


ROCKHAMPTON REGIONAL COUNCIL
ADDITIONAL PLANS APPROVED
26 March 2020
DATE
These plans are approved and now incorporated into the approved suite of plans subject to the current conditions of approval associated with **Development Permit No.: D/37-2017**
Dated: 23 January 2018

 Denotes Proposed Building Location Envelope
6.0m setback for road boundaries*
1.5m setback for side boundaries
2.0m setback for rear boundaries
*Unless noted otherwise.

IMPORTANT NOTE
This plan was prepared to accompany an application to Rockhampton Regional Council and should not be used for any other purpose.
The dimensions and areas shown hereon are subject to field survey and also to the requirements of council and any other authority which may have requirements under any relevant legislation.
In particular, no reliance should be placed on the information on this plan for any financial dealings involving the land.
This note is an integral part of this plan.

client
Edenbrook Land Pty Ltd
A.B.N. 112 588 182

project
Edenbrook Drive, Parkhurst

plan of
Building Location Envelope Plan
(17 Lots Stages 7A-7E)

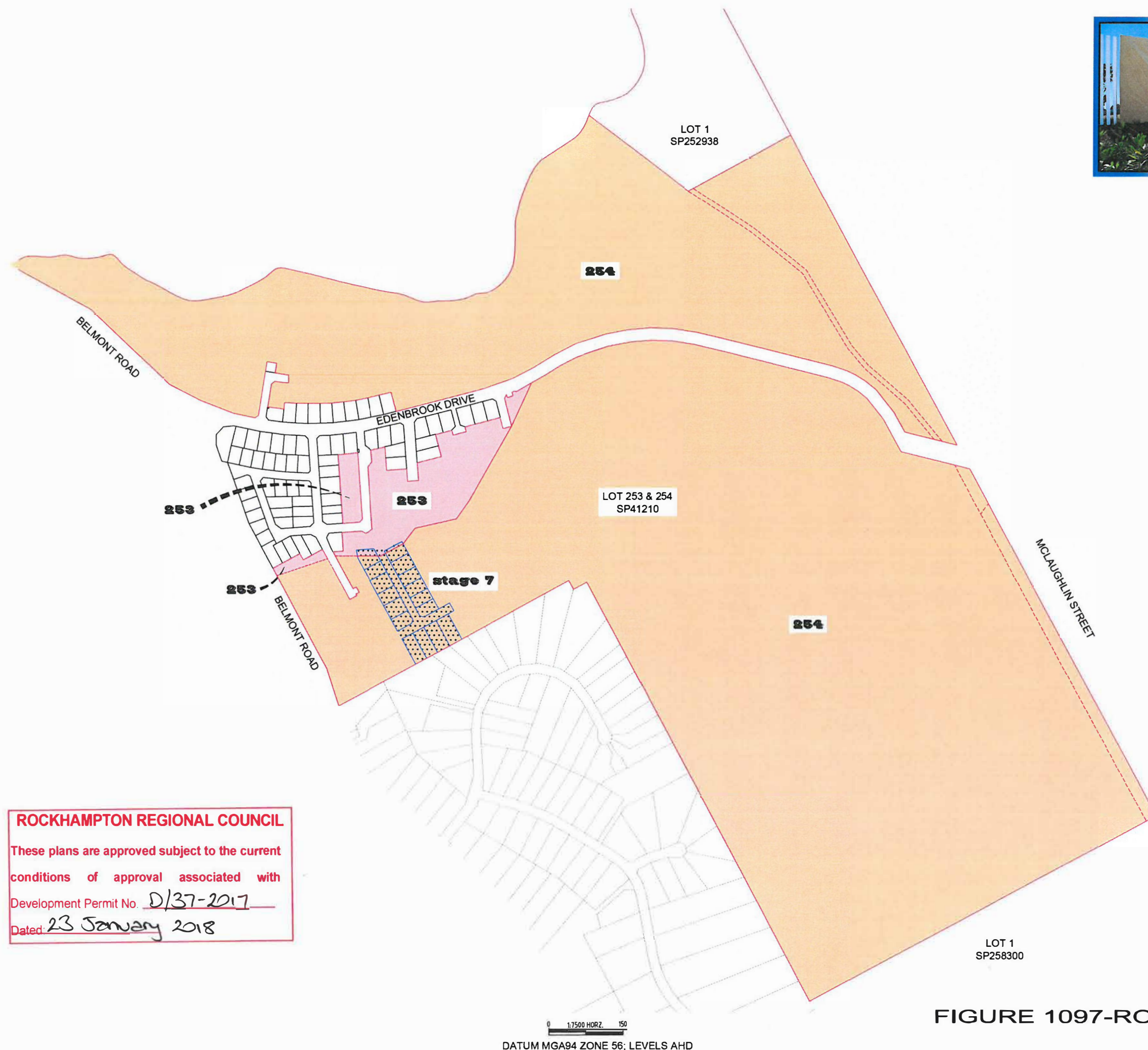
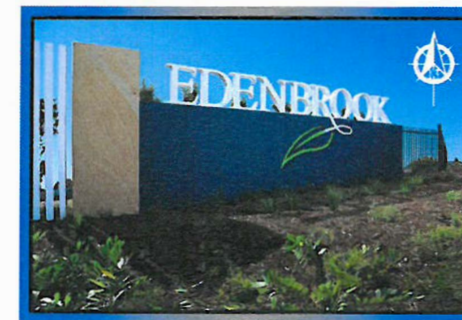
rp
Lot 253 on SP316480

lga
Rockhampton Regional Council

issue	date	details	authorised
A	14-03-2020	Initial Issue	RJKF
B	19-03-2020	Lot 156 amended	RJKF

created
 **capricornsurveygroupcq**
SURVEYING & PLANNING SOLUTIONS
07 4927 5199 | reception@csqcq.com.au | 132 Victoria Parade, Rockhampton QLD 4700

scale
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1 of 1
plan no.
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cad file
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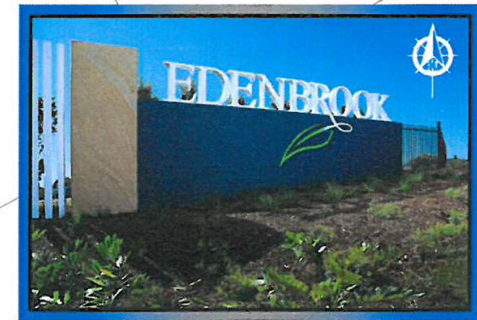


