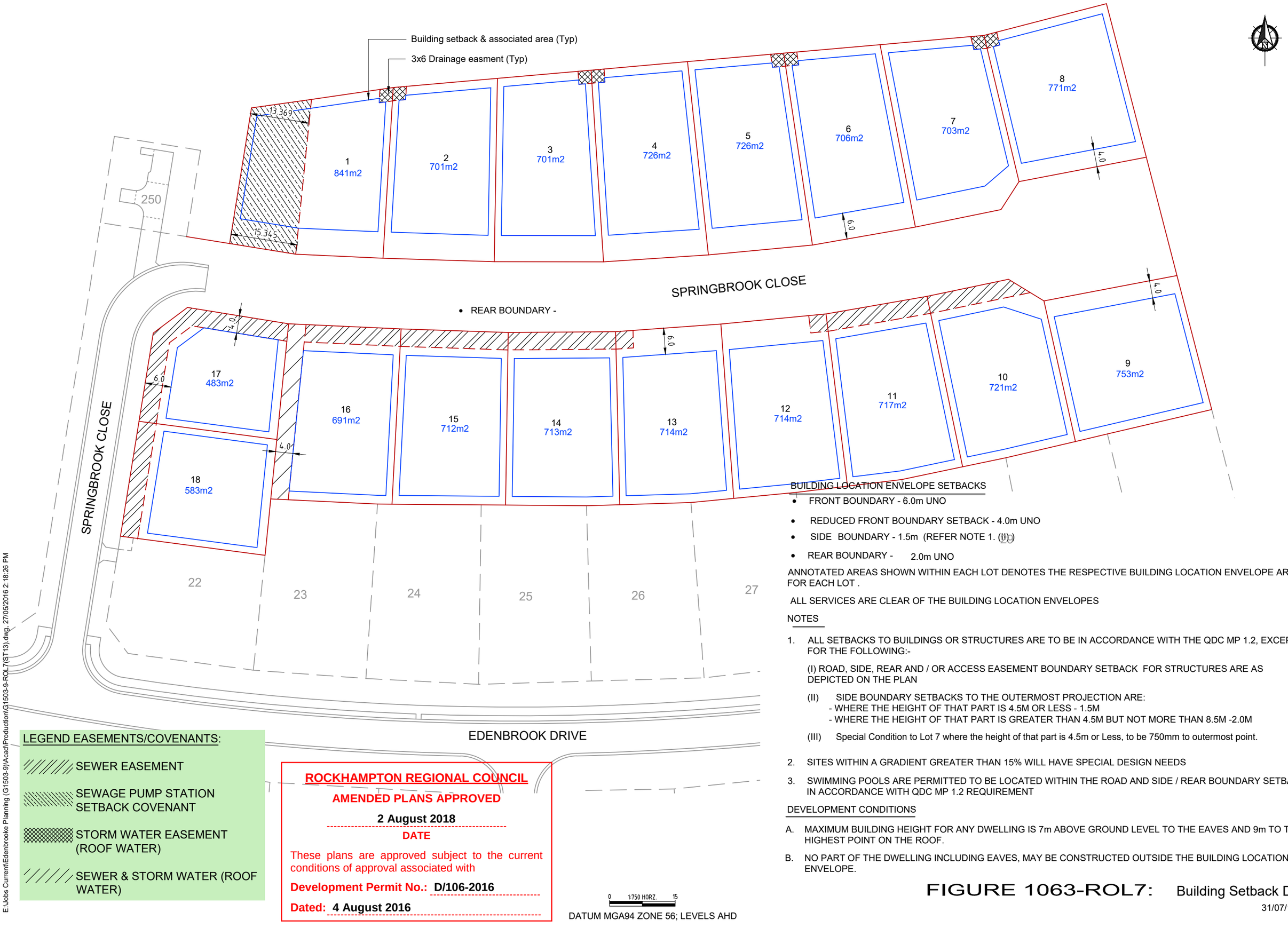

BUILDING LOCATION ENVELOPE SETBACKS

- 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

1. 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

   (III) Special Condition to Lot 7 where the height of that part is 4.5m or Less, to be 750mm to outermost point.

2. SITES WITHIN A GRADIENT GREATER THAN 15% WILL HAVE SPECIAL DESIGN NEEDS
3. 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

A. MAXIMUM BUILDING HEIGHT FOR ANY DWELLING IS 7m ABOVE GROUND LEVEL TO THE EAVES AND 9m TO THE HIGHEST POINT ON THE ROOF.

