GLADSTONE REGIONAL COUNCIL

Gladstone Regional Council
PO Box 29, Gladstone Qld 4680
Phone (07) 4970 0700 Fax (07) 4975 8500
Email info@gladstone.qld.gov.au
Website www.gladstone.qld.gov.au

Please address all correspondence to The Chief Executive Officer

Contact Officer: Helen McLaren-Greiss
Our Ref: DA/32/2017

12 March 2018

Mr T P Lawry
C/- Mr Stephen Enders
Zone Planning Group
PO Box 5332
GLADSTONE QLD 4680

Dear Sir

NEGOTIATED DECISION NOTICE
SUSTAINABLE PLANNING ACT 2009 S362 & 363

DA/32/2017 MATERIAL CHANGE OF USE - CODE NATURE BASED TOURISM - (74 SITES IN 3 STAGES)
2546, 2590 & LOT 21 ROUND HILL ROAD AND LOT 900 UNNAMED ROAD, AGNES WATER QLD 4677
LOTS 19, 20 & 21 RP 616664 AND LOT 900 SP 264882, UXBRIDGE

Reference is made to the above development application and to your request to make representations in relation to certain matters within Council's Decision Notice dated 17 October 2017.

I wish to advise that your request was assessed under Delegated Authority on 8 March 2018 where it was decided to agree to the representations in part as set out in the following Negotiated Decision Notice. The Negotiated Decision Notice replaces the Decision Notice previously issued and dated 17 October 2017.

Should you have any questions or require further clarification in relation to any matters raised in the Decision Notice, please do not hesitate to contact Council's Planning Officer Helen McLaren-Greiss on (07) 4977 6851.

Yours faithfully

T R MCDONALD
PLANNING SERVICES COORDINATOR

GLADSTONE
REGIONAL COUNCIL

NEGOTIATED DECISION NOTICE - DA/32/2017
SUSTAINABLE PLANNING ACT 2009 S362 & 363

Application:	Material Change of Use - Code - Nature Based Tourism
Applicant Name & Address:	Mr T P Lawry Zone Planning Group 31 Langdon St TANNUM SANDS QLD 4680
Owner:	Agnes Street Developments Pty Ltd
Subject Land:	2546 & 2590 Round Hill Road, and Lot 21 RP 616664, Round Hill Road, ROUND HILL QLD 4677,
Location:	Lot 19, 20 & 21 RP 616664, and Lot 900 SP 264882, UXBRIDGE
Zoning:	Rural Zone
Site Area:	181,200m^2
Submissions Received:	1 "Not Properly Made" Submission
Application Received:	04 May 2017

You are advised that your application was Approved in Part Negotiated subject to conditions. The conditions relevant to this approval are attached. These conditions are clearly identified to indicate whether the assessment manager or a concurrence agency imposed them.

1. NATURE OF THE CHANGES

The nature of the changes are:-

- Condition 1 - **Amended**
- Condition 3 - **Amended**
- Condition 4 - **Amended**
- Condition 5 - **Amended**
- Condition 6 - **Amended**
- Condition 7 - **Amended**
- Condition 14 - **Deleted**
- Condition 15 - **Amended**
- Condition 16 - **Amended**
- Condition 17 - **Amended**
- Condition 18 - **Amended**
- Condition 19 - **Amended**
- Condition 26 - **Amended**
- Condition 30 - **Amended**

2. DETAILS OF THE APPROVAL

	Development Permit	Preliminary Approval
• **Material Change of Use** made assessable by the planning scheme	✓	x

3. RELEVANT PERIOD FOR THE APPROVAL

The relevant periods stated in section 341 of the *Sustainable Planning Act 2009* (SPA) apply to each aspect of development in this approval, as outlined below:-

✓ material change of use - 4 years

OR

✓ the following relevant periods apply to the following aspects of development in this approval:-

If there is one (1) or more subsequent related approvals for a development approval for a material change of use or a reconfiguration, the relevant period for the approval will be taken to have started on the day the latest related approval takes effect.

4. APPROVED PLANS

The approved plans and/or documents for this development approval are listed in the following table:

Drawing Number	Revision	Description	Author	Date
SK-01	A	Proposed Site Plan	Zone Planning Group	19/04/2017
SK-02	C	Site Plan Showing Access Arrangements	Zone Planning Group	15/12/2017
PEG0229-DA-S04	D	Road Access Layout	Pinnacle Engineering	3/07/2017
PEG0229-DA-S05	C	Road Longitudinal Sections Sheet 1 of 2	Pinnacle Engineering	3/07/2017
PEG0229-DA-S06	C	Road Longitudinal Sections Sheet 2 of 2	Pinnacle Engineering	3/07/2017
PEG0209-DA-SK08	B	Concept Earthworks Layout Sheet 1 of 2	Pinnacle Engineering	3/07/2017
PEG0209-DA-SK09	B	Concept Earthworks Layout Sheet 2 of 2	Pinnacle Engineering	3/07/2017
B170309 - Page 1	N/A	Proposed Ablutions Block	Bespoke Building Design	3/03/2017
B170309 - Page 3	N/A	Proposed Ablutions Block	Bespoke Building Design	3/03/2017
Refer: FC1612187-1	N/A	Building Layout	Widespan Sheds	24/12/2016

And supporting documents

Document Number	Revision	Description	Author	Date
PEG0209	05	Site Based Stormwater Management Plan	Pinnacle Engineering Group	July 2017

5. OTHER NECESSARY DEVELOPMENT PERMITS

Listed below are other development permits that are necessary to allow the development to be carried out:-

- Operational Works
- Building, Plumbing and Drainage Works

6. IDAS REFERRAL AGENCIES

The IDAS referral agencies applicable to this application are:-

- State Assessment and Referral Agency – Reference number SDA-0517-039311 Referral Response dated 21 September 2017

7. APPEAL RIGHTS

Attached is an extract from the SPA which details your appeal rights and the appeal rights of any submitters regarding this decision.

8. WHEN THE DEVELOPMENT APPROVAL TAKES EFFECT

This development approval takes effect:-

- From the time the decision notice is given, if there is no submitter and the applicant does not appeal the decision to the court.

OR

- If there is a submitter and the applicant does not appeal the decision, the earlier date of either:
    - When the submitter's appeal ends; or
    - The day the last submitter gives the assessment manager written notice that the submitter will not be appealing the decision.

OR

- Subject to the decision of the court, when the appeal is finally decided, if an appeal is made to the court.

This approval will lapse if:-

- for a material change of use, the first change of use under the approval does not start within the relevant period stated in section 3 of this decision notice;
- for a reconfiguration, a plan for the reconfiguration is not given to the local government within the relevant period stated in section 3 of this decision notice;

- for a development approval other than a material change of use or reconfiguration, the development does not substantially start within the relevant period stated in section 3 of this decision notice.

Note that in the case of a development approval for a material change of use or for reconfiguring a lot, if there is 1 or more subsequent related approvals the relevant period for the material change of use or reconfiguration will restart from the date of the related approval taking effect. Please refer to section 341 of SPA for further information.

Should you wish to discuss this matter further, please contact Council's Planning Officer Helen McLaren-Greiss on (07) 4977 6851.

Yours faithfully

T R MCDONALD
PLANNING SERVICES COORDINATOR

Attached: **Conditions**
Appeal Rights
Approved Plans
Referral Agency Response

GLADSTONE
REGIONAL COUNCIL

ASSESSMENT MANAGER CONDITIONS - DA/32/2017
SUSTAINABLE PLANNING ACT 2009 S362 & 363

1. **Development is to be carried out generally in accordance with the submitted application including the following plans and supporting documentation except where amendments are required to satisfy the conditions of this approval:**

Drawing Number	Revision	Description	Author	Date
SK-01	A	Proposed Site Plan	Zone Planning Group	19/04/2017
SK-02	C	Site Plan Showing Access Arrangements	Zone Planning Group	15/12/2017
PEG0229-DA-S04	D	Road Access Layout	Pinnacle Engineering	3/07/2017
PEG0229-DA-S05	C	Road Longitudinal Sections Sheet 1 of 2	Pinnacle Engineering	3/07/2017
PEG0229-DA-S06	C	Road Longitudinal Sections Sheet 2 of 2	Pinnacle Engineering	3/07/2017
PEG0209-DA-SK08	B	Concept Earthworks Layout Sheet 1 of 2	Pinnacle Engineering	3/07/2017
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B170309 - Page 1	N/A	Proposed Ablutions Block	Bespoke Building Design	3/03/2017
B170309 - Page 3	N/A	Proposed Ablutions Block	Bespoke Building Design	3/03/2017
Refer: FC1612187-1	N/A	Building Layout	Widespan Sheds	24/12/2016

And supporting documents

Document Number	Revision	Description	Author	Date
PEG0209	05	Site Based Stormwater Management Plan	Pinnacle Engineering Group	July 2017

Special Conditions

2. Prior to the first application for Operational Works and/or Building Works, the Applicant must submit and have approved by Council amended versions of Zone Planning Group drawings SK-01 Rev A, SK-02 Rev A, SK-03 Rev A which show:

   a. The provision of 74 camps sites, across three (3) stages; and
   b. The provision of refuse collection areas.