ROCKHAMPTON REGIONAL COUNCIL

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Dated 23 January 2018

NGGA
civil engineers
ACN 063 548 390
PH: 4927 3220
EMAIL: mail@ngga.com.au

FIGURE 1097-ROL1: Property Description
08/11/17 Rev 3



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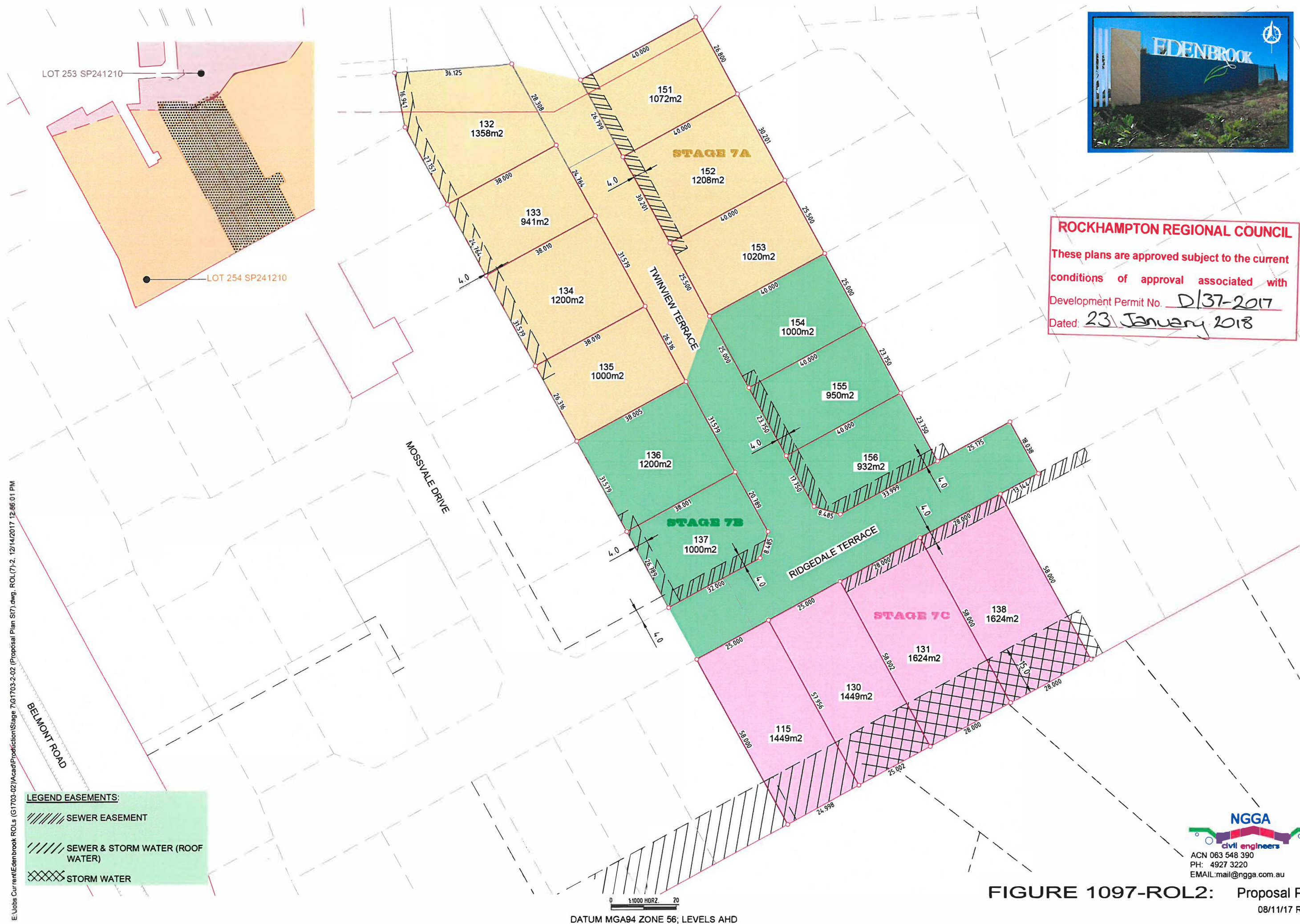
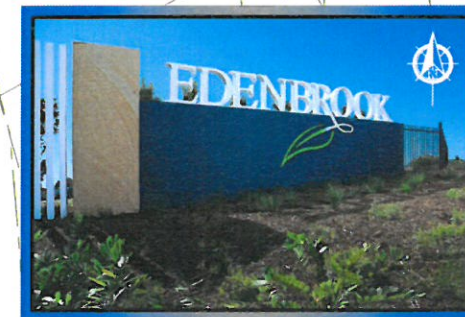


FIGURE 1097-ROL2: Proposal Plan
08/11/17 Rev 3

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LEGEND

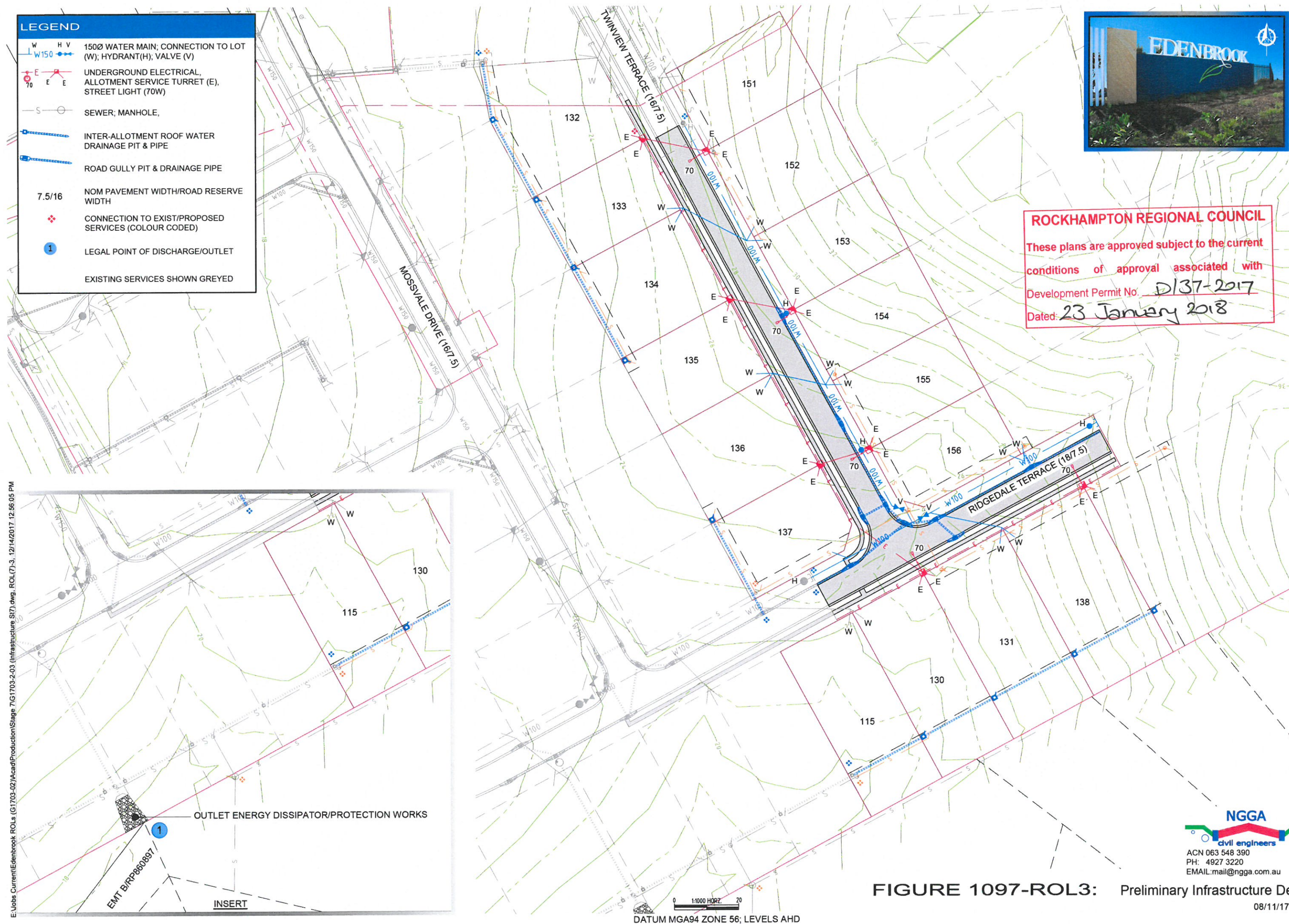
- W 150 H V 150Ø WATER MAIN; CONNECTION TO LOT (W); HYDRANT(H); VALVE (V)
- E E UNDERGROUND ELECTRICAL, ALLOTMENT SERVICE TURRET (E), STREET LIGHT (70W)
- S S SEWER; MANHOLE,
- INTER-ALLOTMENT ROOF WATER DRAINAGE PIT & PIPE
- ROAD GULLY PIT & DRAINAGE PIPE
- 7.5/16 NOM PAVEMENT WIDTH/ROAD RESERVE WIDTH
- CONNECTION TO EXIST/PROPOSED SERVICES (COLOUR CODED)
- 1 LEGAL POINT OF DISCHARGE/OUTLET
- EXISTING SERVICES SHOWN GREYED



