOUR (MAJ/MIN)
	BOUNDARY
	EASEMENT
	EXISTING FENCE
OH	EXISTING OVERHEAD POWER
E	EXISTING UNDERGROUND POWER
OP	EXISTING TELSTRA
FOC	EXISTING NBN
G	EXISTING GAS

NOTES

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BEWARE OF UNDERGROUND SERVICES:
THE LOCATION OF UNDER GROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT LOCATION SHOULD BE PROVEN ON SITE BY THE RELEVANT AUTHORITIES. NO GUARANTEE IS GIVEN THAT ALL SERVICES ARE SHOWN.

WATER & SEWER NOTES

ALL WORKS ARE TO BE IN ACCORDANCE WITH THE WATER SUPPLY CODE OF AUSTRALIA WSA 03 - 2011-3.1 VERSION 3.1 MRWA EDITION V2.0 AND SEWERAGE CODE OF AUSTRALIA MELBOURNE RETAIL WATER AGENCIES CODE WSA 02 - 2014-3.1 MRWA VERSION 2 AND TASWATER'S SUPPLEMENTS TO THESE CODES

WATER METER ASSEMBLY TO BE HOUSED IN VANDAL PROOF CAGE AS PER TWS-W-0003. DEVELOPER TO LIAISE WITH TASWATER FOR SUPPLY OF ABLOY LOCK AND PIN AT DEVELOPERS COST

SEWER AND WATER PLAN - SHEET 4

SCALE 1:250 (A1)

DIAL BEFORE YOU DIG www.1100.com.au

REV	ISSUE	DATE	APPROVAL
			DRAWN:
			CHECKED:
H	DEVELOPMENT APPROVAL	18/03/2025	DESIGN:
G	COUNCIL REVIEW	9/01/2025	CHECKED:
F	PLANNING APPROVAL	13/09/2024	VERIFIED:

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www.aldanmark.com.au

0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25m

PROJECT:	COVE HILL SUBDIVISION	ADDRESS:	COVE HILL ROAD BRIDGEWATER
CLIENT:	THE YOUNG GROUP	SHEET:	SEWER AND WATER PLAN - SHEET 4
SCALE:	1:250	TOTAL SHEETS:	23
SIZE:	A1	PROJECT No:	24E99-38
SHEET:	C204	REV:	H

COVE HILL ROAD

10500Ø SEWER MANHOLE AS PER MRWA-S-307 BY DEVELOPER AND DEVELOPERS COST

10500Ø SEWER MANHOLE AS PER MRWA-S-307 BY DEVELOPER AND DEVELOPERS COST

ALLOW TO CONNECT TO EXISTING TASWATER SEWER MANHOLE

10500Ø SEWER MANHOLE AS PER MRWA-S-307 BY DEVELOPER AND DEVELOPERS COST

LOT 6

SEWER LEGEND

S	DN150 SN8 DWV SWJ SEWER MAIN
S	EXISTING SEWER MAIN AS PER TWDA 2024/00163-BTN
EX S	EXISTING SEWER
	SEWER MAINTENANCE HOLE 1050Ø AS PER MRWA-S-307
IO	INSPECTION OPENING

WATER SERVICES LEGEND

EX W	EXISTING WATER MAIN

SITE & EXISTING SERVICES LEGEND

26.0	DESIGN SURFACE CONTOUR (MAJ/MIN)
26.0	EXISTING SURFACE CONTOUR (MAJ/MIN)
	BOUNDARY
	EASEMENT
//	EXISTING FENCE
OH	EXISTING OVERHEAD POWER
E	EXISTING UNDERGROUND POWER
OP OP	EXISTING TELSTRA
FOC	EXISTING NBN
G G	EXISTING GAS

NOTES

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WATER & SEWER NOTES

ALL WORKS ARE TO BE IN ACCORDANCE WITH THE WATER SUPPLY CODE OF AUSTRALIA WSA 03 - 2011-3.1 VERSION 3.1 MRWA EDITION V2.0 AND SEWERAGE CODE OF AUSTRALIA MELBOURNE RETAIL WATER AGENCIES CODE WSA 02 - 2014-3.1 MRWA VERSION 2 AND TASWATER'S SUPPLEMENTS TO THESE CODES

WATER METER ASSEMBLY TO BE HOUSED IN VANDAL PROOF CAGE AS PER TWS-W-0003. DEVELOPER TO LIAISE WITH TASWATER FOR SUPPLY OF ABLOY LOCK AND PIN AT DEVELOPERS COST

SEWER AND WATER PLAN - SHEET 5

SCALE 1:250 (A1)

DIAL BEFORE YOU DIG www.1100.com.au

REV	ISSUE	DATE	APPROVAL
			DRAWN:
			CHECKED:
H	DEVELOPMENT APPROVAL	18/03/2025	DESIGN:
G	COUNCIL REVIEW	9/01/2025	CHECKED:
F	PLANNING APPROVAL	13/09/2024	VERIFIED:

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mail@aldanmark.com.au
www.aldanmark.com.au

PROJECT: COVE HILL SUBDIVISION

0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25m

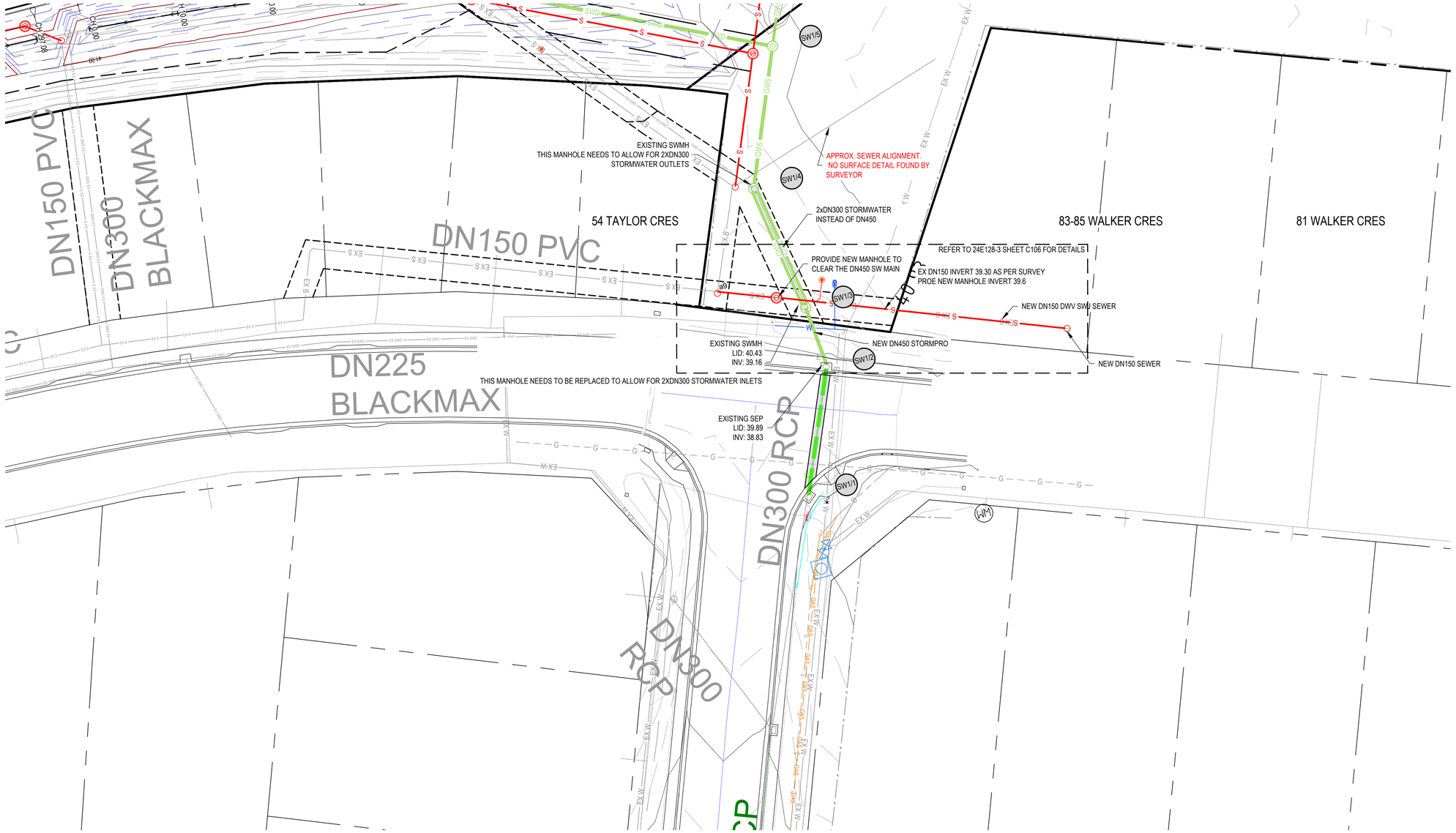
ADDRESS: COVE HILL ROAD
BRIDGEWATER

CLIENT: THE YOUNG GROUP

SHEET: SEWER AND WATER PLAN - SHEET 5

SCALE: 1:250 | TOTAL SHEETS: 23 | SIZE: A1

PROJECT No: 24E99-38 | SHEET: C205 | REV: H



STORMWATER LEGEND

	STORMWATER LOT CONTROL
SWD	DN375 STORMPRO UNO
SWD	STORMWATER AS PER SA 2024/00003
EX SWD	EXISTING STORMWATER
	CONCRETE MANHOLE WITH CLASS 'D' LID AS PER TSD-SW02-V3
	INSPECTION OPENING
	SIDE ENTRY PIT TYPE 3, AS PER TSD-SW09-v3

SITE & EXISTING SERVICES LEGEND

26.0	DESIGN SURFACE CONTOUR (MAJ/MIN)
26.0	EXISTING SURFACE CONTOUR (MAJ/MIN)
	BOUNDARY
	EASEMENT
	EXISTING FENCE
OH	EXISTING OVERHEAD POWER
E	EXISTING UNDERGROUND POWER
OP OP	EXISTING TELSTRA
FOC	EXISTING NBN
G G	EXISTING GAS

NOTES

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DIAL BEFORE YOU DIG www.1100.com.au

REV	ISSUE	DATE	APPROVAL
A	DEVELOPMENT APPROVAL	29/07/2025	

DRAWN: | CHECKED: | DESIGN: | CHECKED: | VERIFIED:

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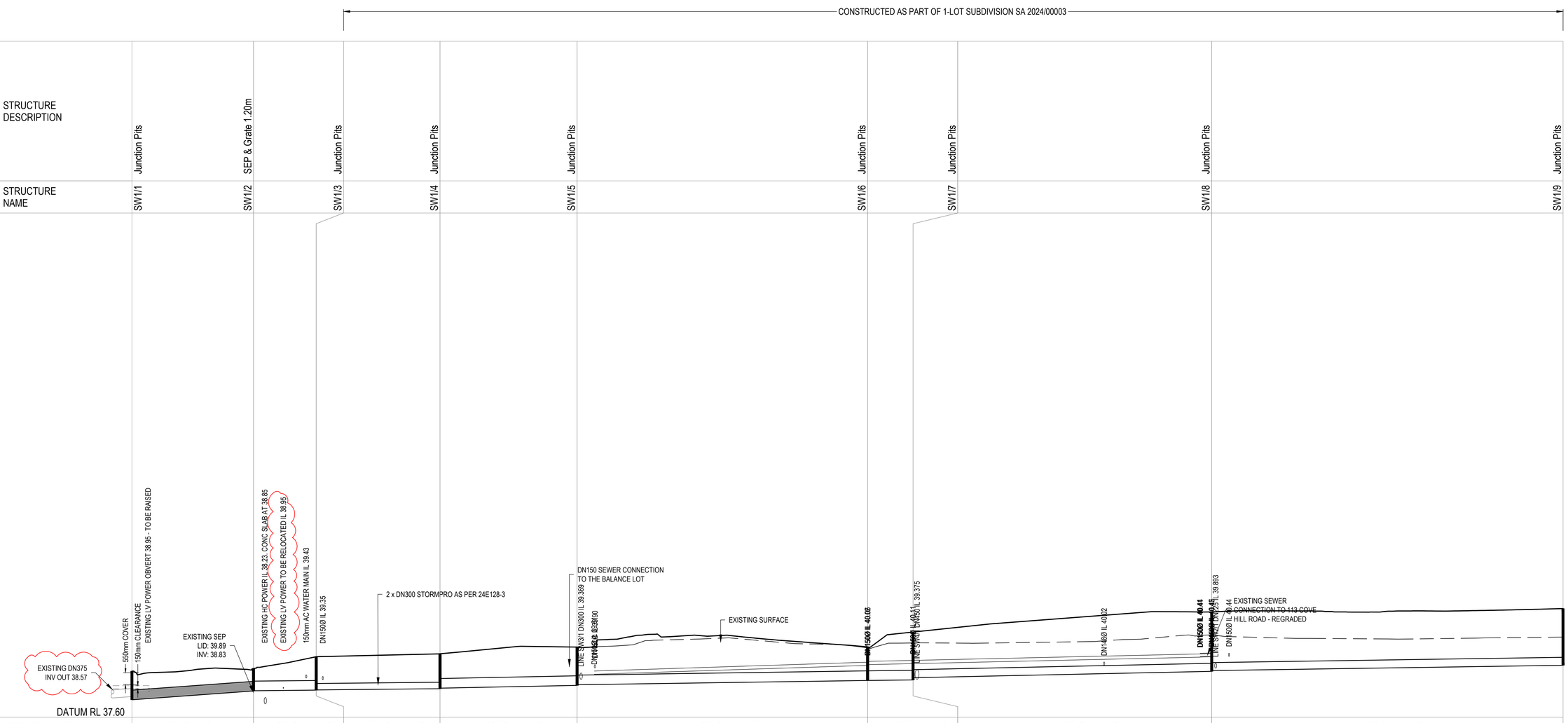
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25m

PROJECT:	COVE HILL SUBDIVISION	ADDRESS:	COVE HILL ROAD BRIDGEWATER	SHEET:	TAYLOR CRESCENT SERVICES DETAIL SHEET
CLIENT:	THE YOUNG GROUP	SCALE:	1:250	TOTAL SHEETS: 23	SIZE: A1
		PROJECT No:	24E99-38	SHEET: C206	REV: A

CONSTRUCTED AS PART OF 1-LOT SUBDIVISION SA 2024/00003



STRUCTURE DESCRIPTION	Junction Pits	SEP & Grate 1.20m	Junction Pits	Junction Pits	Junction Pits	Junction Pits	Junction Pits	Junction Pits	Junction Pits
STRUCTURE NAME	SW1/1	SW1/2	SW1/3	SW1/4	SW1/5	SW1/6	SW1/7	SW1/8	SW1/9
PIPE SIZE / MATRIAL	DN450 Class 3 RRJ	DN450 StormPRO	DN300 StormPRO	DN450 StormPRO	DN450 StormPRO	DN450 StormPRO	DN375 StormPRO	DN375 StormPRO	
GRADE %	2.90%	0.40%	0.40%	0.80%	0.59%	0.50%	0.85%	0.60%	
PIPE VELOCITY	3.61 m/s	3.64 m/s	4.07 m/s	3.65 m/s	3.27 m/s	3.27 m/s	1.24 m/s	0.31 m/s	
PIPE HGL CAPACITY	678 L/s	261 L/s	181 L/s	381 L/s	322 L/s	295 L/s	244 L/s	202 L/s	
DESIGN FLOW	574 L/s	574 L/s	575 L/s	576 L/s	516 L/s	516 L/s	136 L/s	34 L/s	
DEPTH TO INVERT	1.33	1.04	1.03 1.56	1.55 1.63	1.60 1.78	1.75 1.57	2.23	2.13 2.77	2.74 2.65
INVERT LEVEL	38.420	38.830	38.841 38.870	38.879 38.937	38.962 39.090	39.120 39.319	39.345	39.449 39.745	39.780 40.026
FINISHED SURFACE	39.75	39.87	40.43	40.56	40.87	40.89	41.58	42.52	42.67
EXISTING SURFACE	39.75	39.87	40.43	40.56	40.87	40.84	41.07	41.44	41.34
CHAINAGE	0.00	14.16	21.46	35.89	51.86	85.70	91.00	125.79	166.72
	14.16m		7.30m	14.43m	15.97m	33.84m	5.29m	34.79m	40.93m

DRAINAGE LONGITUNDINAL SECTION FOR LINE SW1
SCALES: HORIZONTAL 1:250 VERTICAL 1:100

REV	ISSUE	DATE	APPROVAL
			DRAWN: NM
			CHECKED: DE
			DESIGN: NM
			CHECKED: DE
0	FOR CONSTRUCTION	8/08/2025	VERIFIED: MG

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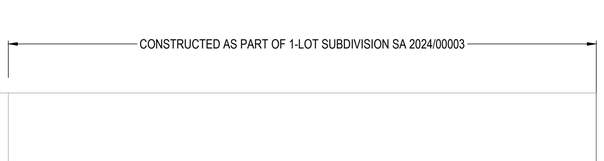
PROJECT: COVE HILL SUBDIVISION
ADDRESS: COVE HILL ROAD BRIDGEWATER
CLIENT: THE YOUNG GROUP
SHEET: STORMWATER LONG SECTIONS - SHEET 1
SCALE: AS INDICATED
TOTAL SHEETS: 23
SIZE: A1
PROJECT No: 24E99-38
SHEET: C301
REV: 0

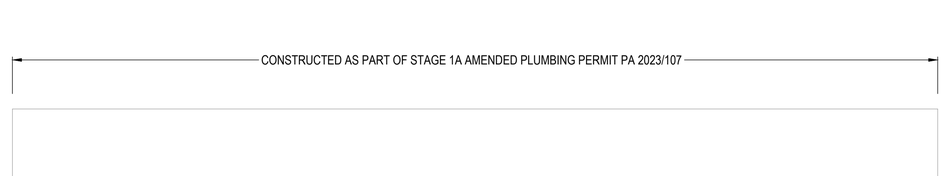
CONSTRUCTED AS PART OF 1-LOT SUBDIVISION SA 2024/00003

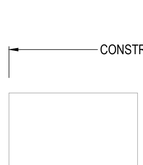
CONSTRUCTED AS PART OF STAGE 1A AMENDED PLUMBING PERMIT PA 2023/107

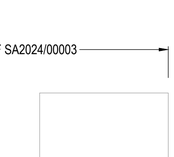
CONSTRUCTED AS PART OF SA2024/00003

STRUCTURE DESCRIPTION	Junction Pits		Junction Pits	Junction Pits		Junction Pits	Junction Pits		Junction Pits
STRUCTURE NAME	SW1/9		SW1/10	SW1/8		SW2/1	SW1/5	SW3/1	SW1/7	SW4/1









DATUM RL 39.20				DATUM RL 39.00			DATUM RL 38.50			
PIPE SIZE / MATRIAL	DN375 StormPRO			EXISTING CONNECTION TO 113 COVE HILL ROAD DN150 PVC			DN300 StormPRO		DN450 StormPRO	
GRADE %	0.60%			2.00%			0.60%		0.50%	
PIPE VELOCITY	0.32 m/s			2.54 m/s			1.04 m/s		2.49 m/s	
PIPE HGL CAPACITY	202 L/s			103 L/s			113 L/s		295 L/s	
DESIGN FLOW	35 L/s			102 L/s			73 L/s		392 L/s	
DEPTH TO INVERT	2.61		1.77	1.55		1.42	1.51	1.83	1.69	1.57
INVERT LEVEL	40.056		40.344	39.893		41.403	39.369	39.420	39.375	39.410
FINISHED SURFACE	42.67		42.11	41.44		42.83	40.87	41.25	41.07	40.98
EXISTING SURFACE	41.34		42.11	41.44		42.83	40.87	41.25	41.07	40.98
CHAINAGE	166.72	47.99m	214.71	0.00	75.52m	75.52	0.00	8.56m	0.00	7.05m

DRAINAGE LONGITUNDINAL SECTION FOR LINE SW1
SCALES: HORIZONTAL 1:250 VERTICAL 1:100

DRAINAGE LONGITUNDINAL SECTION FOR LINE SW2
SCALES: HORIZONTAL 1:250 VERTICAL 1:100

DRAINAGE LONGITUNDINAL SECTION FOR LINE SW3

DRAINAGE LONGITUNDINAL SECTION FOR LINE SW4

REV	ISSUE	DATE	APPROVAL
			DRAWN: NM
			CHECKED: DE
			DESIGN: NM
G	COUNCIL REVIEW	9/01/2025	CHECKED: DE
F	PLANNING APPROVAL	13/09/2024	VERIFIED: MG

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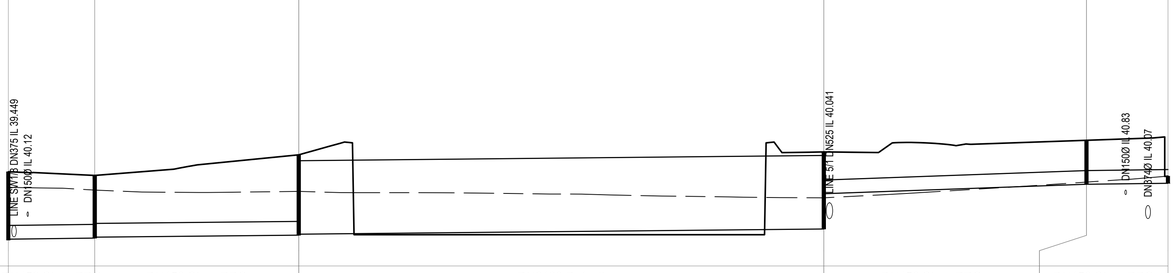
PROJECT: COVE HILL SUBDIVISION
ADDRESS: COVE HILL ROAD BRIDGEWATER
CLIENT: THE YOUNG GROUP
SHEET: STORMWATER LONG SECTIONS - SHEET 2
SCALE: AS INDICATED
TOTAL SHEETS: 23
SIZE: A1
PROJECT No: 24E99-38
SHEET: C302
REV: G

CONSTRUCTED AS PART OF STAGE 1A AMENDED PLUMBING PERMIT PA 2023/107

STRUCTURE DESCRIPTION	Junction Pits	Junction Pits	Junction Pits	Junction Pits	Junction Pits	Junction Pits
STRUCTURE NAME	SW1/7	SW4/1	SW4/2	SW4/3	SW4/4	SW4/5

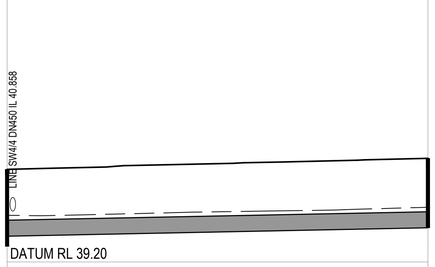


DATUM RL 38.50

PIPE SIZE / MATRIAL	DN450 StormPRO		DN450 StormPRO	DN2400 Default	DN450 StormPRO	DN450 StormPRO
GRADE %	0.50%		0.40%	0.40%	1.44%	0.50%
PIPE VELOCITY	2.58 m/s		2.59 m/s	STORMWATER DETENTION SYSTEM	0.15 m/s	0.15 m/s
PIPE HGL CAPACITY	295 L/s		261 L/s		523 L/s	294 L/s
DESIGN FLOW	406 L/s		409 L/s	420 L/s	24 L/s	24 L/s
DEPTH TO INVERT	2.20	2.05	2.02 2.62	2.59 2.52	1.37 1.44	0.23
INVERT LEVEL	39.375	39.410	39.440 39.507	39.537 39.708	40.858 41.167	41.200
FINISHED SURFACE	41.58	41.46	42.13	42.22	42.60	41.43
EXISTING SURFACE	41.07	40.98	40.93	40.73	41.24	41.43
CHAINAGE	0.00	7.05	23.71	66.56	88.00	94.65
	7.05m		16.65m	42.85m	21.44m	6.65m

DRAINAGE LONGITUNDINAL SECTION FOR LINE SW4
SCALES: HORIZONTAL 1:250 VERTICAL 1:100

STRUCTURE DESCRIPTION	Junction Pits
STRUCTURE NAME	SW4/3	5/1



DATUM RL 39.20

PIPE SIZE / MATRIAL	DN525 StormPRO
GRADE %	0.80%
PIPE VELOCITY	1.98 m/s
PIPE HGL CAPACITY	573 L/s
DESIGN FLOW	425 L/s
DEPTH TO INVERT	2.18	2.27
INVERT LEVEL	40.041	40.316
FINISHED SURFACE	42.22	42.58
EXISTING SURFACE	40.73	40.98
CHAINAGE	0.00	34.35
	34.35m

DRAINAGE LONGITUNDINAL SECTION FOR LINE 5
SCALES: HORIZONTAL 1:250 VERTICAL 1:100

REV	ISSUE	DATE	APPROVAL
			DRAWN: NM
			CHECKED: 0
			DESIGN: NM
B	PLANNING APPROVAL	23/04/2024	CHECKED: 0
A	PLANNING APPROVAL	9/04/2024	VERIFIED: 0

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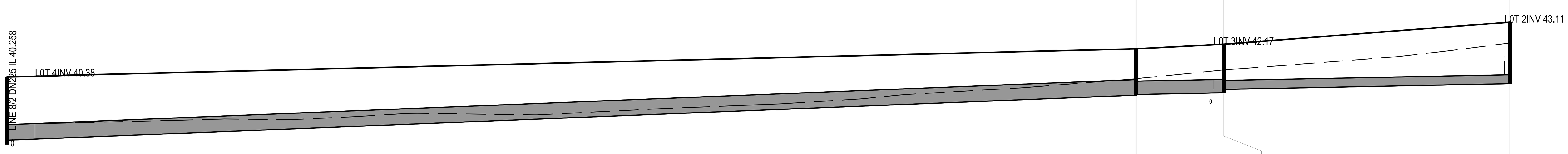
PROJECT: COVE HILL SUBDIVISION
ADDRESS: COVE HILL ROAD BRIDGEWATER
CLIENT: THE YOUNG GROUP
SHEET: STORMWATER LONG SECTIONS- SHEET 1
SCALE: AS INDICATED
TOTAL SHEETS: ~
SIZE: A1
PROJECT No: 24 E 99 - 38
SHEET: C301
REV: B

STRUCTURE DESCRIPTION	Junction Pits		Junction Pits		Junction Pits		Junction Pits
STRUCTURE NAME	SW5/1		SW5/2		SW5/3		SW5/4



PIPE SIZE / MATRIAL		DN525 StormPRO		DN450 StormPRO		DN300 StormPRO	
GRADE %		1.60%		0.80%		0.80%	
PIPE VELOCITY		1.22 m/s		1.67 m/s		1.50 m/s	
PIPE HGL CAPACITY		832 L/s		381 L/s		132 L/s	
DESIGN FLOW		262 L/s		263 L/s		106 L/s	
DEPTH TO INVERT	2.12		1.56 1.54		1.63 1.52		2.06
INVERT LEVEL	40.460		41.972 41.994		42.053 42.167		42.358
FINISHED SURFACE	42.58		43.53		43.68		44.42
EXISTING SURFACE	40.98		42.52		42.82		43.71
CHAINAGE	34.35	94.49m	128.83	7.33m	136.16	23.93m	160.09

DRAINAGE LONGITUNDINAL SECTION FOR LINE SW5
SCALES: HORIZONTAL 1:250 VERTICAL 1:100

REV	ISSUE	DATE	APPROVAL	
			DRAWN:	
			CHECKED:	
H	COUNCIL RFI RESPONSE	31/07/2025	DESIGN:	
G	COUNCIL REVIEW	9/01/2025	CHECKED:	
F	PLANNING APPROVAL	13/09/2024	VERIFIED:	

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PROJECT: COVE HILL SUBDIVISION

ADDRESS: COVE HILL ROAD BRIDGEWATER

CLIENT: THE YOUNG GROUP

SHEET: STORMWATER LONG SECTIONS - SHEET 4

SCALE: AS INDICATED | TOTAL SHEETS: 23 | SIZE: A1

PROJECT No: 24E99-38 | SHEET: C304 | REV: H

STRUCTURE NAME	LC-6/1	LC-6/2	LC-6/3	LC-6/4	LC-6/5	LC-6/6	LC-6/7	LC-6/8	LC-6/9	LC-6/10	LC-6/11
PIPE SIZE / MATRIAL	DN150 PVC		DN150 PVC	DN150 PVC	DN150 PVC	DN150 PVC	DN150 PVC	DN150 PVC	DN150 PVC	DN150 PVC	DN150 PVC
GRADE %	1.00%		1.20%	1.20%	5.08%	2.93%	1.20%	3.33%	3.44%	1.20%	1.20%
DESIGN FLOW											
DEPTH TO INVERT	2.23	2.22	1.82	0.60	0.60	0.60	0.60	0.60	0.60	1.61	1.80
INVERT LEVEL	38.414	38.416	38.555	38.933	38.944	38.969	38.993	39.268	39.468	39.884	40.149
FINISHED SURFACE	40.64	40.64	40.37	39.53	39.54	39.57	39.59	39.87	40.07	41.49	41.95
EXISTING SURFACE	40.64	40.64	40.37	39.53	39.54	39.57	39.59	39.87	40.07	41.49	41.95
CHAINAGE	0.00	0.20	11.83	43.32	43.54	44.37	46.38	54.65	60.45	95.13	117.21
	0.20m		11.63m	31.48m	0.22m	0.84m	2.01m	8.27m	5.79m	34.69m	22.08m

DRAINAGE LONGITUNDINAL SECTION FOR LINE LC-6

SCALES: HORIZONTAL 1:250 VERTICAL 1:100

REV		DATE	
			DRAWN:
			CHECKED:
			DESIGN:
			CHECKED:
A	COUNCIL RFI RESPONSE	23/06/2025	VERIFIED:
REV	ISSUE	DATE	APPROVAL

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PROJECT: COVE HILL SUBDIVISION

ADDRESS: COVE HILL ROAD
BRIDGEWATER

CLIENT: THE YOUNG GROUP

SHEET: STORMWATER LONG SECTIONS-LOT 6 CONTROL

SCALE: AS INDICATED

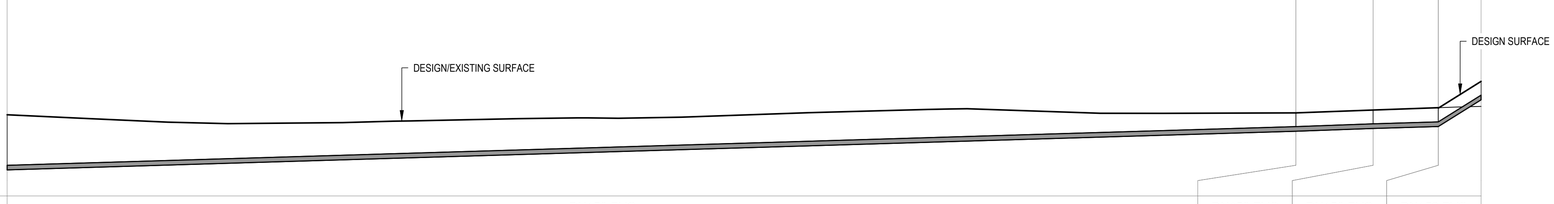
TOTAL SHEETS: 23

SIZE: A1

PROJECT No: 24E99-38

SHEET: C305

REV: A



STRUCTURE NAME	LC-6/11							LC-6/12	LC-6/13	LC-6/14	LC-6/15
DATUM RL 39.30											
PIPE SIZE / MATRIAL	DN150 PVC							DN150 PVC	DN150 PVC	DN150 PVC	
GRADE %	1.20%							1.45%	1.20%	24.99%	
DESIGN FLOW											
DEPTH TO INVERT	1.80						0.60	0.60	0.60	0.60	
INVERT LEVEL	40.149						41.411	41.503	41.567	42.439	
FINISHED SURFACE	41.95						42.01	42.10	42.17	43.04	
EXISTING SURFACE	41.95						42.01	42.10	42.18	42.22	
CHAINAGE	117.21						222.40	228.71	234.03	237.52	
	105.19m							6.31m	5.32m	3.49m	