B. NO PART OF THE DWELLING INCLUDING EAVES, MAY BE CONSTRUCTED OUTSIDE THE BUILDING LOCATION ENVELOPE.

LEGEND EASEMENTS/COVENANTS:

- SEWER EASEMENT
- SEWAGE PUMP STATION SETBACK COVENANT
- STORM WATER EASEMENT (ROOF WATER)
- SEWER & STORM WATER (ROOF WATER)

ROCKHAMPTON REGIONAL COUNCIL

AMENDED PLANS APPROVED

2 August 2018

DATE

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

Development Permit No.: D/106-2016

Dated: 4 August 2016

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DATUM MGA94 ZONE 56; LEVELS AHD

FIGURE 1063-ROL7: Building Setback Details

31/07/18 Rev 2

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ROCKHAMPTON REGIONAL COUNCIL
AMENDED PLANS APPROVED
03-04-2017
DATE

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

Development Permit No. D/106-2016 dated 04-08-2016

Allotment covering/vegetation - Hydromulch

Footpath turfing

SPRINGBROOK CLOSE (7.5/16m)

SPRINGBROOK CLOSE

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

LEGEND	
	HYDROMULCH/CHIP MULCH TO DISTURBED ROAD AND ALLOTMENT AREAS NOT COVERED WITH NEW WORKS
	FOOTPATH TREES. REFER TABLE THIS PLAN
	TURF & FOOTPATH TREATMENT
S	UNDERGROUND SERVICES (SEWER)
	ROAD/ALLOTMENT DRAINAGE.

TREE SPECIES OPTIONS

LOCATION	DESCRIPTION - ALTERNATIVE SELECTIONS	POT SIZE (MIN)	HEIGHT	MAINTENANCE
FOOTPATH	BUCKHINGHAMIA KELSISSMA (IVORY CURL)	45L	6m	NATURAL DOUBLE DOUBLE STAKED
FOOTPATH	CALLISTEMON VIMINALIS (WEEPING BOTTLEBRUSH)	45L	6m	NATURAL DOUBLE DOUBLE STAKED
FOOTPATH	RANDIA FITZALANII (NATIVE GARDENIA)	45L	5m	NATURAL DOUBLE DOUBLE STAKED
FOOTPATH	TRISTANIOPSIS LAURINA (WATER GUM)	45L	5m	NATURAL DOUBLE DOUBLE STAKED
FOOTPATH	HARPULLIA PENDULA (TULIP WOOD)	45L	6m	NATURAL DOUBLE DOUBLE STAKED

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FIGURE 1063-ROL6: Concept Landscape Plan

16/05/16 Rev 1

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AMENDED PLANS APPROVED
03-04-2017
DATE
These plans are approved subject to the current conditions of approval associated with
Development Permit No. D/106-2016 dated 04-08-2016

Exist. pathway - Typical

Stage Number - Typical

Future pathway - Typical

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FIGURE 1063-ROL5: Staging Details and Pathway Strategy

16/05/16 Rev 1

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Dated: 4 August 2016

EXISTING DRAINAGE EASEMENT

Exist. Sewage Pump Station

250

30m Setback

STAGE 13B

STAGE 13C

STAGE 13D

1 1201m2 (719m2)
2 1000m2
3 1000m2
4 1024m2
5 1024m2
6 1001m2
7 1000m2
8 1037m2
9 1020m2
10 1020m2
11 1008m2
12 1008m2
13 1008m2
14 1008m2
15 1008m2
16 1080m2
17 817m2
18 870m2

SPRINGBROOK CLOSE (16m)

SPRINGBROOK CLOSE

STAGE 13A

EDENBROOK DRIVE

22 23 24 25 26 27 28 29 30 31 194

LEGEND EASEMENTS/COVENANTS:

- SEWER EASEMENT
- SEWAGE PUMP STATION SETBACK COVENANT
- STORM WATER EASEMENT (ROOF WATER)
- SEWER & STORM WATER (ROOF WATER)

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FIGURE 1063-ROL1: Proposal Plan

16/05/16 Rev 1

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Dated: 4 August 2016

Existing sewer pump station

30m Setback

SPRINGBROOK CLOSE 7.5/16m

SPRINGBROOK CLOSE (7.5/16m)