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Dated: 23 January 2018

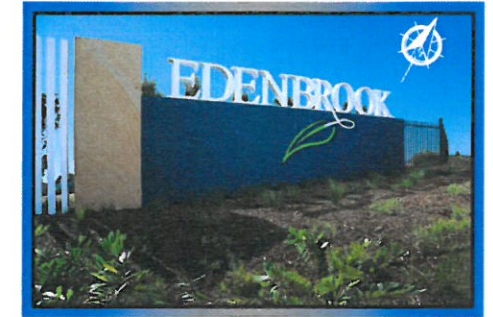


0 1:1000 HORIZ. 20
DATUM MGA94 ZONE 56; LEVELS AHD

FIGURE 1097-ROL3: Preliminary Infrastructure Details

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08/11/17 Rev 3



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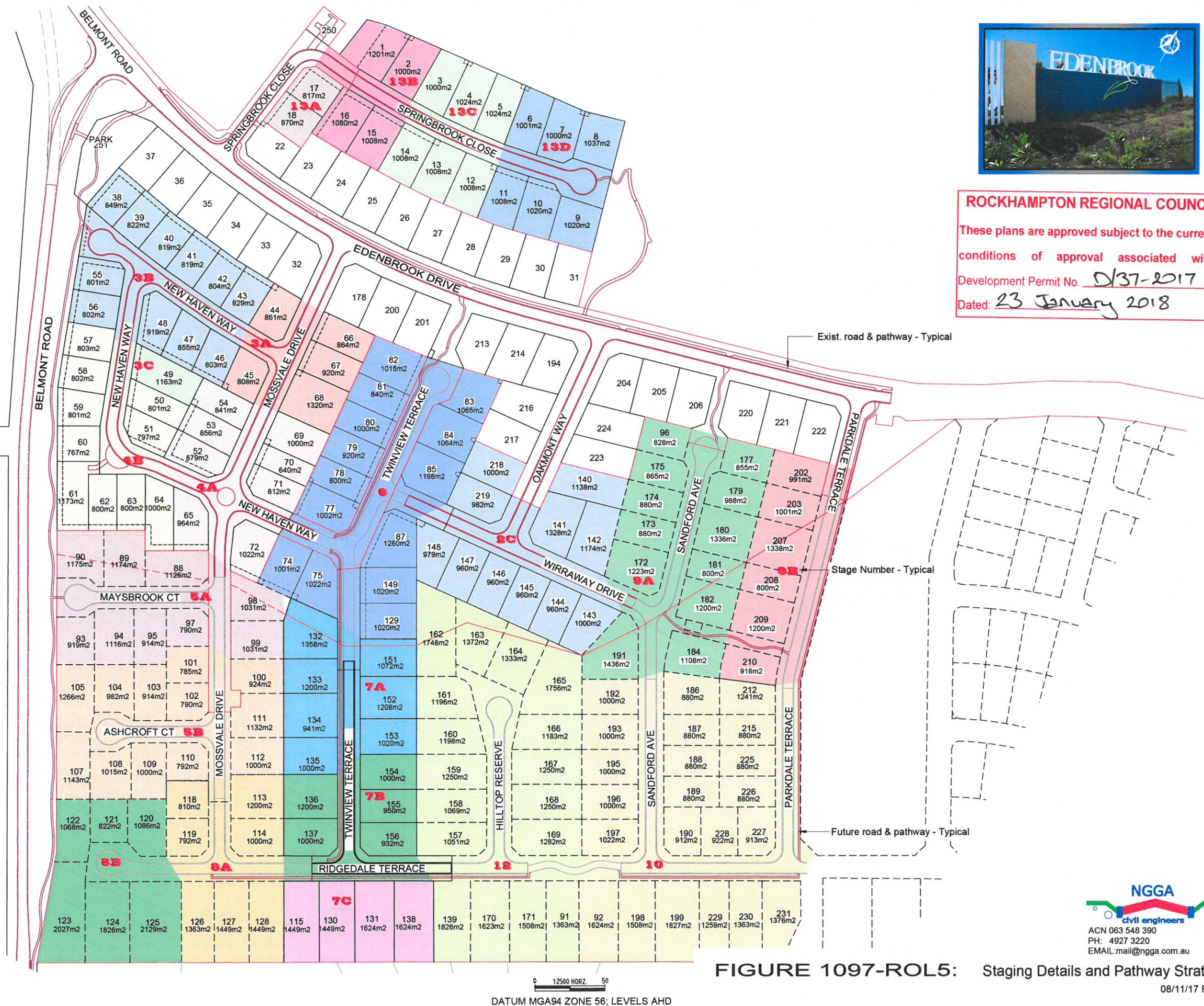
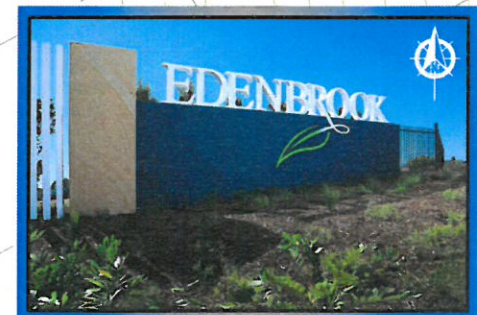
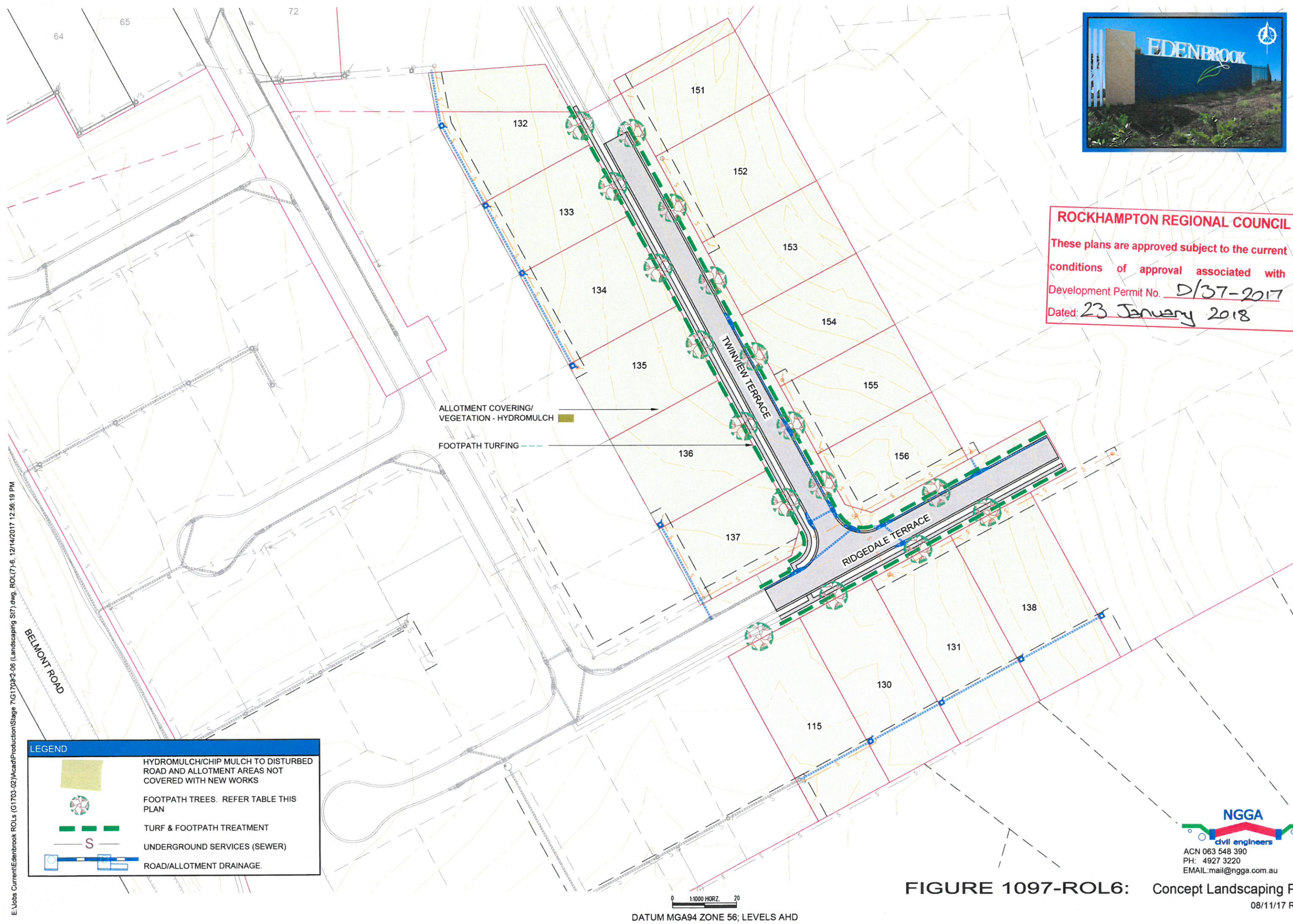