DRAINAGE LONGITUNDINAL SECTION FOR LINE LC-6
SCALES: HORIZONTAL 1:250 VERTICAL 1:100

REV	ISSUE	DATE	APPROVAL
			DRAWN:
			CHECKED:
			DESIGN:
			CHECKED:
A	COUNCIL RFI RESPONSE	23/06/2025	VERIFIED:

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PROJECT: COVE HILL SUBDIVISION

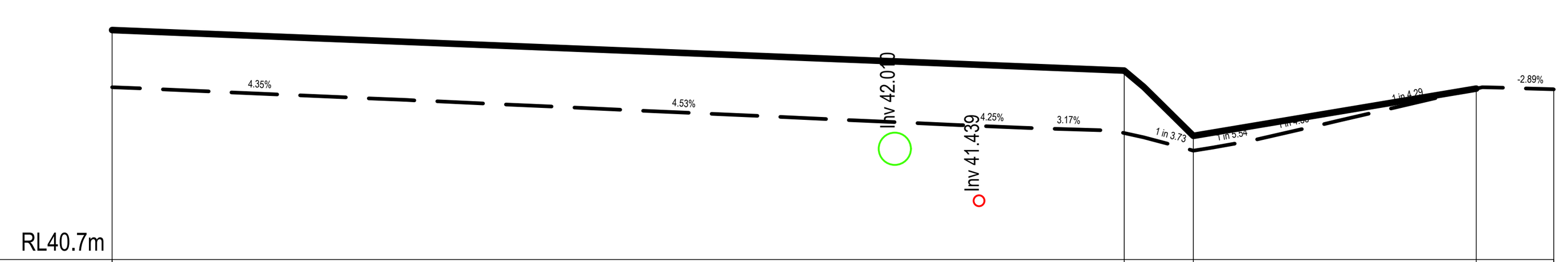
ADDRESS: COVE HILL ROAD
BRIDGEWATER

CLIENT: THE YOUNG GROUP

SHEET: STORMWATER LONG SECTIONS-LOT 6 CONTROL

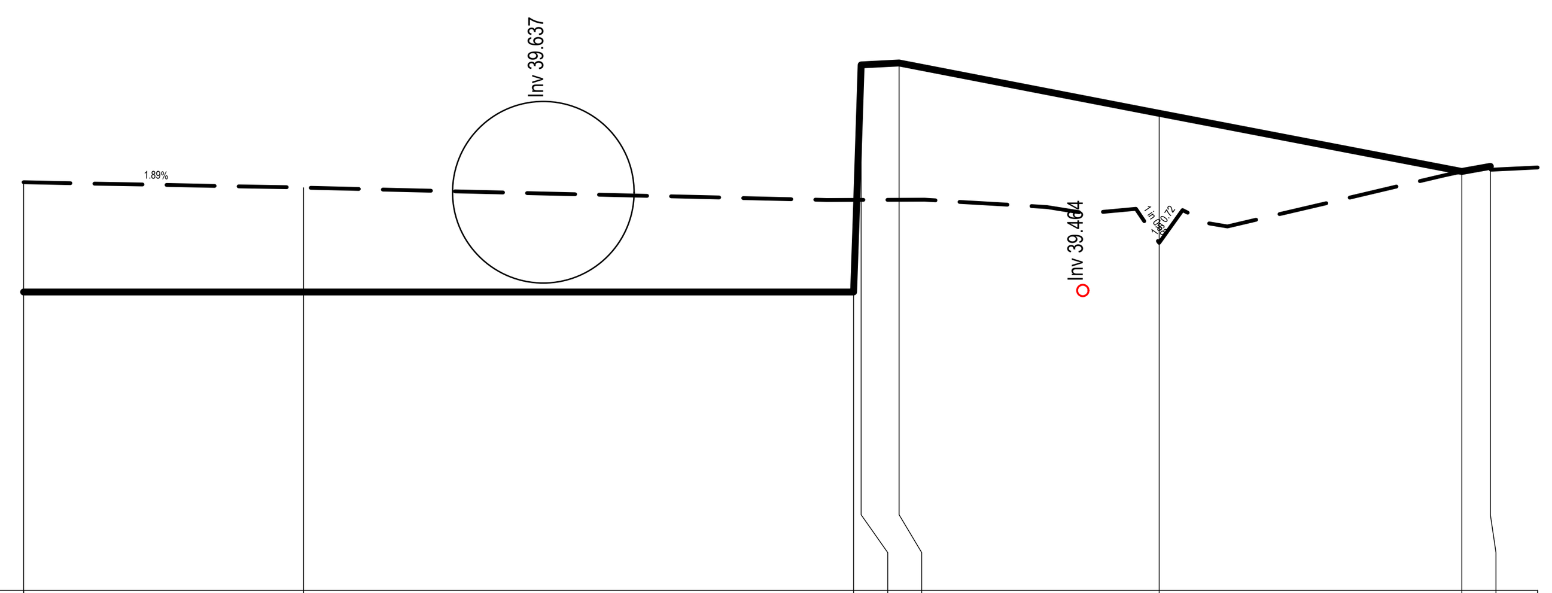
SCALE: AS INDICATED | TOTAL SHEETS: 23 | SIZE: A1

PROJECT No: 24E99-38 | SHEET: C306 | REV: A



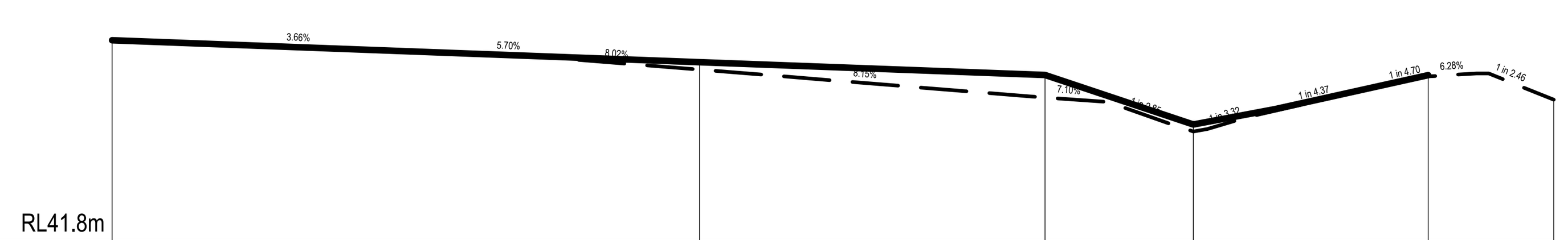
CUT (-) / FILL			0.21		
DESIGN	43.877	43.317	42.413	43.068	
EXISTING	43.09	42.45	42.21	43.07	43.06
OFFSET	-15.00	-0.96	-0.00	3.92	5.00

Ch 150.00 m



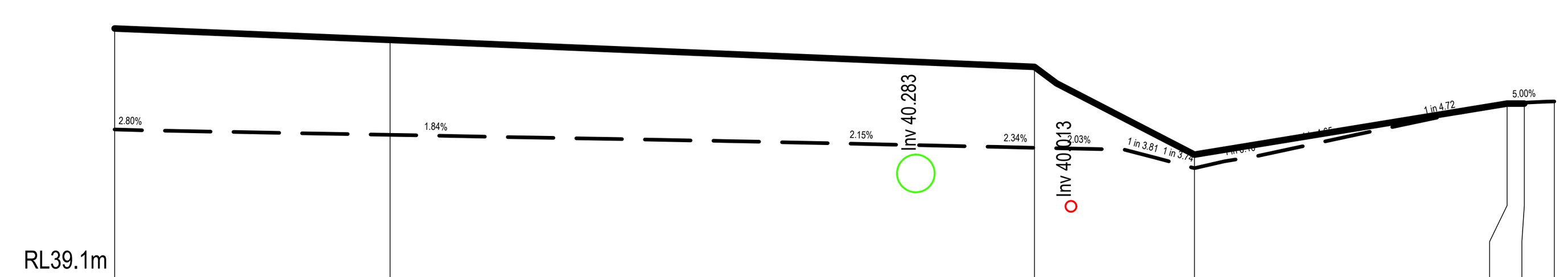
CUT (-) / FILL									
DESIGN	39.520	39.520	39.520	42.520	42.545	41.880	41.113	41.180	
EXISTING	40.97	40.90	40.74	40.74	40.74	40.17	41.11	41.14	41.17
OFFSET	-15.00	-11.30	-4.04	-3.94	-3.44	0.00	4.00	4.37	5.00

Ch 297.08 m



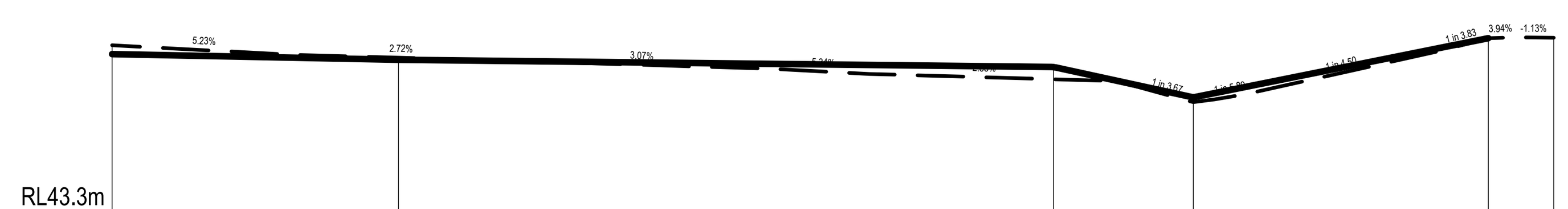
CUT (-) / FILL				0.10		
DESIGN	44.583	44.279	44.101	43.413	44.100	
EXISTING	44.59	44.18	43.79	43.32	44.08	43.76
OFFSET	-15.00	-6.85	-2.06	-0.00	3.26	5.00

Ch 100.00 m



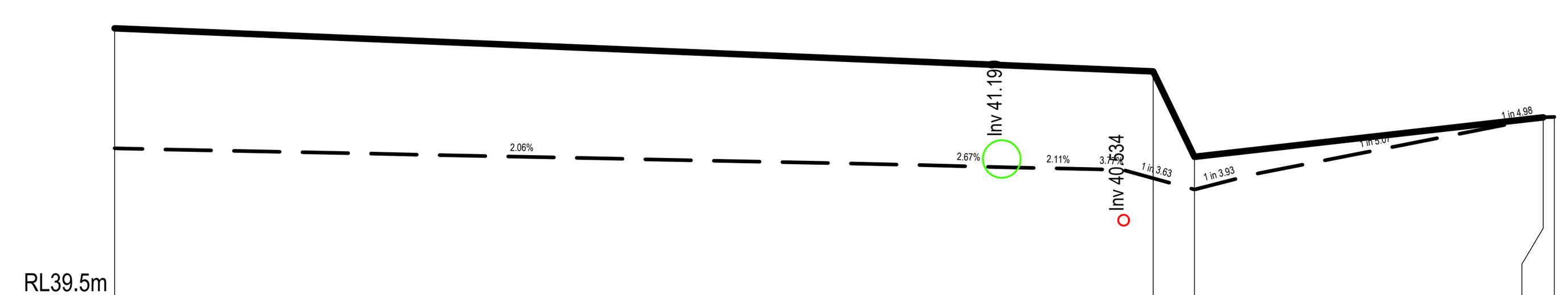
CUT (-) / FILL				0.19			
DESIGN	42.560	42.403	42.028	40.808	41.518	41.518	
EXISTING	41.16	41.08	40.90	40.62	41.52	41.53	41.55
OFFSET	-15.00	-11.17	-2.22	0.00	4.34	4.58	5.00

Ch 250.00 m



CUT (-) / FILL				0.07		
DESIGN	45.515	45.436	45.336	44.916	45.734	
EXISTING	45.64	45.46	45.17	44.85	45.73	45.74
OFFSET	-15.00	-11.03	-1.94	-0.00	4.09	5.00

Ch 50.00 m



CUT (-) / FILL			0.45		
DESIGN	43.279	42.679	41.492	42.041	
EXISTING	41.61	41.19	41.04	42.04	42.05
OFFSET	-15.00	-0.57	0.00	4.84	5.00

Ch 200.00 m

SECTIONS 01

SCALE 1:100 (A1)

REV	ISSUE	DATE	APPROVAL	
			DRAWN:	NM
			CHECKED:	DE
			DESIGN:	NM
			CHECKED:	DE
-	-	-	VERIFIED:	MG

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PROJECT: COVE HILL SUBDIVISION

0 1 2 3 4 5 6 7 8 9 10m

ADDRESS: COVE HILL ROAD BRIDGEWATER

CLIENT: THE YOUNG GROUP

SHEET: CROSS SECTIONS - SHEET 1

SCALE: AS INDICATED | TOTAL SHEETS: 20 | SIZE: A1

PROJECT No: 24 E 99 - 38 | SHEET: C202 | REV: A

STORMWATER REPORT

Cove Hill Subdivision
8 Lot Subdivision
Cove Hill Road
Bridgewater TAS 7030

250812 SR 24 E 99 - 38 REV E 8 Lot Subdivision

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ABN 79 097 438 714

PROJECT INFORMATION

DOCUMENT TITLE	Stormwater Report - 24 E 99 - 38 Rev D
PROJECT LOCATION	Cove Hill Road, Bridgewater TAS 7030
CLIENT ORGANISATION	The Young Group
CLIENT REFERENCE	Cove Hill Subdivision – 8 Lot Subdivision
CLIENT CONTACT/S	Trent Young
ALDANMARK REFERENCE	24 E 99 - 38
ALDANMARK CONTACT/S	Nathan Morey (nmorey@aldanmark.com.au)

DOCUMENT CONTROL

REVISION	DATE	REVISION DETAILS	PREPARED	VERIFIED	APPROVED
A	8/08/2024	Preliminary	NM	~	~
B	4/09/2024	Development Approval	NM	~	~
C	18/03/2025	Development Approval	NM	~	~
D	23/06/2025	Development Approval	GR	NM	NM
E	13/08/2025	Development Approval	GR	NM	NM

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PROJECT SUMMARY

Aldanmark Engineers were engaged by The Young Group to prepare a stormwater report and engineering plans for a proposed industrial subdivision at 115 Cove Hill Road. The site has existing Planning and Plumbing Permits that were considered in the design philosophy.

The proposed subdivision includes stormwater infrastructure that is approved under Brighton Council Pemit SA 2024/00003 and Plumbing Permit for "Point B" (PA 2023-107).

The stormwater design has considered Brighton Council's input and advice surrounding existing downstream infrastructure capacity. The current discharge point is not suitable for this development and all stormwater needs to be directed to the intersection of Tayor Crescent and Bisdee Road.

The engineering design includes an end of line detention system on proposed Council Land, aligning with the existing Plumbing Permit (PA 2023-107) detention basin approval. The engineering design for Point B (Aldanmark Reference 24E128-2) does not include the end of line detention system to avoid confusion between proposed private and public infrastructure.

A Drains IL-CL model was created to analyze the existing and proposed development.

TAYLOR CRESCENT STORMWATER CONNECTION

Bottom of tanks RL 39.53 *180mm orifice RL 39.53*

Top of tanks RL 41.94 *300mm overflow RL 41.85*

AEP DESIGN STORM	PRE-DEVELOPMENT FLOW	POST-DEVELOPMENT FLOW	RL OF DETENTION SYSTEM	FREEBOARD IN DETENTION SYSTEM
5% AEP	183 L/s	167 L/s	40.82	1110mm
2% AEP	289 L/s	232 L/s*	41.25	680mm
1% AEP	333 L/s	269 L/s	41.60	330mm

*Includes Lot 5 with no detention control (157 L/s)

With Climate Change (SSP 2 – 4.5, 2100 Yr)

AEP DESIGN STORM	PRE-DEVELOPMENT FLOW	POST-DEVELOPMENT FLOW	RL OF DETENTION SYSTEM	FREEBOARD IN DETENTION SYSTEM
5% AEP	183 L/s (no cc)	220	41.29	640mm
2% AEP	289 L/s (no cc)	290*	41.94	0mm

*Includes Lot 5 with detention control

Due to site topography Lot 5 cannot be discharged to the proposed detention system and hence, prior to the sealing of the Final Plan of Survey an agreement pursuant to Part 5 of the Land Use Planning and Approvals Act 1993 must be entered into for Lot 5, to the effect that the owner covenants and agrees with the Brighton Council that –

a) Prior to connecting to the public stormwater system each lot must provide onsite stormwater detention such that peak flows from the site to the public stormwater system for up to a 2% AEP event are limited to pre-existing.

b) Prior to connecting to the public stormwater system each lot must provide on-site treatment of stormwater to meet the following:
    - Standard Stormwater Treatment Requirements specified in Table 3 Water Quality Treatment Targets in DEP AND LGAT TASMANIAN STORMWATER POLICY GUIDANCE AND STANDARDS FOR DEVELOPMENT 2021 V1.

    - Runoff from the developments must be 'visually free' of hydrocarbons prior to entering the public stormwater system.

Proposed Lot 1 has been considered, designed and approved under Council SA 2024/00003.

1. INTRODUCTION

Aldanmark have been engaged by The Young Group to provide a stormwater report and assessment for the proposed 8 lot subdivision development at Cove Hill Road.

The development has been designed generally in accordance the stormwater quantity and quality requirements of the Council Planning Permit SA 2024/00003 dated 27th June 2024:

- Condition 31
    a) *The piped system within the subdivision must be able to accommodate a storm with a 2% AEP when the land serviced by the system is fully developed*
    b) *The public stormwater system downstream of the development must be upgraded to accommodate any increase in peak flows from the subdivision once the land is fully developed for up to a 2% AEP rainfall event*

Aldanmark Engineers have maintained the same design approach as detailed in the previously approved engineering plans and stormwater report by ADG dated 7th March 2024. Aldanmark recognise the previous work completed by ADG and Brighton Council and want to ensure that the same engineering outcome is achieved that is fair and reasonable to both The Young Group and Brighton Council.

Council have noted that there are downstream restrictions in the current stormwater network, resulting in surcharging stormwater in private property. The proposed design nominates stormwater outflow from each lot, to be aligned with the current Plumbing Approval (PA 2023-107) and 2%AEP outflow on Bisdee Road.

The proposed subdivision plan by PDA is attached as an Appendix to this document.

This report aims to demonstrate that the development in its entirety at Cove Hill Road complies with the stormwater quality and quantity requirements.

2. SITE OVERVIEW

2.1 EXISTING SITE

The existing site is vacant with low shrub and bare clay-loam soil. The site has a current Plumbing Approval, PA 2023-107, dated 28/3/2024 and 1-lot subdivision approval SA2024/00003. There is no negative impact to the current approval when considering these subdivision works.

The existing topography slopes from Northwest to Southeast at an approximate grade of 3%.

The development site has frontages to:

- Cowle Road to the West
- Cove Hill Road to the North
- Residential development along Taylor Crescent to the South

2.2 EXISTING STORMWATER INFRASTRUCTURE

The development site has the following stormwater infrastructure visible from site inspection and aerial imagery:

- Legal Point of Discharge 01 - Open table drain along the Southern Boundary that conveys stormwater to culverts and stormwater mains through No.46 Taylor Crescent.
- Legal Point of Discharge 02 - Council 225mm stormwater main servicing #113 Cove Hill Road, connecting to Brighton Council infrastructure on Taylor Cres.
- Legal Point of Discharge 03 – Table drain and culverts along Cove Hill Road

3. STORMWATER QUANTITY

A Drains model was created to assess the pre-existing stormwater flows ensuring that the future subdivision outflows will not have a negative impact on existing Council infrastructure. The Drains model considered the previously approved stormwater report by ADG to ensure Councils expectations were met.

The Initial Loss / Continuing Loss (IL-CL) loss model was applied within DRAINS. The parameters for the loss model were retrieved from the ARR Data Hub website (https://data.arr-software.org/).

3.1 DESIGN RAINFALL DEPTHS

Rainfall depths for the model were retrieved from the Bureau of Meteorology website (http://www.bom.gov.au/water/designRainfalls/revised-ifd/). Temporal patterns, pre-burst rainfall depths and rural losses were sourced from the ARR Data Hub website.

Table 1: IFD Design Rainfall Depths

Duration (minutes)	2% AEP (mm/hr)	1% AEP (mm/hr)
1	169	195
5	103	117
10	78.7	91.1
20	54.6	63.2
25	47.8	55.1
30	42.7	49.0
45	32.9	37.5
60	27.3	30.9
90	21.1	23.6
120	17.6	23.6

3.2 STORM LOSSES

Rural initial and continuing losses were sourced from the ARR Data Hub website. Impervious area losses have been set as per advice in ARR 2019 Book 5 Chapter 3 Section 3.5.3.1.2. Table 2 shows the storm losses assumed in the DRAINS model.

Table 2: Assumed Storm Losses

Impervious Area Initial Losses (mm)	1
Impervious Area Continuing Losses (mm/hr)	0
Pervious Area Initial Losses (mm)	26
Pervious Area Continuing Losses (mm/hr)	4.3

3.3 EXISTING INTERNAL CATCHMENTS

Tables 3 describes the internal site catchment areas for the pre-development model scenarios. The tables outline the proportions of effective impervious area (EIA), remaining impervious area (RIA) and pervious area (PA). The pre-development catchment was simulated as a single homogenous catchment.

Times of concentration for all catchments were determined within DRAINS using the kinematic wave equation. The lot areas are as per PDA plan of subdivision. A screenshot of the constructed DRAINS model is shown in Appendix 7.

Table 3: Pre-development internal site catchments

CATCHMENT	AREA (m^2)	EIA (%)	RIA (%)	PA (%)	Retardance coefficient (n)
Lot 1	8025	0	0	100	0.2
Lot 2	4748	0	0	100	0.2
Lot 3	7216	0	0	100	0.2
Lot 4	9668	0	0	100	0.2
Lot 5	7473	0	0	100	0.2
Lot 6	10,460	0	0	100	0.2
Lot 7	6237	0	0	100	0.2
Lot 8	2857	0	0	100	0.2
113 Cove Hill Road	20,335	0	0	100	0.2

Surface Type	Roughness Coefficient n*
Concrete or Asphalt	0.01 - 0.013
Bare Sand	0.01 - 0.016
Graveled Surface	0.012 - 0.03
Bare Clay-Loam Soil (eroded)	0.012 - 0.033
Sparse Vegetation	0.053 - 0.130
Short Grass Prairie (Veldt or Scrub)	0.10 - 0.20
Lawns	0.17 - 0.48

appendix – pre-existing drains box & whisker plots provides the pre-existing flow rates as modelled in Drains.

Table 4: Pre-Development Peak flow rate summary

CATCHMENT	SITE RUNOFF (L/S)	CRITICAL 2% AEP STORM DURATION (MINS)
Lot 1	35 AS PER SA 2024/0004	120
Lot 2	22	4.5hrs
Lot 3	34	4.5hrs
Lot 4	37	4.5hrs
Lot 5	33	4.5hrs
Lot 6	44	120
Lot 7	28	4.5hrs
Lot 8	19	4.5hrs
113 Cove Hill Road	95	4.5hrs

The council's downstream stormwater receiving capacity is limited to the existing DN300 at the junction of Taylor Crescent and Bisdee Road. Existing Plumbing Permit (PA 2023-107) allows the upgrade of Council stormwater mains in Bisdee Road. The proposed subdivision will upgrade the existing DN300 RCP to DN450 from SW1/1 to SW 1/2 as per sheet C103 24E99-38. Upstream stormwater upgrades were designed in line with *SA 2024/00003*.

3.4 PROPOSED INTERNAL CATCHMENTS

The following lot breakdowns were modelled to simulate the post development demand on the Council stormwater system. The lot areas are as per PDA plan of Subdivision.

Table 5: Post - Development Lot Breakdown Summary

CATCHMENT	AREA (m^2)	EIA (%)	RIA (%)	PA (%)
Lot 1 *2024.11.12_SA2024.00003*	8025	88	0	12
Lot 2	4748	80	0	20
Lot 3	7216	80	0	20
Lot 4	9668	80	0	20
Lot 5	7473	80	0	20
Lot 6	10,460	80	0	20
Lot 7 PA2023-107	6237	95	0	5
Lot 8	2857	0	0	100
113 Cove Hill Road	19,856	0	0	100

Table 6: Post-Development Peak flow rate summary provides the proposed post development- flow rates as modelled in Drains. Refer to Appendix for full lot box whisker plots distributions

Table 6: Post-Development Peak flow rate summary

CATCHMENT	SITE RUNOFF 2 %AEP (L/S)	CRITICAL 2% AEP STORM DURATION (MINS)
Lot 1	35 AS PER SA 2024/0004	5
Lot 2	143	5
Lot 3	219	5
Lot 4	243	5
Lot 5	234	5
Lot 6	330	5
Lot 7	237	5
Lot 8	38	60
113 Cove Hill Road	191	60

3.5 STORMWATER DETENTION

Public stormwater detention is proposed on Lot 8 to manage the permissible site discharge. Aldanmark has considered the existing plumbing permit and the permissible flow at the junction of Taylor Crescent and Bisdee Road.

7x90kL (7.3mR x 2.4mH) concrete tanks have been modelled to control the outflow to the existing stormwater connection. The tanks will be manifolded with:

Bottom of tanks RL 39.53 *180mm orifice RL 39.53*

Top of tanks RL 41.94 *300mm overflow RL 41.85*

The following design storms have been modelled in Drains based on recommendations within AS3500.3 and Brighton Council Standards, to determine the volume of detention.

- Minor Storms
  - 2% AEP for Internal stormwater infrastructure
  - 5% AEP external to the site (Existing Stormwater infrastructure)
- Major Storms
  - 1% AEP for internal and external infrastructure

3.5.1 MITGATED OUTFLOWS

Table 7: Detention model summary - 2% AEP

2 % AEP	SITE RUNOFF (L/S)	CRITICAL STORM DURATION (MINS)
SITE DISCHARGE		
Pre-development	289	120
Post-development – (Unmitigated)	1063	10
Post-development with OSD	290*	60

* Includes Lot 5 with detention control (29 L/s)

A climate change multiplier has also been applied to the BOM 2016 IFD's as per the 2100 RCP4.5 climate change model. The effect of climate change can be found in the Project Summary at the start of the report.

4. CONCLUSION

This report has demonstrated that the proposed development at Cove Hill Road, Bridgewater complies with the stormwater quantity conditions of Brighton Councils planning permit.

Note:

- No assessment has been undertaken of Council's stormwater infrastructure and its capacity.
- This report assumes the Council stormwater main has capacity for the pre-development peak discharge.
- It is the responsibility of Council to assess their infrastructure and determine the impact (if any) of altered inflows into their stormwater network.