3. **Prior to the first application for Operational Works and/or Building Works, the Applicant must submit and have approved by Council amended versions of Pinnacle Engineering Group drawings PEG0209-DA-SK04, SK05, SK06, SK08 and SK09 which show:**

   a. The provision of access roadways to all camp sites;
   b. The provision of a minimum of 74 parking spaces, across three (3) stages;
   c. The provision of a 6.0m wide Rural Road Access Crossover to Round Hill Road in accordance with the Capricorn Municipal Development Guidelines;
   d. The proposed dimensions of access driveways, internal roadways and cul-de-sacs;
   e. The proposed typical cross-section of driveways and cul-de-sacs which addresses stormwater flows and the prevention of pavement loss due to erosion;
   f. The provision of cul-de-sacs capable of catering for the turning movements of service vehicles, up to and including Refuse Collection Vehicles.

4. **As part of the Development Application for Operational Works for Stage 2, the Applicant must submit to and have approved by Council an amended version of drawing PEG0209-DA-S05 which indicates the proposed horizontal geometry on the Corfield Drive Access Longitudinal section.**

5. **Upon commencement of the use, each stage is to occur as follows:**

Stage	Description
Stage 1	**Nature Based Tourism include, but not limited to, the construction of the following at the Western part of Lot 19 RP616664:** **- A maximum of 40 camp sites; and** **- A minimum of one camp kitchen to cater for a minimum 40 camp sites; and** **- Ablution blocks to cater for a minimum 40 camp sites in accordance with Council's relevant local law(s), unless alternative provisions have been negotiated and approved by Council.**
Stage 2	**Nature Based Tourism include, but not limited to, the construction of the following at the Eastern part of Lot 19 RP616664:** **- A maximum of 20 additional camp sites (maximum of 60 camp sites in total); and** **- A minimum of one additional camp kitchen to cater for a minimum 20 camp sites; and** **- Additional ablution blocks to cater for a minimum 20 camp sites in accordance with Council's relevant local law(s), unless alternative provisions have been negotiated and approved by Council.**

Stage	Description
Stage 3	**Nature Based Tourism include, but not limited to, the construction of the following at the Eastern and Western part of Lot 19 RP616664:** **- A maximum of 14 additional camp sites (a maximum of 74 camp sites in total); and** **- Additional ablution blocks to cater for the needs of the development in accordance with Council's relevant local law(s), unless alternative provisions have been negotiated and approved by Council;** **- Upgrade kitchens located at the Eastern and Western part of Lot 19 RP616664 to cater for an additional 14 camp sites.**

6. **Prior to the commencement of the use for Stage 1, the Applicant must:**

   a. Install and maintain directional signage marking the property boundaries of Lot 19 RP 616664 for guests at a rate of one per 50m to clearly delineate the subject site from all other properties;
   b. Install directional signage marking the access easement (Emt A, B & C RP616903) for guests at a rate of one per 50m; and
   c. Install signage indicating that the land beyond the property boundaries of Lot 19 RP 616664 and the access easement is private property at a rate of one per 50m.

Operational Works

7. **A Development Approval for Operational Works (Earthworks) must be obtained from Council prior to the commencement of construction.**

8. Development Applications for Operational Works shall be designed and constructed in accordance with Australian Standards, the Engineering Design Planning Scheme Policy under the Gladstone Regional Council Planning Scheme and any other applicable standards at the time of lodgement. Prior to the commencement of the use, all Operational Works conditioned by this approval must be accepted "on maintenance" by Council.

   Advisory Note: The Capricorn Municipal Development Guidelines within the Engineering Design Planning Scheme Policy is the current document for preparing any Development Application for Operational Works which is found at http://www.cmdg.com.au/index.htm.

Building, Plumbing and Drainage Works

9. The Applicant is required to obtain a Development Permit and Building Final for Building Works in accordance with the *Planning Act 2016*. Construction is to comply with the *Building Act 1975*, the National Construction Code and the requirements of other relevant authorities.

10. The Applicant is required to obtain a Development Permit for Plumbing and Drainage Works and Plumbing and Drainage Final in accordance with the *Planning Act 2016*. Construction is to comply with the *Plumbing and Drainage Act 2002* and the requirements of other relevant authorities.

11. Prior to the commencement of the use, all plant and equipment (including air conditioners, exhaust fans and the like) are to be housed, screened and located so that these do not cause environmental nuisance or harm to residential uses in the surrounding area.

12. Prior to the commencement of the use, the development is to incorporate a variety of at least two different textures, colours and designs within the external façade of the building. Details of the proposed colour scheme, materials and finishes for all external areas of the building are to be submitted to Council for approval prior to the issue of a Development Permit for Building Works.

13. Prior to the commencement of the use, all lighting at ground level and associated with illuminating ground level areas must be focused downwards and be provided with hoods, shades or other permanent devices to direct illumination downwards and not allow upward lighting to adversely affect the residential uses on this site and the adjoining sites.

Acid Sulfate Soils

14. **Deleted**.

Bushfire Hazard

15. **Prior to the first Development Application for Operational Works or Building Works, the Applicant must submit to and have approved by Council, a Bushfire Hazard Assessment and Management Plan which illustrates compliance with the Bushfire Overlay Code, ensures adequate measures are in place to manage any bushfire threat to the development or to neighbouring areas, and has been prepared by a suitably qualified person experienced in that type of work.**

    a. **The Bushfire Management Plan must comply with all other conditions of this approval and be associated with any vegetation clearing plans developed for the site and include, but is not limited to, the following items:**

        i. **evidence that the plan has addressed the whole of the site and local area;**
        ii. **identification of the location and severity of all bushfire risks, such as vegetation, landforms and bushfire history;**
        iii. **identification of the fire risk reduction features including identified fire maintenance trails and fire-fighting facilities to be installed and their ongoing maintenance schedule; and**
        iv. **evidence that an alternative evacuation route is not required in order to achieve an acceptable level of bushfire risk.**

    b. **Upon approval of the Bushfire Hazard Assessment and Management Plan, the recommendations are to then be implemented by the Applicant for the life of the approval.**

16. **As part of the first Development Application for Operational Works or Building Works, the Applicant must construct the unsealed internal roads with a minimum width of 6.0m for a two way road, and 4.0m for a one way road, a maximum grade of 12.5% and must be designed to accommodate fire-fighting trucks and equipment unless an alternative site-based solution is approved through the Bushfire Hazard Assessment and Management Plan prepared for the site.**

17. **Unless an alternative site-based solution is approved through the Bushfire Hazard Assessment and Management Plan prepared for the site, the Applicant is to provide an easily accessible fire resistant on-site water storages of not less than 5,000L (e.g. concrete tank with fire brigade fittings) that is within 100m of each camp kitchen and ablution block and provide a hard stand area allowing a heavy rigid fire appliance safe access to within 6.0m of the storage facility. The location/s of the fire resistant on-site water storage/s is to be readily identifiable with clear signage directing firefighters to its access point. The fire resistant on-site water storages shall be installed;**

    a. **Prior to the commencement of the use for Stage 1 at the Western part of Lot 19 RP616664; and**
    b. **Prior to the commencement of the use for Stage 2 at the Eastern part of Lot 19 RP616664Stage 2.**

    Advisory Note:
    a. The size of the fire resistant on-site water storage for firefighting purpose should be determined in consultation with the relevant emergency services agency.
    b. Swimming pools, creeks, dams etc. should not be used as a substitute for dedicated static supply since water supply from these sources cannot be warranted during drought conditions.

18. **Unless an alternative site-based solution is approved through the Bushfire Hazard Assessment and Management Plan prepared for the site, as part of Building Works, fire breaks are to be provided at a minimum of:**

    a. **20m from the immediate development footprint of all permanent structures;**
    b. **20m along all boundaries of Lot 19 RP616664; and**
    c. **5m around all campsites.**

Steep Land

19. **As part of the first Development Application for Operational Works or Building Works *where* structures or roads are proposed to be located in an area mapped as Steep Land, the Applicant must submit a Geotechnical Report prepared in accordance with the *Landslide Risk Management – Australian Geomechanics Journal* for approval to Council. The Geotechnical Report must be certified by an RPEQ in Geotechnical field and experienced in the relevant matter.**

Water Infrastructure

20. Prior to the commencement of the use, for the relevant stage and any preceding stages, an appropriately sized water tank and/or tanks, as designed and certified by a Registered Professional Engineer of Queensland experienced in this type of work, is to be constructed for the purpose of on-site water. Each campsite (Upper and Lower) is to have their own separate water sources.

Stormwater Infrastructure

21. Prior to the commencement of the use of each applicable Stage, all stormwater infrastructure is to be constructed on the site generally in accordance with the approved Site Based Stormwater Management Plan outlined in Condition 1 and any associated Operational Works approval, including quantity and quality infrastructure. The stormwater infrastructure is to be in accordance with the Engineering Design Planning Scheme Policy under the Gladstone Regional Council Planning Scheme, Queensland State Planning Policy and Queensland Urban Drainage Manual (QUDM).

Waste Management

22. As part of the first Development Application for Operational Works or Building Works, a Waste Management Plan is to be submitted and approved by Council. The Waste Management Plan is to be in accordance with the Waste Management Planning Scheme Policy of the Gladstone Regional Planning Scheme.

23. Prior to the commencement of the use of each stage, refuse bins are to be provided for the relevant stage and any preceding stage, in accordance with either:

    a. one 240L waste storage bin per 4 camp sites per week; and one 240L recycling bin per 4 camp sites per fortnight; or
    b. bulk bins, provided the capacity of the bin equates to 60L of waste storage per camp site per week and 60L of recycling storage per camp site per week.