FIGURE 1097-ROL5: Staging Details and Pathway Strategy



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FIGURE 1097-ROL6: Concept Landscaping Plan

08/11/17 Rev 3

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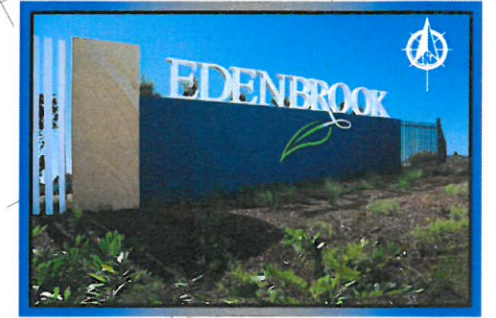
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LEGEND EASEMENTS:

SEWER EASEMENT

SEWER & STORM WATER (ROOF WATER)

STORM WATER



ROCKHAMPTON REGIONAL COUNCIL

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BUILDING LOCATION ENVELOPE SETBACKS

- FRONT BOUNDARY - 6.0m UNO
- REDUCED FRONT BOUNDARY SETBACK - 4.0m UNO
- SIDE BOUNDARY - 1.5m (REFER NOTE 1. (II))
- REAR BOUNDARY - 2.0m UNO

ANNOTATED AREAS SHOWN WITHIN EACH LOT DENOTES THE RESPECTIVE BUILDING LOCATION ENVELOPE AREA FOR EACH LOT.

ALL SERVICES ARE CLEAR OF THE BUILDING LOCATION ENVELOPES

NOTES

- ALL SETBACKS TO BUILDINGS OR STRUCTURES ARE TO BE IN ACCORDANCE WITH THE QDC MP 1.2, EXCEPT FOR THE FOLLOWING:-
 (I) ROAD, SIDE, REAR AND / OR ACCESS EASEMENT BOUNDARY SETBACK FOR STRUCTURES ARE AS DEPICTED ON THE PLAN
 (II) SIDE BOUNDARY SETBACKS TO THE OUTERMOST PROJECTION ARE:
 - WHERE THE HEIGHT OF THAT PART IS 4.5M OR LESS - 1.5M
 - WHERE THE HEIGHT OF THAT PART IS GREATER THAN 4.5M BUT NOT MORE THAN 8.5M - 2.0M
- SITES WITH A GRADIENT GREATER THAN 15% WILL HAVE SPECIAL DESIGN NEEDS
- SWIMMING POOLS ARE PERMITTED TO BE LOCATED WITHIN THE ROAD AND SIDE / REAR BOUNDARY SETBACK IN ACCORDANCE WITH QDC MP 1.2 REQUIREMENT

DEVELOPMENT CONDITIONS

- MAXIMUM BUILDING HEIGHT FOR ANY DWELLING IS 7m ABOVE GROUND LEVEL TO THE EAVES AND 9m TO THE HIGHEST POINT ON THE ROOF.
- NO PART OF THE DWELLING INCLUDING EAVES, MAY BE CONSTRUCTED OUTSIDE THE BUILDING LOCATION ENVELOPE.

E:\Jobs Current\Edenbrook ROLs (G1703-02)\Acad\Production\Stage 7\G1703-2-07 (Bld Setbacks S17).dwg, ROL(7)-7, 12/14/2017 12:56:24 PM

0 1:1000 HORZ. 20

DATUM MGA94 ZONE 56; LEVELS AHD

FIGURE 1097-ROL7: Building Setback Details

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08/11/17 Rev 3

RRC Ref: D/37-2017_one lot into 18 Stages 7(A B & C)
Our Ref: 1096_Response to ROL Information Request

19 December 2017

Planning and Regulatory Services
Rockhampton Regional Council
PO Box 1860, Rockhampton, QLD, 4700

Attention:- Brandon Diplock

Dear Sir

ROCKHAMPTON REGIONAL COUNCIL

APPROVED PLANS

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

Development Permit No.: D/37-2017

Dated: 23 January 2018

D/37-2017, ROL APPLICATION, 1 LOT INTO 18 LOTS Lot 253 & LOT 254 SP241210 – EDENBROOK STAGE 7 (A, B & C)

We acknowledge on behalf of the Applicant receipt of Council's letter dated 4 April 2017 wherein further information is requested. The Applicant has approved the attached Rev 3 set of ROL Drawings (some minor allotment dimension changes) and the following response:

1.0 Stormwater Management

1.1 A portion of the subject development site drains to the south through an existing easement adjacent to Lot 67 on RP860897 (97 Belmont Road, Parkhurst). The applicant has stated that they accept that Council will impose a condition to reach an agreement with the neighbouring property owners to adjust this easement to accommodate the stormwater flows from the subject development; however it is appropriate that these negotiations occur as part of the subject application. The submitted documentation does not propose any mitigation measures to limit the peak flows from the site to that of the pre-development scenario and Council is concerned that the existing downstream drainage infrastructure may not be sufficiently sized to accommodate the additional runoff from both the subject development, and the future stages that will also be directed through this easement.

Supporting pre / post development calculations and flow path cross sections demonstrating the appropriateness of the proposed drainage arrangement, as well as any required agreement from the affected downstream property owners, must be submitted to Council prior to any approvals being granted. Please amend the application accordingly to address these matters.

Response:

Attached please find five (5) hydraulic analysis drawings (all Issue 2).

These drawings show the findings of the Q100 analysis of the existing "pre" condition (without Edenbrook) and "post" condition (after all future stages of Edenbrook are developed including Stages 7 and 8).

Drawing 1097-FM01 - Catchment Plan including the approved layout west of Belmont Rd.

Drawing 1097-FM02 - Catchment Plan with RRC's infrastructure/easements shown.

Drawing 1097-FM03 - "Pre" Edenbrook Inundation in Easement B, Belmont Rd & downstream

Drawing 1097-FM04 - "Post" Edenbrook Inundation in Easement B, Belmont Rd & downstream

Drawing 1097-FM05 - Preliminary design of proposed pipe infrastructure in Easement B

A. Belmont Road Infrastructure

The catchment that relates to the culvert (2/1050 dia pipes) under Belmont Road in front of Lot 67 RP 860897, is significant. The catchment has an area of 25.3 hectares and extends to the top of Samuel Crescent, includes half of Gremalis Drive and is nominally cut off by 650 metres of Belmont Road which has kerb and channel only on its eastern side. There are several underground pipe drainage systems that extend over the sub-catchments and one pipe system runs down Belmont Road to discharge into the side of the southern-most barrel of the 2/1050 culvert.

The overall catchment with sub-catchments is shown on Drawing No 1097-FM01.

The proposed development of Edenbrook does not result in additional catchment area being added to the downstream drainage system. The development of Edenbrook will increase the impervious component of the catchment.

Drawing 1097-FM02 shows Council's existing infrastructure within the 25.3 hectares of catchment. It should be noted that the pipe systems and the resulting Q100 flow off this entire catchment have one only outlet point which is opposite Easement B in Lot 67 RP 860897.

The relevant portion of the catchment within Edenbrook is 4.2 hectares and this represents 16.7% or one sixth (1/6) of this overall catchment of 25.3 hectares.

B. Results of Analysis for Belmont Road Drainage Infrastructure

The attached drawings 1097-FM03 and 1097-FM04 refer.

The analysis of the overall catchment and its effects on the *existing downstream drainage infrastructure* (ie the existing 2/1050 culvert under Belmont Road) shows for the 1 in 100 year probability event:

"PRE" Condition (@ Pt 3): Depth on Belmont Rd = 150mm, "D.V" = 0.17 m²/s

"POST" Condition (@ Pt 3): Depth on Belmont Rd = 160mm, "D.V" = 0.17 m²/s

The QUDM Table 7.4.4 requires for transverse road flow, a maximum of 200mm depth of flow and "D.V", the product of depth times velocity to be less than 0.3 m²/s.

Both the existing ("Pre" Edenbrook) and the proposed future situation ("Post" Edenbrook) are therefore compliant with the relevant QUDM parameters. The existing culvert accommodates the additional runoff from the subject Edenbrook development. There is no significant impact effect arising from the Edenbrook development; it is unreasonable to require the Applicant to propose mitigation measures.