Yours faithfully,

Nathan Morey BEng (Hons)
Executive & Civil Engineer

5. APPENDIX – PRE-EXISTING DRAINS BOX & WHISKER PLOTS

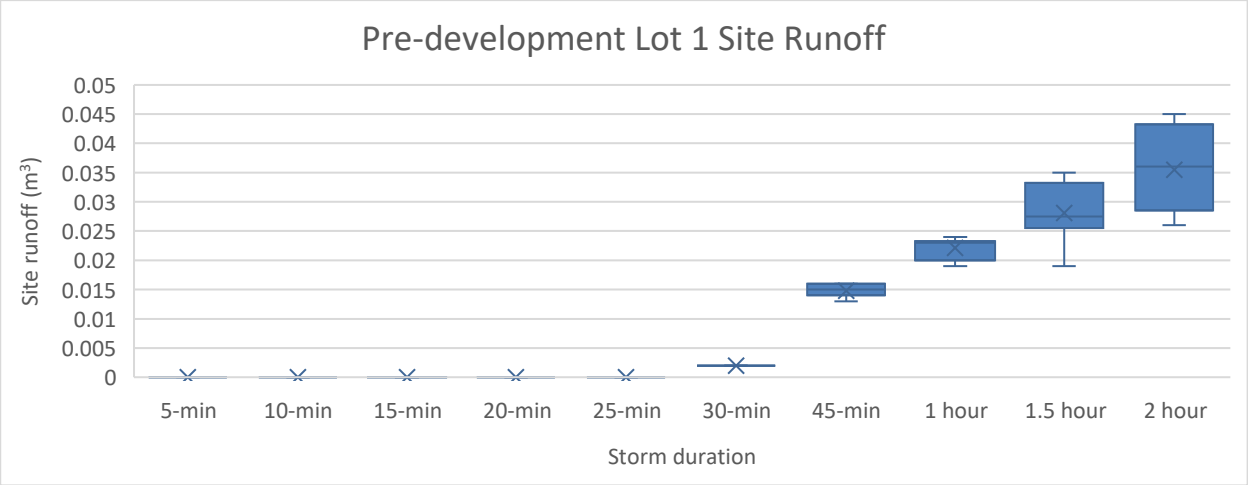


Figure 1: Lot 1 2% AEP Pre - Development Flow Rate

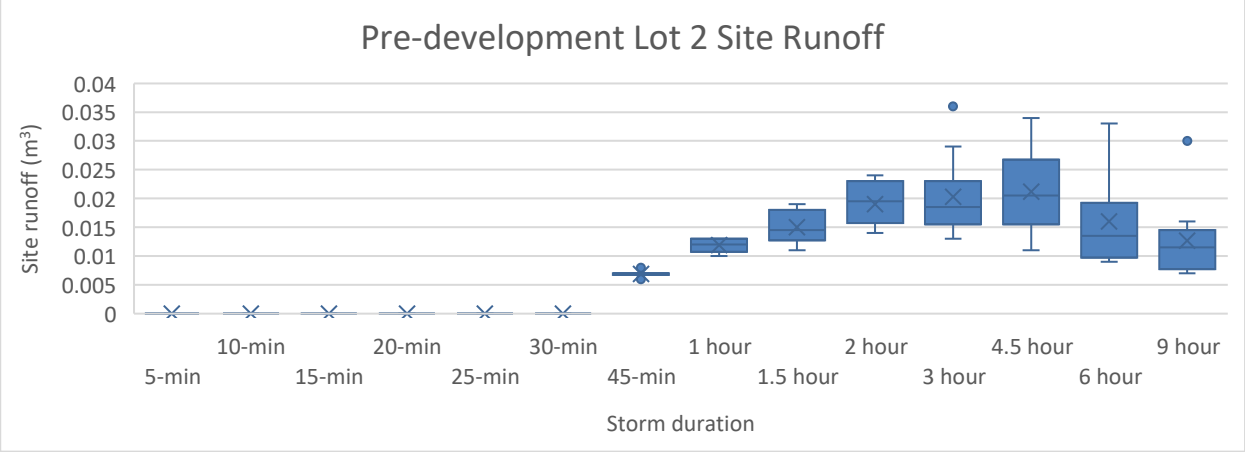


Figure 2: Lot 2 2% AEP Pre - Development Flow Rate

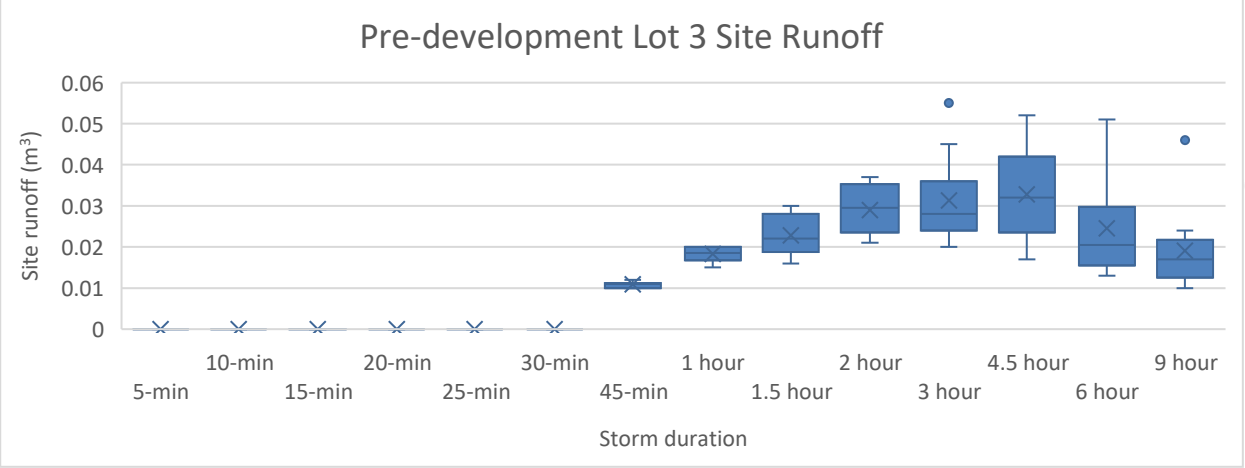


Figure 3: Lot 3 2% AEP Pre - Development Flow Rate

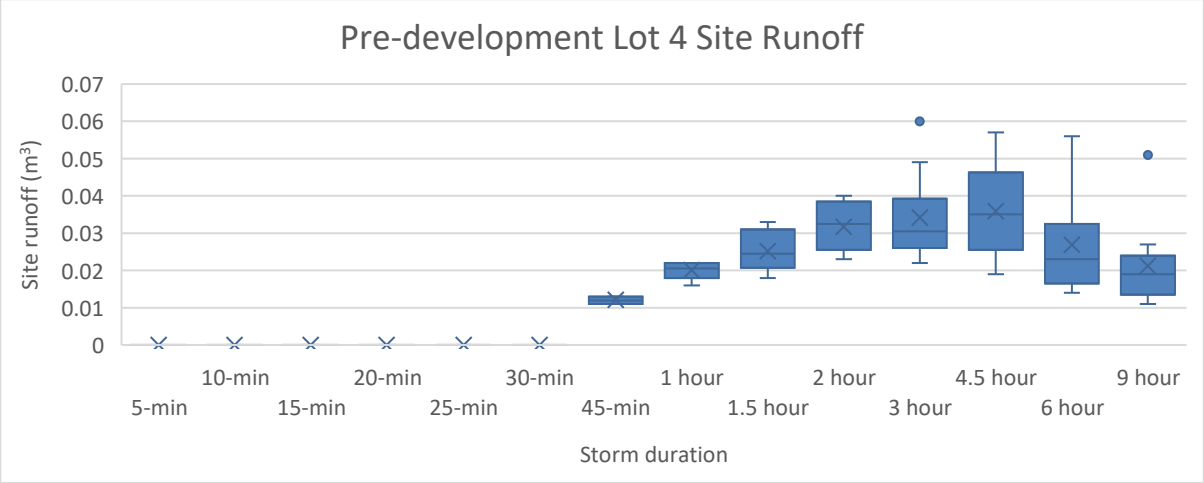


Figure 4: Lot 4 2% AEP Pre - Development Flow Rate

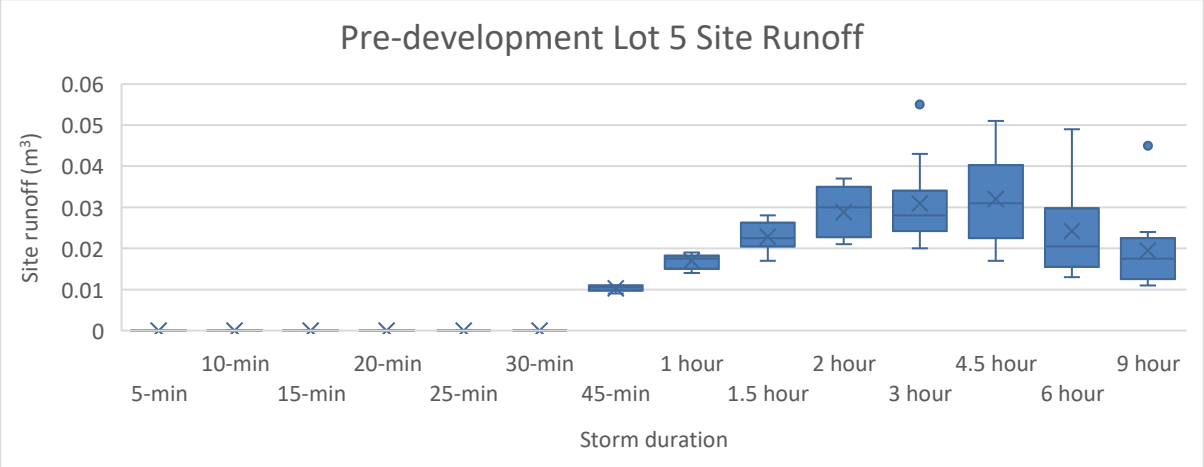


Figure 5: Lot 5 2% AEP Pre - Development Flow Rate

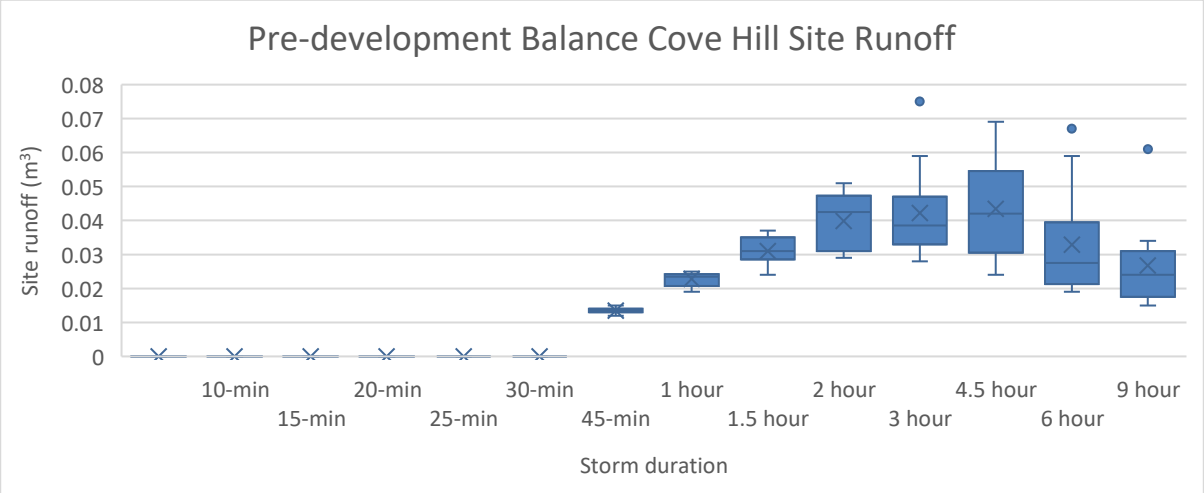


Figure 6: Lot 6 2% AEP Pre - Development Flow Rate

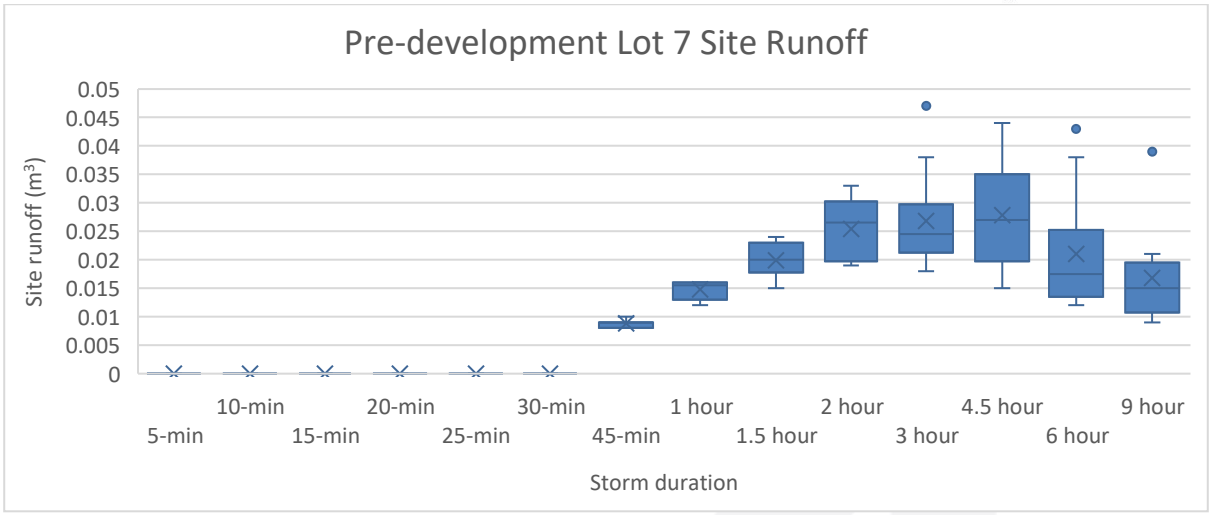


Figure 7: Lot 7 2% AEP Pre - Development Flow Rate

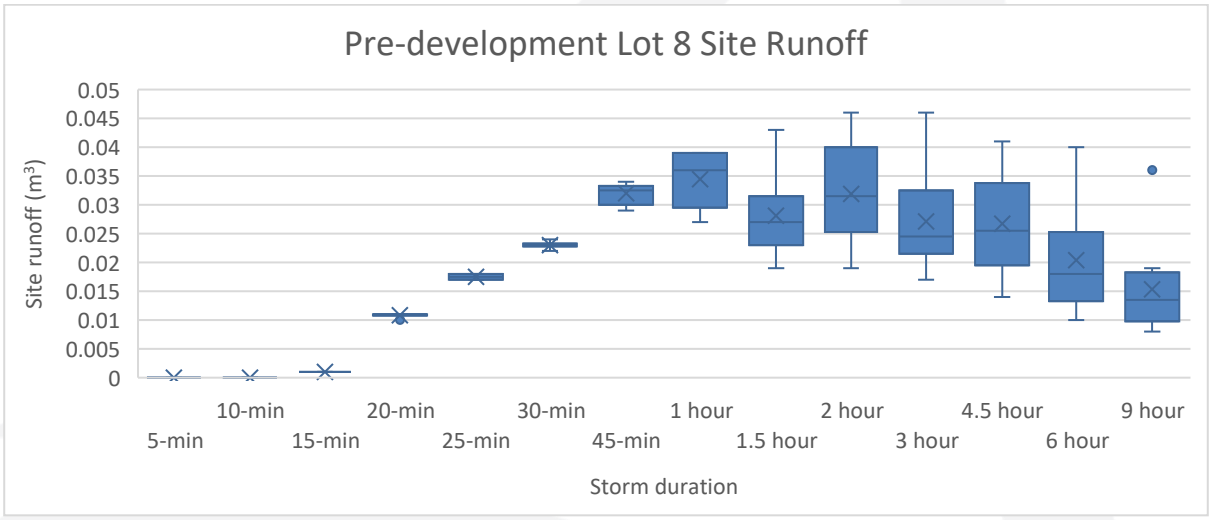


Figure 8: Lot 8 2% AEP Pre - Development Flow Rate

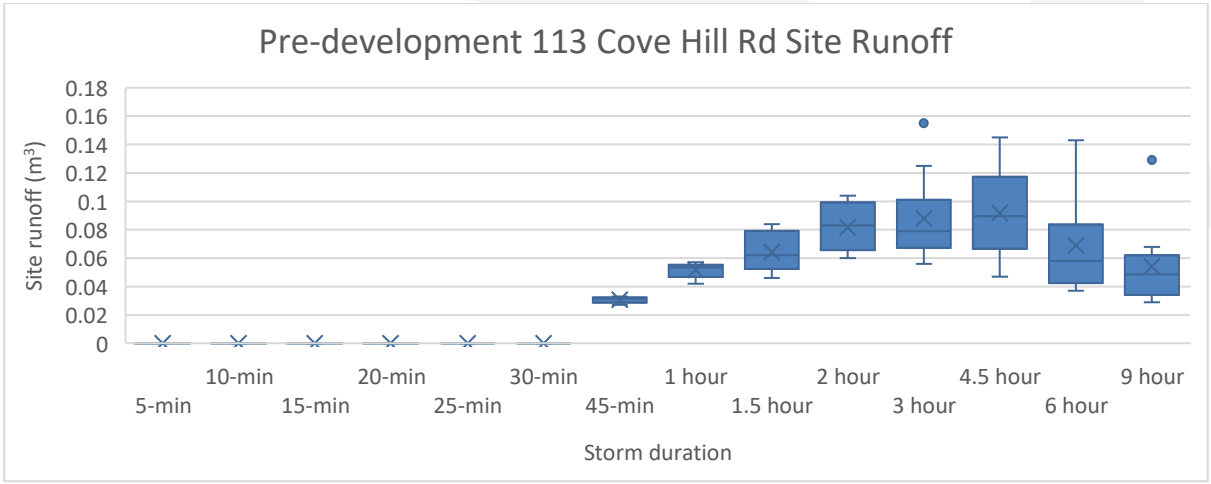


Figure 9: Lot 2 2% AEP Pre - Development Flow Rate

6. APPENDIX – POST - DEVELOPMENT DRAINS BOX & WHISKER PLOTS – UNMITIGATED (SSP2.0 – 4.5, 2100YR)

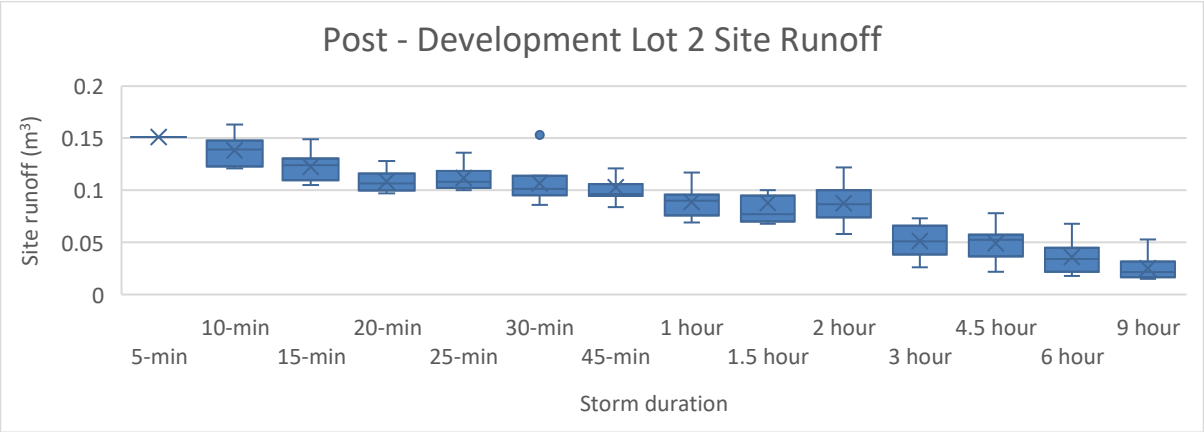


Figure 10: Lot 2 2% AEP Post Development Flow Rate

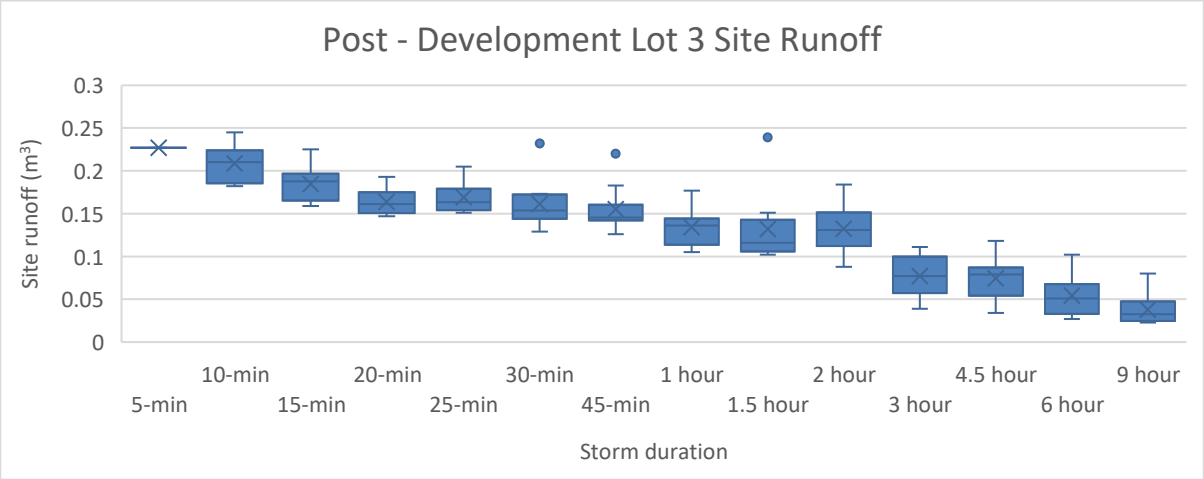


Figure 11: Lot 3 2% AEP Post Development Flow Rate

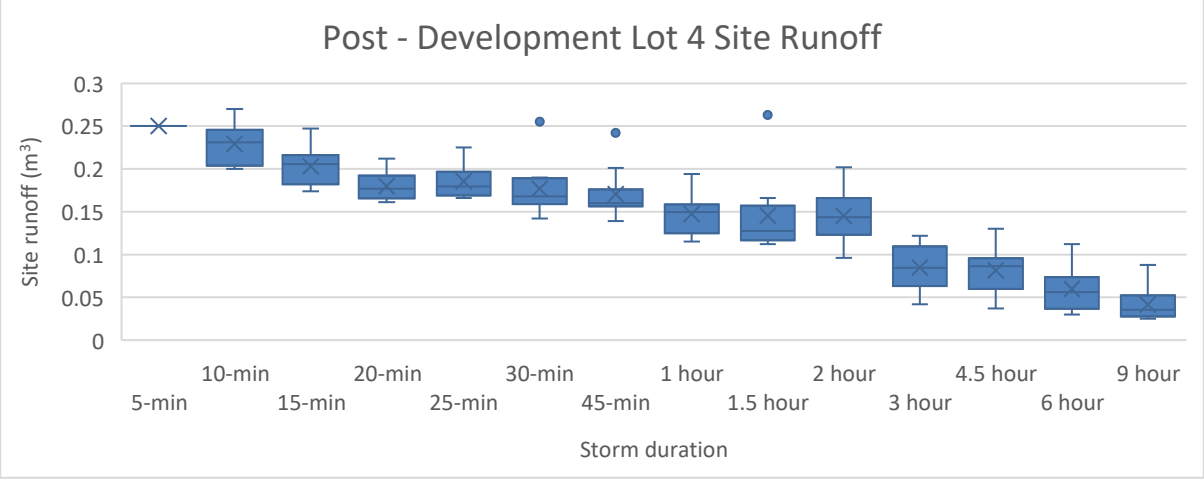


Figure 12: Lot 4 2% AEP Post Development Flow Rate

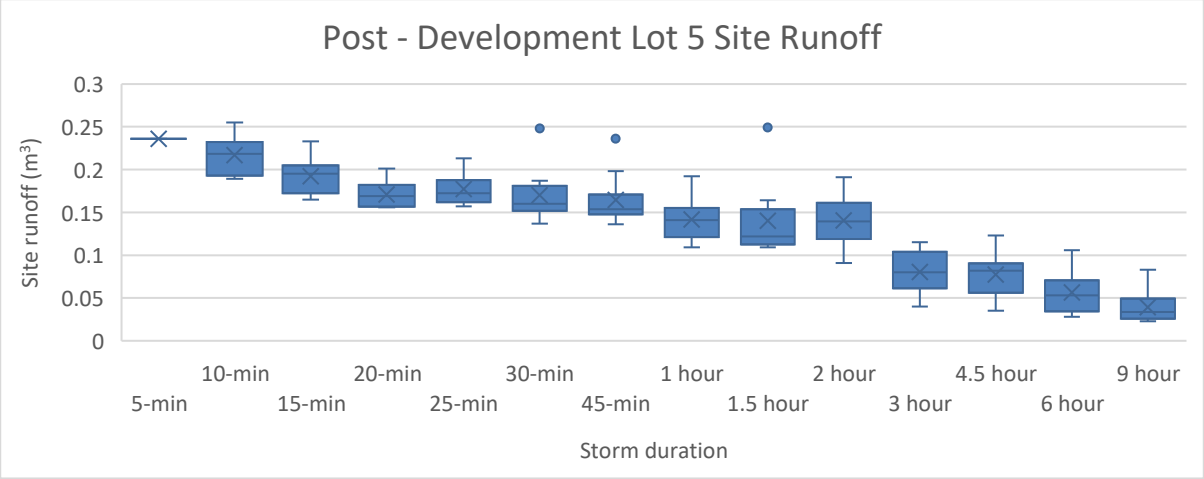


Figure 13: Lot 5 2% AEP Post Development Flow Rate

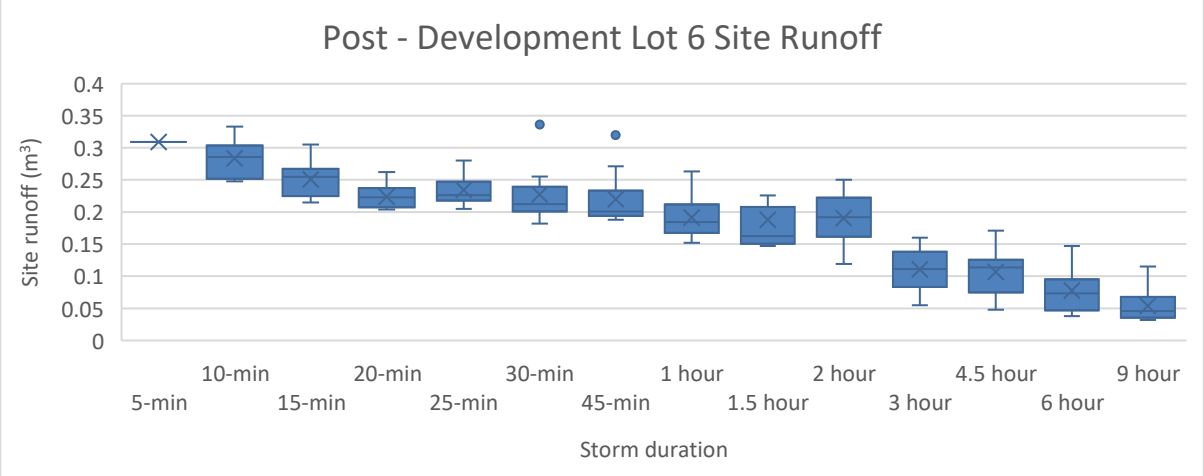


Figure 14: Lot 6 2% AEP Post Development Flow Rate

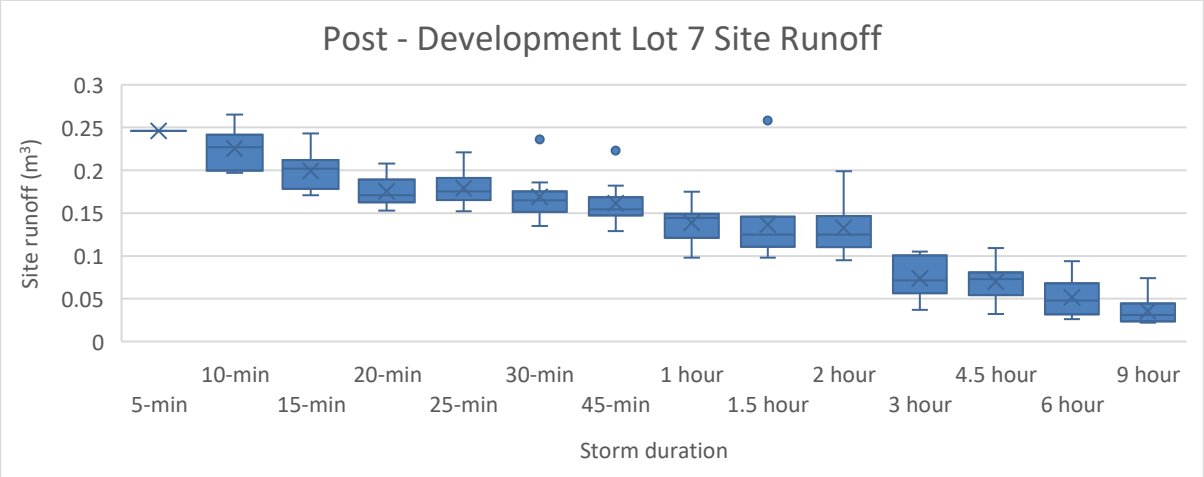


Figure 15: Lot 7 2% AEP Post Development Flow Rate

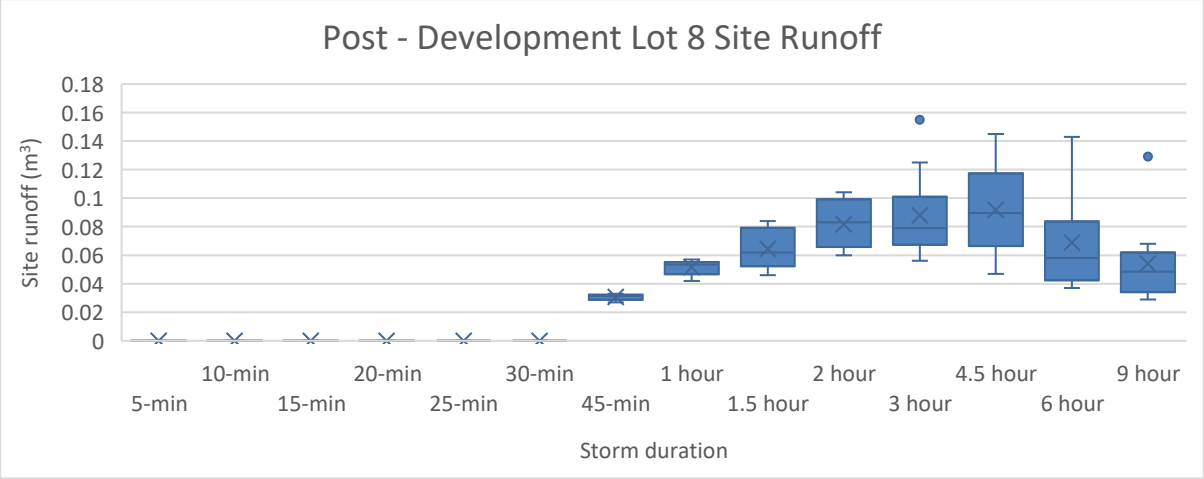


Figure 16: Lot 8 2% AEP Post Development Flow Rate

7. APPENDIX – DRAINS MODEL

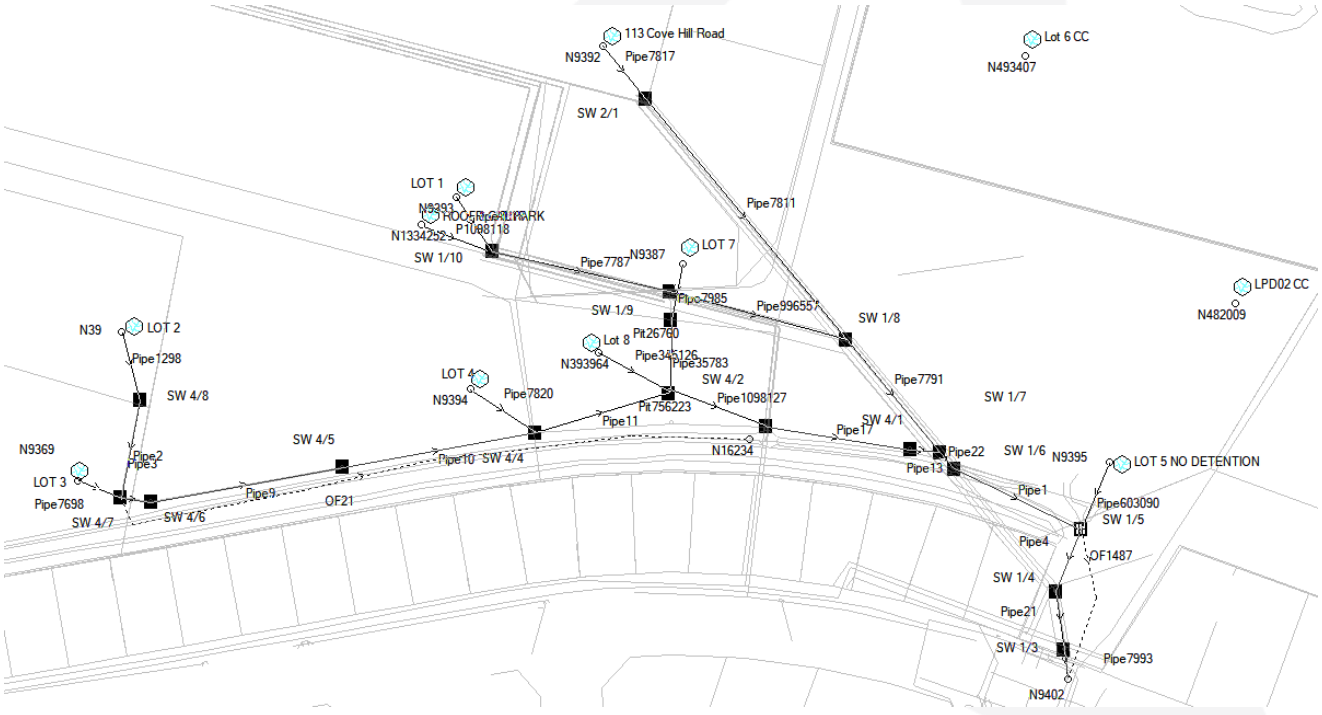


Figure 17: Constructed DRAINS Model

The Young Group
860 Cambridge Rd, Cambridge
+61 (03) 6128 1002

15 August 2025

Jo Blackwell
Manger Planning
Brighton Council
Email: development@brighton.tas.gov.au

Dear Jo

RFI RESPONSE – SA 2025/00011 – 115 & 131 COVE HILL ROAD, BRIDGEWATER

Please see attached updated civil plans and stormwater report to address the request for information dated 11 August 2025.