24. Prior to the commencement of the use or each stage, the waste storage area/s are to be sufficient in size to house all waste collection containers including recycling waste containers. The waste storage area/s must be suitably enclosed and imperviously paved, with a hose cock and hose fitted in close proximity to the enclosure to ensure the area can be easily and effectively cleaned.

25. Prior to the commencement of the use, open storage areas shall be adequately screened so as not to detract from the visual amenity of the area. One way of achieving compliance with this condition is as follows:

    a. Outdoor storage areas are situated in locations not visible from the street; and
    b. A 1.8m solid screen fence is located around storage areas.

Transportation Services

26. **Prior to the commencement of the use of each stage, car parking spaces are to be constructed onsite, for the relevant stage and any preceding stage, generally in accordance with the approved plans and Council's car parking rates for Nature Based Tourism, including designated disabled car parking spaces, and all vehicle movement areas are to be constructed and maintained in accordance with the Engineering Design Planning Scheme Policy under the Gladstone Regional Council Planning Scheme and AS2890.**

    As a minimum, provision of car parking spaces is to be staged as follows:

    a. **Prior to the commencement of the use of Stage 1, a minimum of 40 car parking spaces are to be constructed adjacent to the respective campsite;**

b. **Prior to the commencement of the use of Stage 2, a minimum of 20 additional car parking spaces are to be constructed adjacent to the respective camp site (60 car parking spaces in total); and**
c. **Prior to the commencement of the use of Stage 3, a minimum of 14 car parking spaces are to be constructed adjacent to the respective camp site (74 car parking spaces in total).**

27. As part of the first Development Application for Operational Works or Building Works, a 6.0m wide Rural Road Access driveway crossover is to be constructed in accordance with Council's Standard Drawing for a Rural Roads Crossover Access, at each road frontage (Round Hill Road and Corfield Drive).

    Advisory Note: Council's standard drawing is located within the Capricorn Municipal Development Guidelines - Drawings and Specifications at http://www.cmdg.com.au/index.htm.

28. As part of any Development Application for Operational Works, any damage to the driveway crossing and kerb and channel as part of the development works at Corfield Drive shall be repaired at the owner's expense and to Council's Standard Drawing for an Urban Commercial/Industrial Driveway.

    Advisory Note: Council's standard drawing is located within the Capricorn Municipal Development Guidelines - Drawings and Specifications at http://www.cmdg.com.au/index.htm.

Miscellaneous

29. Prior to the commencement of the use, the Applicant must submit a Property Pest Management Plan for approval by Council. The Plan is to detail what restricted matter under the *Biosecurity Act 2014* (Qld) the Plan relates to; the location of restricted matter on the site; and what actions will be undertaken to manage the restricted matter before, during and after the development activity. The Plan must be drafted by a suitably qualified person who has a minimum of five years of experience in invasive species management. Upon approval of the Pest Management Plan, the Applicant must undertake all recommended actions.

    Advisory Note: Council's Regulatory Services Division (Pest Management Section) can provide support in the development of this Property Pest Management Plan which are contactable on (07) 4970 0700.

Lawful Commencement

30. **Prior to the commencement of this use for each stage, the Applicant must apply for and receive approval from Council for a "Licence to Operate a Campground".**

    Advisory Note: Where Campgrounds do not meet the minimum standards outlined in the Gladstone Regional Council Subordinate Local Law No. 1.6 (Operation of Camping Grounds) 2011, the Owner/Operator must obtain a "Licence to Operate a Campground" to operate legally.

31. Prior to the commencement of this use for each stage, the Applicant is to request a that a Compliance Inspection be undertaken by Council to confirm that all conditions of this Development Permit are considered compliant.

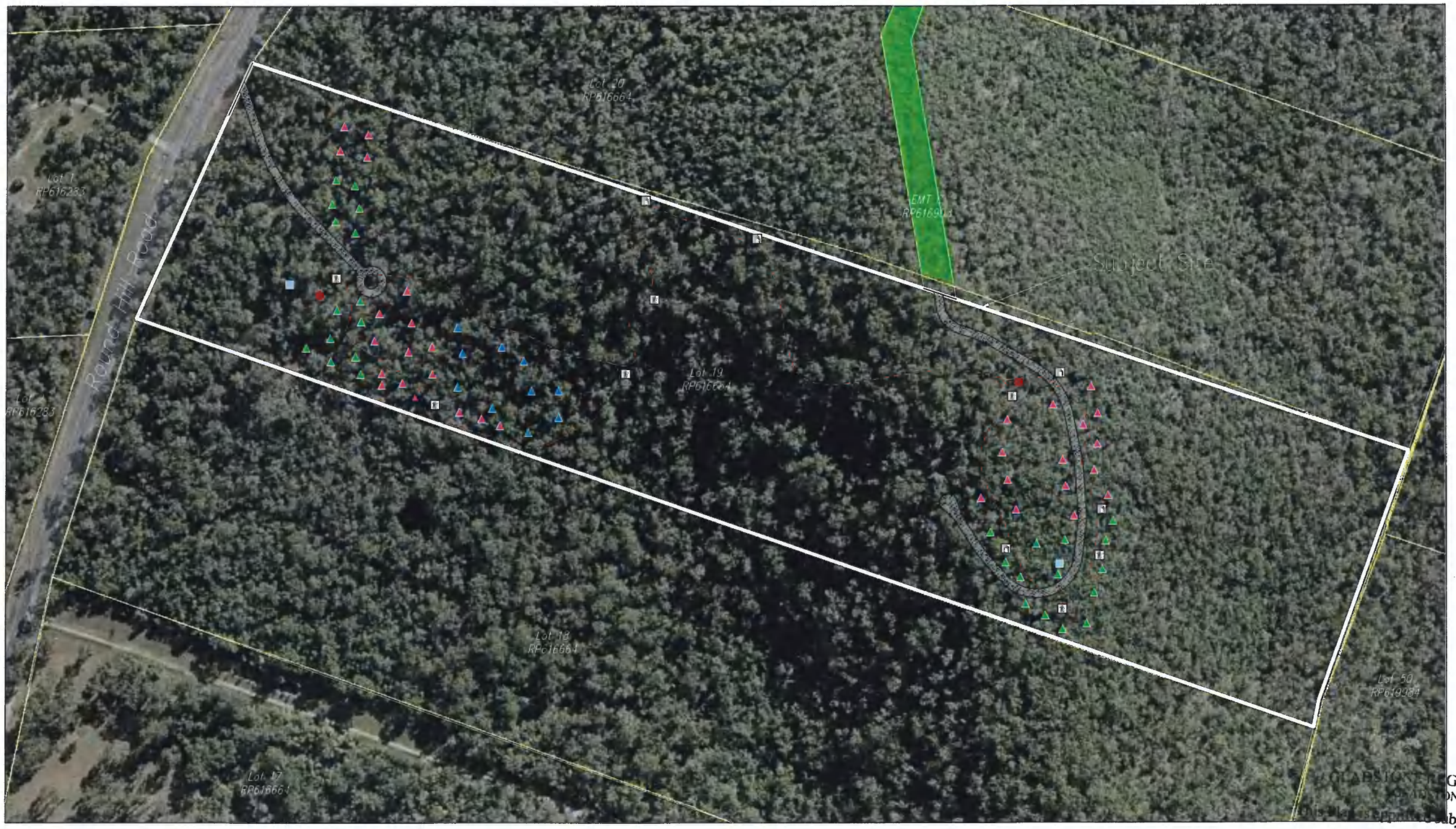
32. Upon receipt of confirmation from Council that all conditions of this Development Permit are considered compliant, the Applicant is to notify Council within 20 business days that this approved use has lawfully commenced.

END OF CONDITIONS

Advice to Applicant:

Council provides a comprehensive certification service for any Building Certification requirements.

An Adopted Infrastructure Charge Notice in relation to the infrastructure charges applicable to this development has been provided separately.



LEGEND

▲ Camping Site ○ Camp Kitchen ■ Amenities Building Walking Trail Point of Interest Walking Trail View Point ---- Walking Trail

GLADSTONE REGIONAL COUNCIL
ZONE OFFICE
Subject to the attached
Decision Notice No. DA/32/2017
Per ..... Date 12.3.18
ASSESSMENT MANAGER