C. Effects Downstream of Edenbrook Through Lot 67 – J & G Tomkins

It is important to recognise that Easement B in Lot 67 receives runoff from two existing outlets on significant pipe systems in Samuel Crescent and not just runoff from the Edenbrook land.

At the third points along Lot 67's easement, the analysis shows:

"PRE" Condition (@ Pt 1): WSL = 16.897 Depth = 0.99m DV = 0.93 m²/s

"POST" Condition (@ Pt 1): WSL = 16.914 Depth = 1.01m DV = 1.12 m²/s

"PRE" Condition (@ Pt 2): WSL = 15.938 Depth = 0.53m DV = 1.22 m²/s Q = 8.8 m³/s

"POST" Condition (@ P 2): WSL = 15.947 Depth = 0.54m DV = 1.27 m²/s Q = 9.2 m³/s

The additional runoff of 0.4 cumecs from the subject development adds between 10mm to 17mm of flow depth which stays within the existing open channel. This does not impact the floor levels of houses and structures on Lot 67 or adjacent lots. The floor levels of adjacent houses and structures are over 1m above the Q100 water levels in Easement B. There is no impact of significance; it would not be reasonable to require the Applicant to propose mitigation measures.

D. Effects Downstream West of Belmont Road

The analysis further downstream at a nominal point 70 metres below the 2/1050 culvert shows:

"PRE" Condition (@ Point 4): Q = 15.2 cumecs Depth of flow = 0.75m

"POST" Condition (@ Point 4): Q = 15.5 cumecs Depth of flow = 0.76m

The development of Edenbrook does not produce any significant effect; it is not reasonable and not feasible to require the Applicant to propose any mitigation measures.

Summary of Drainage Issues

In response to the main points raised in the information request:

- (i) There is no additional catchment area added to the drainage Easement B on Lot 67 of J & G Tomkins which is downstream of Edenbrook.
- (ii) There is no significant impact resulting from the development (urbanization) of Edenbrook arising from stormwater discharge into Easement B on Lot 67 of J & G Tomkins which is downstream of Edenbrook.
- (iii) No mitigation is reasonably required or warranted to limit the peak flows from the subject site to that of the pre-development scenario.
- (iv) The existing downstream drainage infrastructure in Belmont Road is not adversely impacted in accommodating the minor additional runoff from the subject development including its future stages which will be directed through Easement B in Lot 67.
- (v) A signed Lot 67 owners' permission/agreement will be provided to Council with the Operational Works submission for Stage 7B and 7C if not provided in an earlier stage. This could be incorporated as an ROL condition for Stage 7B and 7C if deemed necessary albeit the standard ROL conditions are considered to be sufficient protection for Council.

If essential for Stage 7B and 7C to ensure that the owners of Lot 67 have no concern about perceived changes in catchment conditions or the effect of any outfall of drainage above, through or into Easement B in their property, the developer (the Applicant) is prepared to pipe the Q5 flow (as a minimum) through Easement B and fully remediate the affected land within the easement. Attached Drawing No 1097-FM05 shows an indicative layout.

It was un-necessary for Council to request that *these negotiations occur as part of the subject application* and/or for the Applicant to obtain the written consent from the owner of Lot 70 RP859705 for the minor impost arising from a future sewerage connection.

These matters could have been very simply addressed as ROL conditions of approval to be addressed at Operational Works and/or with ROL conditions. A similar issue arose with sewerage reticulation in Stage 1 and it was not necessary to require any such agreement in advance before issuing the ROL approval or even the Operational Works approval.

2.0 Sewerage Works

2.1 *Evidence of written consent from the neighboring property (Lot 70 on 859705, 13 Samuel Crescent, Parkhurst) must be provided to Council, for the proposed sewerage works located within the corner of the allotment.*

Response: Written consent attached.

This is a complete response to the Council's information request.

We request Council proceed with assessment of the application.

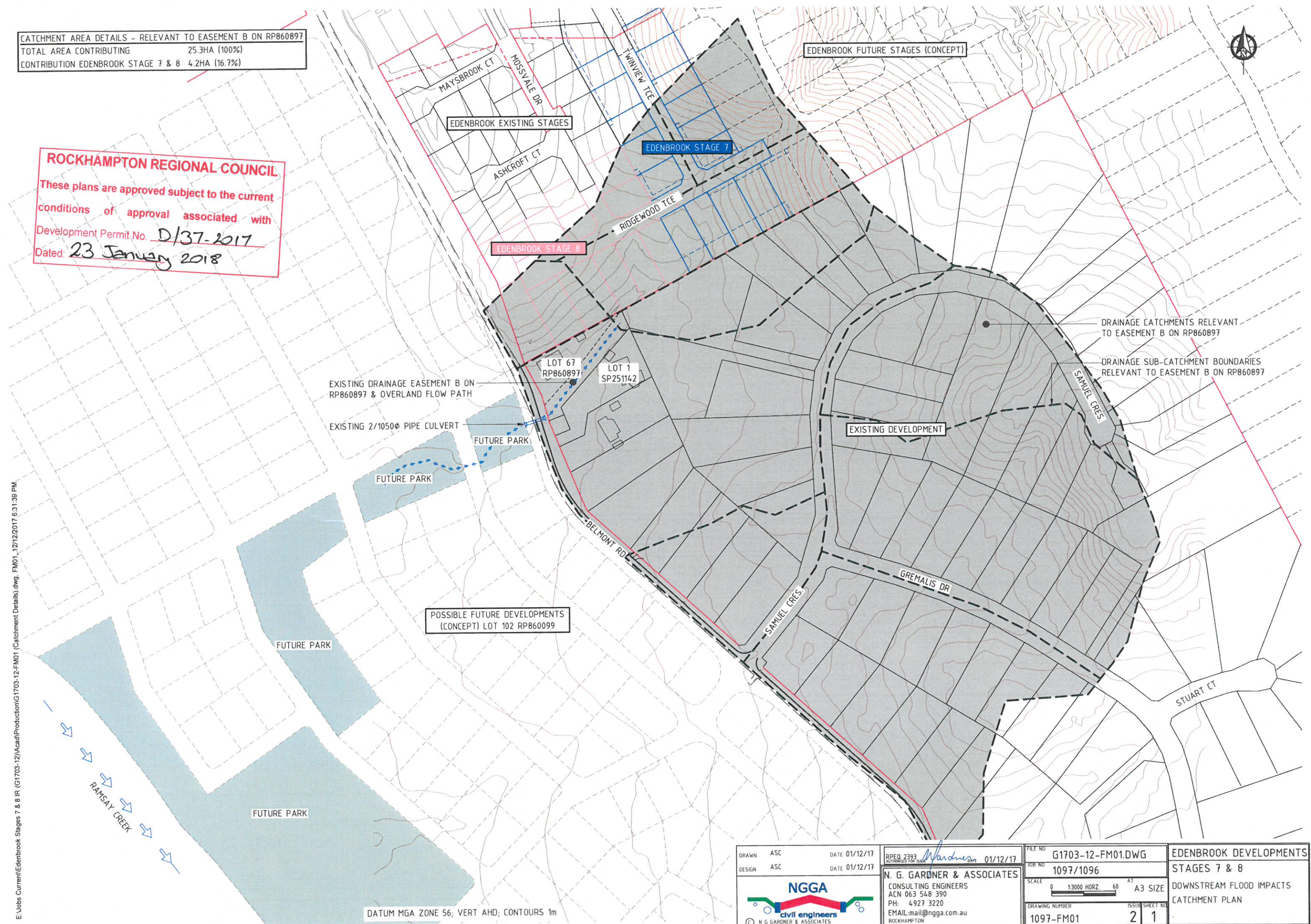


Signed by N. Gardner RPEQ No 2393 for and on behalf of

N G Gardner & Associates Pty Ltd

CATCHMENT AREA DETAILS - RELEVANT TO EASEMENT B ON RP860897
TOTAL AREA CONTRIBUTING 25.3HA (100%)
CONTRIBUTION EDENBROOK STAGE 7 & 8 4.2HA (16.7%)

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				ACN 063 548 390		A3 SIZE		CATCHMENT PLAN
				PH: 4927 3220		DRAWING NUMBER	1097-FM01	
				EMAIL: mail@ngga.com.au		ISSUE SHEET NO	2 1	
				ROCKHAMPTON				