1. Please provide an updated stormwater report which shows:
   a) stormwater profiles including 90kL detention tanks;
   Advice: Not provided. The information is required to adequately assess the stormwater system. In particular that the system upstream of the detention does not surcharge.

An updated stormwater report is attached. Regrading and filling of Lots 2,3,4 & 8 is proposed to ensure that the upstream system doesn't surcharge.

b) stormwater profile for Lot 6 to confirm entirety of lot can be drained.
Advice: Not entirely satisfied. The plans do not show chainages/references to the long section. The depth of connection to the drainage in Cove Hill Road needs to be confirmed. See above.

Drainage longitudinal sections for Lot 6 are provided.

c) detention for Lot 5 connected to public detention, if possible.
Advice: Not shown – and also not fully addressed in report.

Due to the topography, Lot 5 cannot be discharged to the proposed detention system Therefore, it is proposed that a Part 5 agreement be entered into that requires onsite detention to be provided, prior to the connection into the public stormwater system, which limits the peak flows from the site to pre-existing.

d) overland flow.
Advice: Not addressed.

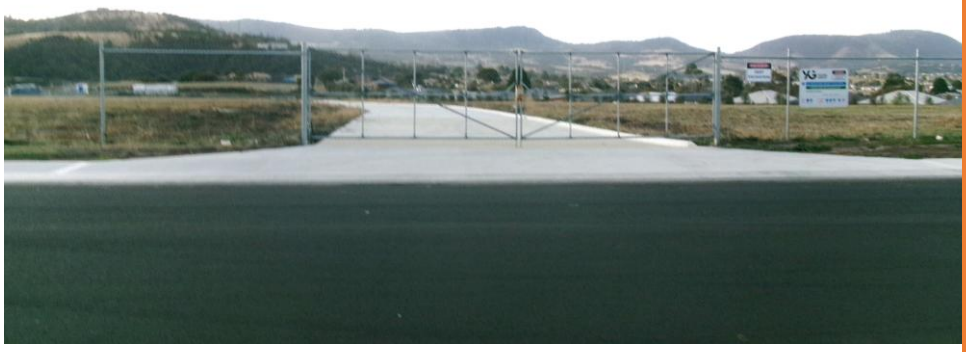
Overland flood flows are provided (see Sheet C110).

The Young Group
860 Cambridge Rd, Cambridge
+61 (03) 6128 1002

I trust that the information satisfies the request, however, please contact me if you would like to discuss.

Yours sincerely

Lisa Balding
PROJECT MANAGER



LIGHT INDUSTRIAL SUBDIVISION, 115 COVE HILL ROAD, BRIDGEWATER

TRAFFIC IMPACT ASSESSMENT

Hubble Traffic

June 2025

Disclaimer: This report has been prepared based on and in reliance upon the information provided to Hubble Traffic Pty Ltd by the client and gathered by Hubble Traffic Pty Ltd during the preparation of the report. Whilst all reasonable skill, care and diligence has been used in preparation of the report, Hubble Traffic Pty Ltd take no responsibility for errors or omissions arising from misstatements by third parties.

This report has been prepared specifically for the exclusive use of the client named in the report and to the extent necessary, Hubble Traffic Pty Ltd disclaim responsibility for any loss or damage occasioned by use of or reliance upon this report, or the date produced herein, by any third party.

Version	Date	Reason for Issue
Draft	June 2025	Draft issued for client feedback
Final	June 2025	Final issued

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1. Introduction

The Young Group has engaged Hubble Traffic to prepare an independent Traffic Impact Assessment, to consider the traffic impacts from eight light industrial subdivision lots at 115 Cove Hill Road, Bridgewater (development site).

A development application was submitted to Brighton Council (SS 2025/00011), who have requested for an independent Traffic Impact Assessment addressing C2.0 Parking & Sustainable Transport Code and C3.0 Road and Railway Assets Code of the Tasmanian Planning Scheme, while considering the impact and suitability of the surrounding road network.

This assessment has reviewed the functional requirements of the proposed development, the size and location of the lots, the existing surrounding road network, and the provision of safe and efficient access.

This report has been prepared to satisfy the requirements of Austroads, Guide to Traffic Management Part 12: Traffic Impacts of Developments, 2019, and referred to the following information and resources:

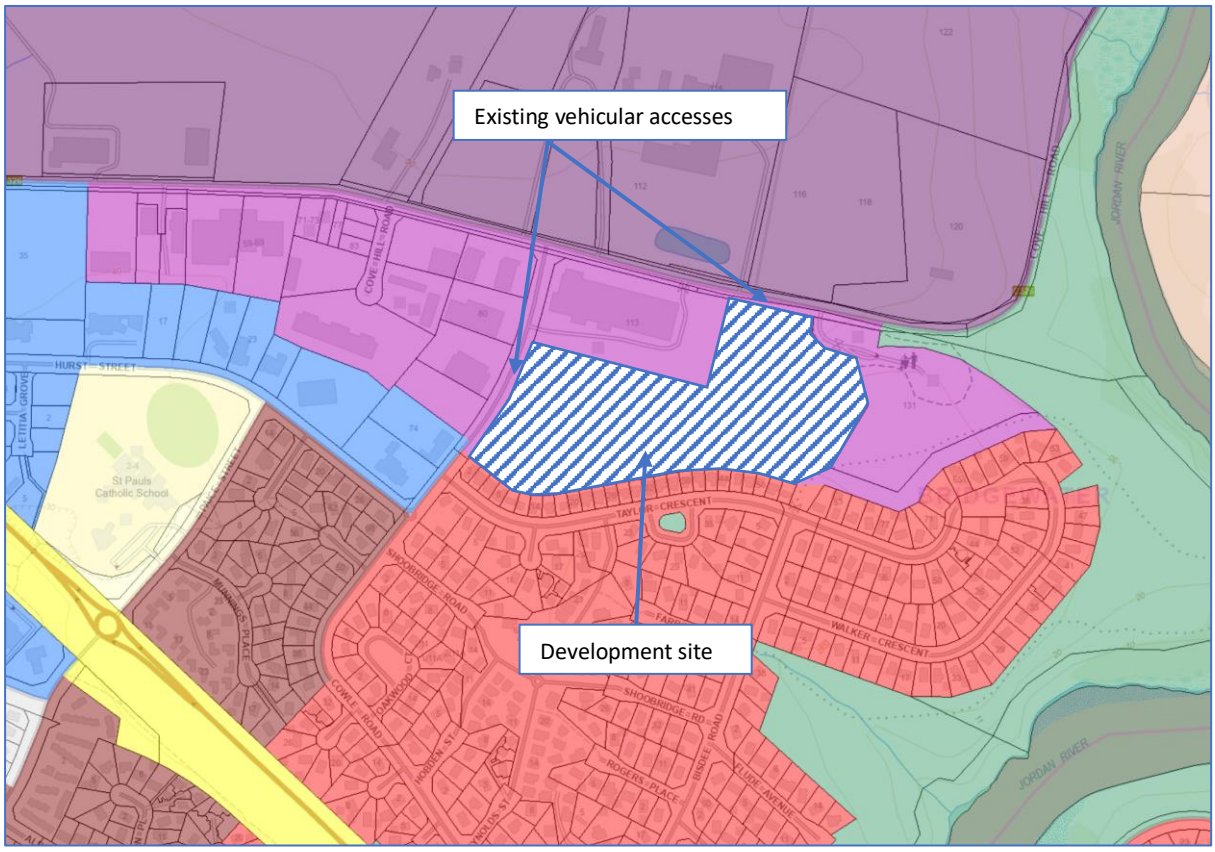
- Tasmanian Planning Scheme (Brighton)
- Road Traffic Authority NSW (RTA) Guide to Traffic Generating Developments
- Australian Standards AS2890 parts 1, 2 and 6
- Austroads series of Traffic Management and Road Design
  - Part 4: Intersection and crossings, General
  - Part 4a: Unsignalised and Signalised Intersections
  - Part 12: Traffic Impacts of Development
- Department of State Growth
- Autoturn Online vehicle turning software
- LIST – Land Information System Tasmania Database

2. Site Description

Located at 115 Cove Hill Road, Bridgewater, the development site is a large mostly undeveloped parcel of land, cleared of any significant trees or vegetation. The site is situated within the Brighton Industrial Hub, with direct road frontage and existing vehicular accesses onto Cove Hill Road and Cowle Road.

The Land Information System of Tasmania (LIST) indicates that the development site is within a Light Industrial Zone. There is a General Industrial Zone to the north of Cove Hill Road, and a General Residential Zone to the south of the site.

Diagram 2.0 – Extract from LIST Database



3. Development proposal

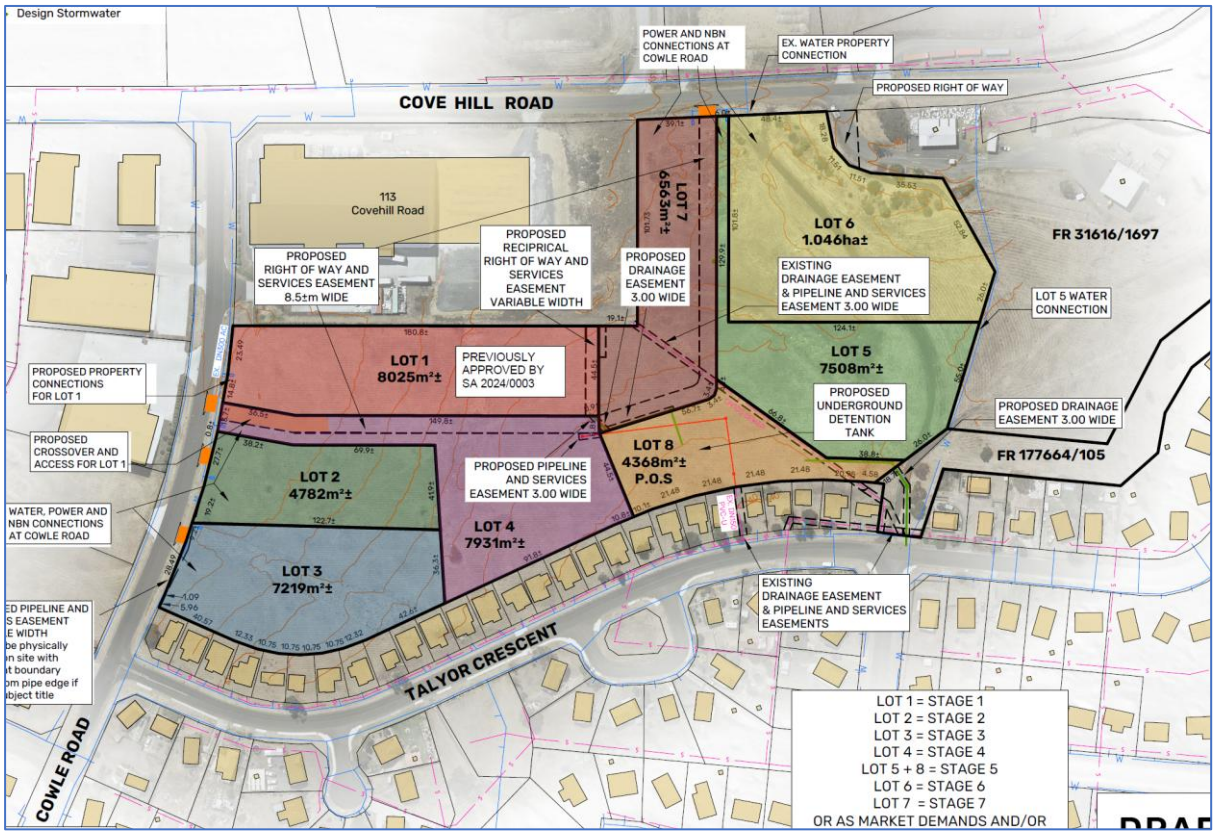
The development proposal is to subdivide the large parcel of land into eight light industrial lots, ranging in size from 4,368 square metres to 1.046 hectares.

Vehicular access for each lot is proposed through the following:

- Lots 2 and 3 to have direct access onto Cowle Road,
- Lot 6 to have access via a right-of-way with the adjacent property at 131 Cove Hill Road, and
- The remaining lots to have direct access off an internal driveway, extending between the existing accesses onto Cove Hill Road and Cowle Road.

Under the Tasmanian Planning Scheme, Light Industrial land is to provide for manufacturing, processing, repair, storage and distribution of goods, with a minimum size light industrial lot of 1,000 square metres.

Diagram 3.0 – Proposed development layout



4. Trip generation by this development

A trip in this report is defined as a one way vehicular movement from one point to another excluding the return journey. Therefore, a return trip to and from a land use is counted as two trips.

To determine the number of trips likely to be generated by this development, reference has been taken from the RTA Guide.

To predict the number of vehicular trips likely to be generated by a proposed light industrial subdivision, two different methods have been used; strategic planning and theoretical land-use.

4.1. Strategic planning method

For industrial estates with unknown development types and sizes, a strategic planning approach is suggested. According to the RTA Guide, peak traffic generation depends on employee density, travel mode, and peak period travel distribution.

The Guide estimates that each hectare of developed industrial estate can generate 28 employees, with 55 percent commuting during peak periods. Therefore, a 5.686 hectare site could produce 159 employees, with 88 commuting during peak times. This trip generation calculation is considered low for this type of development.

4.2. Theoretical land-use method

This method forecasts traffic generation based on land use type and potential floor area. According to Table 18.2 of the planning scheme, warehousing and storage uses are permitted within this zone, while bulky goods are considered discretionary.

Given that bulky goods are discretionary, this assessment presumes that they will occupy a relatively small portion of the site, approximately 11.5 percent or 6,500 square metres, with the remaining 5.036 hectares dedicated to warehousing and storage uses. Based on prior assessments conducted by Hubble Traffic, the total developed floor area for bulky goods uses is anticipated to be around 40 percent of the total site area, whereas warehousing and storage typically occupy 50 percent of the site. One of the key factors is achieving sufficient on-site car parking.

Bulky Goods trip generation

The RTA Guide recommends that a bulky goods land-use has the potential to generate five trips per 100 square metres of floor area during the evening peak period. As the RTA Guide does not provide recommendations for daily and morning peak trips, the following assumptions have been made based on warehousing and factory trip generation.

- Daily vehicle trips of six times the evening peak trip generation.
- Morning peak trips of one per 100 square metres of floor area.

Based on an approximate floor area of 2,600 square metres, the bulky goods land-use has the potential to generate up to 780 daily trips, with 26 of these trips likely to occur during the morning peak and 130 during the evening peak.

Warehousing trip generation

The RTA Guide recommends the following trip generation for warehousing:

- Daily vehicle trips of four per 100 square metres of gross floor area, and
- Peak period vehicle trips of 0.5 per 100 square metres of gross floor area.

Based on an approximate floor area of 25,100 square metres, the warehousing land-use has the potential to generate up to 1,004 daily trips, with 126 of these trips likely to occur during the morning and evening peaks.

Summary of trip generation

Table 4.2 summarises the potential trip generation by the theoretical land-use, with this method estimating that the development could generate 1,784 daily trips, with 152 likely occurring within the morning peak and 256 in the evening peak.

Table 4.2 – Summary of trip generation based on approximate floor area

Type of use	Floor area M^2	Morning peak hour			Evening peak hour			Daily trips
		Peak	Entering	Leaving	Peak	Entering	Leaving	
Bulky Goods	2,600	26	23	3	130	26	104	780
Warehouse	25,100	126	113	13	126	13	113	1,004
Total	**27,700**	**152**	**136**	**16**	**256**	**39**	**217**	**1,784**

4.3. Summary of trip generation from both methods

The two methodologies predicted different trip generation rates, with the strategic planning method predicting lower rates than the theoretical land-use method. Using the higher trip generation rates provides an assessment of the potential maximum impact on the surrounding road network and is considered appropriate for this impact evaluation.

This traffic assessment evaluates the impact of 152 trips during the morning peak hour and 256 trips in the evening, on the surrounding road network.

Table 4.3 – Summary of trip generation by the different methodologies

Method	Peak hour two-way		Daily
	Morning	Evening	
Strategic planning	88	88	440
Theoretical land-use	152	256	1,784

5. Existing surrounding road network

According to LIST Database, Cove Hill Road is a collector road within the surrounding road network, while Cowle Road is a local access road. The nearest arterial road to the site is East Derwent Highway (the highway), which is part of the State Road network.

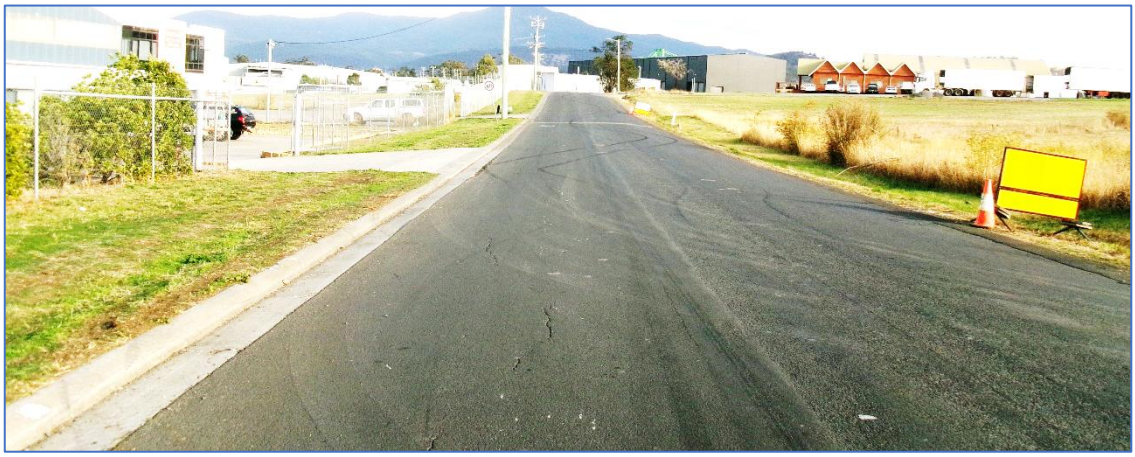
Based on the location of the development site, there are two routes vehicles can take to access the highway, directly from Cove Hill Road or alternatively via Cowle Road, Hurst Street and Paice Street. Roundabouts are located at each access point onto the highway, ensuring safe and efficient traffic movements onto and off the highway.

5.1. Cove Hill Road

Cove Hill Road extends easterly from the highway, providing access to the local industrial area. The road has a generally straight alignment, is situated within mostly flat terrain and operates with a posted 60 km/h speed limit.

To the west of the Cowle Road junction, the road has been constructed with a bitumen surface, concrete kerb and channel on the southern side of the road, with a table drain and grassy verge on the northern side of the road, accompanied with street lighting and guide posts. The average road width measured eight metres wide.

Photograph 5.1A – Cove Hill Road, west of Cowle Road junction



To the east of the junction, the road has a rural standard with a 5.8 metre wide bitumen surface, one metre wide gravel shoulders, and table drains on both sides. The development site fronts this part of Cove Hill Road, where the road alignment is straight and slopes gently downward.

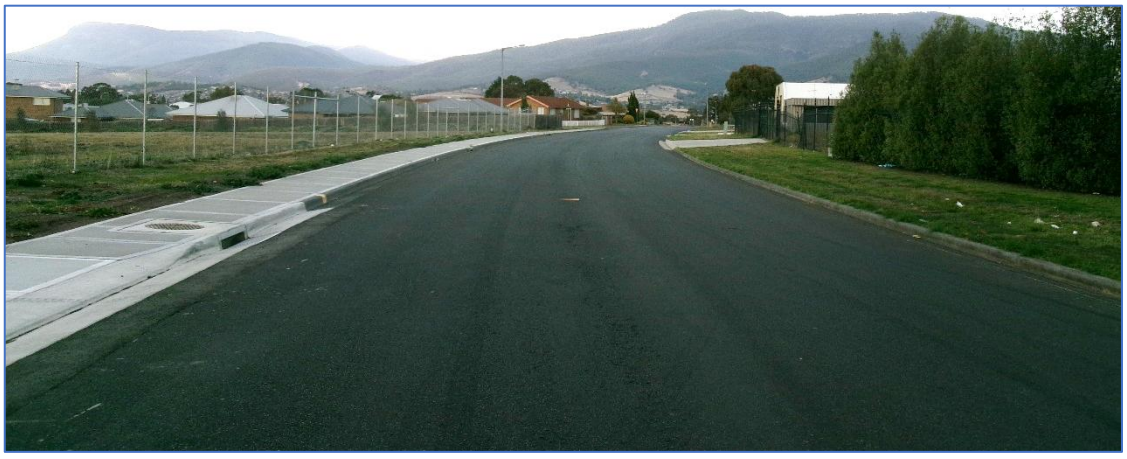
Photograph 5.1B – Cove Hill Road, east of Cowle Road junction

5.2. Cowle Road

Cowle Road extends between Cove Hill Road and Hurst Street, with light industrial land use situated north of Taylor Crescent and an urban residential area to the south. The road has been built to a typical urban standard, with a sealed bitumen surface, concrete kerb and channel, concrete footpath along the eastern side of the road, and accompanied by street lighting.

Adjacent to the development site, the road has an average measured width of 9.4 metres, a generally straight alignment, with a long sweeping horizontal curve, and is situated within flat terrain, with the 50 km/h default urban speed limit applying.

Photograph 5.2 – Cowle Road adjacent to the development site



5.3. Paice and Hurst Street's

Paice Street directly connects motorists to the highway from Hurst Street, while Hurst Street extends between Cowle Road and Cove Hill Road. Within the surrounding road network, both function as local access roads with a posted speed limit of 50 km/h. The land uses along both streets varies between General Business, Community Purpose (St Pauls Catholic School) and Inner Residential.

Each road has been built to a typical urban standard, with a sealed bitumen surface, with sufficient width to accommodate two-way traffic flow, concrete kerb and channel, concrete footpath along both sides, and street lighting. The street alignments are generally straight, with gentle vertical grades.

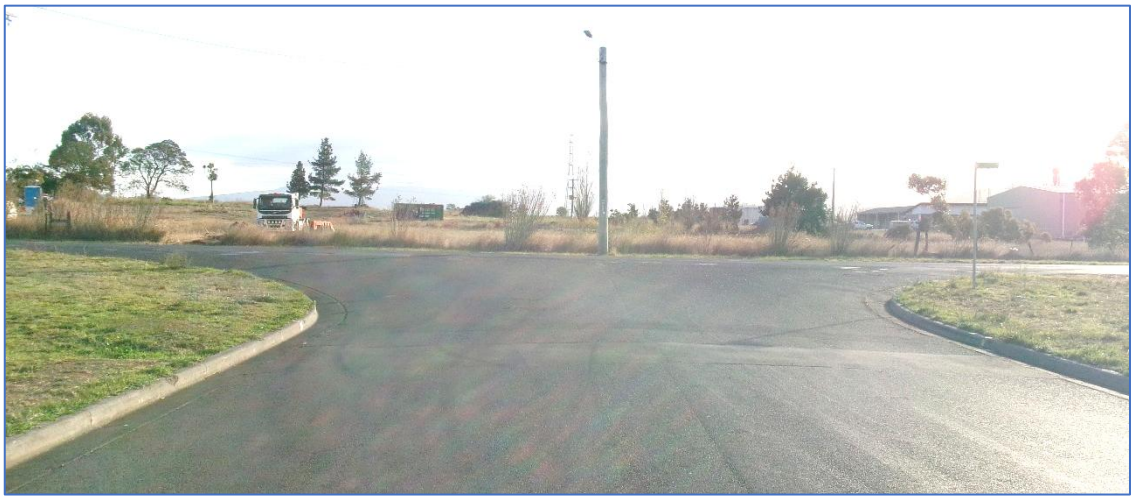
A recent site inspection found no safety or traffic efficiency issue with these roads.

5.4. Cove Hill and Cowle Road's junction

Cowle Road intersects Cove Hill Road at ninety degrees forming a standard T-junction. The junction is supported with street lighting, however, there is no Give Way sign or marked holding line, and traffic priority operates under the T-Junction rule.

The junction has an asphalt surface that is in reasonably good condition, with a wide junction throat to accommodate the swept path of turning vehicles. Dedicated turning lanes have not been provided at the junction, which is located within a 60 km/h speed environment.

Photograph 5.4 – Cove Hill and Cowle Road's junction



5.5. Available sight distance at the Cove Hill and Cowle Road's junction

As the development site will be generating additional vehicles travelling through the junction, it is important drivers have Safe Intersection Sight Distance (SISD), which is the highest sight distance parameter. Austroads Guide to Road Design provides guidance on sight distance and specifies SISD of 114 metres for a 60 km/h speed environment, based on a driver reaction time of 1.5 seconds and observation time of three seconds.

On-site measurements of the available sight distance were taken based on the driver leaving the access being 1.1 metres above the access surface, and an approaching vehicle being 1.2 metres high. The available sight distance in both directions exceeds 120 metres.

With the available sight distance exceeding the SISD, vehicles will be able to enter and leave Cowle Road in a safe and efficient manner, without impacting other road users.

Photograph 5.5A - Available sight distance to the left

Photograph 5.5B – Available sight distance to the right

5.6. Traffic flow on the surrounding road network

In evaluating the traffic impact from the development, it is important to understand the current traffic flow on the surrounding road network. Recent manual traffic surveys were undertaken at the following locations:

- Paice Street, Scott Road and the highway roundabout (Paice Street roundabout), and
- Cove Hill and Cowle Road's junction.

Traffic data from Cove Hill Road, Chalmers Link, and the highway roundabout (Cove Hill Road roundabout) collected two years ago has been used. The traffic flows have been increased by one percent based on an evening survey of traffic using Cove Hill Road arriving at and leaving the roundabout.

The surveys revealed that the highway generates consistent traffic flow, with Cove Hill Road and Paice Street generating moderate flows. Traffic flows were observed to be higher within the evening peak, compared to the morning peak. The traffic flow along Cove Hill Road between the roundabout and Cowle Road was significantly higher than east of Cowle Road, this is expected as the level of roadside development is quite different.

Adjacent to the development site, Cove Hill Road and Cowle Road were found to be lightly trafficked, with less than 150 vehicles travelling through the junction within the morning peak period. Table 5.6 captures the two-way flow on the surrounding roads, with the turning movements for each roundabout and junction available in Appendix A.

Table 5.6 – Summary of traffic flows on the surrounding road network

Junction	**Road**	**Peak hour two-way flows**	
		Morning	**Evening**
East Derwent Highway, Cove Hill Road and Chalmers Link roundabout	Cove Hill Road (North)	406	792
	East Derwent Highway (East)	695	734
	Chalmers Road (South)	165	242
	East Derwent Highway (West)	1,110	1,476
East Derwent Highway, Paice Street and Scott Road roundabout	Paice Street (North)	453	606
	East Derwent Highway (East)	1,073	1,400
	Scott Road (South)	627	810
	East Derwent Highway (West)	823	970
Cove Hill Road and Cowle Road	Cove Hill Road (East)	100	
	Cowle Road (South)	71	
	Cove Hill Road (West)	67	

5.7. Road safety of surrounding road network

The Department of State Growth maintains a database of reported road crashes, a check of this database found one crash at the Cove Hill and Cowle Road's junction, where a vehicle hit another vehicle parked on the side of the road, resulting in property damage only.

At both the Paice Street and Cove Hill Road roundabout's, a total of nine and ten crashes have been reported respectively. Majority of these crashes have resulted in property damage only, with one crash at each roundabout resulting in minor injury.

The primary cause of these crashes was due to a vehicle failing to give way to a vehicle already travelling within the roundabout, or a vehicle rear ending another vehicle waiting to enter. These types of crashes are common for roundabouts.

Although the number of crashes at the two roundabouts is disappointing, it is proportionate to the high volume of traffic passing through them. Notably, most crashes result in property damage only, suggesting that the roundabouts provide for safe traffic movements.

Additional traffic generated by this development is not expected to alter the crash risk.

6. Impact from traffic generated by this development

According to section 4 of this report, the theoretical trip calculation method estimates that the development site may generate up to 1,784 daily trips, with 152 trips occurring during the morning peak period and 256 trips in the evening peak period.

6.1. Trip assignment

Light industrial areas typically experience most trips arriving onsite in the morning and departing in the evening. For this assessment, it's assumed that 90 percent of trips arrive during the morning peak and depart in the evening.

Determining the route vehicles will take to access the highway is challenging since there are two routes available via roundabouts. Heavy vehicles are expected to use the Cove Hill Road roundabout, while light vehicles can choose either. Therefore, two scenarios were assessed: one where each roundabout handles 30 percent of trips and another where each handles 70 percent. This is to demonstrate both roundabouts has sufficient spare traffic capacity.

Table 6.1 – Trip assignment

Scenario	Morning peak			Evening peak		
	Arriving	Leaving	Total	Arriving	Leaving	Total
30% of trips	41	5	46	12	65	77
70% of trips	95	11	106	27	152	179

6.2. Traffic performance at junctions, intersections and roundabouts

The traffic performance of junctions, intersections, and roundabouts can be estimated using a variety of analytical and computational techniques, with this assessment using the SIDRA software package. The performance of intersections is commonly described by the Degree of Saturation (DOS) of the critical traffic movements, a measure of the volume/capacity ratio or degree, to which the available intersection capacity is utilised.

Other terms used, Level of service (LOS) which is based on the average stopped delay in seconds, and maximum queue length in metres. The table below provides a reference to the level of service for the various traffic controls.

Table 6.2 – Level of service for intersections and roundabouts

Level of	Average delay per vehicle (secs/vehicle)	Traffic Signals and Roundabouts	Give Way and Stop controls
A	<10	Good operation	Good operation
B	10 to <20	Good with acceptable delays and spare capacity	Acceptable delays and spare capacity
C	20 to <35	Satisfactory	Satisfactory, but crash study required
D	35 to <50	Operating near capacity, acceptable for State Roads	Near capacity and crash study required
E	50 to <70	At capacity for signals, will cause excessive delays. Roundabouts require other control mode	At capacity, requires other control modes
F	>70	Saturated flows – at signals, consider additional lanes	

6.3. Traffic efficiency at the Cove Hill and Cowle Road's junction

Traffic modelling for the Cove Hill and Cowle Road junction was deemed unnecessary based on manual surveys that recorded fewer than 150 vehicles passing through the junction. Drawing from experience and acknowledged standards, the junction is assessed to be operating at Level of Service (LOS) A, which indicates optimal traffic efficiency with no delays or queues for motorists.

6.4. Traffic efficiency at the Cove Hill Road roundabout

A traffic model was developed within the SIDRA software to replicate the Cove Hill Road roundabout, with the existing peak hour flows entered.