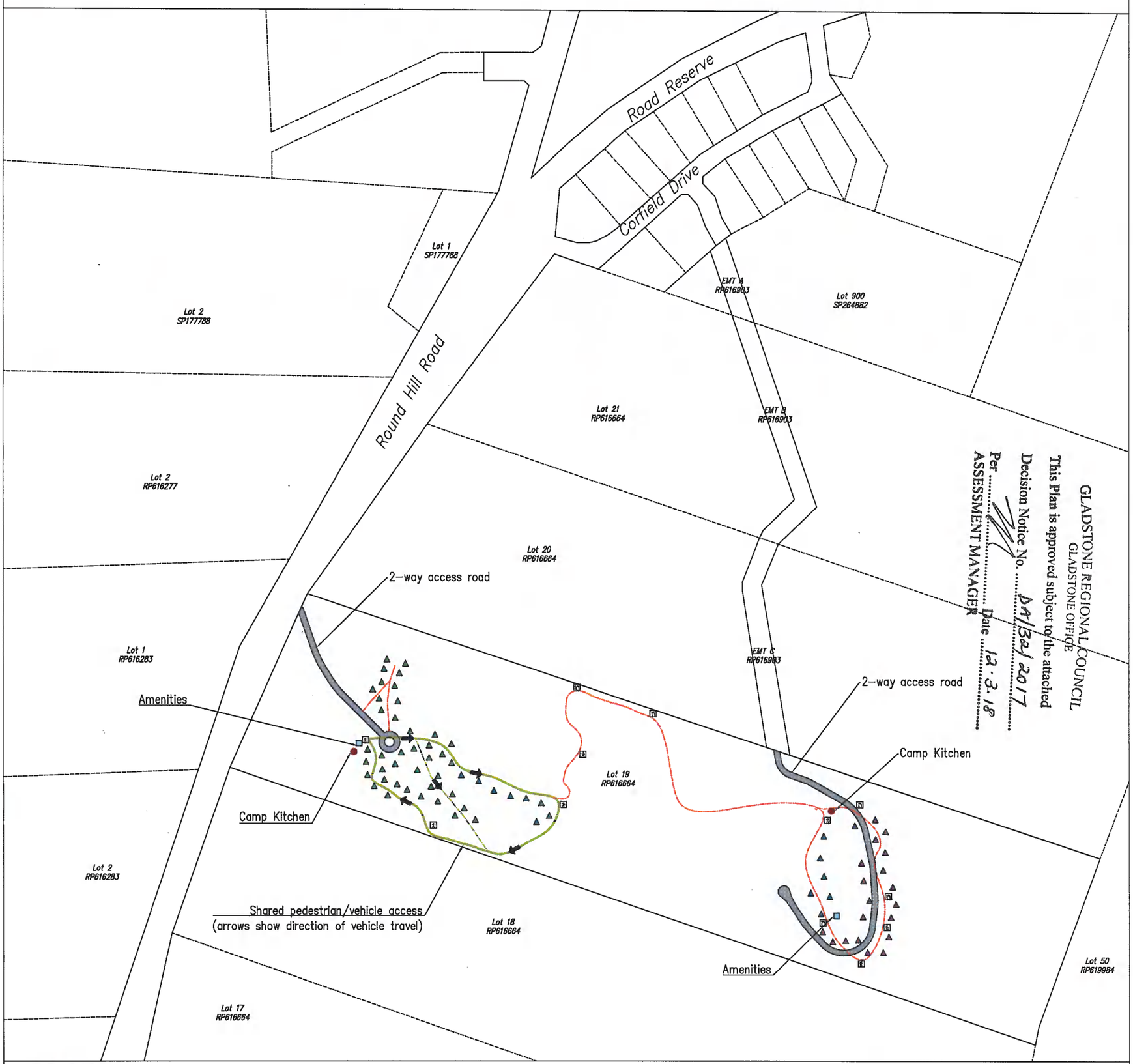
Note
All dimensions and areas are approximate only, and are subject to survey and Council approval.

Dimensions have been rounded to the nearest 0.1 metres.

The boundaries shown on this plan should not be used for final detailed engineers design.

Contours supplied by Terranean Mapping Technologies.

REVISION	Level Datum	Date 19 April 2017	CLIENT	PROJECT	zone Planning Group
	Origin	Comp By.	Tim Lawry	Nature Based Camping Ground	Gladstone 31 Langdon Street TANNUM SANDS QLD T (07) 5562 2303 W zoneplanning.com.au E admin@zoneplanning.com.au
		DWG Name. Z16280A	PROPOSED SITE PLAN		Gold Coast 6/249 Southdale Drive ROBINA QLD
	Scale 1:2500	Sheet A3	Local Authority GLADSTONE REGIONAL COUNCIL	Plan Ref SK-0□	Rev A
		Locality			
		Job Reference Z16280			



GLADSTONE REGIONAL COUNCIL
GLADSTONE OFFICE

This Plan is approved subject to the attached Decision Notice No. DA/32/2017

Per ..... Date 12.3.18

ASSESSMENT MANAGER

LEGEND

- Camping Site
- Camp Kitchen
- Amenities Building
- Walking Trail Point of Interest
- Walking Trail View Point
- Walking Trail
- Stage 1
- Stage 2
- Stage 3

Note
All dimensions and areas are approximate only, and are subject to survey and Council approval.

Dimensions have been rounded to the nearest 0.1 metres.

The boundaries shown on this plan should not be used for final detailed engineers design.

Contours supplied by Terranean Mapping Technologies.

Level Datum		Date	15 December 2017
Origin		Comp By.	
		DWG Name.	Z16280A
		Local Authority	GLADSTONE REGIONAL COUNCIL
Scale	Sheet	Locality	
1:1000	A3	Job Reference	Z16280

CLIENT
Tim Lawry

SITE PLAN
SHOWING ACCESS ARRANGEMENTS

PROJECT
Nature Based Camping Ground

Plan Ref **SK-02** Rev **C**

Zone Planning Group
Gladstone
2/172 Goondoon Street
GLADSTONE QLD
T (07) 5562 2303
W zoneplanning.com.au
E admin@zoneplanning.com.au
Gold Coast
1836 Tweed Street
BURLEIGH HEADS QLD

LEGEND

- EXISTING CONTOURS (2.0m)
- SITE BOUNDARY
- CATCHMENT BOUNDARY
- EXISTING OVERLAND FLOW
- 500 CENTRELINE CHAINAGES
- PROPOSED UNSEALED ACCESS ROAD
- PROPOSED SEALED ACCESS ROAD
- OVERLAND FLOW DIRECTION
- PROPOSED AMENITIES BLOCK – STAGE 1
- PROPOSED CAMP SITE – STAGE 1
- PROPOSED CAMP SITE – STAGE 2
- PROPOSED CAMP SITE – STAGE 3
- PROPOSED CAMP KITCHEN

ROUNDABOUT TURNING PATH

SCALE 2 1 0 2 4 6 8 10 1:200

CUL□DE□SAC TURNING PATH

SCALE 2 1 0 2 4 6 8 10 1:200

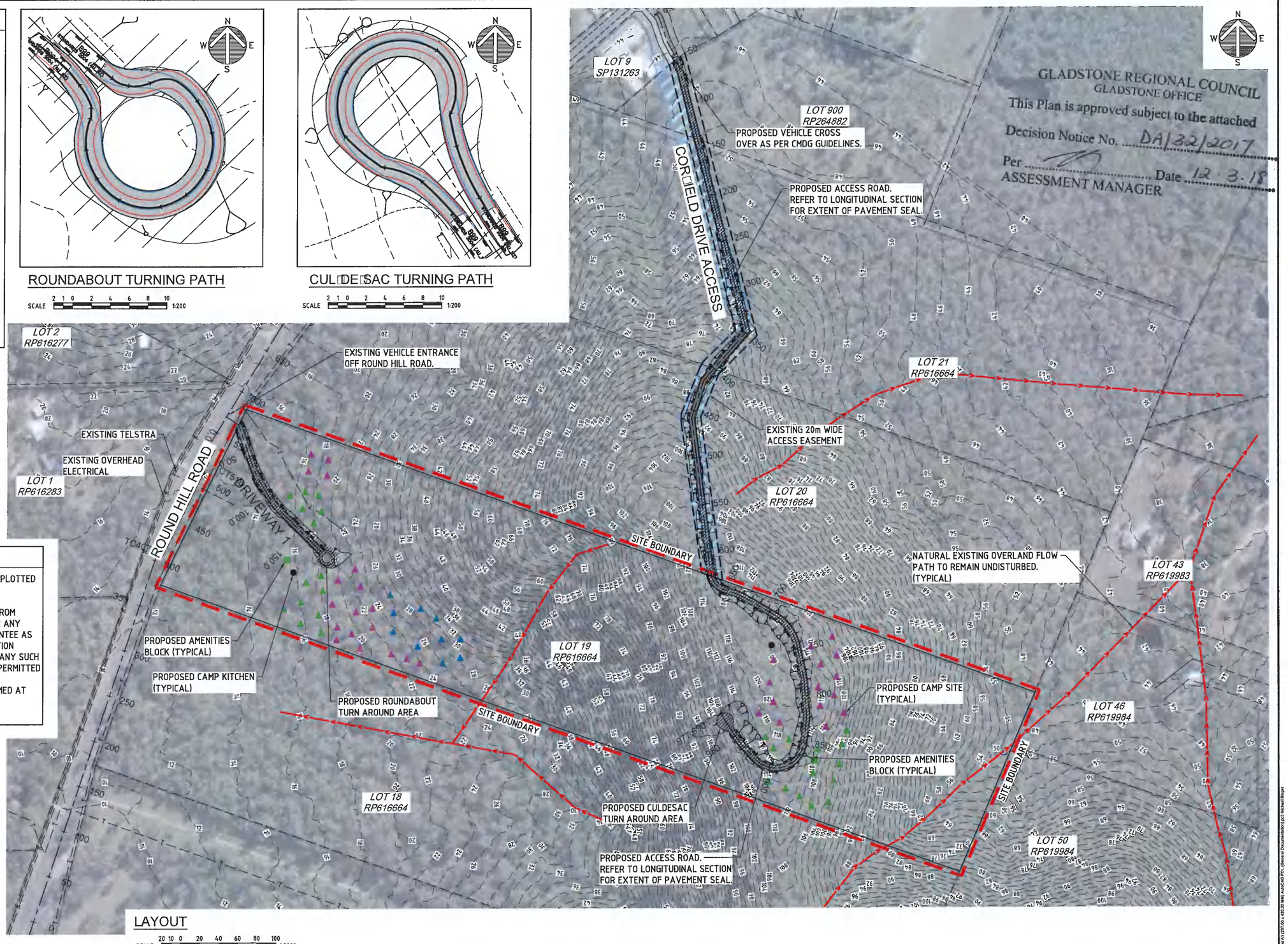
DIAL BEFORE YOU DIG www.1100.com.au

The Essential First Step.