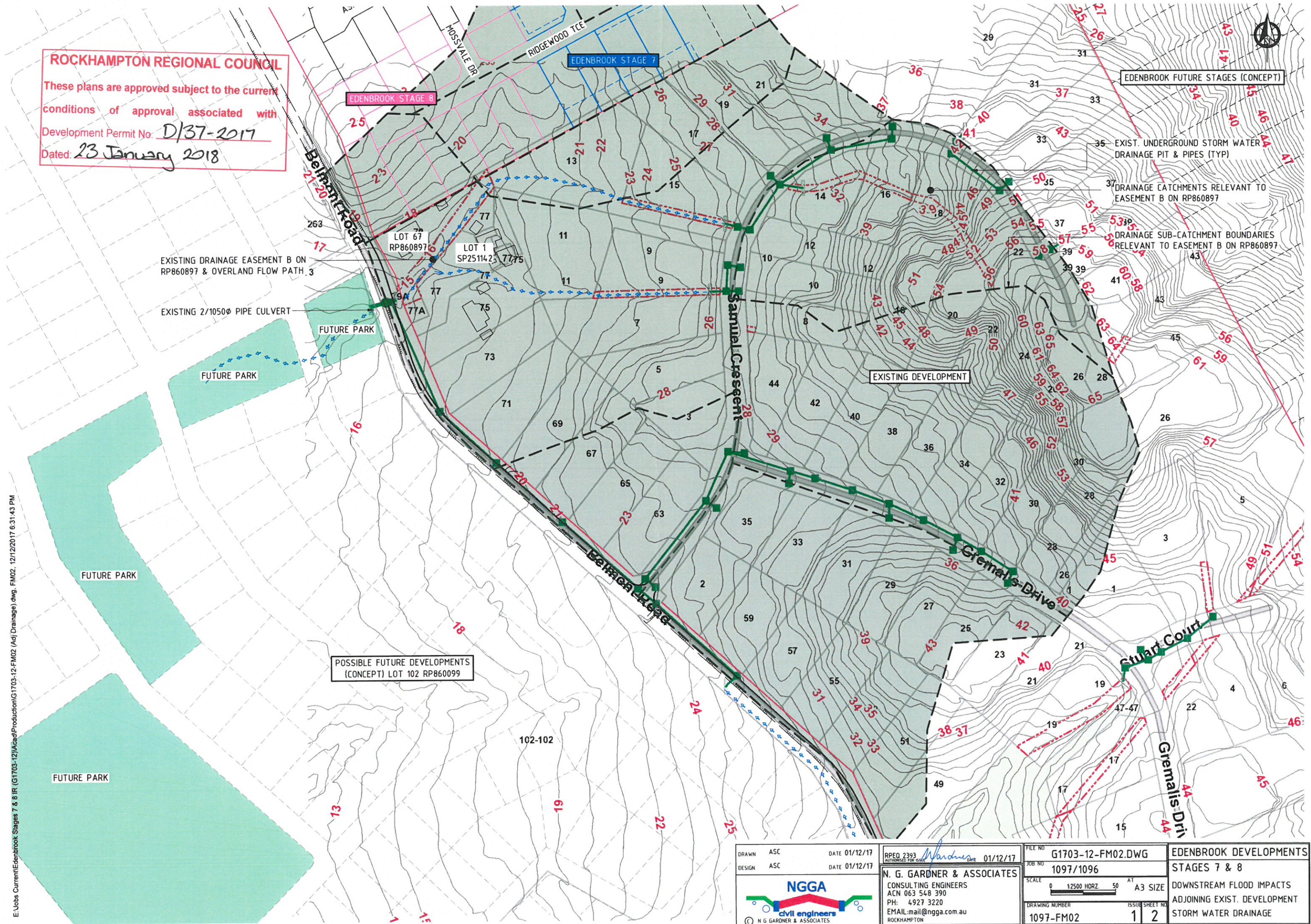
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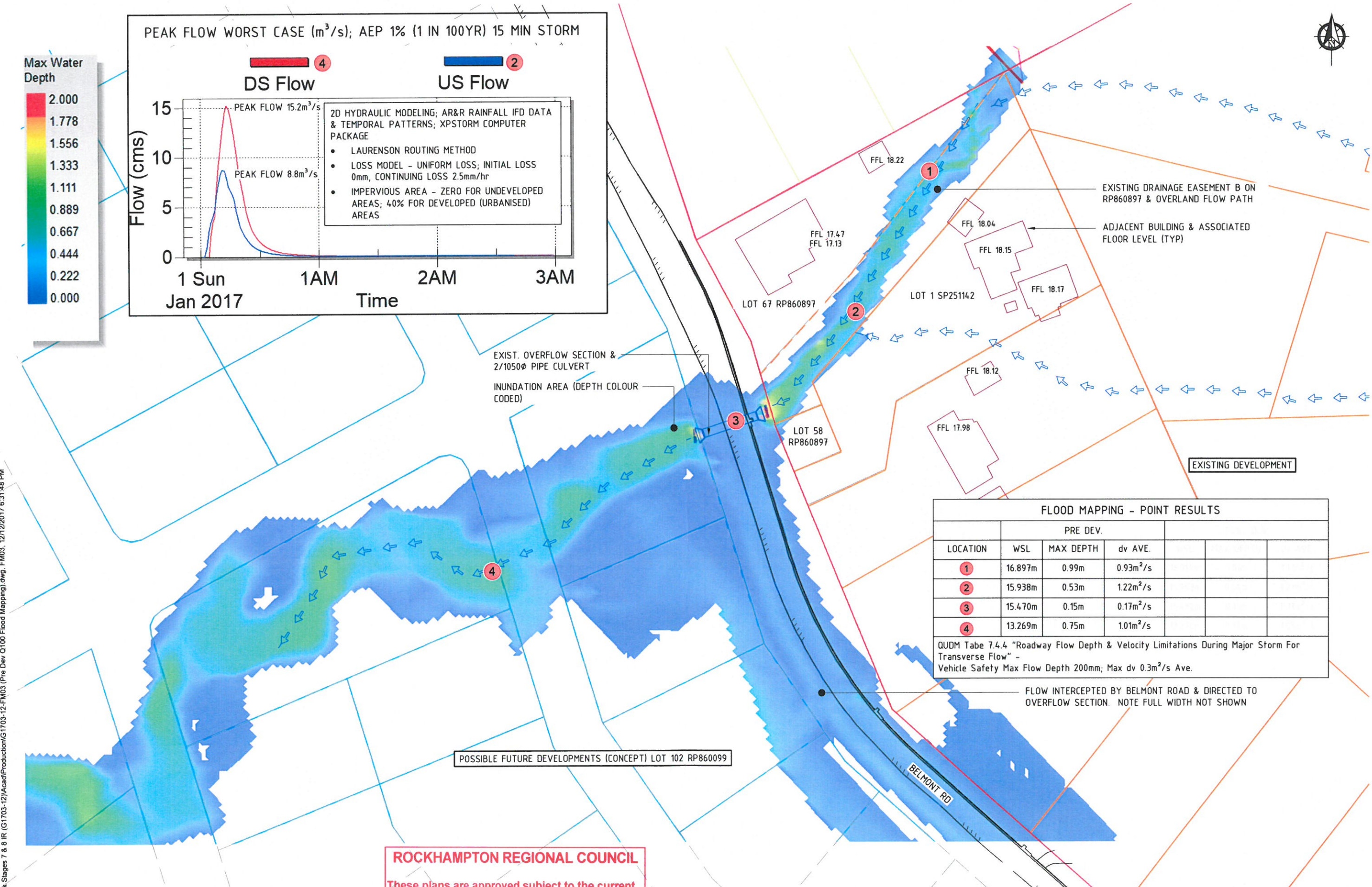
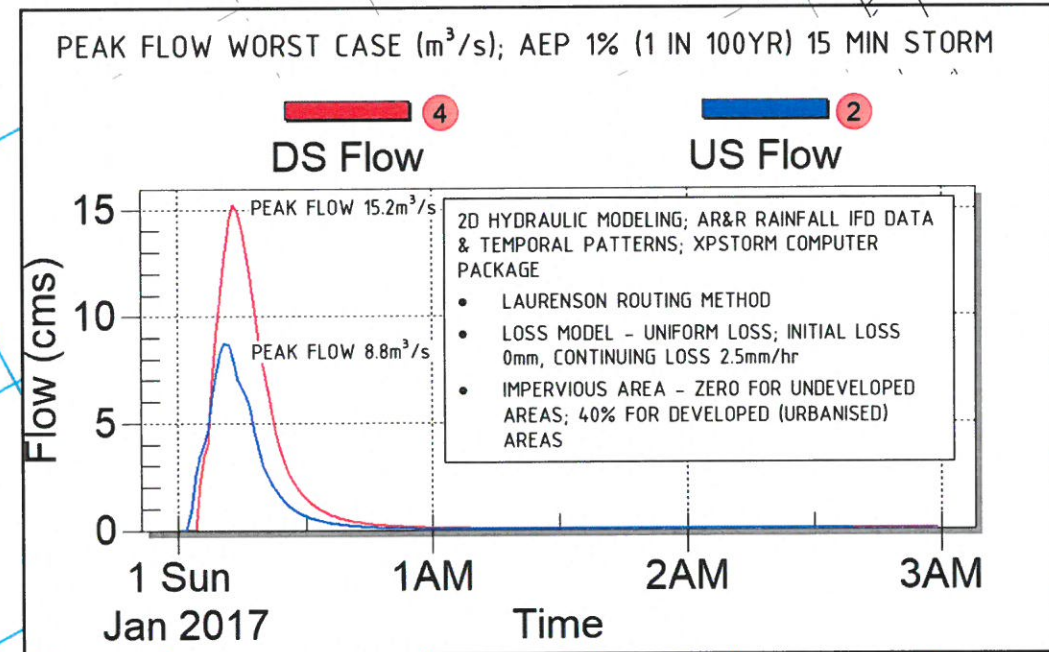
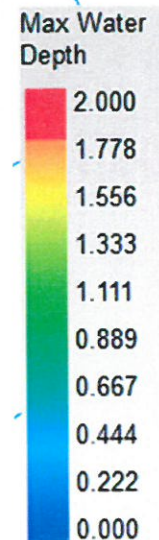
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DRAWN ASC	DATE 01/12/17	FILE NO G1703-12-FM02.DWG	EDENBROOK DEVELOPMENTS
DESIGN ASC	DATE 01/12/17	JOB NO 1097/1096	STAGES 7 & 8
 N. G. GARDNER & ASSOCIATES CONSULTING ENGINEERS ACN 063 548 390 PH: 4927 3220 EMAIL: mail@ngga.com.au ROCKHAMPTON		SCALE 0 1:2500 HORZ. 50 A3 SIZE	DOWNSTREAM FLOOD IMPACTS ADJOINING EXIST. DEVELOPMENT STORM WATER DRAINAGE
		DRAWING NUMBER 1097-FM02	ISSUE SHEET NO 1 2