Modelling indicates that during the morning peak, the roundabout is currently operating with a DOS of 0.233, which represents the roundabout is operating at 23 percent capacity. Overall, the roundabout is providing motorists with a high level of traffic efficiency, operating at LOS A, with the worst delay estimated at 10.4 seconds and a maximum queue length of 8.4 metres or less than two vehicles.

While in the evening period, the roundabout is currently operating with a DOS of 48 percent. Even though the roundabout is busier in this period, it is still operating at an acceptable level of performance, operating at LOS A overall, with an estimated delay of 14.3 seconds and maximum queue length of 26.3 metres or five vehicles.

The additional trips generated by the development have been assigned to the roundabout, based on 30 and 70 percent of trips travelling through the roundabout, allowing the change in traffic performance to be quantified, as illustrated in Table 6.4.

This table demonstrates the additional trips generated by the development will intensify the roundabout but is not expected to adversely impact the level of traffic performance, with the roundabout to continue to operate at LOS A, overall.

Table 6.4 – Summary of traffic modelling at the Cove Hill Road roundabout

Period	Scenario	Total vehicles	DOS	Worst delay	Overall, LOS	Max Queue
Morning peak	Existing	1,251	0.233	10.4 secs	A	8.4m
	30 percent	1,298	0.466	11.4 secs	A	27.6m
	70 percent	1,360	0.502	11.5 secs	A	31.3m
Evening peak	Existing	1,707	0.475	14.3 secs	A	26.3m
	30 percent	1,788	0.514	15.0 secs	A	30.8m
	70 percent	1,896	0.593	16.2 secs	A	38.2m

Printouts of traffic modelling can be found in Appendix B.

6.5. Traffic efficiency at the Paice Street roundabout

Traffic modelling at the Paice Street roundabout indicates that although the roundabout experiences moderate traffic volumes, it maintains an acceptable level of performance. During morning peak hours, the roundabout operates at Level of Service (LOS) A, resulting in minor delays and a maximum queue length of approximately five vehicles.

Similarly, during evening peak hours, the modelling shows the roundabout operating at 71 percent capacity. As in the morning peak, the roundabout delivers an overall performance at LOS A, with motorists experiencing minor delays and queues.

Similar to section 6.4, the additional trips generated by the development have been assigned to the roundabout based on two scenarios: 30 and 70 percent of trips traveling through the roundabout. This allows the change in traffic performance to be quantified, as shown in Table 6.5.

During the morning peak, the additional trips will increase flows through the roundabout but are not expected to reduce the level of traffic efficiency. Motorists are predicted to experience the same delay, while the maximum queue length will increase slightly, with an additional maximum of two vehicles.

In the evening peak, modelling indicates that the roundabout will still provide motorists with an acceptable level of traffic efficiency. However, slight delays and longer queues are expected, with the average delay increasing by less than two seconds.

Overall, the modelling demonstrates no significant deterioration in traffic performance based on either scenario, with the roundabout continuing to provide motorists with an acceptable level of service.

Table 6.5 – Summary of traffic modelling at the Paice Street roundabout

Period	Scenario	Total vehicles	DOS	Worst delay	Overall, LOS	Max Queue
Morning peak	Existing	1,566	0.540	13.2 secs	A	29.8m
	30 percent	1,614	0.567	13.2 secs	A	34.0m
	70 percent	1,676	0.604	13.2 secs	A	40.1m
Evening peak	Existing	1,993	0.714	15.8 secs	A	59.7m
	30 percent	2,074	0.749	16.5 secs	B	70.9m
	70 percent	2,181	0.799	17.7 secs	B	89.1m

Printouts of traffic modelling can be found in Appendix B.

6.6. Lane capacity and level of service for Paice Street and Cowle Road

In evaluating the impact of additional vehicles on the surrounding road network, it is important to understand LOS motorists are currently receiving, which is done by comparing the peak hour traffic flow with diagram 6.6 from the RTA Guide, for urban environments.

Diagram 6.6 – Extract from the RTA Guide

Table 4.4
Urban road peak hour flows per direction

Level of Service	One Lane (veh/hr)	Two Lanes (veh/hr)
A	200	900
B	380	1400
C	600	1800
D	900	2200
E	1400	2800

From the manual traffic surveys, both Paice Street and Cowle Road are operating at a high level of traffic efficiency, with Paice Street operating at LOS B and Cowle Road at LOS A during the peak periods. This means that the traffic is stable, motorists have freedom to select their own operating speed, and there should be sufficient gaps in the traffic stream to enable vehicles to enter and leave, without causing adverse impacts.

The additional peak hour trips have been assigned to the surrounding road network, based on two scenarios, 30 and 70 percent of trips travelling towards the Paice Street roundabout. Table 6.6 demonstrates that the increase in vehicular trips will intensify the surrounding road network, with motorists to continue to receive the same level of traffic performance, except for southbound motorists on Paice Street, which will operate at LOS C during the evening peak, based on 70 percent of trips using this route.

Overall, the development is expected to increase traffic flow on these two roads, but the impact remains within acceptable limits, with the road standard of both roads suitable to absorb the increase.

Table 6.6 – Comparison of traffic performance on Paice Street and Cowle Road

	Paice Street				**Cowle Road**	
	Morning		**Evening**		**Morning**	
	NB	**SB**	**NB**	**SB**	**NB**	**SB**
Existing flows	219	234	323	283	31	40
Level of Service	B	B	B	B	A	A
With 30 percent	**260**	**238**	**335**	**348**	**72**	**45**
Level of Service	**B**	**B**	**B**	**B**	**A**	**A**
With 70 percent	**314**	**243**	**350**	**435**	**126**	**51**
Level of Service	**B**	**B**	**B**	**C**	**A**	**A**

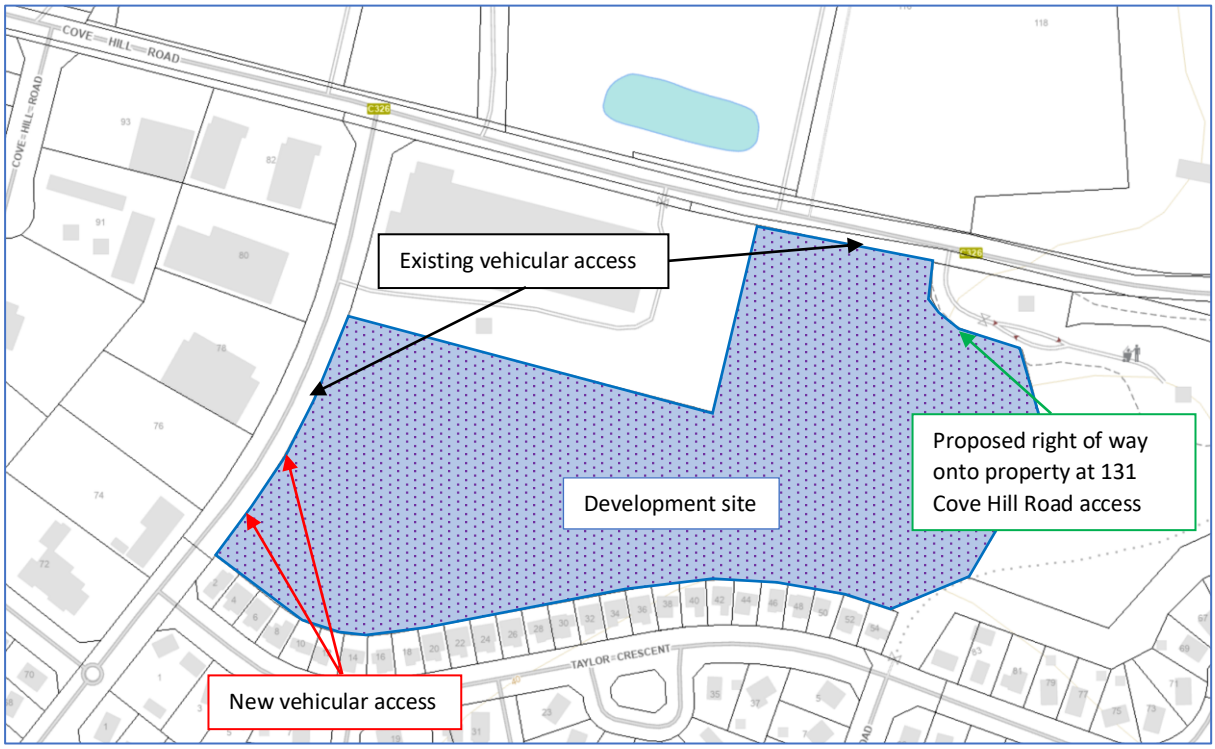
7. Access arrangement to and from the development site

The development site has two existing vehicular accesses, one onto Cove Hill Road and one onto Cowle Road. The subdivision will retain these accesses, with an internal driveway operating between the two accesses, with lots 1, 4, 5, 7 and 8 obtaining access off this driveway.

To service lots 2 and 3, it is proposed that two new accesses be created onto Cowle Road, with each lot to operate with separate access points. Lot 6 is proposed to create a right of way with the adjacent property at 131 Cove Hill Road, utilising this properties existing access.

Overall, the proposed access arrangements will minimise the number of vehicular accesses onto Cove Hill and Cowle Road's.

Diagram 7.0 – Extract from LIST Database



7.1. Existing access onto Cove Hill Road

The development site will retain and upgrade the existing 8.5 metre unsealed access onto Cove Hill Road. The upgraded access will be designed to comply with LGAT Standard Drawing TSD-R09-v3 for an urban driveway access and Figure 3.1 of Australian Standard AS2890.2:2008 – Off-street commercial vehicles facilities (Commercial Standard).

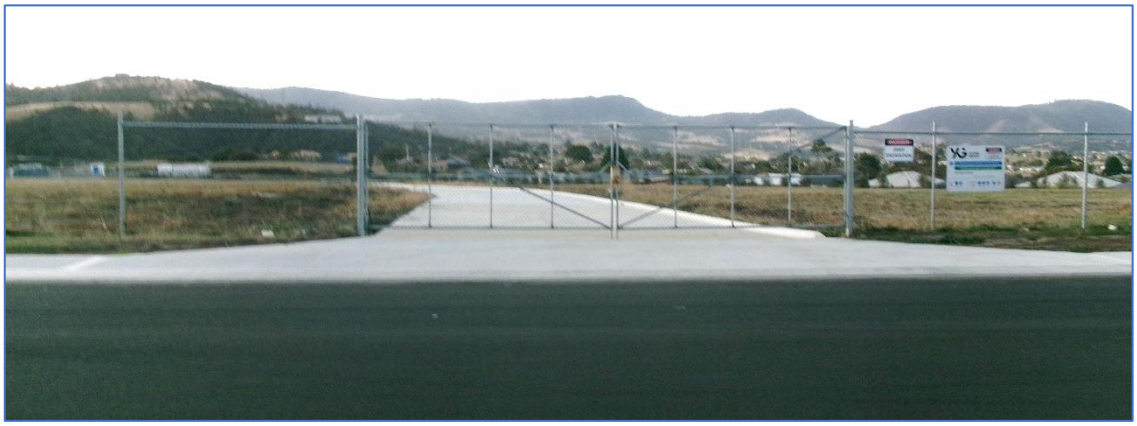
As per Council's advice, the access will be designed for medium rigid vehicle's. It will be constructed with a concrete surface, with a minimum width of nine metres, accommodating two-way traffic flow. Additionally, flaring will be incorporated on either side to accommodate vehicle swept paths entering and exiting the site.

Photograph 7.1 – Existing access onto Cove Hill Road

7.2. Existing access onto Cowle Road

The site will retain the existing 8.5 metre wide vehicular access onto Cowle Road, which is of sufficient width to accommodate two-way traffic flow.

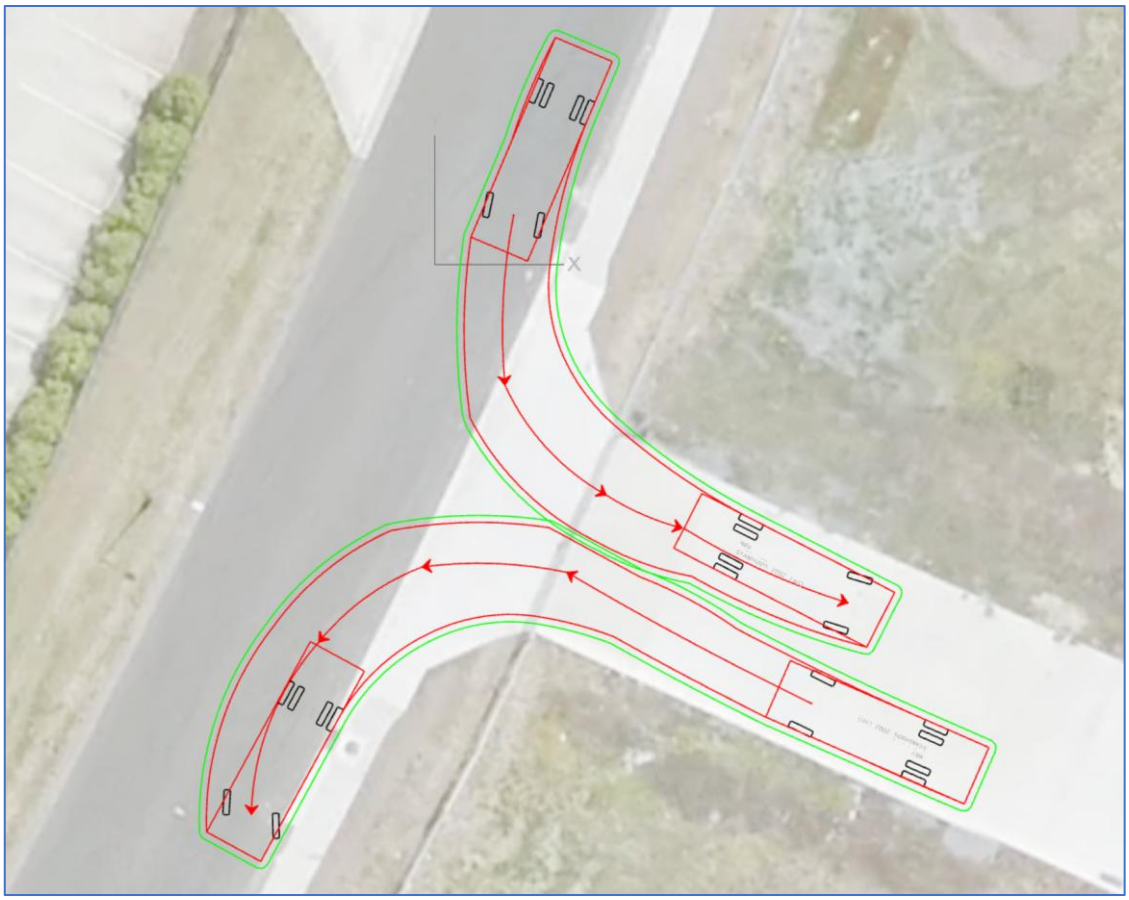
Photograph 7.2 – Existing access onto Cowle Road



While it is expected that the majority of heavy vehicle movements will use Cove Hill Road to access the highway, the Cowle Road access should be designed to allow a medium rigid vehicle to turn left onto Cowle Road, without crossing the centre of the road.

Although this access point has been constructed with minimal flaring, vehicle swept path analysis has confirmed that there is sufficient width to accommodate a medium rigid vehicle entering and exiting simultaneously, without encroaching on the theoretical centreline of Cowle Road. Furthermore, given that Cowle Road experiences light traffic, vehicles can wait at the access point for a clear exit without impacting oncoming traffic.

Diagram 7.2 – Swept path of a medium rigid vehicle



7.3. Existing access for property at 131 Cove Hill Road

As previously stated, the development proposes to create a right of way with the adjacent property at 131 Cove Hill Road, to provide access for lot 6. This property has an existing seven metre wide vehicular access onto Cove Hill Road, which is sufficient to accommodate two-way traffic flow.

This arrangement is not expected to adversely impact the property at 131, which only operates Fridays to Mondays.

Photograph 7.3 – Existing access onto Cove Hill Road for property 131

7.4. Proposed new accesses for lots 2 and 3

It is proposed that new accesses will be created onto Cowle Road to service lots 2 and 3. Each access will be a minimum of 5.5 metres wide, accommodating two-way traffic flow and be designed to comply with LGAT Standard Drawing TSD-R09-v3 for an urban driveway access and Figure 3.1 of the Commercial Standard.

The photographs below illustrate the possible location of each access.

Photograph 7.4A – Proposed location of access to service lot 2

Photograph 7.4B – Proposed location of access to service lot 3

7.5. Sight distance leaving each access

Austroads Guide to Road Design recommends the following SISD for the following speed environments, based on a driver reaction time of 1.5 seconds and an observation time of three seconds:

- 60 km/h speed environment – 114 metres, and
- 50 km/h speed environment – 90 metres.

On-site measurements of the available sight distance were taken, based on the driver leaving the access being 1.1 metres above the access surface, and an approaching vehicle being 1.2 metres high.

The table below demonstrated each access has sufficient available sight distance for the prevailing operating speed of approaching vehicles, enabling safe and efficient access to the development site.

Table 7.5 – Safe Intersection Sight Distance at each access

Access	Operating speed	Required SISD	Available sight distance		Comment
			Left	Right	
Existing access onto Cove Hill Road	60 km/h	114 metres	130 metres	130 metres	Compliant
Existing access for 131 Cove Hill Road	60 km/h	114 metres	130 metres	130 metres	Compliant
Existing access onto Cowle Road	50 km/h	90 metres	100 metres	100 metres	Compliant
Proposed new access onto Cowle Road for lot 2	50 km/h	90 metres	100 metres	100 metres	Compliant
Proposed new access onto Cowle Road for lot 3	50 km/h	90 metres	100 metres	100 metres	Compliant

Photographs of the available sight distance are available in Appendix C.

7.6. Pedestrian sight distance

It is important that drivers leaving the development site have adequate sight lines to pedestrians using the footpath. Among the roads surrounding the development site, only Cowle Road has an existing footpath. The footpath on Cowle Road is located back of the kerb, 3.5 metres from the property line, and this provides separation between pedestrians using the footpath, and vehicles leaving accesses onto Cowle Road from the development site.

The development is not anticipated to negatively affect pedestrians.

7.7. Upgrade to Cove Hill Road

Council has requested that Cove Hill Road be widened to a trafficable width of 11 metres, along the length of the property road frontage.

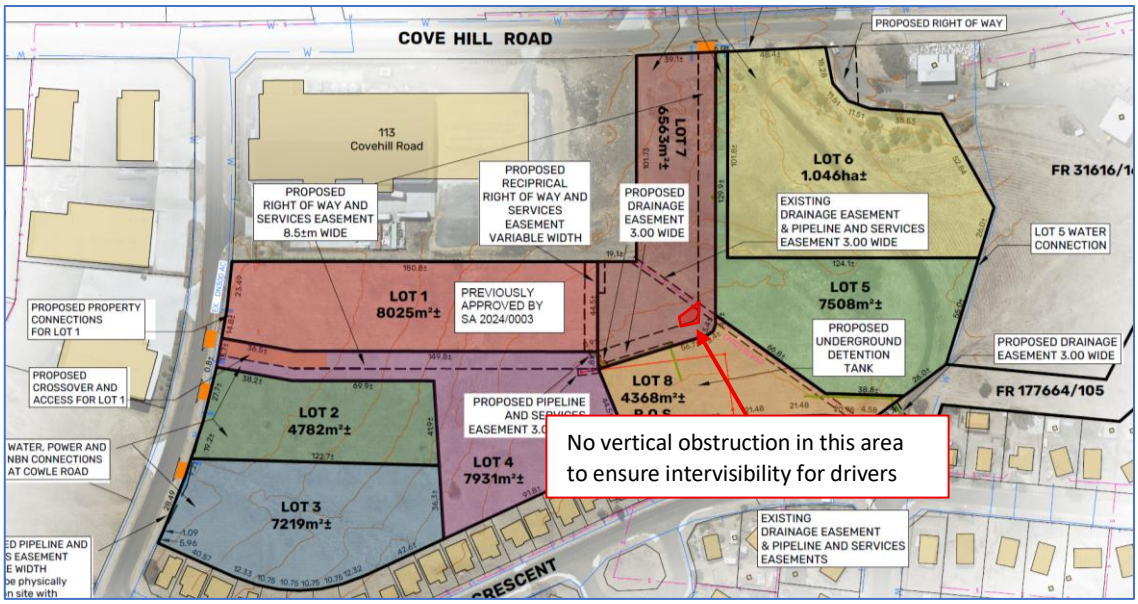
The client has agreed to upgrade this section of Cove Hill Road to an urban standard, similar to the standard of Cove Hill Road further to the west. This upgrade will include a bitumen surface, trafficable road width of 11 metres, and concrete kerb and channel along both sides.

7.8. Internal driveway standard

The layout of the subdivision includes an internal driveway, extending between Cove Hill Road and Cowle Road. This driveway will be designed to comply with table 3.1 of the Commercial Standard, to accommodate an Articulated Vehicle (AV) circulating the site.

This driveway will have a width of 8.5 metres, accommodating two-way traffic flow, constructed with a concrete surface and a suitable camber to direct surface water to kerbing, feeding into an approved stormwater drainage system. The Commercial Standard specifies an 8.5 metre wide driveway requires driver intervisibility at tight corners, to ensure drivers can see opposing vehicles. With the driveway incorporating a tight corner, the layout will include no vertical obstructions located on the inside of this corner, as illustrated in the diagram below.

Diagram 7.8 – Driver intervisibility at the tight corner



8. Planning scheme

8.1. C3.5.1 Traffic generation at a vehicle crossing, level crossing or new junction

The development site will increase the number of vehicular movements at the existing accesses by more than 20 percent, while also creating two new accesses onto Cowle Road, and as such, is required to be assessed against the performance criteria P1.

Performance criteria	Assessment
Vehicular traffic to and from the site must minimise any adverse effects on the safety of a junction, vehicle crossing or level crossing or safety or efficiency of the road or rail network, having regard to:	
a) Any increase in traffic caused by the use;	To evaluate a worst-case scenario, the projected increase in trips has been calculated using a theoretical trip methodology. Based on a worst case scenario, the development site has the potential to generate up to 1,784 daily trips, with 152 of these anticipated to occur during the morning peak and 256 during the evening peak.
b) The nature of the traffic generated by the use;	A light industrial subdivision will generate traffic from both light vehicles (less than 5.5 metres) and heavy vehicles. Light vehicle traffic will consist of employees and visitors, whereas heavy vehicles will facilitate deliveries to each of the industrial lots. Currently, Cove Hill Road and The Cove Hill roundabout service light industrial businesses, and it is anticipated that the heavy vehicles generated by the development will be compatible with the existing traffic on the surrounding road network.
c) The nature of the road	Within the surrounding road network, Cove Hille Road operates as a collector road, while all other surrounding roads operate as local access roads. Each road has been constructed with sufficient width to accommodate two-way traffic flow and is of suitable standard to accommodate the increase in vehicles generated by the development. Cove Hill Road will be upgraded to an urban standard, for the length of the properties road frontage. Each existing or proposed new access will have sufficient available sight distance for the prevailing speed environment, allowing vehicles to enter and leave the site in a safe and efficient manner, without impacting other road users.
d) The speed limit and traffic flow of the road	Cove Hill Road has a posted 60 km/h speed limit, while all other roads operate under the 50 km/h default urban speed limit. Recent manual surveys revealed that Cove Hill Road and Cowle Road junction generated less than 150 vehicles in the morning peak, while the Cove Hill Road and Paice Street roundabouts generated consistent traffic flows during both peak periods. Traffic analysis determined that while it is busy during both peak periods, both roundabouts are providing an acceptable level of

	traffic performance, while the junction is operating at the highest level of efficiency, LOS A. Modelling predicts that both roundabouts have spare capacity to absorb the additional traffic movements generated by the development site, without deteriorating the level of traffic efficiency throughout the surrounding road network.
e) Any alternative access to a road	None.
f) The need for the use	The land is zoned light industrial, the new industrial lots creating new employment opportunities within the Brighton municipality.
g) Any traffic impact assessment	A traffic impact assessment found no reason for this development not to proceed.
h) Any advice received from the rail or road authority	Aware of none.

8.2. C2.0 Parking and Sustainable Transport Code

C2.5.1 Car parking numbers.	Each lot will be of sufficient size to accommodate on-site parking facilities to meet the reasonable demand generated.
C2.5.2 Bicycle parking numbers.	Not applicable for a light industrial subdivision.
C2.5.3 Motorcycle parking numbers.	Not applicable for a light industrial subdivision.
C2.5.4 Loading bays.	Each lot will be of sufficient size to accommodate on-site loading and unloading, while being designed to allow heavy vehicles to enter, circulate and leave in a forward-driving direction.
C2.5.5 Number of car parking spaces within the General Residential Zone and Inner Residential Zone.	Not applicable for a light industrial subdivision.

9. Conclusion

From a traffic engineering and road safety perspective, additional traffic generated from this development is not expected to create any adverse safety, amenity, or traffic efficiency problems, as:

- the amount of traffic estimated to be generated is considered to be moderate and there is sufficient spare capacity within the surrounding road network to absorb these extra traffic movements,
- traffic modelling indicates that the surrounding road network will continue to provide motorists with an acceptable level of traffic performance,
- each access onto Cove Hill Road and Cowle Road has sufficient available sight distance for the prevailing speeds of approaching motorists, ensuring safe and efficient vehicle movements, without causing adverse impact to other users,
- Cove Hill Road will be upgraded to an urban standard for the length of the properties road frontage, and
- all vehicles will be able to enter and leave the development site in a forward-driving direction, without adversely impacting other motorists on the public road network.

This Traffic Impact Assessment found no reason for this development not to proceed.

10. Appendix A – Manual traffic surveys

10.1. East Derwent Highway, Paice Street and Scott Road roundabout

Table 10.1A – Morning survey completed on Tuesday 6th of May

Time	Paice Street (North)			East Derwent Hwy (East)			Scott Road (South)			East Derwent Hwy (West)		
	Right	Straight	Left	Right	Straight	Left	Right	Straight	Left	Right	Straight	Left
7:30 7:45	5	11	24	16	45	23	36	7	9	15	127	9
7:45 8:00	3	15	33	18	41	33	35	12	9	18	108	8
8:00 8:15	2	19	18	15	39	35	28	5	13	20	106	9
8:15 8:30	7	42	35	33	41	45	41	20	20	36	108	17
8:30 8:45	10	30	20	29	59	36	40	28	20	27	77	25
Total	**27**	**117**	**130**	**111**	**235**	**172**	**180**	**72**	**71**	**116**	**526**	**68**
Peak	**22**	**106**	**106**	**95**	**180**	**149**	**144**	**65**	**62**	**101**	**399**	**59**

Table 10.1B – Evening survey completed on Tuesday 6th of May

Time	Paice Street (North)			East Derwent Hwy (East)			Scott Road (South)			East Derwent Hwy (West)		
	Right	Straight	Left	Right	Straight	Left	Right	Straight	Left	Right	Straight	Left
4:00 4:15	10	36	42	40	117	48	55	33	31	21	77	5
4:15 4:30	9	17	31	56	109	54	37	31	31	20	83	5
4:30 4:45	4	35	30	51	79	42	32	27	33	30	78	3
4:45 5:00	4	28	37	40	109	57	34	30	35	23	62	2
Total	**27**	**116**	**140**	**187**	**414**	**201**	**158**	**121**	**120**	**94**	**300**	**15**

10.2. Traffic movements at the Paice Street roundabout

Diagram 10.2A – Morning peak hour traffic movements

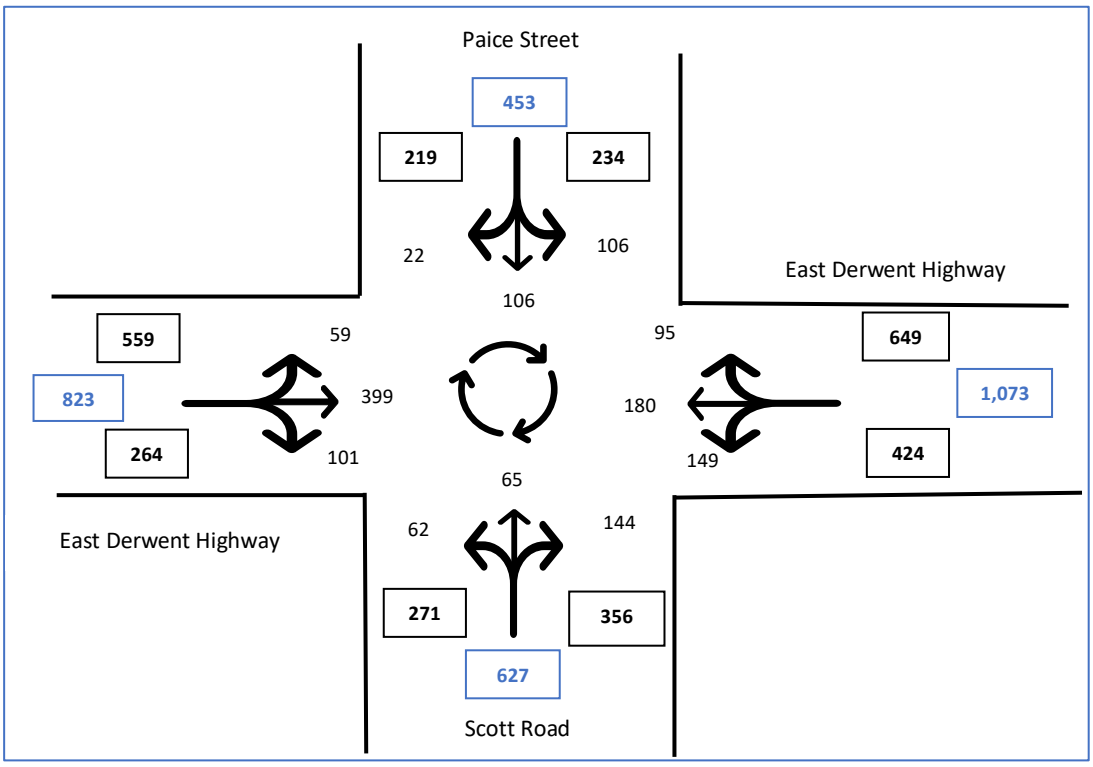
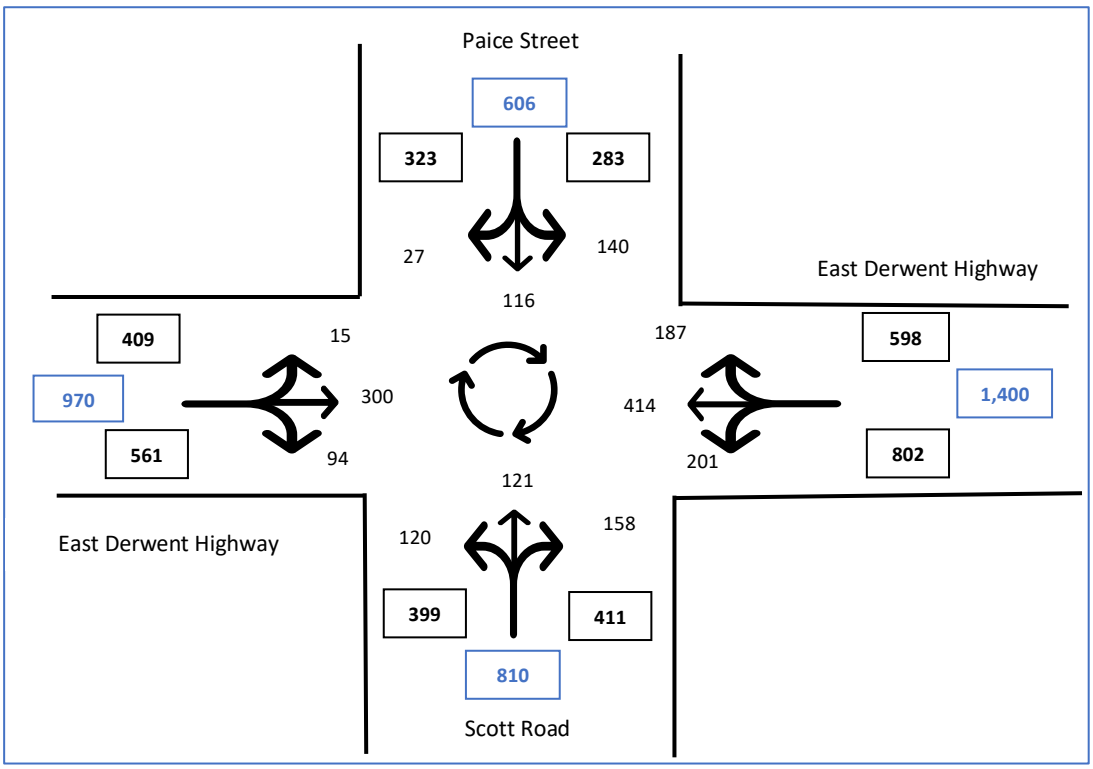