UNDERGROUND PUBLIC UTILITY PLANT EXISTS IN THIS VICINITY. THE CONTRACTOR IS ADVISED TO CONTACT THE RELEVANT AUTHORITIES TO CONFIRM THE EXACT LOCATION OF PUBLIC UTILITY PLANT ON SITE PRIOR TO THE COMMENCEMENT OF ANY EXCAVATION OR CONSTRUCTION WORKS.

NOTES

1. THE LOCATION OF THE EXISTING SERVICES HAS BEEN PLOTTED FROM RECORDS AND IS TO BE CONFIRMED PRIOR TO CONSTRUCTION.
2. CONTOUR LEVEL INFORMATION HAVE BEEN DERIVED FROM NEARMAP AND QUEENSLAND GLOBE. NEITHER WE NOR ANY THIRD PARTIES PROVIDE ANY WARRANTY OR GUARANTEE AS TO THE ACCURACY OR SUITABILITY OF THE INFORMATION CONTAINED. WE EXPRESSLY EXCLUDE LIABILITY FOR ANY SUCH INACCURACIES OR ERRORS TO THE FULLEST EXTENT PERMITTED BY LAW.
3. TOTAL EXTENT OF SEALED DRIVEWAY TO BE CONFIRMED AT DETAILED DESIGN PHASE AFTER RECEIVING DETAILED TOPOGRAPHIC SURVEY.



GLADSTONE REGIONAL COUNCIL
GLADSTONE OFFICE
This Plan is approved subject to the attached
Decision Notice No. DA/32/2017
Per ..... Date 12.3.18
ASSESSMENT MANAGER

LAYOUT

SCALE 20 10 0 20 40 60 80 100 1:2000

PINNACLE ENGINEERING GROUP
PO BO□ 517 PARADISE POINT, QUEENSLAND 4216
WWW.PINNACLEENG.COM.AU

REV	DESCRIPTION	DRAWN	DATE
A	ORIGINAL ISSUE □OR COMMENT	M.G.	09.03.2017
B	REVISED LAYOUT	M.B.	28.03.2017
c	GRC R□I RESPONSE	M.B.	21.06.2017
D	REVISED LAYOUT	M.G.	03.07.2017
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TASK	BY	INITIAL	DATE
REVIEW	B.P.		09.03.2017
DESIGN	B.P.		09.03.2017
DRAWN	M.G.		09.03.2017

SCALE: AS SHOWN
(SCALE ABOVE DENOTES ORIGINAL SHEET SIZE □A1)

CLIENT: MR. TIM LAWRY

PROJECT: 2546 ROUND HILL ROAD, AGNES WATER (LOT 19 ON RP616664)

DRAWING TITLE: ROAD ACCESS LAYOUT

STATUS: PRELIMINARY
NOT TO BE USED □OR CONSTRUCTION

APPROVED

RPEQ No N/A

DRAWING NUMBER: PEG0229□DA□S□04

REVISION: D

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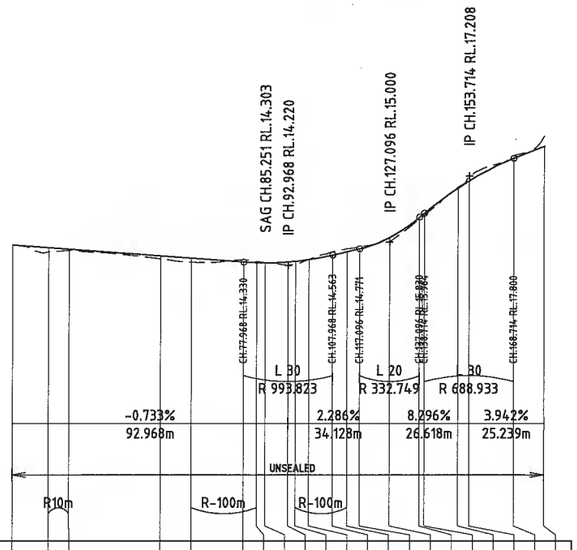

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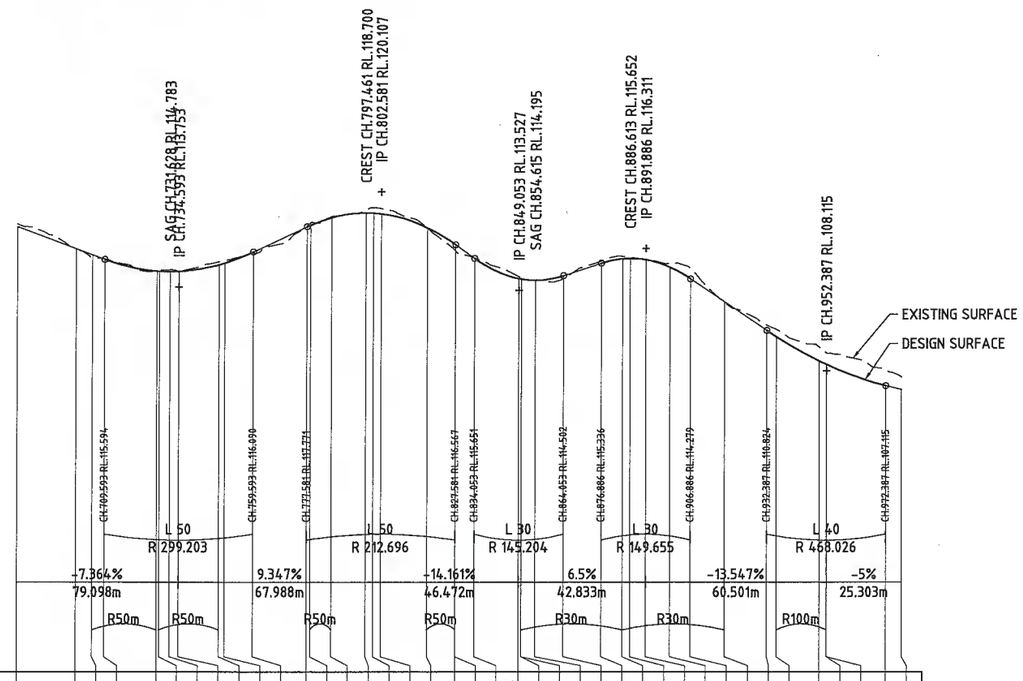

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Vertical Curve Radius (m)
Vertical Geometry Grade (%)
Vertical Grade Length (m)
Horiz Curve Data

DATUM R.L.88.000

| | | |

LEGEND

- EXISTING CONTOURS (2.0m)
- DESIGN CONTOURS (2.0m)
- SITE BOUNDARY
- PROPOSED CUT OFF SWALE
- OVERLAND FLOW DIRECTION
- PROPOSED AMENITIES BLOCK – STAGE 1
- PROPOSED CAMP SITE – STAGE 1
- PROPOSED CAMP SITE – STAGE 2
- PROPOSED CAMP SITE – STAGE 3
- PROPOSED CAMP KITCHEN
- AREA IN FILL
- AREA IN CUT
- BOTTOM OF BATTER
- TOP OF BATTER

CUT & FILL VOLUMES

CUT TO FILL ON LEADS	= 5,862m³
FILL REQUIRED	= 2,004m³
EXPORT MATERIAL	= 3,857m³

NOTE: NO COMPACTION FACTOR APPLIED

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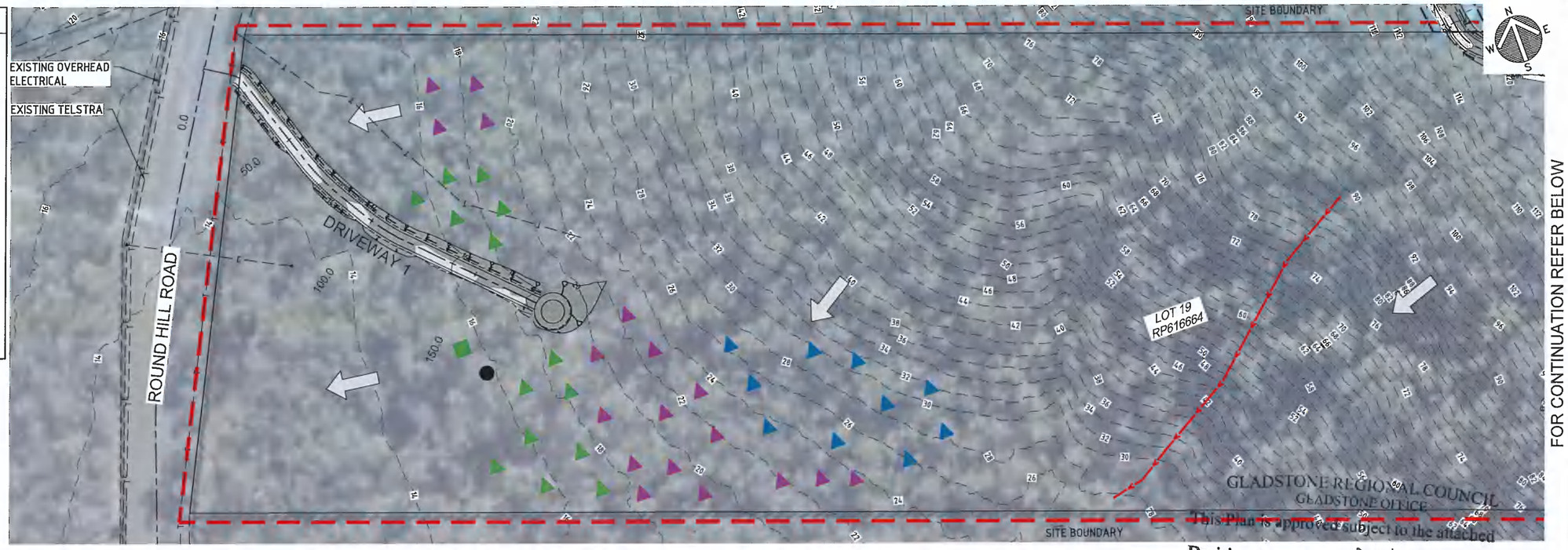