FLOOD MAPPING - POINT RESULTS					
LOCATION	PRE DEV.				
	WSL	MAX DEPTH	dv AVE.		
1	16.897m	0.99m	0.93 m^2/s		
2	15.938m	0.53m	1.22 m^2/s		
3	15.470m	0.15m	0.17 m^2/s		
4	13.269m	0.75m	1.01 m^2/s		

QUDM Tab 7.4.4 "Roadway Flow Depth & Velocity Limitations During Major Storm For Transverse Flow" - Vehicle Safety Max Flow Depth 200mm; Max dv 0.3 m^2/s Ave.

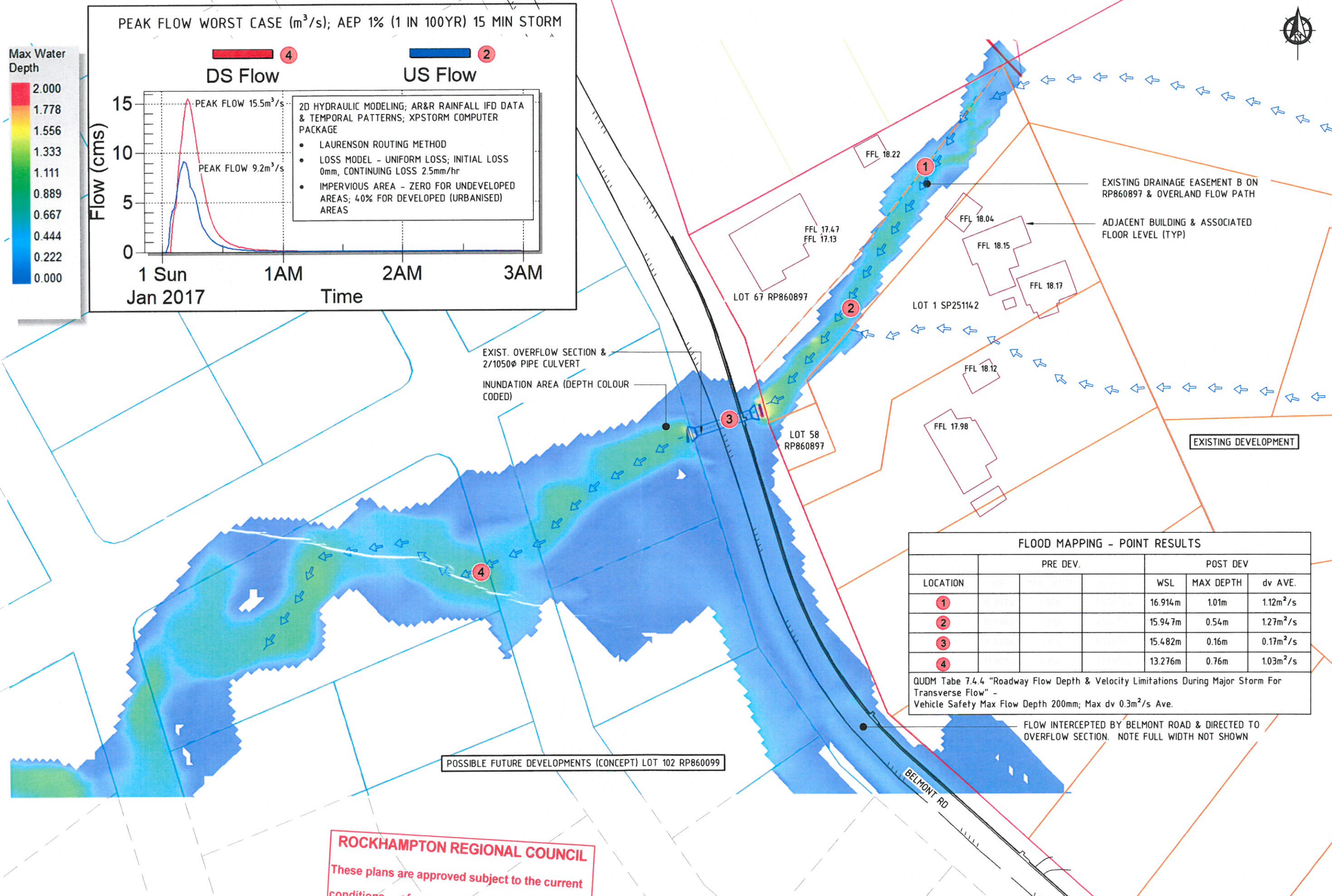
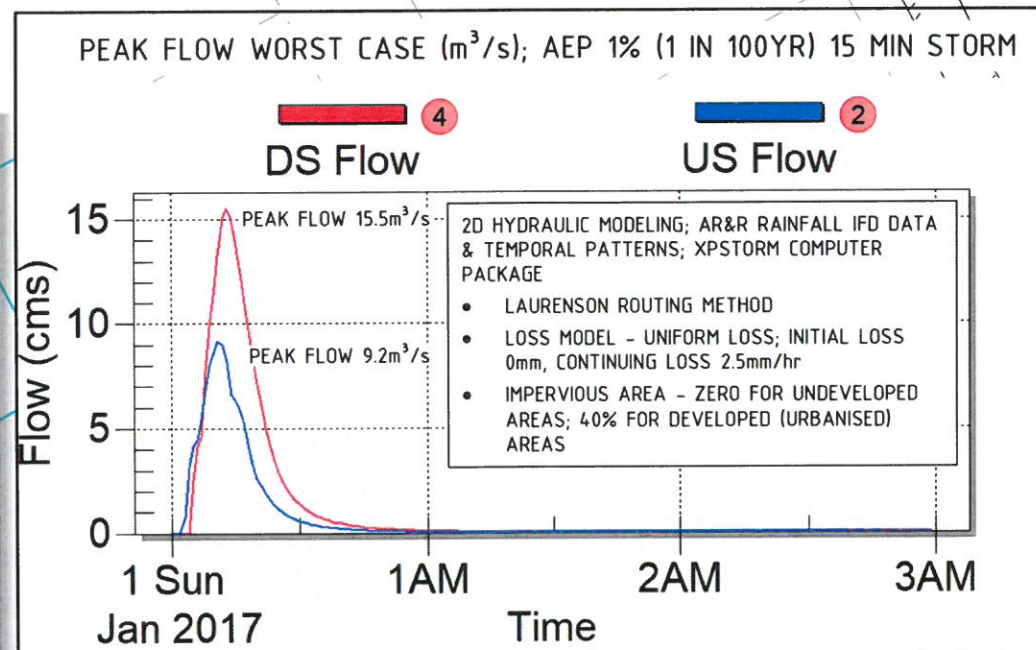
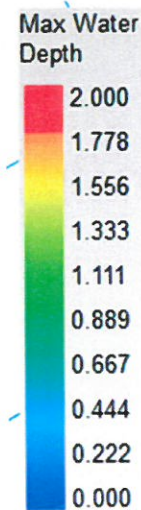
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DRAWN: ASC DESIGN: ASC	DATE: 01/12/17 DATE: 01/12/17	RPED 2393 N. G. GARDNER & ASSOCIATES CONSULTING ENGINEERS ACN 063 548 390 PH: 4927 3220 EMAIL: mail@ngga.com.au ROCKHAMPTON	FILE NO: G1703-12-FM02.DWG JOB NO: 1097/1096 SCALE: 0 1:1000 HORZ. 20 AT A3 SIZE DRAWING NUMBER: 1097-FM03 ISSUE SHEET NO: 2 3	EDENBROOK DEVELOPMENTS STAGES 7 & 8 DOWNSTREAM FLOOD IMPACTS 1 IN 100YR FLOOD MAPPING PRE EDENBROOK STAGE 7 & 8
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FLOOD MAPPING - POINT RESULTS					
LOCATION	PRE DEV.			POST DEV	
				WSL	MAX DEPTH
1				16.914m	1.01m
2				15.947m	0.54m
3				15.482m	0.16m
4				13.276m	0.76m