Diagram 10.2B – Evening peak hour traffic movements



10.3. Traffic movements at the Cove Hill Road roundabout

Diagram 10.3A – Morning peak hour traffic movements

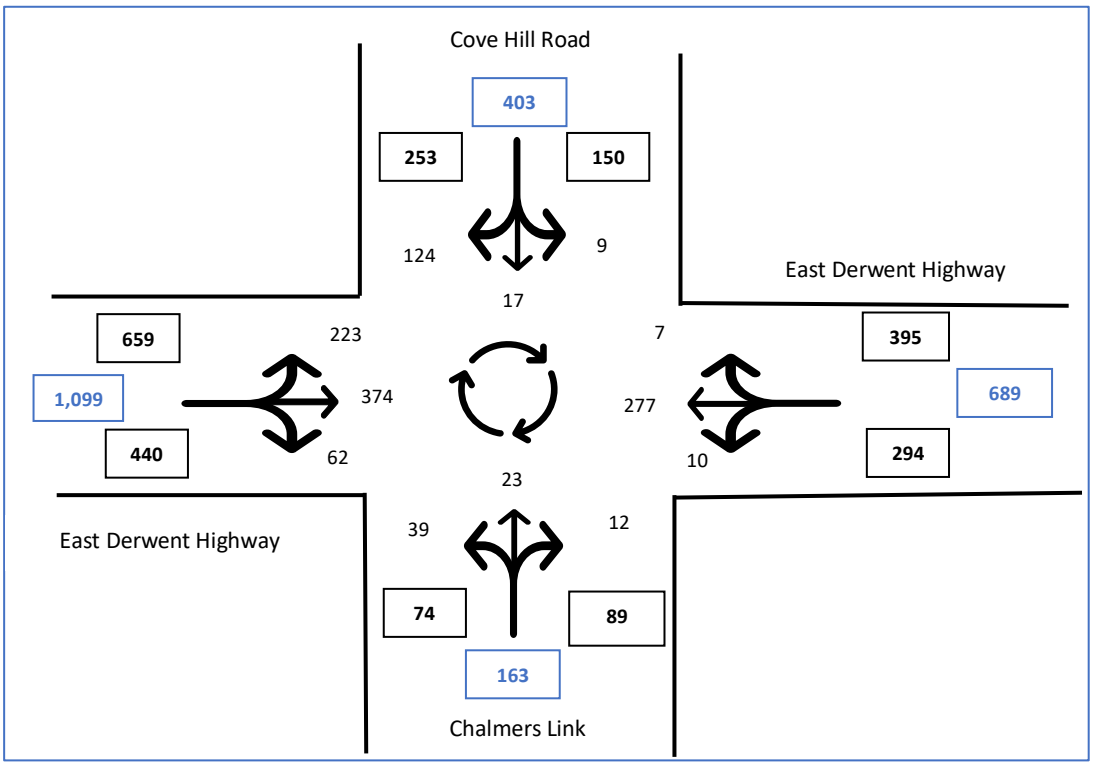
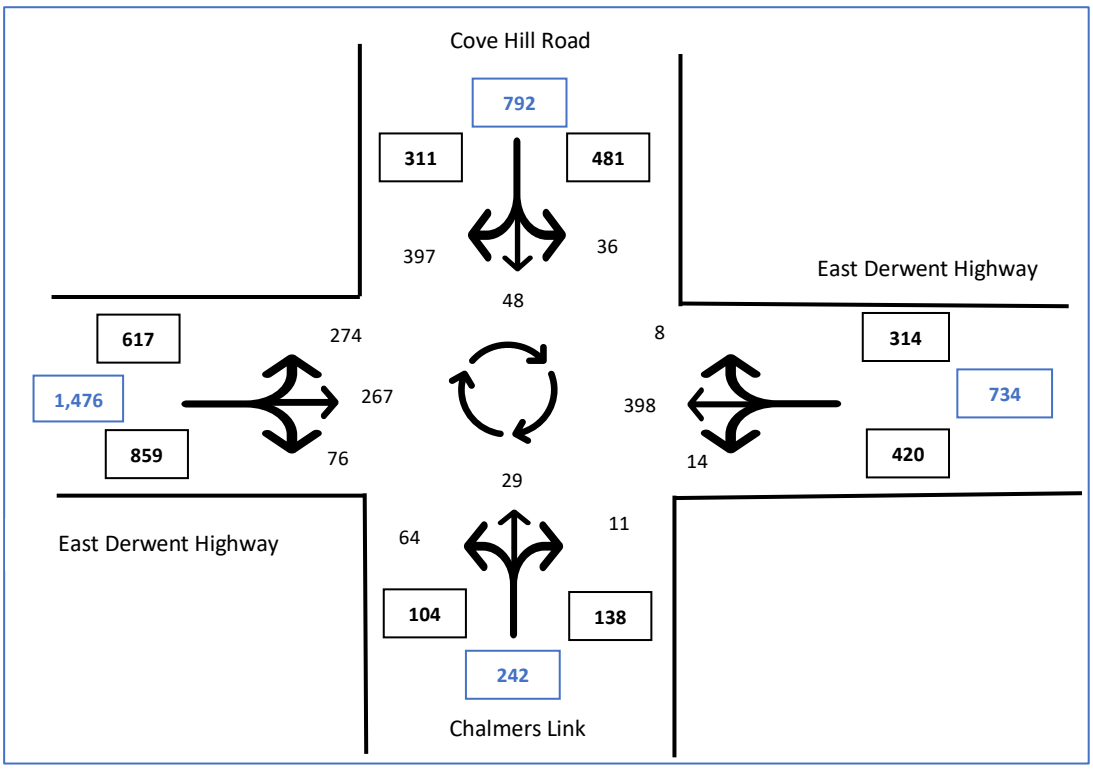


Diagram 10.3B – Evening peak hour traffic movements



10.4. Updated traffic movements at Cove Hill Road roundabout

Diagram 10.4A – Morning peak hour traffic movements

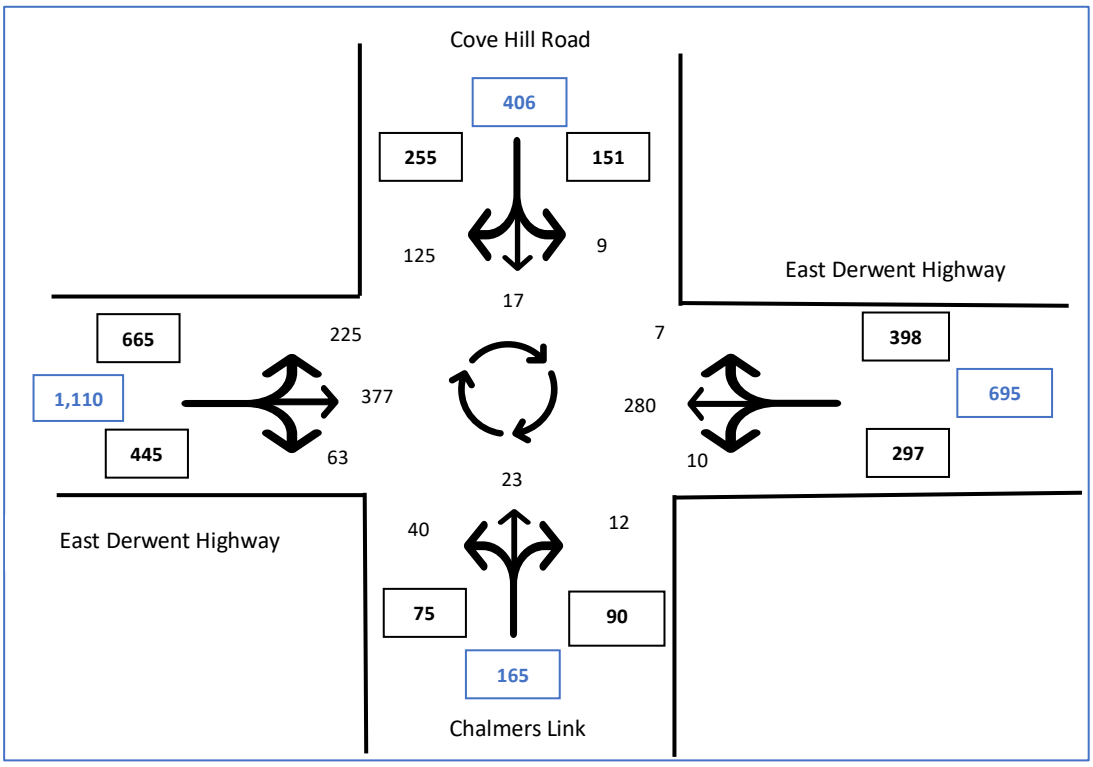
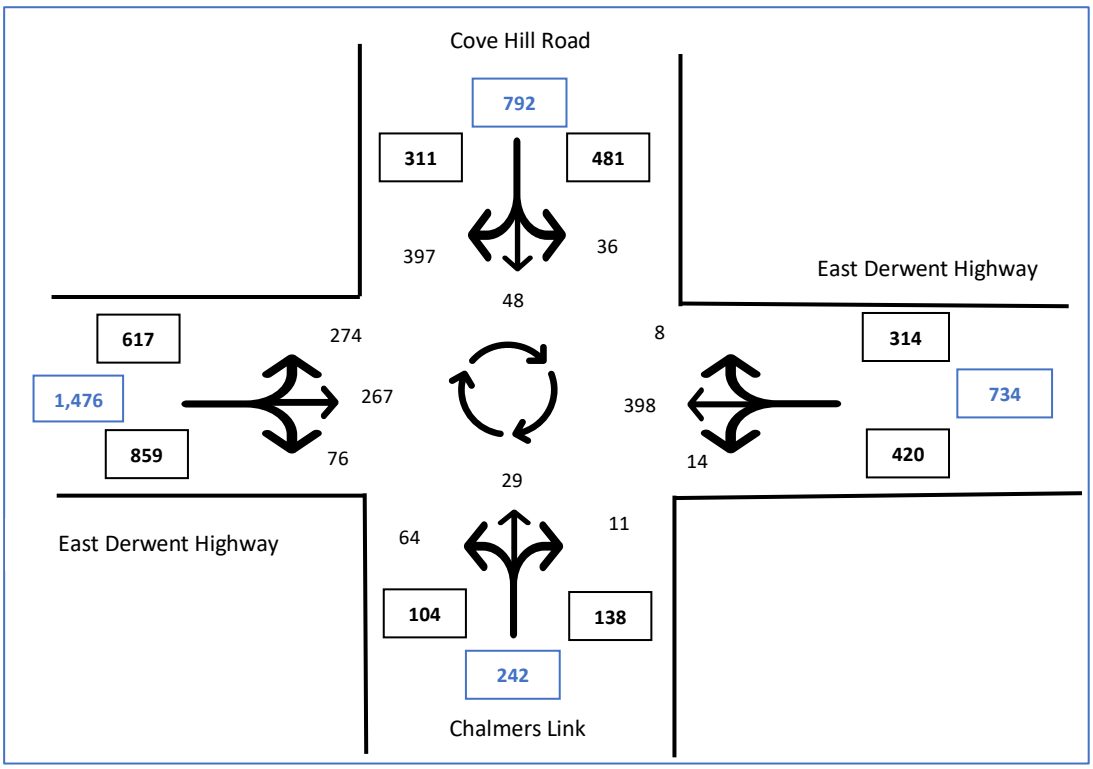


Diagram 10.4B – Evening peak hour traffic movements

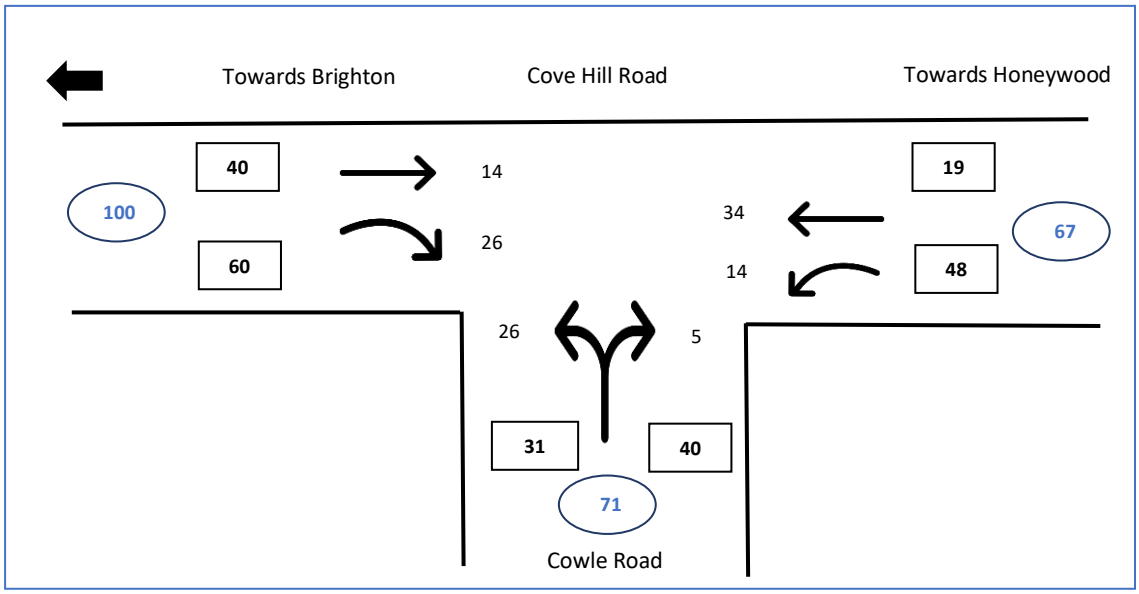


10.5. Cove Hill Road and Cowle Road junction

Table 10.5 – Morning survey completed on Tuesday 6th of May

Time	Cove Hill Road				Cowle Road	
	Straight towards Honeywood	Straight towards Brighton	Left into Cowle Rd	Right into Cowle Rd	left onto Cove Hill Rd	Right onto Cove Hill Rd
7:30 - 7:45	2	4	1	9	11	2
7:45 - 8:00	2	14	2	10	3	1
8:00 - 8:15	4	9	5	3	5	2
8:15 - 8:30	6	7	6	4	7	0
Total	**14**	**34**	**14**	**26**	**26**	**5**

Diagram 10.5 – Morning peak hour traffic movements



10.6. Cove Hill Road survey

Table 10.6 – Evening survey completed on Tuesday 6th of May

Time	Cove Hill Road	
	Straight towards Honeywood	Straight towards Brighton
4:00 - 4:15	97	129
4:15 - 4:30	86	118
4:30 - 4:45	82	100
4:45 - 5:00	87	93
Total	**352**	**450**

11. Appendix B – Traffic modelling

Cove Hill Road, Chalmers Link and the highway roundabout

Morning peak – Existing flows

MOVEMENT SUMMARY

Site: 101 [Cove Hill and East Derwen roundabout - Morning current flows]

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m
South: Chalmers Link								
1	L2	42	0.0	0.035	4.6	LOS A	0.1	1.0
2	T1	24	0.0	0.035	4.7	LOS A	0.1	0.9
3	R2	13	0.0	0.035	10.4	LOS B	0.1	0.9
Approach		79	0.0	0.035	5.6	LOS A	0.1	1.0
East: East Derwent (Paice St)								
4	L2	11	0.0	0.124	4.3	LOS A	0.5	3.8
5	T1	295	0.0	0.124	4.1	LOS A	0.5	3.8
6	R2	7	0.0	0.124	9.9	LOS A	0.5	3.8
Approach		313	0.0	0.124	4.3	LOS A	0.5	3.8
North: Cove Hill Road								
7	L2	9	0.0	0.038	5.9	LOS A	0.1	1.0
8	T1	18	0.0	0.038	5.8	LOS A	0.1	1.0
9	R2	132	0.0	0.112	10.4	LOS B	0.5	3.2
Approach		159	0.0	0.112	9.6	LOS A	0.5	3.2
West: East Derwent (Midland Hwy)								
10	L2	237	0.0	0.233	3.8	LOS A	1.2	8.4
11	T1	397	0.0	0.233	3.6	LOS A	1.2	8.4
12	R2	66	0.0	0.233	9.3	LOS A	1.2	8.3
Approach		700	0.0	0.233	4.2	LOS A	1.2	8.4
All Vehicles		1251	0.0	0.233	5.0	LOS A	1.2	8.4

Evening peak – Existing flows

MOVEMENT SUMMARY

Site: 101 [Cove Hill and East Derwent Roundabout - Evening current flows]

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m
South: Chalmers Link								
1	L2	67	0.0	0.151	8.6	LOS A	1.0	7.1
2	T1	31	0.0	0.151	8.6	LOS A	1.0	7.1
3	R2	12	0.0	0.151	14.3	LOS B	1.0	7.1
Approach		109	0.0	0.151	9.2	LOS A	1.0	7.1
East: East Derwent (Paice St)								
4	L2	15	0.0	0.475	7.2	LOS A	3.8	26.3
5	T1	419	0.0	0.475	7.3	LOS A	3.8	26.3
6	R2	8	0.0	0.475	13.0	LOS B	3.8	26.3
Approach		442	0.0	0.475	7.4	LOS A	3.8	26.3
North: Cove Hill								
7	L2	38	0.0	0.455	5.8	LOS A	3.2	22.5
8	T1	51	0.0	0.455	5.8	LOS A	3.2	22.5
9	R2	418	0.0	0.455	11.5	LOS B	3.2	22.5
Approach		506	0.0	0.455	10.5	LOS B	3.2	22.5
West: East Derwent (Midland Hwy)								
10	L2	288	0.0	0.415	3.7	LOS A	3.5	24.5
11	T1	281	0.0	0.415	3.7	LOS A	3.5	24.5
12	R2	80	0.0	0.415	9.4	LOS A	3.5	24.5
Approach		649	0.0	0.415	4.4	LOS A	3.5	24.5
All Vehicles		1707	0.0	0.475	7.3	LOS A	3.8	26.3

Morning peak – Existing flows with 30 percent of development trips

MOVEMENT SUMMARY

Site: 101 [Cove Hill and East Derwent Roundabout - Morning with 30% development trips]

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m
South: Chalmers Link								
1	L2	42	0.0	0.079	5.3	LOS A	0.4	3.0
2	T1	28	0.0	0.079	5.4	LOS A	0.4	3.0
3	R2	13	0.0	0.079	11.1	LOS B	0.4	3.0
Approach		83	0.0	0.079	6.2	LOS A	0.4	3.0
East: East Derwent (Paice St)								
4	L2	11	0.0	0.253	4.5	LOS A	1.6	10.9
5	T1	295	0.0	0.253	4.5	LOS A	1.6	10.9
6	R2	8	0.0	0.253	10.2	LOS B	1.6	10.9
Approach		314	0.0	0.253	4.7	LOS A	1.6	10.9
North: Cove Hill								
7	L2	9	0.0	0.157	5.7	LOS A	0.9	6.4
8	T1	18	0.0	0.157	5.7	LOS A	0.9	6.4
9	R2	136	0.0	0.157	11.4	LOS B	0.9	6.4
Approach		163	0.0	0.157	10.5	LOS B	0.9	6.4
West: East Derwent (Midland Hwy)								
10	L2	275	0.0	0.466	3.7	LOS A	3.9	27.6
11	T1	397	0.0	0.466	3.7	LOS A	3.9	27.6
12	R2	66	0.0	0.466	9.4	LOS A	3.9	27.6
Approach		738	0.0	0.466	4.2	LOS A	3.9	27.6
All Vehicles		1298	0.0	0.466	5.2	LOS A	3.9	27.6

Evening peak – Existing flows with 30 percent of development trips

MOVEMENT SUMMARY

Site: 101 [Cove Hill and East Derwent Roundabout - Evening with 30% development trips]

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m
South: Chalmers Link								
1	L2	67	0.0	0.163	9.3	LOS A	1.1	7.8
2	T1	32	0.0	0.163	9.3	LOS A	1.1	7.8
3	R2	12	0.0	0.163	15.0	LOS B	1.1	7.8
Approach		111	0.0	0.163	9.9	LOS A	1.1	7.8
East: East Derwent (Paice St)								
4	L2	15	0.0	0.509	8.4	LOS A	4.4	30.8
5	T1	419	0.0	0.509	8.4	LOS A	4.4	30.8
6	R2	8	0.0	0.509	14.1	LOS B	4.4	30.8
Approach		442	0.0	0.509	8.5	LOS A	4.4	30.8
North: Cove Hill								
7	L2	42	0.0	0.514	5.9	LOS A	3.9	27.0
8	T1	58	0.0	0.514	5.9	LOS A	3.9	27.0
9	R2	475	0.0	0.514	11.6	LOS B	3.9	27.0
Approach		575	0.0	0.514	10.6	LOS B	3.9	27.0
West: East Derwent (Midland Hwy)								
10	L2	300	0.0	0.424	3.7	LOS A	3.6	25.4
11	T1	281	0.0	0.424	3.7	LOS A	3.6	25.4
12	R2	80	0.0	0.424	9.4	LOS A	3.6	25.4
Approach		661	0.0	0.424	4.4	LOS A	3.6	25.4
All Vehicles		1788	0.0	0.514	7.8	LOS A	4.4	30.8

Morning peak – Existing flows with 70 percent of development trips

MOVEMENT SUMMARY

Site: 101 [Cove Hill and East Derwent Roundabout - Morning with 70% development trip]

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m
South: Chalmers Link								
1	L2	42	0.0	0.084	5.4	LOS A	0.5	3.3
2	T1	34	0.0	0.084	5.4	LOS A	0.5	3.3
3	R2	13	0.0	0.084	11.1	LOS B	0.5	3.3
Approach		88	0.0	0.084	6.2	LOS A	0.5	3.3
East: East Derwent (Paice St)								
4	L2	11	0.0	0.256	4.5	LOS A	1.6	11.1
5	T1	295	0.0	0.256	4.5	LOS A	1.6	11.1
6	R2	9	0.0	0.256	10.3	LOS B	1.6	11.1
Approach		315	0.0	0.256	4.7	LOS A	1.6	11.1
North: Cove Hill								
7	L2	9	0.0	0.164	5.7	LOS A	1.0	6.7
8	T1	19	0.0	0.164	5.7	LOS A	1.0	6.7
9	R2	140	0.0	0.164	11.5	LOS B	1.0	6.7
Approach		168	0.0	0.164	10.5	LOS B	1.0	6.7
West: East Derwent (Midland Hwy)								
10	L2	325	0.0	0.502	3.8	LOS A	4.5	31.3
11	T1	397	0.0	0.502	3.8	LOS A	4.5	31.3
12	R2	66	0.0	0.502	9.5	LOS A	4.5	31.3
Approach		788	0.0	0.502	4.2	LOS A	4.5	31.3
All Vehicles		1360	0.0	0.502	5.3	LOS A	4.5	31.3

Evening peak – Existing flows with 70 percent of development trips

MOVEMENT SUMMARY

Site: 101 [Cove Hill and East Derwent Roundabout - Evening with 70% development trips]

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m
South: Chalmers Link								
1	L2	67	0.0	0.181	10.4	LOS B	1.3	8.9
2	T1	34	0.0	0.181	10.4	LOS B	1.3	8.9
3	R2	12	0.0	0.181	16.2	LOS B	1.3	8.9
Approach		113	0.0	0.181	11.0	LOS B	1.3	8.9
East: East Derwent (Paice St)								
4	L2	15	0.0	0.562	10.4	LOS B	5.5	38.2
5	T1	419	0.0	0.562	10.4	LOS B	5.5	38.2
6	R2	8	0.0	0.562	16.1	LOS B	5.5	38.2
Approach		442	0.0	0.562	10.5	LOS B	5.5	38.2
North: Cove Hill								
7	L2	49	0.0	0.593	6.7	LOS A	5.4	37.6
8	T1	66	0.0	0.593	6.8	LOS A	5.4	37.6
9	R2	551	0.0	0.593	12.5	LOS B	5.4	37.6
Approach		666	0.0	0.593	11.5	LOS B	5.4	37.6
West: East Derwent (Midland Hwy)								
10	L2	314	0.0	0.434	3.7	LOS A	3.8	26.7
11	T1	281	0.0	0.434	3.7	LOS A	3.8	26.7
12	R2	80	0.0	0.434	9.4	LOS A	3.8	26.7
Approach		675	0.0	0.434	4.4	LOS A	3.8	26.7
All Vehicles		1896	0.0	0.593	8.7	LOS A	5.5	38.2

Paice Street, Scott Road and the highway roundabout

Morning peak – Existing flows

MOVEMENT SUMMARY

Site: 101 [East Derwent, Pace and Scott roundabout - Morning current flows]

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m
South: Scott Road								
1	L2	65	0.0	0.269	5.6	LOS A	1.7	11.7
2	T1	68	0.0	0.269	5.9	LOS A	1.7	11.7
3	R2	152	0.0	0.269	10.5	LOS B	1.7	11.7
Approach		285	0.0	0.269	8.3	LOS A	1.7	11.7
East: East Derwent (Bowen Bridge)								
4	L2	157	0.0	0.386	5.4	LOS A	2.7	18.7
5	T1	189	0.0	0.386	5.6	LOS A	2.7	18.7
6	R2	100	0.0	0.386	10.2	LOS B	2.7	18.7
Approach		446	0.0	0.386	6.6	LOS A	2.7	18.7
North: Paice Street								
7	L2	112	0.0	0.322	8.3	LOS A	2.2	15.5
8	T1	112	0.0	0.322	8.5	LOS A	2.2	15.5
9	R2	23	0.0	0.322	13.2	LOS B	2.2	15.5
Approach		246	0.0	0.322	8.9	LOS A	2.2	15.5
West: East Derwent (Midland Hwy)								
10	L2	62	0.0	0.540	6.3	LOS A	4.3	29.8
11	T1	420	0.0	0.540	6.5	LOS A	4.3	29.8
12	R2	106	0.0	0.540	11.1	LOS B	4.3	29.8
Approach		588	0.0	0.540	7.3	LOS A	4.3	29.8
All Vehicles		1566	0.0	0.540	7.5	LOS A	4.3	29.8

Evening peak – Existing flows

MOVEMENT SUMMARY

Site: 101 [East Derwent, Pace and Scott roundabout - Eveneing current flows]

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m
South: Scott Road								
1	L2	126	0.0	0.569	11.0	LOS B	5.5	38.2
2	T1	127	0.0	0.569	11.2	LOS B	5.5	38.2
3	R2	166	0.0	0.569	15.8	LOS B	5.5	38.2
Approach		420	0.0	0.569	13.0	LOS B	5.5	38.2
East: East Derwent (Bowen Bridge)								
4	L2	212	0.0	0.714	7.2	LOS A	8.5	59.7
5	T1	436	0.0	0.714	7.4	LOS A	8.5	59.7
6	R2	197	0.0	0.714	12.1	LOS B	8.5	59.7
Approach		844	0.0	0.714	8.5	LOS A	8.5	59.7
North: Paice Street								
7	L2	147	0.0	0.357	7.6	LOS A	2.5	17.2
8	T1	122	0.0	0.357	7.8	LOS A	2.5	17.2
9	R2	28	0.0	0.357	12.5	LOS B	2.5	17.2
Approach		298	0.0	0.357	8.2	LOS A	2.5	17.2
West: East Derwent (Midland Hwy)								
10	L2	16	0.0	0.475	7.5	LOS A	3.6	25.4
11	T1	316	0.0	0.475	7.7	LOS A	3.6	25.4
12	R2	99	0.0	0.475	12.4	LOS B	3.6	25.4
Approach		431	0.0	0.475	8.8	LOS A	3.6	25.4
All Vehicles		1993	0.0	0.714	9.4	LOS A	8.5	59.7

Morning peak – Existing flows with 30 percent of development trips

MOVEMENT SUMMARY

Site: 101 [East Derwent, Pace and Scott roundabout - Morning with 30% development t

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m
South: Scott Road								
1	L2	65	0.0	0.285	5.8	LOS A	1.8	12.7
2	T1	81	0.0	0.285	6.0	LOS A	1.8	12.7
3	R2	152	0.0	0.285	10.6	LOS B	1.8	12.7
Approach		298	0.0	0.285	8.3	LOS A	1.8	12.7
East: East Derwent (Bowen Bridge)								
4	L2	157	0.0	0.403	5.4	LOS A	2.8	19.9
5	T1	189	0.0	0.403	5.6	LOS A	2.8	19.9
6	R2	119	0.0	0.403	10.3	LOS B	2.8	19.9
Approach		465	0.0	0.403	6.7	LOS A	2.8	19.9
North: Paice Street								
7	L2	114	0.0	0.330	8.3	LOS A	2.3	16.0
8	T1	114	0.0	0.330	8.6	LOS A	2.3	16.0
9	R2	23	0.0	0.330	13.2	LOS B	2.3	16.0
Approach		251	0.0	0.330	8.9	LOS A	2.3	16.0
West: East Derwent (Midland Hwy)								
10	L2	74	0.0	0.567	7.0	LOS A	4.9	34.0
11	T1	420	0.0	0.567	7.2	LOS A	4.9	34.0
12	R2	106	0.0	0.567	11.8	LOS B	4.9	34.0
Approach		600	0.0	0.567	8.0	LOS A	4.9	34.0
All Vehicles		1614	0.0	0.567	7.8	LOS A	4.9	34.0