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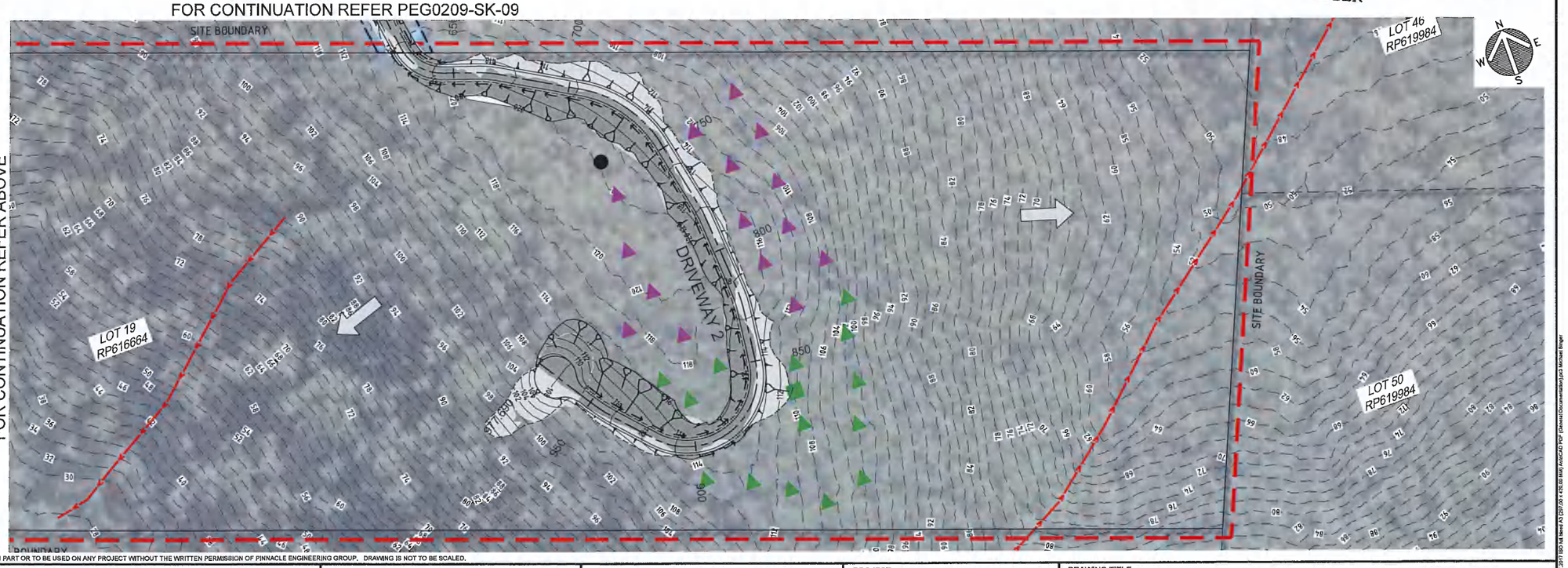

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REV	DESCRIPTION	DRAWN	DATE
A	ORIGINAL ISSUE FOR COMMENT	M.G.	20.06.2017
B	REVISED LAYOUT	M.G.	03.07.2017

TASK	BY	INITIAL	DATE
REVIEW	B.P.		20.06.2017
DESIGN	B.P.		20.06.2017
DRAWN	M.G.		20.06.2017

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CLIENT: MR. TIM LAWRY

PROJECT: 2546 ROUND HILL ROAD, AGNES WATER (LOT 19 ON RP616664)

DRAWING TITLE: CONCEPT EARTHWORKS LAYOUT SHEET 1 OF 2

STATUS: PRELIMINARY — NOT TO BE USED FOR CONSTRUCTION

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RPEQ No N/A

DRAWING NUMBER: PEG0209-DA-SK08

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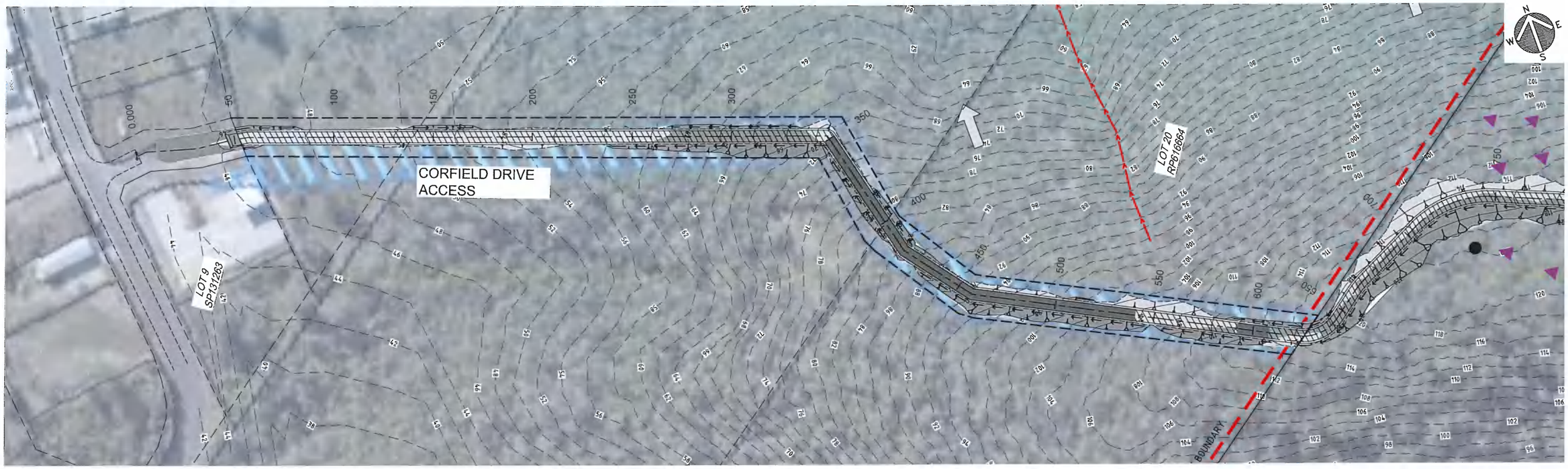

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SCHEDULE OF PAGES:

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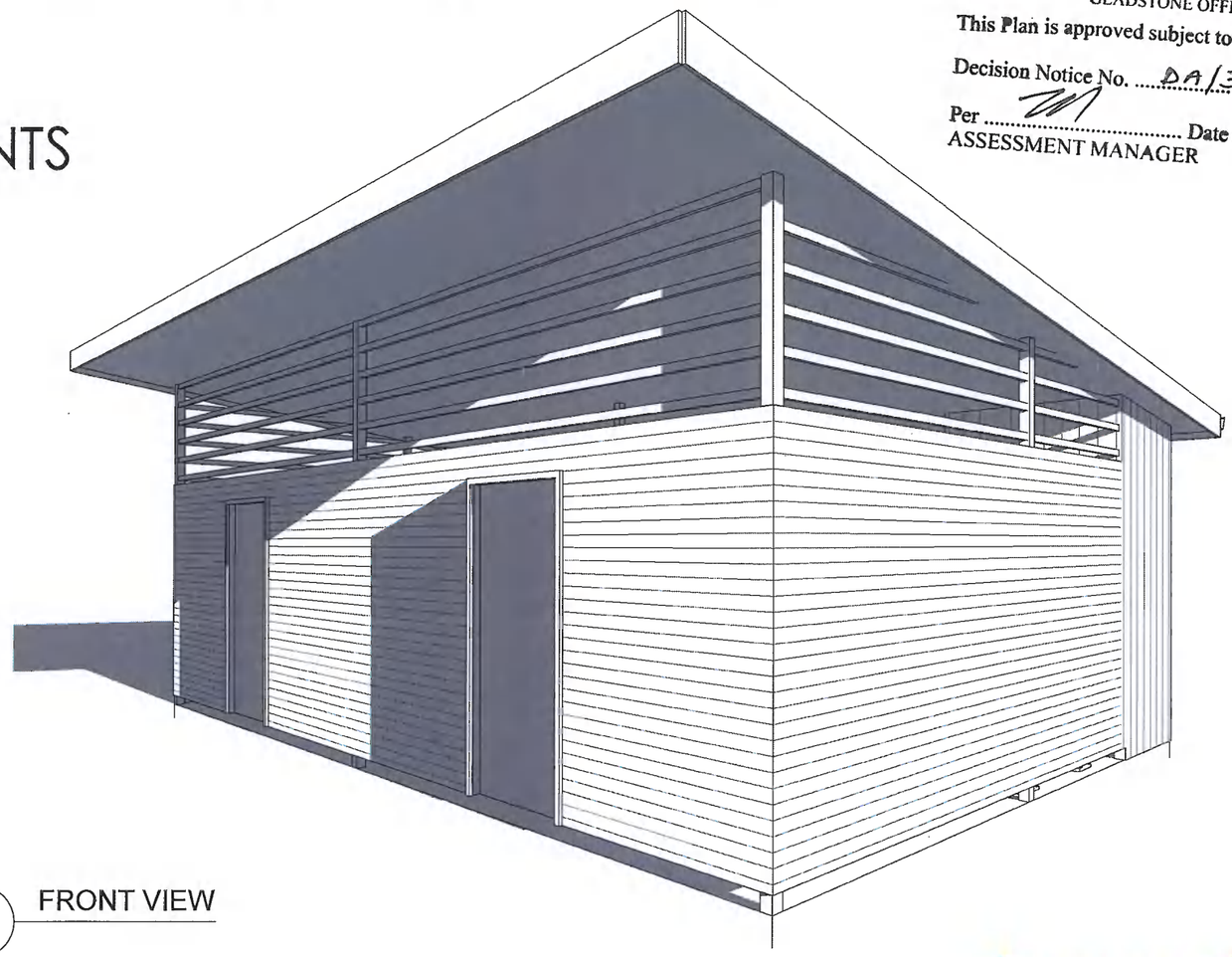
AGNES STREET DEVELOPMENTS