QUDM Table 7.4.4 "Roadway Flow Depth & Velocity Limitations During Major Storm For Transverse Flow" - Vehicle Safety Max Flow Depth 200mm; Max dv $0.3 \text{ m}^2/\text{s}$ Ave.

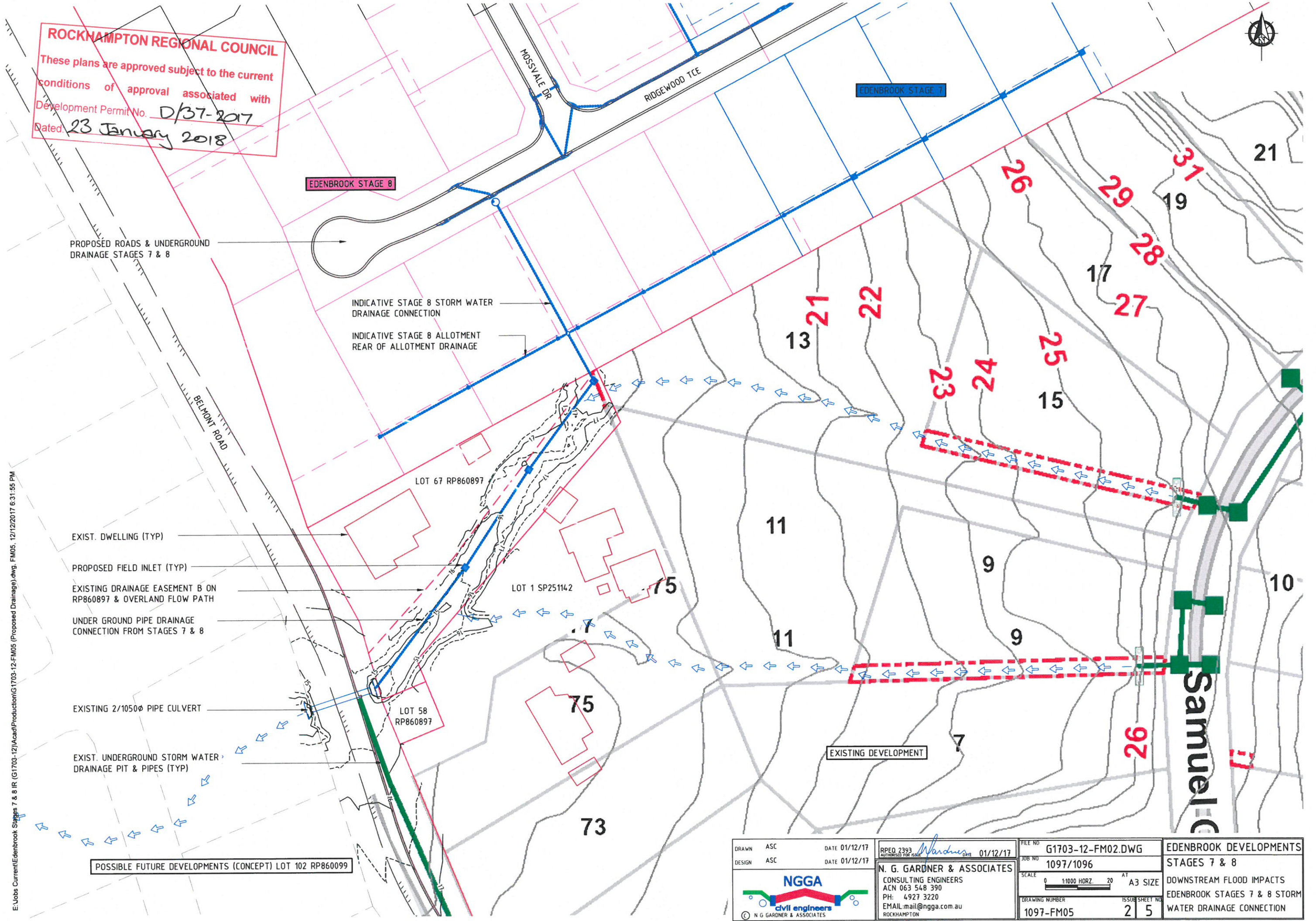
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Dated: 23 January 2018

DRAWN: ASC	DATE: 01/12/17	RPEQ 2393	01/12/17	FILE NO: G1703-12-FM02.DWG	EDENBROOK DEVELOPMENTS
DESIGN: ASC	DATE: 01/12/17	N. G. GARDNER & ASSOCIATES		JOB NO: 1097/1096	STAGES 7 & 8
		CONSULTING ENGINEERS		SCALE: 1:1000 HORZ. 20 AT A3 SIZE	DOWNSTREAM FLOOD IMPACTS
ACN 063 548 390 PH: 4927 3220 EMAIL: mail@ngga.com.au ROCKHAMPTON		DRAWING NUMBER: 1097-FM04 ISSUE SHEET NO: 2/4		1 IN 100YR FLOOD MAPPING POST EDENBROOK STAGE 7 & 8	

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DRAWN ASC	DATE 01/12/17	RPEQ 2393 AUTHORISED FOR ISSUE N. G. GARDNER & ASSOCIATES CONSULTING ENGINEERS ACN 063 548 390 PH: 4927 3220 EMAIL: mail@ngga.com.au ROCKHAMPTON	FILE NO G1703-12-FM02.DWG	EDENBROOK DEVELOPMENTS
DESIGN ASC	DATE 01/12/17		JOB NO 1097/1096	STAGES 7 & 8
			SCALE 0 1:1000 HORZ. 20 AT A3 SIZE	DOWNSTREAM FLOOD IMPACTS
			DRAWING NUMBER 1097-FM05	EDENBROOK STAGES 7 & 8 STORM WATER DRAINAGE CONNECTION
			ISSUE SHEET NO 2 5	