Evening peak – Existing flows with 30 percent of development trips

MOVEMENT SUMMARY

Site: 101 [East Derwent, Pace and Scott roundabout - Evening with 30% development tri

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m
South: Scott Road								
1	L2	126	0.0	0.593	11.7	LOS B	5.9	41.6
2	T1	132	0.0	0.593	11.9	LOS B	5.9	41.6
3	R2	166	0.0	0.593	16.5	LOS B	5.9	41.6
Approach		424	0.0	0.593	13.7	LOS B	5.9	41.6
East: East Derwent (Bowen Bridge)								
4	L2	212	0.0	0.749	8.5	LOS A	10.1	70.9
5	T1	436	0.0	0.749	8.8	LOS A	10.1	70.9
6	R2	204	0.0	0.749	13.4	LOS B	10.1	70.9
Approach		852	0.0	0.749	9.8	LOS A	10.1	70.9
North: Paice Street								
7	L2	181	0.0	0.440	8.0	LOS A	3.2	22.7
8	T1	151	0.0	0.440	8.2	LOS A	3.2	22.7
9	R2	35	0.0	0.440	12.9	LOS B	3.2	22.7
Approach		366	0.0	0.440	8.6	LOS A	3.2	22.7
West: East Derwent (Midland Hwy)								
10	L2	17	0.0	0.482	7.7	LOS A	3.8	26.3
11	T1	316	0.0	0.482	7.9	LOS A	3.8	26.3
12	R2	99	0.0	0.482	12.6	LOS B	3.8	26.3
Approach		432	0.0	0.482	9.0	LOS A	3.8	26.3
All Vehicles		2074	0.0	0.749	10.2	LOS B	10.1	70.9

Morning peak – Existing flows with 70 percent of development trips

MOVEMENT SUMMARY

Site: 101 [East Derwent, Pace and Scott roundabout - Morning with 70% development t

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m
South: Scott Road								
1	L2	65	0.0	0.309	6.0	LOS A	2.0	14.0
2	T1	99	0.0	0.309	6.2	LOS A	2.0	14.0
3	R2	152	0.0	0.309	10.8	LOS B	2.0	14.0
Approach		316	0.0	0.309	8.4	LOS A	2.0	14.0
East: East Derwent (Bowen Bridge)								
4	L2	157	0.0	0.424	5.5	LOS A	3.1	21.4
5	T1	189	0.0	0.424	5.7	LOS A	3.1	21.4
6	R2	143	0.0	0.424	10.3	LOS B	3.1	21.4
Approach		489	0.0	0.424	7.0	LOS A	3.1	21.4
North: Paice Street								
7	L2	116	0.0	0.340	8.3	LOS A	2.4	16.7
8	T1	116	0.0	0.340	8.6	LOS A	2.4	16.7
9	R2	24	0.0	0.340	13.2	LOS B	2.4	16.7
Approach		256	0.0	0.340	8.9	LOS A	2.4	16.7
West: East Derwent (Midland Hwy)								
10	L2	88	0.0	0.604	8.0	LOS A	5.7	40.1
11	T1	420	0.0	0.604	8.2	LOS A	5.7	40.1
12	R2	106	0.0	0.604	12.9	LOS B	5.7	40.1
Approach		615	0.0	0.604	9.0	LOS A	5.7	40.1
All Vehicles		1676	0.0	0.604	8.3	LOS A	5.7	40.1

Evening peak – Existing flows with 70 percent of development trips

MOVEMENT SUMMARY

Site: 101 [East Derwent, Pace and Scott roundabout - Evening with 70% development tri

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m
South: Scott Road								
1	L2	126	0.0	0.629	12.9	LOS B	6.7	47.0
2	T1	138	0.0	0.629	13.1	LOS B	6.7	47.0
3	R2	166	0.0	0.629	17.7	LOS B	6.7	47.0
Approach		431	0.0	0.629	14.8	LOS B	6.7	47.0
East: East Derwent (Bowen Bridge)								
4	L2	212	0.0	0.799	10.8	LOS B	12.7	89.1
5	T1	436	0.0	0.799	11.0	LOS B	12.7	89.1
6	R2	214	0.0	0.799	15.7	LOS B	12.7	89.1
Approach		861	0.0	0.799	12.1	LOS B	12.7	89.1
North: Paice Street								
7	L2	225	0.0	0.551	9.6	LOS A	5.0	34.8
8	T1	187	0.0	0.551	9.8	LOS A	5.0	34.8
9	R2	45	0.0	0.551	14.4	LOS B	5.0	34.8
Approach		458	0.0	0.551	10.2	LOS B	5.0	34.8
West: East Derwent (Midland Hwy)								
10	L2	17	0.0	0.490	8.0	LOS A	3.9	27.3
11	T1	316	0.0	0.490	8.2	LOS A	3.9	27.3
12	R2	99	0.0	0.490	12.8	LOS B	3.9	27.3
Approach		432	0.0	0.490	9.3	LOS A	3.9	27.3
All Vehicles		2181	0.0	0.799	11.7	LOS B	12.7	89.1

12. Appendix C – Available sight distance

Existing access onto Cove Hill Road

Available sight distance to the left

Available sight distance to the right

Existing access for property at 131 Cove Hill Road

Available sight distance to the left

Available sight distance to the right

Existing access onto Cowle Road

Available sight distance to the left

Available sight distance to the right

Proposed access onto Cowle Road for lot 2

Available sight distance to the left

Available sight distance to the right

Proposed access onto Cowle Road for lot 3

Available sight distance to the left

Available sight distance to the right

JR BUSHFIRE ASSESSMENTS

BUSHFIRE ASSESSMENT REPORT

Proposed Eight Lot Subdivision

Address: 115 Cove Hill Road, Bridgewater TAS 7030

Title Reference: C.T.176216/103

Prepared by James Rogerson (of *JR Bushfire Assessments*), Bushfire Hazard Practitioner (BFP-161)
VERSION – 1.0
Date: 29/08/2024

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Disclaimer: The information contained within this report is based on the instructions of AS 3959-2018 the standard states that *"Although this Standard is designed to improve the performance of building when subjected to bushfire attach in a designated bushfire-prone area there can be no guarantee that a building will survive a bushfire event of every occasion. This is substantially due to the degree of vegetation management, the unpredictable nature and behaviour of fire and extreme weather conditions." (Standards Australia Limited, 2011)*

INTRODUCTION

1.1 Background

This Bushfire Assessment Report and associated Bushfire Hazard Management Plan (BHMP) has been prepared by James Rogerson of JR Bushfire Assessments on behalf of the proponent to form part of supporting documentation for the proposed eight lot subdivision of 115 Cove Hill Road, Bridgewater. Under the Tasmanian Planning Scheme – Brighton (TPS) and C13.0 Bushfire-Prone Areas Code it is a requirement that a subdivision application within a bushfire-prone area must accomplish a minimum Bushfire Attack Level (BAL) rating of BAL-19 for all future dwellings on newly formed allotments. This report also includes an associated BHMP which is also a requirement under C13.0.

The proposed development is within a Bushfire-Prone Area overlay and there is bushfire-prone vegetation within 100m from the site. Therefore, this site is within a bushfire-prone area.

1.2 Scope

This Bushfire Report offers an investigation and assessment of the bushfire risk to establish the level of bushfire threat and vulnerability on the land for the purpose of subdivision. This report includes the following:

- A description of the land and adjacent land, and description of the use or development that may be at threat by a bushfire on the subject site;
- Calculates the level of a bushfire threat and offers opinions for bushfire mitigation measures that are consistent with AS3959:2018 and C13.0.
- Subdivision Proposal Plan (Appendix B)
- Bushfire Hazard Management Plan (Appendix C)
- Planning Certificate (Appendix D)

1.3 Scope of BFP Accreditation

I, James Rogerson am an accredited Bushfire Practitioner (BFP-161) to assess bushfire hazards and endorse BHMP's under the the *Chief Officers Scheme for the Accreditation of Bushfire Hazard Practitioners.* I have successfully completed the *Planning for Bushfire Prone Areas Short Course* at University of Technology Sydney.

1.4 Limitations

The site assessment has been conducted and report written on the understanding that:

- The report only deals with the potential bushfire risk, all other statutory assessments are outside the scope of this report;
- The report only classifies the size, volume and status of the vegetation at the time the site assessment was conducted;
- Impacts on future development and vegetation growth have not been considered in this report. No action or reliance is to be placed on this report, other than which it was commissioned.

1.5 Proposal

The proposal is for the subdivision of the current title C.T.176216/103 into 8 resultant titles. See proposal plan (Appendix B).

2 PRE-FIELD ASSESSMENT

2.1 Site Details

Table 1

Owner Name(s)	Cove Hill Road Pty Ltd
Location	115 Cove Hill Road, Bridgewater TAS 7030
Title Reference	C.T.176216/103
Property ID	9945127
Municipality	Brighton
Zoning	18 Light Industrial
Planning Overlays	13 – Bushfire-prone Areas Code and 9 Attenuation Code.
Water Supply for Firefighting	The property is serviced by reticulated water. There are various hydrants located on Cove Hill Road and Cowle Road.
Public Access	Access to the development is off Cove Hill Road and Cowle Road.
Fire History	Record fires ~300m east and south of the property from 2012-2013.
Existing Development	Nil

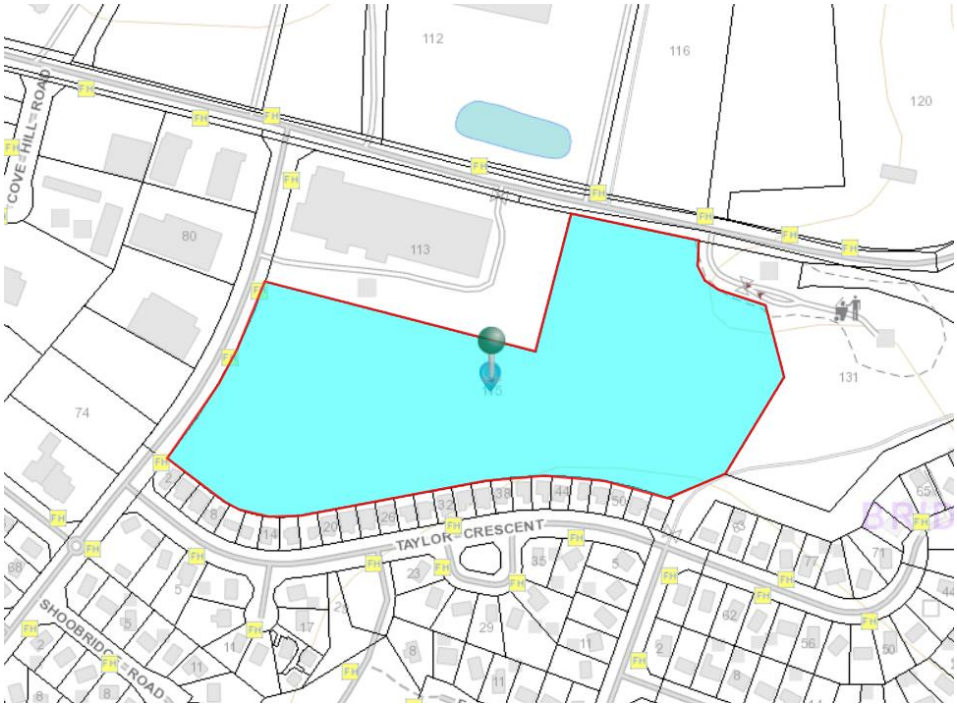

Figure 1 - Location of subject site and nearby hydrants. Source: The LIST, © State of Tasmania

Figure 2 - Planning Scheme Zoning of site and surrounding properties. Source: The LIST, © State of Tasmania

2.2 TasVeg 4.0

There is 1 classified vegetation community on the subject site, and 1 additional community on the surrounding land and parcels. Figure 3 below shows the classified vegetation from TASVEG4.0(Source: The LIST).

Please note that TASVEG4.0 classification does not necessarily reflect ground conditions.

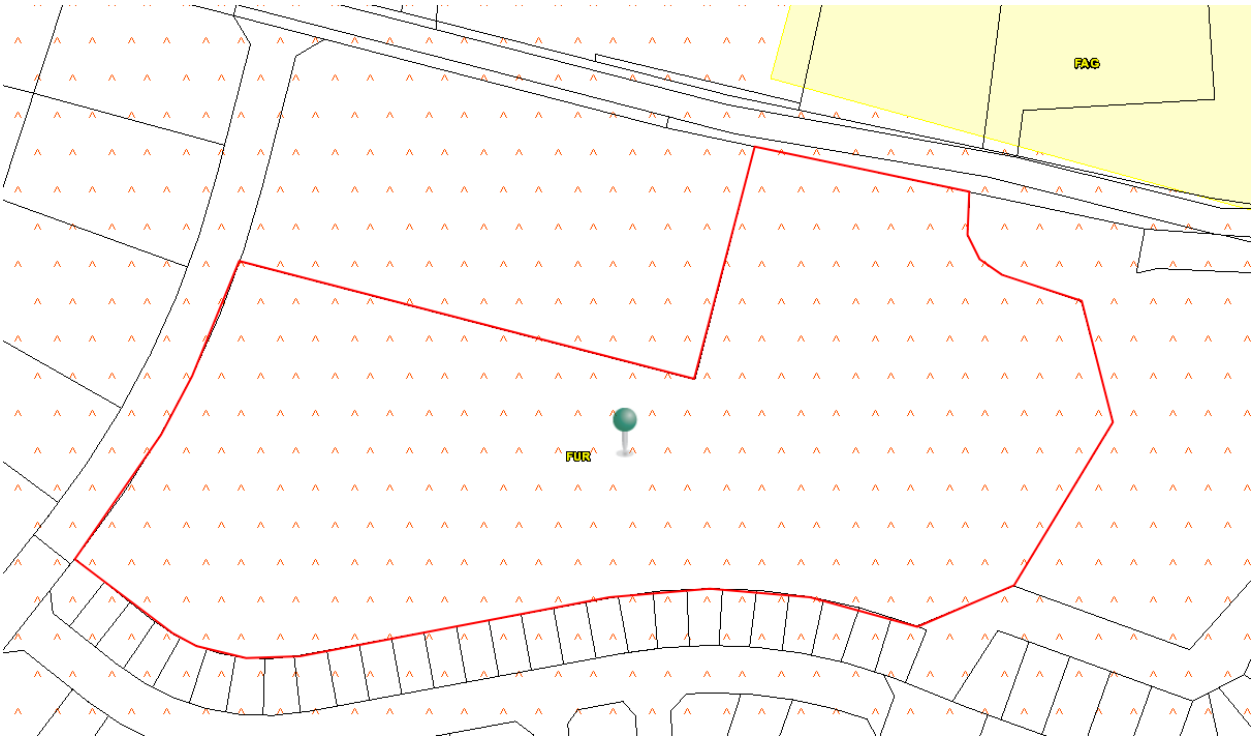

Figure 3 - TASVEG4.0 communities on subject site and surrounding land. FUR – Urban areas, FAG – Agricultural land

3 SITE ASSESSMENT

The site assessment was conducted by James Rogerson (BFP-161) on the 8th of August 2024.

3.1 Bushfire Hazard Assessment

C13.0 Bushfire Prone Areas Code defines Bushfire-prone areas as follows;

> *a) Land that is within the boundary of a bushfire-prone area shown on an overlay on a planning scheme map; or*
>
> *b) Where there is no overlay on a planning scheme map, or where the land is outside the boundary of a bushfire-prone area shown on such map, land that is within 100m of an area of bushfire –prone vegetation equal or greater than 1ha.*

The subject site is within a bushfire-prone areas overlay for the TPS, and the subject site is within 100m of an area of bushfire-prone vegetation equal or greater than 1ha. Therefore, this proposed subdivision is within a bushfire-prone area as per the TPS.

For the purposes of the BAL Assessment, vegetation within 100m of the proposed subdivision site was assessed and classified in accordance with AS3959:2018 Simplified Procedure (Method 1) (relevant fire danger index: 50-which applies across Tasmania).

BUSHFIRE THREAT DIRECTION

The Bushfire threat to this development is from the **GRASSLAND FUEL** within the property. Additional threat is also from Grassland east of the property.

Prevailing Winds: The prevailing winds for this site are primarily westerly, north westerly.

3.2 Vegetation and Effective Slope

Vegetation and relevant effective slopes within 100m of the proposed subdivision have been inspected and classified in accordance with AS 3959:2018. Effective Slope refers to the slope of the land underneath the classified bushfire-prone vegetation relative to the building site and not the slope between the vegetation and the building site. The effective slope affects a fires rate of spread and flame length and is an acute aspect of bushfire behaviour.

WITHIN THE TITLE BOUNDARY (BDY) & PROPERTY DESCRIPTION

The property is a large sized, vacant, Light Industrial zoned property that is located at the northeast corner of the suburb Bridgewater. The property is accessed via Cove Hill Road or Cowle Road. The property is oriented north-south and is located adjacent to the Brighton Waste Transfer Station. The property is surrounded by developed residential and industrial properties and the terrain within the property is gentle, sloping slightly in an easterly aspect. The property consists of various temporary work sheds for storage within a fenced off area and various all-weather access tracks. (See Figure 4 for slopes).

The land within the closed off fenced compound is managed, due to regular personnel access and vehicle use and is therefore classed as MANAGED LAND or LOW THREAT VEGETATION per Clause 2.2.3.2 (e)(f) of AS3959:2018. The remainder of the property is grassed, appearing (*predominantly) as unmanaged, due to the size and minimal land use, therefore, at present the land is classed as GRASSLAND per Table 2.3 of AS3959:2018.

*Some areas of the grass have been disturbed for future civil works and existing gardens, and these areas are classed as MANAGED LAND or LOW THREAT VEGETATION per Clause 2.2.3.2 (f) of AS3959:2018.

NORTH OF THE TITLE BDY

To the north of the property (across slope) are various medium and large sized, developed, Light and General Industrial properties, that consist of existing large warehouse buildings and Class 10a sheds. The land directly surrounding the warehouses and sheds is used as private open space (POS) and is therefore classed as MANAGED LAND or LOW THREAT VEGETATION per Clause 2.2.3.2 (e)(f) of AS3959:2018. The remainder of the properties is also managed land as it is used for vehicles, carparking and storage and is therefore classed as MANAGED LAND or LOW THREAT VEGETATION per Clause 2.2.3.2 (f) of AS3959:2018.

EAST OF THE TITLE BDY

To the east of the property (downslope >0°-5°) is the Brighton Waste Transfer Station, which is a medium sized, developed, Light Industrial zoned property that consists of various Class 10a sheds, cultivated lawns and non-combustible areas. The land directly surrounding the sheds is used as private open space (POS) and is therefore classed as MANAGED LAND or LOW THREAT VEGETATION per Clause 2.2.3.2 (e)(f) of AS3959:2018. The remainder of the property is covered with pasture grass, appearing unmanaged due to minimal land use and is therefore classed as GROUP G GRASSLAND per Table 2.3 of AS3959:2018.

Additionally, to the east is a skinny strip of land (Lot 105 Taylor Crescent) owned by Brighton Council. This strip is zoned Light Industrial and is vacant, covered with grass and is therefore classed as GROUP G GRASSLAND per Table 2.3 of AS3959:2018.

SOUTH OF THE TITLE BDY

To the south of the property (across slope) is various, small, developed, General Residential zoned residential properties that all consist of existing Class 1a dwellings, some consist of Class 10a sheds, and cultivated gardens and low-cut lawns. Due to the residential nature and the size of the properties they are all classed as MANAGED LAND or LOW THREAT VEGETATION per Clause 2.2.3.2 (e)(f) of As3959:2018.

WEST OF THE TITLE BDY

To the west of the property boundary (across slope) are various small and medium, Light Industrial and General Business zoned properties, that consist of warehouses and Class 10 sheds, cultivated gardens and non-combustible areas. Land directly surrounding the warehouses and sheds is used as private open space, as with most of these properties and is therefore classed as MANAGED LAND or LOW THREAT VEGETATION per Clause 2.2.3.2 (e)(f) of AS3959:2018. There are some small portions of unmanaged grass on a few of the properties away from the buildings, these areas are therefore classed as GROUP G GRASSLAND per Table 2.3 of AS3958:2018.

Figure 4 below shows the relationship between the subject site and the surrounding vegetation.

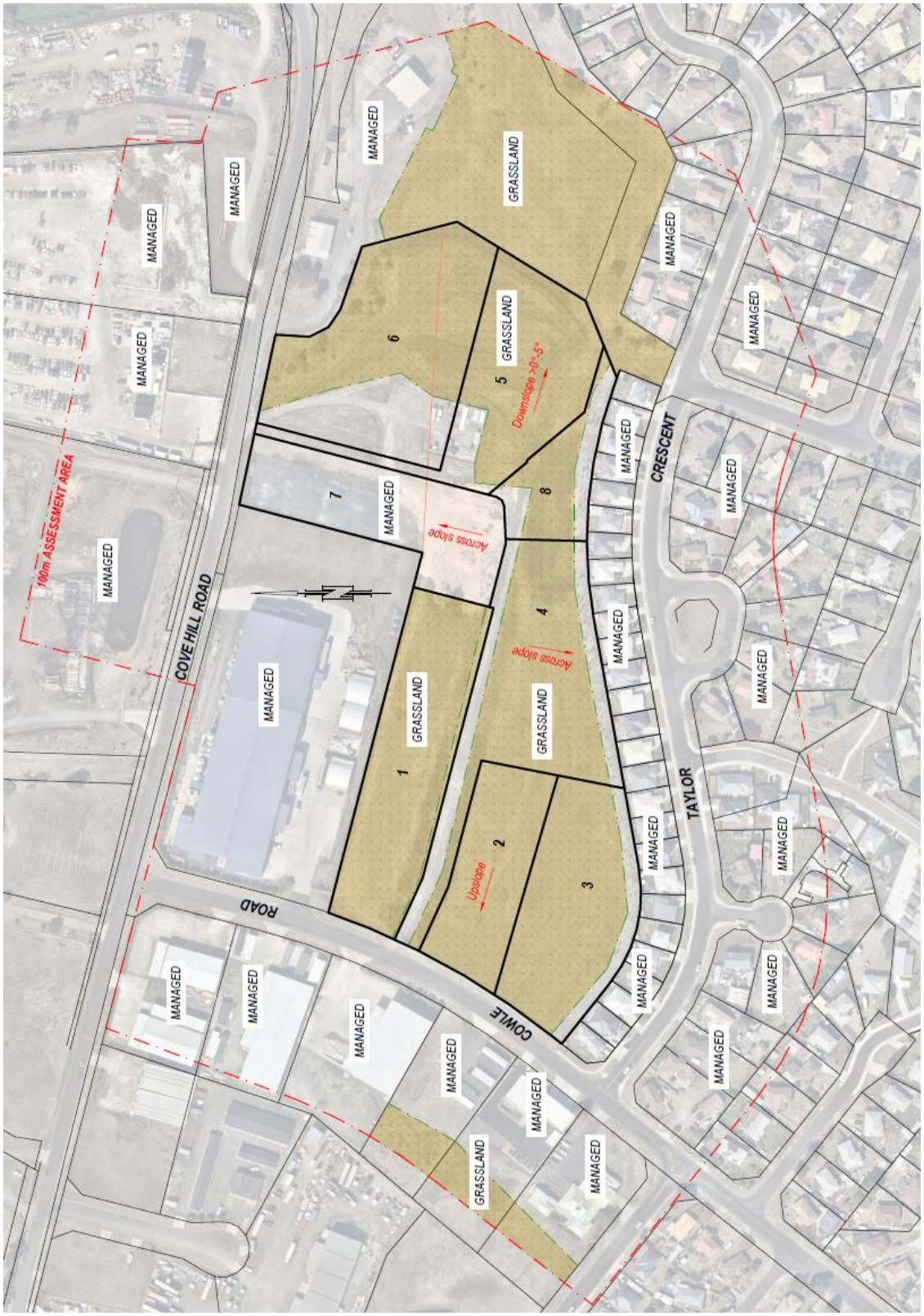

Figure 4 classified vegetation (within 100m of site) and existing separation from bushfire-prone vegetation (not to scale)

3.3 Bushfire Attack Level (BAL)

Table 2 - BAL rating for each lot and required separation distances

LOT 1 – VACANT (Indicative Building Area)				
DIRECTION OF SLOPE	**N, NE**	**E, SE**	**S, SW**	**W, NW**
Vegetation Classification	GRASSLAND MANAGED	GRASSLAND MANAGED	GRASSLAND MANAGED	GRASSLAND MANAGED
Existing Horizontal distance to classified vegetation	0m (G)	0m-60m (G)	0m (G)	0m (G)
Effective Slope under vegetation	Across slope	Downslope >0°-5°	Across slope	Upslope
Exemption				
Current BAL value for each side of the site	BAL-FZ	BAL-FZ	BAL-FZ	BAL-FZ
Separation distances to achieve BAL-19	10m	11m	10m	10m
Separation distances to achieve BAL-12.5	14m	16m	14m	14m
Current BAL rating	**BAL-FZ**			

LOT 2 – VACANT (Indicative Building Area)				
DIRECTION OF SLOPE	**N, NE**	**E, SE**	**S, SW**	**W, NW**
Vegetation Classification	GRASSLAND MANAGED	GRASSLAND MANAGED	GRASSLAND MANAGED	GRASSLAND MANAGED
Existing Horizontal distance to classified vegetation	0m-6m & 16m-60m (G)	0m-100m (G)	0m-72m (G)	0m (G)
Effective Slope under vegetation	Across slope	Downslope >0°-5°	Across slope	Upslope
Exemption				
Current BAL value for each side of the site	BAL-FZ	BAL-FZ	BAL-FZ	BAL-FZ
Separation distances to achieve BAL-19	10m	11m	10m	10m
Separation distances to achieve BAL-12.5	14m	16m	14m	14m
Current BAL rating	**BAL-FZ**			

LOT 3 – VACANT (Indicative Building Area)				
DIRECTION OF SLOPE	**N, NE**	**E, SE**	**S, SW**	**W, NW**
Vegetation Classification	GRASSLAND MANAGED	GRASSLAND MANAGED	MANAGED	GRASSLAND MANAGED
Existing Horizontal distance to classified vegetation	0m-66m & 74m-100m (G)	0m-100m (G)	N/A	0m (G)
Effective Slope under vegetation	Across slope	Downslope >0°-5°	Across slope	Upslope
Exemption				
Current BAL value for each side of the site	BAL-FZ	BAL-FZ	BAL-LOW	BAL-FZ
Separation distances to achieve BAL-19	10m	11m	N/A	10m
Separation distances to achieve BAL-12.5	14m	16m	N/A	14m
Current BAL rating	**BAL-FZ**			

LOT 4 – VACANT (Indicative Building Area)				
DIRECTION OF SLOPE	**N, NE**	**E, SE**	**S, SW**	**W, NW**
Vegetation Classification	GRASSLAND MANAGED	GRASSLAND MANAGED	MANAGED	GRASSLAND MANAGED
Existing Horizontal distance to classified vegetation	0m-50m (G)	0m-100m (G)	N/A	0m-100m (G)
Effective Slope under vegetation	Across slope	Downslope >0°-5°	Across slope	Upslope
Exemption				
Current BAL value for each side of the site	BAL-FZ	BAL-FZ	BAL-LOW	BAL-FZ
Separation distances to achieve BAL-19	10m	11m	N/A	10m
Separation distances to achieve BAL-12.5	14m	16m	N/A	14m
Current BAL rating	**BAL-FZ**			

LOT 5 – VACANT (Indicative Building Area)				
DIRECTION OF SLOPE	**N, NE**	**E, SE**	**S, SW**	**W, NW**
Vegetation Classification	GRASSLAND MANAGED	GRASSLAND MANAGED	GRASSLAND MANAGED	GRASSLAND MANAGED
Existing Horizontal distance to classified vegetation	0m-100m (G)	0m-100m (G)	0m-11m (G)	58m-100mm (G)
Effective Slope under vegetation	Across slope	Downslope >0°-5°	Across slope	Upslope
Exemption				(G) >50m
Current BAL value for each side of the site	BAL-FZ	BAL-FZ	BAL-FZ	BAL-LOW
Separation distances to achieve BAL-19	10m	11m	10m	N/A
Separation distances to achieve BAL-12.5	14m	16m	14m	N/A
Current BAL rating	**BAL-FZ**			

LOT 6 – VACANT (Indicative Building Area)				
DIRECTION OF SLOPE	**N, NE**	**E, SE**	**S, SW**	**W, NW**
Vegetation Classification	GRASSLAND MANAGED	GRASSLAND MANAGED	GRASSLAND MANAGED	MANAGED
Existing Horizontal distance to classified vegetation	0m (G)	0m-100m (G)	0m-100m (G)	N/A
Effective Slope under vegetation	Across slope	Downslope >0°-5°	Across slope	Upslope
Exemption				
Current BAL value for each side of the site	BAL-FZ	BAL-FZ	BAL-FZ	BAL-LOW
Separation distances to achieve BAL-19	10m	11m	10m	N/A
Separation distances to achieve BAL-12.5	14m	16m	14m	N/A
Current BAL rating	**BAL-FZ**			

LOT 7 – VACANT (Indicative Building Area)				
DIRECTION OF SLOPE	**N, NE**	**E, SE**	**S, SW**	**W, NW**
Vegetation Classification	MANAGED	GRASSLAND MANAGED	GRASSLAND MANAGED	MANAGED
Existing Horizontal distance to classified vegetation	N/A	0m-51m-100m (G)	48m-78m (G)	N/A
Effective Slope under vegetation	Across slope	Downslope >0°-5°	Across slope	Upslope
Exemption		(G) >50m		(G) >50m
Current BAL value for each side of the site	BAL-LOW	BAL-LOW	BAL-12.5	BAL-LOW
Separation distances to achieve BAL-19	N/A	N/A	10m	N/A
Separation distances to achieve BAL-12.5	14m	N/A	14m	N/A
Current BAL rating	**BAL-12.5**			

LOT 8 (public open space) – VACANT (Indicative Building Area)				
DIRECTION OF SLOPE	**N, NE**	**E, SE**	**S, SW**	**W, NW**
Vegetation Classification	GRASSLAND MANAGED	GRASSLAND MANAGED	MANAGED	GRASSLAND
Existing Horizontal distance to classified vegetation	0m-21m (G)	0m-100m (G)	N/A	0m-100m (G)
Effective Slope under vegetation	Across slope	Downslope >0°-5°	Across slope	Upslope
Exemption				
Current BAL value for each side of the site	BAL-FZ	BAL-FZ	BAL-LOW	BAL-FZ
Separation distances to achieve BAL-19	10m	11m	N/A	10m
Separation distances to achieve BAL-12.5	14m	16m	N/A	14m
Current BAL rating	**BAL-FZ**			

3.4 Definition of BAL-LOW

Bushfire Attack Level shall be classified BAL-LOW per Section 2.2.3.2 of AS3959:2018 where the vegetation is one or a combination of any of the following Exemptions:

a) Vegetation of any type that is more than 100m from the site.
b) Single areas of vegetation less than 1 hectare in area and not within 100m of other areas of vegetation being classified.
c) Multiple areas of vegetation less than 0.25 ha in area and not within 20m of the site, or each other.
d) Strips of vegetation less than 20m in width (measured perpendicular to the elevation exposed to the strip of vegetation) regardless of length and not within 20m of the site or each other, or other areas of vegetation being classified.
e) Non-vegetated areas, including waterways, roads, footpaths, buildings and rocky outcrops.
f) Low threat vegetation, including grassland managed in a minimal fuel condition, maintained lawns, golf courses, maintained public reserves and parklands, vineyards, orchards, cultivated gardens, commercial nurseries, nature strips and windbreaks.