LOT 19 ON RP616664
2546 ROUND HILL ROAD
ROUND HILL, QLD



FRONT VIEW

bespoke building design
Russell Willcox
Principal Designer/Director
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M 0408 150 676 P 07 4128 9065
E info@bespokesolutions.com.au QBCC 1257937
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LOCATION
LOT 19 ON RP616664
2546 ROUND HILL ROAD
ROUND HILL, QLD

COVER PAGE

PROJECT STATUS
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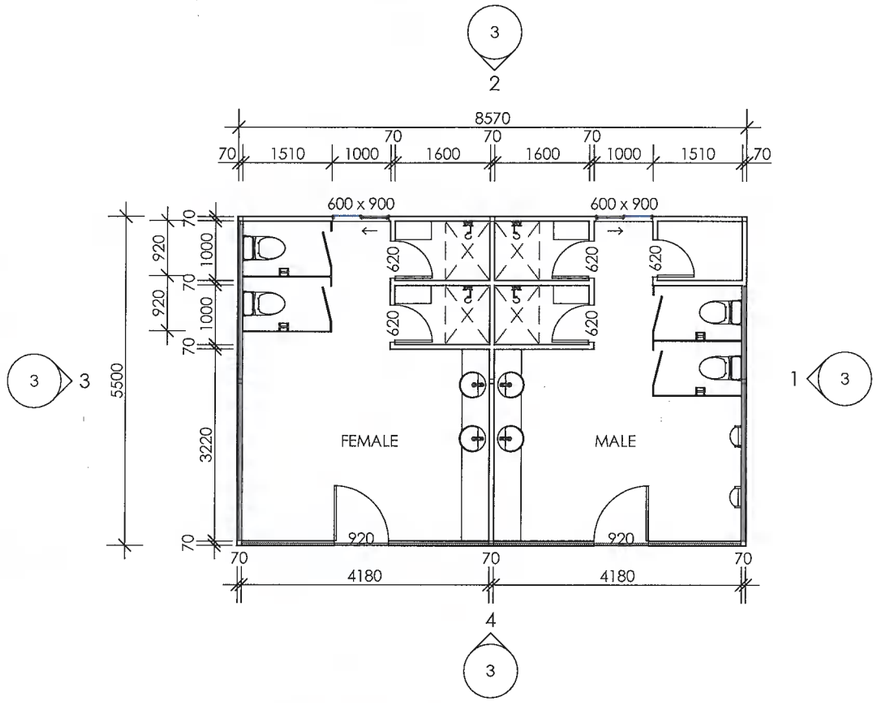

FLOOR PLAN
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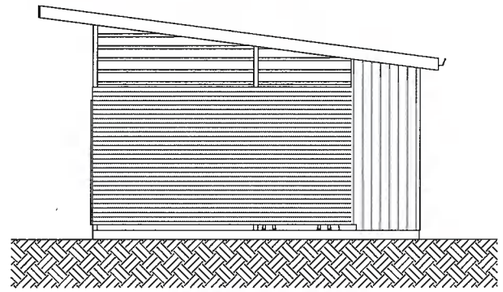

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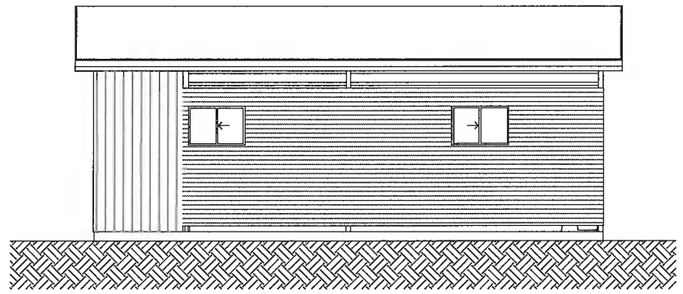

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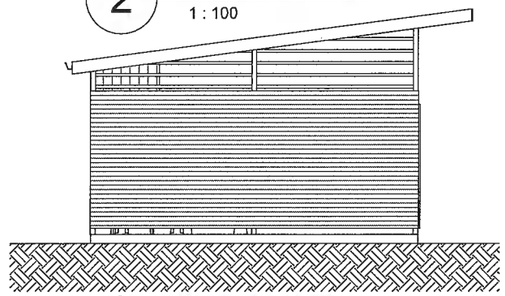

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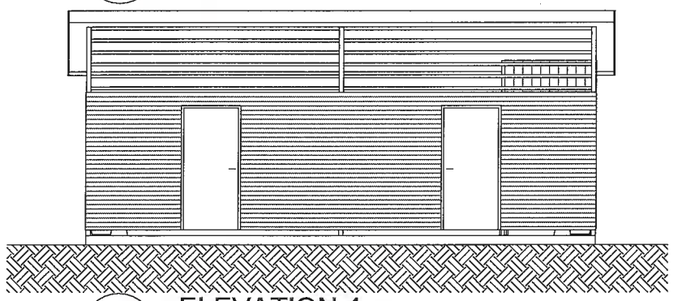

4 ELEVATION 4
1 : 100

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LOCATION
LOT 19 ON RP616664
2546 ROUND HILL ROAD
ROUND HILL, QLD

FLOOR PLAN/ELEVATIONS

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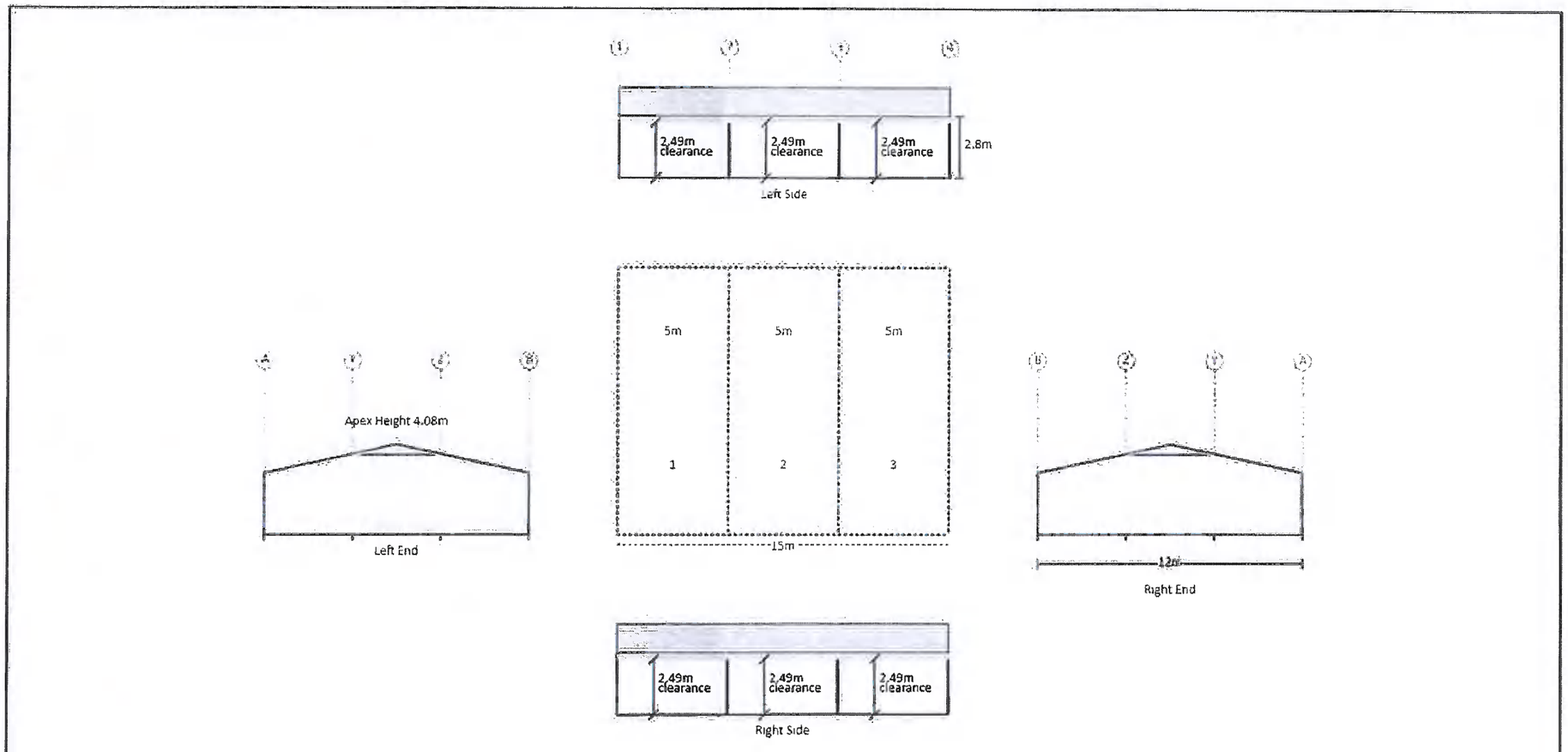