SPRINGBROOK CLOSE (7.5/16m)

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

LEGEND

- 150Ø WATER MAIN; CONNECTION TO LOT (W); HYDRANT(H); VALVE (V)
- UNDERGROUND ELECTRICAL, ALLOTMENT SERVICE TURRET (E), STREET LIGHT (70W)
- SEWER; MANHOLE,
- SEWER RISING MAIN
- INTER-ALLOTMENT ROOF WATER DRAINAGE PIT & PIPE
- ROAD GULLY PIT & DRAINAGE PIPE
- 7.5/16 NOM PAVEMENT WIDTH/ROAD RESERVE WIDTH
- CONNECTION TO EXIST SERVICES
- LEGAL POINT OF DISCHARGE/OUTLET
- Existing services shown greyed

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FIGURE 1063-ROL2: Preliminary Infrastructure Details

16/05/16 Rev 1

RAMSAY CREEK

11.60 (9.5)

11.60

11.60 (10.0)

11.61

11.61

11.62 (10.5)

11.61

11.61

11.62

AEP 1% (1 IN 100yr ARI) Ramsay Creek inundation area and flood levels. Refer N G Gardner & Associates drainage report Reference G0405/14:041103:1040 Rev A. Inundation area and flood levels have been progressively updated to account for impacts from Edenbrook developments including current proposed Stage 13.

Latest flood study has been carried out by Aurecon 2014 Reference 231721 for Rockhampton Regional Council. Aurecon flood levels have been included in brackets for comparative purposes and generally 1m lower than those adopted from N G Gardner report.

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Dated: 4 August 2016

STAGE 13

1 2 3 4 5 6 7 8

SPRINGBROOK CLOSE

LEGEND

- AEP 1% (1 IN 100 YR ARI) INUNDATION AREA
- AREA OF BULK EARTHWORKS
- × 11.62 (10.5) AEP 1% FLOOD LEVEL BY N G GARDNER & ASSOC (AEP 1% FLOOD LEVEL AURECON 2014)
- EXIST NATURAL SURFACE CONTOUR POST STAGES 1 & 2
- —10— FINISHED SURFACE CONTOUR POST PROPOSED STAGE 13 ALLOTMENT FILLING

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FIGURE 1063-ROL3: Storm Water Management - Flood Mapping

16/05/16 Rev 1

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1. REFERENCES STORM WATER MANAGEMENT & HEALTHY WATERWAY REQUIREMENTS

The site based storm water management plan has been based on the following publications and guidelines:

- Healthy Waters Music Modeling Guidelines (HWMMG).
- State Planning Policy 2014
- Storm water quality improvement devices are referred to as SQUID's.

2. OPPORTUNITIES, CONSTRAINTS & PRECEDENTS

The type of development complies with the Council standards for Residential subdivisional works. This development is the continuation of a staged development.

The principal pollutants likely to be generated from the site development will be hydrocarbons, metals, sediment and nutrients such as nitrogen and phosphorus fixed to the sediments.

- The whole of the development outfalls directly to Ramsay Creek flood plain;
- the existing upstream developments include underground storm water drainage collection systems that have been sized for a 1 in 10 year design storm and incorporate in-line SQUIDs sized for the ultimate catchment area(s);
- road and allotment layout and sizing, soil types and functionality requirements precludes the use of above ground in-line and end of line SQUIDs (vegetated swales; bioretention beds) installed in the road verge area;
- installation of end of line bioretention beds in the Ramsay Creek flood plain is not workable;
- current best practice policies in Queensland generally acknowledge that other than for small selected infill developments or specific isolated areas such as the central area of large roundabouts, the use of above ground SQUIDs (vegetated swales; bioretention beds) located within the road reserves, generally in the road verge area, are not a long term successful option and and high long term maintenance; and
- the storm water management strategy proposed for this current stage is the continuation of the same adopted and approved by Council for the existing constructed stages. Outlet/Areas 1 & 4 have already been included in the approved treatment provided for the previous stage 1.

3. RECEIVING WATERS

The nominated receiving waterway is a Ramsay Creek. Although some infiltration of storm water is likely to occur at the site, use of groundwater does not occur downstream of the site. Consequently, only surface water Environmental Values (EVs) and water quality objectives (WQOs) have been identified.