NOTE: Minimal fuel condition means there is insufficient fuel available to significantly increase the severity of the bushfire attack (recognizable as short-cropped grass for example, to a nominal height of 100mm).

The BAL level will also be classified as BAL-LOW if Grassland fuel is >50m from the site for any effective slope per Table 2.6 of AS3959:2018.

Due to some existing developed and managed land, some separations distances are already achieved.

Where there were multiple fuel classifications and effective slopes, the predominant fuel and slope have been used in the BAL table above.

BAL ratings are as stated below:

BAL LOW	BAL 12.5	BAL 19	BAL 29	BAL 40	BAL FZ
There is insufficient risk to warrant any specific construction requirements, but there is still some risk	Ember attack and radiant heat below 12.5 kW/m²	Increasing ember attack and windborne debris, radiant heat between 12.5 kW/m² and 19 kW/m2	Increasing ember attack and windborne debris, radiant heat between 19kW/m² and 29 kW/m2	Increasing ember attack and windborne debris, radiant heat between 29 kW/m² and 40 kW/m². Exposure to flames from fire front likely	Direct Exposure to flames, radiant heat and embers from the fire front

4 BUSHFIRE PROTECTION MEASURES

4.1 Hazard Management Areas (HMA)

Hazard Management Area as described in the Code "*maintained in a minimal fuel condition and in which there are no other hazards present which will significantly contribute to the spread of a bushfire".* Also as described from Note 1 of AS3959:2018 Clause 2.2.3.2 "*Minimal fuel condition means there is insufficient fuel available to significantly increase the severity of the bushfire attack (recognizable as short-cropped grass for example, to a nominal height of 100 mm)".*

Compliance to C13.6.1

The building areas within all lots require a Hazard Management Area (HMA) to be established and maintained between the bushfire vegetation and the area at a distance equal to, or greater than specified for the Bushfire Attack Level in Table 2.6 of AS3959:2018.

Due to the size of the lots, only the building areas require an HMA.

The HMA for all lots to be implemented prior to occupancy of a building.

Minimum separation distances for each lot are stated below.

LOT 1 – Separation Distances (Indicative Building Area)				
Aspect	**N, NE**	**E, SE**	**S, SW**	**W, NW**
BAL-19	10m	11m	10m	10m

LOT 2 – Separation Distances (Indicative Building Area)				
Aspect	**N, NE**	**E, SE**	**S, SW**	**W, NW**
BAL-19	10m	11m	10m	10m

LOT 3 – Separation Distances (Indicative Building Area)				
Aspect	**N, NE**	**E, SE**	**S, SW**	**W, NW**
BAL-19	10m	11m	N/A	10m

LOT 4 – Separation Distances (Indicative Building Area)				
Aspect	**N, NE**	**E, SE**	**S, SW**	**W, NW**
BAL-19	10m	11m	N/A	10m

LOT 5 – Separation Distances (Indicative Building Area)				
Aspect	**N, NE**	**E, SE**	**S, SW**	**W, NW**
BAL-19	10m	11m	10m	N/A

LOT 6 – Separation Distances (Indicative Building Area)				
Aspect	**N, NE**	**E, SE**	**S, SW**	**W, NW**
BAL-19	10m	11m	10m	N/A

LOT 7 – Separation Distances (Indicative Building Area)				
Aspect	**N, NE**	**E, SE**	**S, SW**	**W, NW**
BAL-19	N/A	N/A	10m	N/A

LOT 8 (public open space) – Separation Distances (Indicative Building Area)				
Aspect	**N, NE**	**E, SE**	**S, SW**	**W, NW**
BAL-19	10m	11m	N/A	10m

The Tasmanian Fire Service provides the following advice regarding the implementation and maintenance of Hazard management areas:

- Removing of fallen limbs, sticks, leaf and bark litter
- Maintaining grass at less than a 100mm height
- Removing pine bark and other flammable mulch (especially from against buildings)
- Thinning out understory vegetation to provide horizontal separation between fuels
- Pruning low-hanging tree branches (<2m from the ground) to provide vertical separation between fuel layers
- Pruning larger trees to maintain horizontal separation between canopies
- Minimize the storage of flammable materials such as firewood
- Maintaining vegetation clearance around vehicular access and water supply points
- Use of low-flammability species for landscaping purposes where appropriate
- Clearing out any accumulated leaf and other debris from roof gutters.

Additional site-specific fuel reduction or management may be required. An effective hazard management area does not require removal of all vegetation. Rather, vegetation must be designed and maintained in a way that limits opportunity for vertical and horizontal fire spread in the vicinity of the building being protected. Retaining some established trees can even be beneficial in terms of protecting the building from wind and ember attack

4.2 Public and Fire Fighting Access

Public Access

The proposed development fronts Cowle Road and Cove Hill Road. Both public roads are bitumen sealed and are maintained by the Council. Cowle Road has a nominal carriageway width of 8.5m and Cove Hill Road has nominal carriageway width of 8.5m.
No upgrades are required to the public roads and the public roads comply with public access road requirements.

Property Access

Current Conditions:

An existing concrete access (under a ROW) services the site at present running perpendicular off Cowle Road. In the future, this access will extend, turn north and run though until it reaches Cove Hill Road. Which will service as a ROW through access road, through the entire site. The ROW access road will be approximately 360m long, with a width of 8.5m.

Figure 5 – Existing access within the property

Compliance to C13.6.2

Lots 1, 2, 3, 6 & 7

Access to the building areas within lots 1, 2, 3, 6 and 7 may or may not be <30m and do not require access for a fire appliance, therefore these lots will comply with the Acceptable Solution A1 and C13.6.2.

Lots 4, 5 & 8

Access to the building areas within lots 4, 5 and 8 may or may not be <30m. However, access is required for a fire appliance, therefore, the access to these lots must comply with Acceptable Solution A1 and C13.6.2 Table C13.2 (D).

The requirements of Table C13.2 (D) are outlined below in Table 3.

All required access must be constructed prior to occupancy of any future building. Please note as the existing ROW is 8.5m wide, the required width for access and passing bays will already be reached, so only the private access off the ROW needs to be constructed.

Table 3 – Access Standards per Table C13.2 (D)

Access Standards: (access length >200m and accessing 3 or properties)

As per Table 13.2 (D) of the Code.

a) All-weather construction;
b) Load capacity of at least 20 t, including bridges and culverts;
c) Minimum carriageway width of 4m;
d) Minimum vertical clearance of 4m;
e) Minimum horizontal clearance of 0.5m from the edge of the carriageway;
f) Cross falls less than 3 degrees (1:20 or 5%)
g) Dips less than 7 degrees (1:8 or 12.5%);
h) Curves with a minimum inner radius of 10m;
i) Maximum gradient of 15 degrees (1:3.5 or 28%) for sealed roads, and 10 degrees (1:5.5 or 18%) for unsealed road; and
j) Terminate with a turning area for fire appliances provided by one of the following
    i. A turning circle with a minimum outer radius of 10m; or
    ii. A property access encircling the building; or
    iii. A hammerhead 'T' or 'y' turning head 4m wide and 8m long.

Passing bays of 3m additional carriageway width and 20m length must be provided every 100m.

4.3 Water Supply for Fire Fighting

Current Conditions:

Site assessment confirmed the property is serviced by reticulated water. Various hydrants exist on Cowle Road and Cove Hill Road.

Figure 6 – Existing hydrant (Cowle Road)

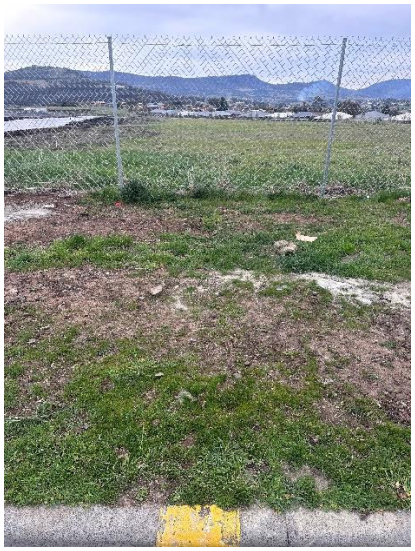

Figure 7 – Existing hydrant (Cove Hill Road)

Compliance to C13.6.3

Lots 1, 2, 3, 6 & 7

The building areas within lots 1, 2, 3, 6 and 7 are within 120m (hose lay) of a hydrant and are therefore compliant with C13.6.3 A1 (b) and Table C13.4.

Lots 4, 5 & 8

The building areas within lots 4, 5 & 8 are not within 120m (hose lay) of a hydrant. Therefore, these lots must install a 10,000L static water supply tank per C13.6.3 A2 (b) and Table C13.5.

The requirements of Table C13.5 are outlined below in Table 4.

Table 4 – Static Water Supply per Table C13.5

Requirements for Static Water Supply C13.6.3 and Table C13.5

A. Distance between building area to be protected and water supply
   a) the building area to be protected must be located within 90m of the fire fighting water point of a static water supply; and
   b) the distance must be measured as a hose lay, between the fire fighting water point and the furthest part of the building area

B. Static Water supplies
   a) may have a remotely located offtake connected to the static water supply;
   b) may be a supply for combined use (fire fighting and other uses) but the specified minimum quantity of fire fighting water must be available at all times;
   c) must be a minimum of 10,000L per building area to be protected. This volume of water must not be used for any other purpose including fire fighting sprinkler or spray systems;
   d) must be metal, concrete or lagged by non-combustible materials if above ground; and
   e) if a tank can be located so it is shielded in all directions in compliance with section 3.5 of Australian Standard AS 3959-2009 Construction of buildings in bushfire-prone areas, the tank may be constructed of any material provided that the lowest 400mm of the tank exterior is protected by:
      (i) metal;
      (ii) non-combustible material; or
      (iii) fibre-cement a minimum of 6mm thickness.

C. Fittings, pipework and accessories (including stands and tank supports)
   Fittings and pipework associated with a fire fighting water point for a static water supply must:

   (a) have a minimum nominal internal diameter of 50mm;
   (b) be fitted with a valve with a minimum nominal internal diameter of 50mm;
   (c) be metal or lagged by non-combustible materials if above ground;
   (d) if buried, have a minimum depth of 300mm [S1];

(e) provide a DIN or NEN standard forged Storz 65mm coupling fitted with a suction washer for connection to fire fighting equipment;
(f) ensure the coupling is accessible and available for connection at all times;
(g) ensure the coupling is fitted with a blank cap and securing chain (minimum 220mm length);
(h) ensure underground tanks have either an opening at the top of not less than 250mm diameter or a coupling compliant with this Table; and
(i) if a remote offtake is installed, ensure the offtake is in a position that is:
    (i) visible;
    (ii) accessible to allow connection by fire fighting equipment;
    (iii) at a working height of 450 – 600mm above ground level; and
    (iv) protected from possible damage, including damage by vehicles.

D. Signage for static water connections

The fire fighting water point for a static water supply must be identified by a sign permanently fixed to the exterior of the assembly in a visible location. The sign must:

a) comply with water tank signage requirements within Australian Standard AS 2304-2011 Water storage tanks for fire protection systems; or
b) comply with the Tasmania Fire Service Water Supply Guideline published by the Tasmania Fire Service.

E. Hardstand

A hardstand area for fire appliances must be:

a) no more than 3m from the fire fighting water point, measured as a hose lay (including the minimum water level in dams, swimming pools and the like);
b) no closer than 6m from the building area to be protected;
c) a minimum width of 3m constructed to the same standard as the carriageway; and
d) connected to the property access by a carriageway equivalent to the standard of the property access.

4.4 Construction Standards

Future habitable dwellings/buildings within the specified building areas on each lot must be designed and constructed to the minimum BAL ratings specified in the BHMP (Appendix C) and to BAL construction standards in accordance with AS3959:2018 or subsequent edition as applicable at the time of building approval.

Future Class 10a buildings within 6m of a Class 1a dwelling/building must be constructed to the same BAL as the dwelling or provide fire separation in accordance with Clause 3.2.3 of AS3959:2018

5 STATUTORY COMPLIANCE

The applicable bushfire requirements are specified in State Planning Provisions C13.0 – Bushfire-Prone Areas Code.

Clause	Compliance
C13.4 Use or development exempt from this code	N/A
C13.5 Use Standards	
C13.5.1 Vulnerable Uses	N/A
C13.5.2 Hazardous Uses	N/A
C13.6 Development Standards for Subdivision	
C13.6.1 Provision of Hazard Management Areas.	To comply with the Acceptable Solution A1, the proposed plan of subdivision must; • Show building areas for each lot; and • Show hazard management areas between these building areas and that of the bushfire vegetation with the separation distances required for BAL 19 in Table 2.6 of *Australian Standard AS 3959:2018 Construction of buildings in bushfire-prone areas.* The BHMP demonstrates that all lots can accommodate a minimum BAL rating of BAL-19. The HMA for all lots to be implemented prior to occupancy of future habitable dwellings/buildings. Subject to the compliance with the BHMP the proposal will satisfy the Acceptable Solution C13.6.1(A1)
C13.6.2 Public and firefighting access; A1	The BHMP (through reference to section 4 of this report) specifies requirements for private accesses are consistent with Table C13.2. Access to lots 1, 2, 3, 6 & 7 may or may not be >30m and access is not required for a fire appliance. Access to lots 4, 5 & 8 may, or may may not be >30m, but access is required for a fire appliance. Subject to the compliance with the BHMP the proposal satisfies the Acceptable Solution C13.6.2(A1).
C13.6.3 A2 Provision of water supply for firefighting purposes.	The building areas within lots 1, 2, 3, 6 & 7 are within 120m (hose lay) of a hydrant. Therefore, compliant with C.13.6.3. Building areas within lots 4, 5 & 8 are not within 120m of a hydrant and must comply to Table C13.5. Subject to the compliance with the BHMP the proposal satisfies the Acceptable Solution C13.6.3

6 CONCLUSION & RECOMMENDATIONS

The proposed subdivision is endorsed that each lot can meet the requirements of Tasmanian Planning Scheme – Brighton and C13.0 Bushfire-prone Areas Code for a maximum BAL rating of BAL-19. Providing compliance with measures outlined in the BHMP (Appendix C) and sections 4 & 5 of this report.

Recommendations:

- The HMA's within the subdivision be applied in accordance with section 4.1 of this report and the BHMP (Appendix C).
- Static water supply tanks for lots 4, 5 & 8 be installed prior to occupancy of a future habitable dwelling/building.
- Brighton Council condition the planning approval on the compliance with the BHMP (as per Appendix C).

7 REFERENCES

Department of Primary Industries and Water, The LIST, viewed August/September 2024, www.thelist.tas.gov.au

Standards Australia, 2018, *AS 3959:2018 – Construction of buildings in bushfire-prone areas*, Standards Australia, Sydney.

Tasmanian Planning Commission, 2015, *Tasmanian Planning Scheme – Brighton* viewed August/September 2024, www.iplan.tas.gov.au

Building Act 2016. The State of Tasmania Department of Premier and Cabinet. https://www.legislation.tas.gov.au/view/html/inforce/current/act-2016-025

Building Regulations 2016. The State of Tasmania Department of Premier and Cabinet. https://www.legislation.tas.gov.au/view/html/inforce/current/sr-2016-110

8 APPENDIX A – SITE PHOTOS

Figure 8 – Grassland fuel within Lot 2, view facing S, SW towards Lot 3

Figure 9 – Grassland fuel within Lot 2, view facing E towards lots 4 & 8

Figure 10 – Managed land (future road) and cleared land within Lot 7, view E, NE towards Lot 6

Figure 11 – Managed land within lots 6 & 7 (work compound), view facing S towards lots 5 & 8

Figure 12 – Grassland fuel east of the property, view facing E

Figure 13 – Existing building and managed land (typical site in this area) west of the property, view facing W, SW

9 APPENDIX B – SUBDIVISION PROPOSAL PLAN

LEGEND

- Title/Proposed Boundary
- Easement
- TasWater Sewer
- TasWater Water
- Design Sewer
- Design Water
- Design Stormwater

DRAFT

ALL STORMWATER, SEWER, WATER, AND ACCESSES TO BE CONSTRUCTED TO RELEVANT STANDARDS

POWER AND NBN CONNECTIONS AT COWLE ROAD

EX. WATER PROPERTY CONNECTION

PROPOSED RIGHT OF WAY

COVE HILL ROAD

113 Covehill Road

LOT 7 6563m²±

LOT 6 1.046ha±

FR 31616/1697

PROPOSED RIGHT OF WAY AND SERVICES EASEMENT 8.5±m WIDE

PROPOSED RECIPRICAL RIGHT OF WAY AND SERVICES EASEMENT VARIABLE WIDTH

PROPOSED DRAINAGE EASEMENT 3.00 WIDE

EXISTING DRAINAGE EASEMENT & PIPELINE AND SERVICES EASEMENT 3.00 WIDE

LOT 5 WATER CONNECTION

LOT 1 8025m²±

LOT 5 7508m²±

PROPOSED UNDERGROUND DETENTION TANK

PROPOSED DRAINAGE EASEMENT 3.00 WIDE

PROPOSED PROPERTY CONNECTIONS FOR LOT 1

PROPOSED CROSSOVER AND ACCESS FOR LOT 1

LOT 2 4782m²±

LOT 8 4368m²± P.O.S

FR 177664/105

PROPOSED PIPELINE AND SERVICES EASEMENT 3.00 WIDE

WATER, POWER AND NBN CONNECTIONS AT COWLE ROAD

LOT 4 7931m²±

LOT 3 7219m²±

EXISTING DRAINAGE EASEMENT & PIPELINE AND SERVICES EASEMENTS

PROPOSED PIPELINE AND SERVICES EASEMENT VARIABLE WIDTH
-Pipe to be physically located on site with easement boundary 1.00m from pipe edge if within subject title

TALYOR CRESCENT

COWLE ROAD

LOT 1 = STAGE 1
LOT 2 = STAGE 2
LOT 3 = STAGE 3
LOT 4 = STAGE 4
LOT 5 + 8 = STAGE 5
LOT 6 = STAGE 6
LOT 7 = STAGE 7
OR AS MARKET DEMANDS AND/OR PROVISION OF INFRASTRUCTURE REQUIRES.

DRAFT

DRAFT

PLAN OF SUBDIVISION

Owners
COVE HILL ROAD PTY LTD; BRIGHTON COUNCIL

Title References
FR 176216/103; FR 177664/105; FR31616/1697

Address
115 Cove Hill Road, Bridgewater;
LOT 5 Taylor Crescent, Bridgewater

Council
Brighton Council

Brighton Local Provisions Schedule

Zone
18 Light Industrial

Zone Code and General Overlay
9 Attenuation Code
13 Bushfire-prone Areas Code

Brighton Industrial Hub
Specific Area Plan
Bridgewater Quarry
Specific Area Plan

PID
9945127

Point of interest GDA2020 MGA55
520860E, 5268378N

Schedule of Easements
Existing (SEE PLAN)
Proposed (SEE PLAN)

NOTES

This plan has been prepared only for the purpose of obtaining preliminary subdivision approval from the Council and the information shown hereon should be used for no other purpose. All measurements and areas are subject to final survey.

Entire site is subject to the Bushfire Code Overlay &
Attenuation Code.
These are not shown for plan clarity purpose.

LIST Cadastral Parcels
by State of Tasmania
www.thelist.tas.gov.au
CC BY 3.0

1.0m Contours:
GreaterHobartLiDAR2013 DEM
https://elevation.fsdf.org.au/
CC BY 4.0

Digital Aerial Photo:
Brighton 10CM 2019
by State of Tasmania
https://nre.tas.gov.au/land-tasmania/aerial-photography
CC BY 3.0
Modified by Vignette

REV	AMENDMENTS	DRAWN	DATE	APPR.
D				
C				
B				
A	Amend lots 4 and 7. Add staging information. Move lot 5 water connection.	MS	07.05.24	-
0	DRAFT PLAN OF SUBDIVISION	MK	01.05.24	MS

NOTES:

DRAFT

SURVEYOR	GEOCIVIL
-	-
DRAWN	CHECKED
MK/MS	MS
DATE	
1 MAY 2024	

PLAN OF SUBDIVISION
115 COVEHILL ROAD, BRIDGEWATER
for THE YOUNG GROUP

PDA
SURVEYORS, ENGINEERS & PLANNERS
6 Freeman Street
Kingston, Tasmania, 7050
PHONE: +61 03 6229 2131
FAX: +61 03 6229 3901
EMAIL: pda.ktn@pda.com.au
www.pda.com.au
Also at: Hobart, Launceston, Burnie & Devonport

SCALE	PAPER
1:2000	(A3)
JOB NUMBER	DRAWING
52176MS-P3-A	

10 APPENDIX C – BUSHFIRE HAZARD MANAGEMENT PLAN

BAL rating for all lots is BAL-19

- *HMA's for both lots to be implemented prior to occupancy of a dwelling/building.*
- *Static water supply for lots 4, 5 & 8 to be installed prior to occupancy of a dwelling/building.*
- *The building areas show do not include any planning scheme setbacks.*

COVE HILL ROAD

COWLE ROAD

TAYLOR CRESCENT

WALKER CRESCENT

EXISTING FIRE HYDRANT, BUILDING AREA IN LOT 1 WITHIN 120m (HOSE LAY) OF THE WATER POINT

EXISTING FIRE HYDRANT, BUILDING AREA IN LOT 2 WITHIN 120m (HOSE LAY) OF THE WATER POINT

EXISTING FIRE HYDRANT, BUILDING AREA IN THE LOT 7 WITHIN 120m (HOSE LAY) OF THE WATER POINT

EXISTING FIRE HYDRANT, BUILDING AREA IN LOT 6 WITHIN 120m (HOSE LAY) OF THE WATER POINT

EXISTING FIRE HYDRANT, BUILDING AREA IN LOT 3 WITHIN 120m (HOSE LAY) OF THE WATER POINT

1 2 3 4 5 6 7 8

120m hose lay limit

ROW 8.5m WIDE EXISTING & FUTURE CONCRETE ACCESS

10m 11m

- *HAZARD MANAGEMENT AREA*
- *BUILDNG AREA BAL-19*
- *EXTENT OF 120m HOSE LAY LIMIT*
- *INDICATIVE STATIC WATER SUPPLY*

ROGERSON & BIRCH SURVEYORS
UNIT 1, 2 KENNEDY DRIVE
CAMBRIDGE 7170
PHONE: (03)6248 5898
EMAIL: admin@blcsurveyors.com.au
WEB: www.rbsurveyors.com

BUSHFIRE HAZARD MANAGEMENT PLAN

LOCATION:	115 Cove Hill Road, Bridgewater TAS 7030
TITLE REFERENCE:	C.T.176216/103
PROPERTY ID:	9945127
MUNICIPALITY:	Brighton
DATE:	19th of September 2024 (v1.0)
SCALE: 1:1500 @ A3	REFERENCE: TYG BA04

REQUIREMENTS

1. HAZARD MANAGEMENT AREAS (HMA)
   - 1.1. HMA to be established to distances indicated on this plan and as set out in Section 4.1 of the Bushfire Hazard Report.
   - 1.2. Vegetation in the HMA needs to be strategically modified and then maintained in a low fuel state to protect future dwellings from direct flame contact and intense radiant heat. An annual inspection and maintenance of the HMA should be conducted prior to the bushfire season. All grasses or pastures must be kept short (<100 mm) within the HMA. Fine fuel loads at ground level such as leaves, litter and wood piles must be minimal to reduce the quantity of wind borne sparks and embers reaching buildings; and to halt or check direct flame attack.
   - 1.3. Some trees can be retained provided there is horizontal separation between the canopies; and low branches are removed to create vertical separation between the ground and the canopy. Small clumps of established trees and/or shrubs may act to trap embers and reduce wind speeds.
   - 1.4. No trees to overhang houses to prevent branches or leaves from falling on the building.
   - 1.5. Non-combustible elements including driveways, paths and short cropped lawns are recommended within the HMA.
   - 1.6. Fine fuels (leaves bark, twigs) should be removed from the ground periodically (pre-fire season) and all grasses or pastures must be kept short (<100 mm).
2. CONSTRUCTION STANDARDS
   - 2.1. Future dwellings within the specified building areas to be designed and constructed to BAL ratings shown on this plan in accordance with AS3959:2018 at the time of building approval
   - 2.2. Future outbuildings within 6m of a class 1a dwelling must be constructed to the same BAL as the dwelling or provide fire separation in accordance with Clause 3.2.3 of AS3959:2018.
3. PUBLIC AND FIRE-FIGHTING ACCESS REQUIREMENTS
   - 3.1. Access to all lots must comply with the design and construction requirements specified in Section 4.2 of the Bush Fire Report.
4. RETICULATED & STATIC FIRE-FIGHTING WATER SUPPLY

4.1 The reticulated water supply must be;
- Consistent with the specifications outlined in section 4.3 of the Bushfire Report.

This plan is to be read in conjunction with the preceding *Bushfire Assessment Report "Proposed 8 Lot Subdivision 115 Cove Hill Road, Bridgewater" dated 29/08/2024.*

BHMP BY JAMES ROGERSON
ACCREDITED BUSHFIRE PRACTITIONER (BFP-161), scopes: 1, 2 & 3B

JR BUSHFIRE ASSESSMENTS

11 APPENDIX D – PLANNING CERTIFICATE

BUSHFIRE-PRONE AREAS CODE

CERTIFICATE[1] UNDER S51(2)(d) *LAND USE PLANNING AND APPROVALS ACT 1993*

1. Land to which certificate applies

The subject site includes property that is proposed for use and development and includes all properties upon which works are proposed for bushfire protection purposes.

Street address:	**115 Cove Hill Road, Bridgewater TAS 7030**
Certificate of Title / PID:	**C.T.176216/103 / 9945127**

2. Proposed Use or Development

Description of proposed Use and Development:	**EIGHT LOT SUBDIVISION OF C.T.176216/103**
Applicable Planning Scheme:	**Tasmanian Planning Scheme - Brighton**

3. Documents relied upon

This certificate relates to the following documents:

Title	Author	Date	Version
SUBDIVISION PROPOSAL PLAN	PDA SURVEYORS, ENGINEERS & PLANNERS	01/05/2024	Rev A (7/5/24)
BUSHFIRE HAZARD REPORT – 115 COVE HILL ROAD, BRIDGEWATER	JAMES ROGERSON – JR BUSHFIRE ASSESSMENTS	19/09/2024	1.0
BUSHFIRE HAZARD MANGAEMENT PLAN– 115 COVE HILL ROAD, BRIDGEWATER (8 lots)	JAMES ROGERSON – JR BUSHFIRE ASSESSMENTS	29/08/2024	1.0

[1] This document is the approved form of certification for this purpose and must not be altered from its original form.

4. Nature of Certificate

The following requirements are applicable to the proposed use and development:

☐	**E1.4 / C13.4 – Use or development exempt from this Code**	
	Compliance test	**Compliance Requirement**
☐	E1.4(a) / C13.4.1(a)	

☐	**E1.5.1 / C13.5.1 – Vulnerable Uses**	
	Acceptable Solution	**Compliance Requirement**
☐	E1.5.1 P1 / C13.5.1 P1	***Planning authority discretion required. A proposal cannot be certified as compliant with P1.***
☐	E1.5.1 A2 / C13.5.1 A2	
☐	E1.5.1 A3 / C13.5.1 A2	

☐	**E1.5.2 / C13.5.2 – Hazardous Uses**	
	Acceptable Solution	**Compliance Requirement**
☐	E1.5.2 P1 / C13.5.2 P1	***Planning authority discretion required. A proposal cannot be certified as compliant with P1.***
☐	E1.5.2 A2 / C13.5.2 A2	
☐	E1.5.2 A3 / C13.5.2 A3	

☐	**E1.6.1 / C13.6.1 Subdivision: Provision of hazard management areas**	
	Acceptable Solution	**Compliance Requirement**
☐	E1.6.1 P1 / C13.6.1 P1	***Planning authority discretion required. A proposal cannot be certified as compliant with P1.***
☐	E1.6.1 A1 (a) / C13.6.1 A1(a)	
☒	E1.6.1 A1 (b) / C13.6.1 A1(b)	Provides BAL-19 for all lots (including any lot designated as 'balance')

☐	E1.6.1 A1(c) / C13.6.1 A1(c)	

☐	**E1.6.2 / C13.6.2 Subdivision: Public and fire fighting access**	
	Acceptable Solution	**Compliance Requirement**
☐	E1.6.2 P1 / C13.6.2 P1	
☐	E1.6.2 A1 (a) / C13.6.2 A1 (a)	
☒	E1.6.2 A1 (b) / C13.6.2 A1 (b)	Access complies with relevant Tables

☐	**E1.6.3 / C13.1.6.3 Subdivision: Provision of water supply for fire fighting purposes**	
	Acceptable Solution	**Compliance Requirement**
☐	E1.6.3 A1 (a) / C13.6.3 A1 (a)	
☒	E1.6.3 A1 (b) / C13.6.3 A1 (b)	Reticulated water supply (lots 1, 2, 3, 6 & 7) complies with relevant the Table.
☐	E1.6.3 A1 (c) / C13.6.3 A1 (c)	
☐	E1.6.3 A2 (a) / C13.6.3 A2 (a)	
☒	E1.6.3 A2 (b) / C13.6.3 A2 (b)	Static water supply (lots 4, 5 & 8) complies with relevant the Table.
☐	E1.6.3 A2 (c) / C13.6.3 A2 (c)	

5. Bushfire Hazard Practitioner

Name:	JAMES ROGERSON	**Phone No:**	0488372283
Postal Address:	UNIT 1-2 KENNEDY DRIVE, CAMBRIDGE PARK	**Email Address:**	JR.BUSHFIREASSESSMENTS@GMAIL.COM
Accreditation No:	BFP – 161	**Scope:**	1, 2, 3B

6. Certification

I certify that in accordance with the authority given under Part 4A of the *Fire Service Act 1979* that the proposed use and development:

☐ Is exempt from the requirement Bushfire-Prone Areas Code because, having regard to the objective of all applicable standards in the Code, there is considered to be an insufficient increase in risk to the use or development from bushfire to warrant any specific bushfire protection measures, or

☒ The Bushfire Hazard Management Plan/s identified in Section 3 of this certificate is/are in accordance with the Chief Officer's requirements and compliant with the relevant **Acceptable Solutions** identified in Section 4 of this Certificate for lot 3.

Signed: *certifier* Mogerson

Name: JAMES ROGERSON **Date:** 19/9/2024

Certificate Number: 161

(for Practitioner Use only)