4. PROPOSED STORM WATER TREATMENT

After consideration of the available opportunities & constraints, the treatment train will comprise the following storm water quality improvement devices (SQUIDs) already in place downstream and previously approved:

- in line SQUIDs within the pipe drainage system for gross pollutant, sediment and nutrient removal; and
- use of the natural vegetated flow path at the drainage outlets to Ramsay Creek

5. PROPOSED STORM WATER TREATMENT EVALUATION & SIZING

The evaluation & sizing of the components proposed and/or adopted for the treatment train has been carried out using the MUSIC Version 6 computer package and 6 minute rainfall for the period from 1 January 1970 to 31 December 2000. The pollutant types and concentrations evaluated for removal are -

- gross pollutants (GP);
- sediments and dissolved soilds, Total Suspended Solids (TSS);
- total dissolved nitogen (TN); and
- total dissolved phosphorus (TP).

All catchments have been modeled as 'Urban Residential' split catchments. The split catchment surface types & associated runoff generation parameters; pollutant concentrations and generation parameters applicable to these type of catchments and surface compositions recommended in Healthy Waters Music Modeling Guidelines have been adopted. Details of these areas are shown in Table 1.

Inline proprietary product SQUID HUMECEPTORS or equivalent have been nominated. The size of the unit(s) has been determined using the manufacturers software package based on a minimum 80% TSS removal rate and associated nitrogen and phosphorus removed being that component 'fixed' to the suspended solids.

6. PERFORMANCE EVALUATION

Details of the Council nominated target water quality objectives (WQO) for storm water discharging from the site to the receiving waters based on nutrient load reduction are summarised in Table 2. Details of performance of the proposed treatment train with connected catchments detailed in Table 1 are summarised in Tables 3 to 5. Tables 3 and 4 provide a comparison between the pre and post development scenario. Table 5 provides details of the post development pollutant load reductions for the proposed treatment train and evaluation in relation to target objectives in Table 2

7. CERTIFICATION

An assessment has been carried out of the impact from the development on storm water quality (comparison between pre and post development loads) and the effectiveness of the proposed site water quality management in meeting the nominated Council water quality standards for storm water management and healthy waterways. Details of the nominated standards, comparison between pre and post development pollutant loads & evaluation of the effectiveness of the proposals in meeting the standards have been provided. Within the limits imposed by the available opportunities and constraints and existing precedents, the proposed storm water management should provide -

- Treatment comparable to the Council approved proposals for existing constructed stages;
- An acceptable water quality management strategy that is the best achievable, cost effective and within community and sensible expectations.

This evaluation and certification is subject to review at the time of carrying out detail design and submission to Council for Operational Works approval

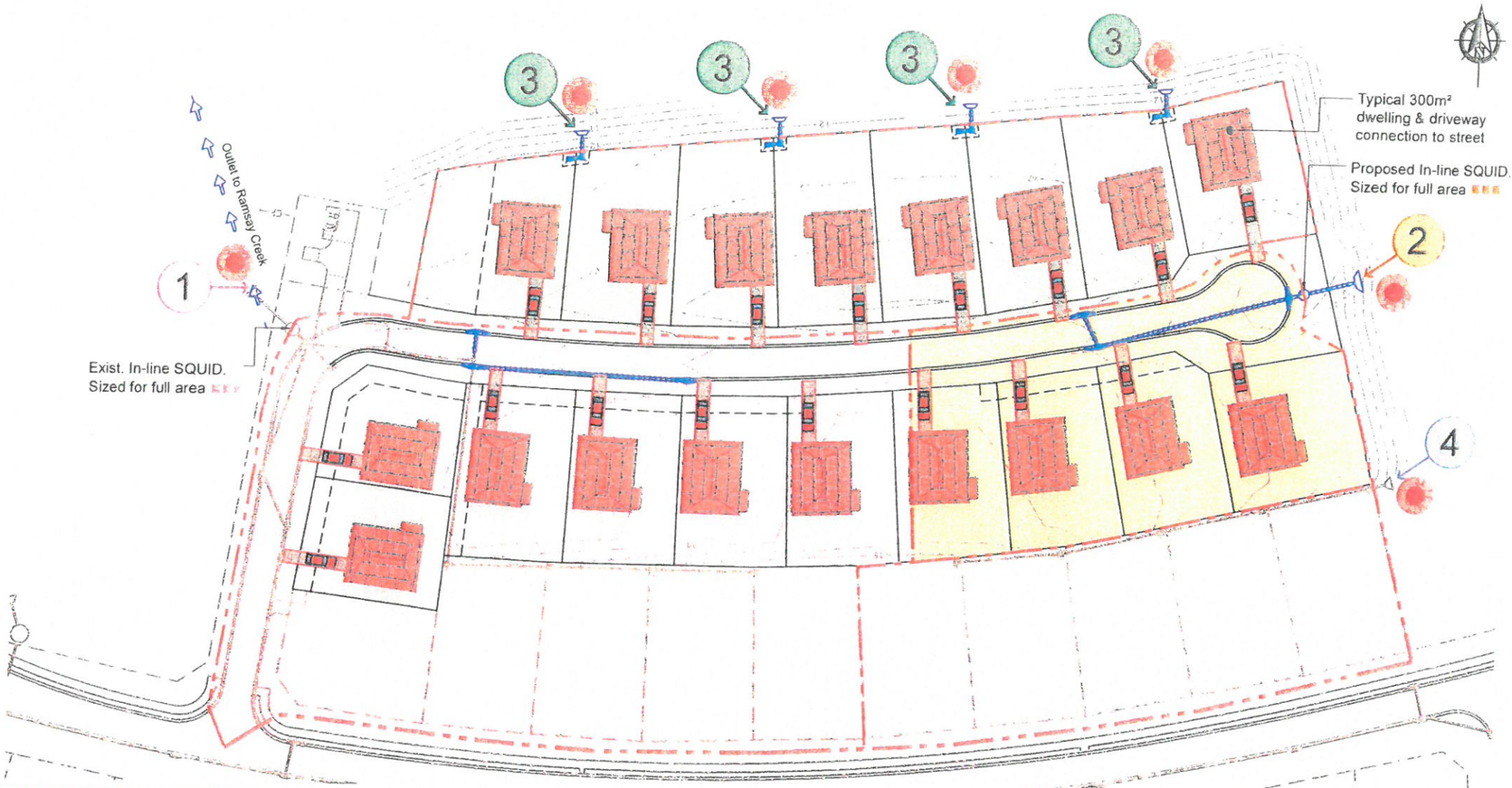

TABLE 1 DESIGN AREAS (ha) (COLOUR CODED TO MATCH PLAN VIEW)

Outlet	Total	Roof	Roads	Ground level
1	1.444	0.330	0.311	0.803
2	0.551	0.120	0.147	0.284
3	0.876	0.240	0	0.636
Total	2.871 (100%)	0.690 (24%)	0.458 (16%)	1.723 (60%)

Outlet (Area) 4 included in previous stage and no new connections from this stage - excluded from this assessment.

TABLE 2 TARGET WATER QUALITY OBJECTIVES (WQO)

	Load Reduction (ref QWQG)
Indicator	% Reduction
Total Suspended Solids (TSS)	85
Total Nitrogen (TN)	45
Total Phosphorus (TP)	60
Litter, Gross Pollutants (GP)	90

TABLE 3 PERFORMANCE EVALUATION - POLLUTANT MEAN CONCs (mg/L)

	TSS		TN		TP	
PRE & POST COMPARISON	PRE	POST	PRE	POST	PRE	POST
At Nominated Receiving Waters combined wet & dry flows	8.20	3.37	0.293	0.335	0.031	0.031

TABLE 4 PERFORMANCE EVALUATION - POLLUTANT MEAN ANNUAL LOAD (kg/yr)

	TSS		TN		TP	
PRE & POST COMPARISON	PRE	POST	PRE	POST	PRE	POST
At Nominated Receiving Waters combined wet & dry flows	1450	271	15.70	18.10	2.96	1.86

TABLE 5 PERFORMANCE EVALUATION - POLLUTANT REDUCTION (%)

	TSS	TN	TP	GP
At Nominated Receiving Waters combined wet & dry flows	86	30	55	>90
	Complies with Table 2 frequency requirements.			

LEGEND

- DRAINAGE PIPES AND GULLY PITS
- LEGAL POINT OF DISCHARGE; DRAINAGE SYSTEM OUTLET
- CONNECTED CATCHMENT
- PORTION OF CATCHMENT THESE STAGES
- NOMINATED RECEIVING WATER NODE

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FIGURE 1063-ROL4: Storm Water Management - Water Quality

16/05/16 Rev 1