Purchaser Name Tim Lawry	Building Layout	Seller Wide Span Sheds	Wide Span Sheds
Site Address	Ref= FC1612187-1	Name Frank Crema	No Compromise Steel Building Solutions.
Ref = FC1612187-1 Print Date 24 12 16		Phone 1300 943 377	
		Fax 1800 427 400	
		Email frank.crema@sheds.com.au	

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PINNACLE
ENGINEERING GROUP

SITE BASED STORMWATER MANAGEMENT PLAN

NATURE BASED TOURISM (CAMP GROUND) DEVELOPMENT
2546 Round Hill Road, Agnes Water QLD

MR. TIM LAWRY

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JULY 2017
REVISION 05

Pinnacle Engineering Group
ABN: 80 608 431 625
P.O. Box 517 Paradise Point QLD 4216

In accordance with the requirements of the *Queensland Professional Engineers Act 2002*, this document was prepared under the supervision of, reviewed and approved by the following experienced Registered Professional Engineer of Queensland (RPEQ).

B. Popa

Bogdan Popa (RPEQ No. 12349)

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Document control

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01	8-March-2017	A. Cresswell	B. Popa	8-March-2017	Issued for comment
02	17-March-2017	A. Cresswell	B. Popa	17-March-2017	Issued for use
03	29-March-2017	A. Cresswell	B. Popa	29-March-2017	Reissued for use
04	19-June-2017	A. Cresswell	B. Popa	19-June-2017	GRC RFI response
05	03-July-2017	A. Cresswell	B. Popa	03-July-2017	GRC RFI response

Distribution of copies

Revision	Quantity	Distribution
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03	1.pdf	Tim Lawry / Zone Planning Group
04	1.pdf	Tim Lawry / Zone Planning Group
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Project manager:	Michael Binger
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Document version:	REV 05
Project number:	PEG0209

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1 Introduction

Pinnacle Engineering Group (Pinnacle) was engaged by Mr. Tim Lawry to prepare a site based stormwater management plan (SBSMP) and associated investigations to provide supporting documentation for the proposed code assessable development application for a nature based tourism (camp ground) development located at 2546 Round Hill Road, Agnes Water, within the local authority of the Gladstone Regional Council (GRC).

1.1 Scope of Investigation

This report addresses the proposed stormwater management strategy for the aforementioned development, including but not limited to the following elements:

- Pre and post development flows for various Average Recurrence Interval (ARI) design storm events;
- Nomination of the Lawful Point of Discharge for the site;
- Nomination of external catchment conveyance strategy;
- Details of stormwater quantity mitigation strategy for the site;
- Details of the stormwater quality strategy for the site; and
- Sediment and erosion control plan.

Although it is proposed to develop the camp sites over three stages as outlined below, this SBSMP has only investigated the ultimate development scenario as the post-development site largely retains its pre-development features.

1.2 Site Description

1.2.1 Location

Street Address	-	2546 Round Hill Road, Agnes Water QLD
RP Description	-	Lot 19 on RP616664
Total Site Area	-	18.12 Hectares
Proposed Use	-	Nature Based Tourism (Camp Ground)
Local Authority	-	GRC

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Refer to Figure 1.1 for the site location.

1.2.2 Topography

A review of the topographic data and Council's online mapping system has revealed that the subject site does not contain any existing dwellings or structures and is covered by medium to dense vegetation.

The subject site is bisected by a ridge located centrally to the site and falls to the west and east towards the Round Hill Road reserve and eastern property boundary respectively. The highest elevation of the subject site of approximately RL120.00m AHD is reached at the centre of the subject site with the lowest elevation of approximately RL13.00m AHD reached at the eastern property boundary adjacent to Round Hill Road

Refer to Figure 1.2 for the existing aerial view of the site with the site plans and topographic data included in Appendix B.

1.2.3 Proposed Development

The proposed development will deliver a nature based tourism (camp ground) development comprising of 74 camp sites across three stages, 2 amenities buildings, 2 camp kitchens, walking tracks and internal roads over the existing allotment. It is understood that the subject site will be accessed from both Round Hill Road and the existing access easement which provides access to the subject site form Corfield Drive through neighbouring properties the north.

The proposed development plans are included in Appendix A.

1.2.4 Existing Drainage System

Currently, the stormwater runoff from the subject site is conveyed via overland sheet flow to the Round Hill Road reserve and eastern property boundary.

No existing stormwater gully drainage structures have been identified in the vicinity of the subject site.

1.2.5 External Catchment

A review of the site topography has not identified any external catchments being conveyed through the portion of the subject site being developed.

1.2.6 Flood Assessment

A review of the GRC interactive mapping system has identified the subject site as being located outside of the flood affected or hazard investigation area of Agnes Water.

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Figure 1.1: Site Map (Source: Google Maps)

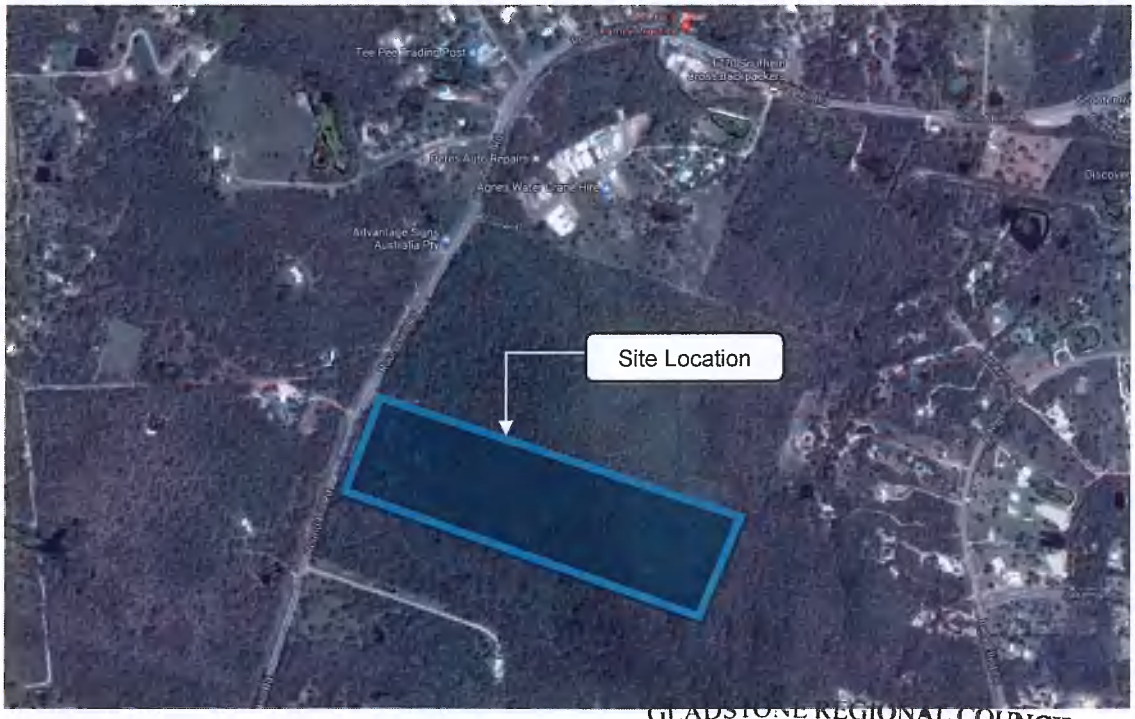

Figure 1.2: Aerial View (Source: Google Maps)

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2 Stormwater Quantity

2.1 Hydrologic Objectives

The hydrologic objectives for the site were set in accordance with the GRC Planning Scheme Policies, Capricorn Municipal Design Guidelines (CMDG) D5 Stormwater Drainage Design and the Queensland Urban Drainage Manual (QUDM). These objectives include but are not limited to:

- The proposed development shall ensure that all stormwater drainage is directed to the Lawful Point of Discharge in accordance with QUDM Section 3.02;
- Minor System Design for Q_2 ARI storm event (based on rural residential category);
- Major System Design for Q_{100} ARI storm event (based on rural residential category);
- No adverse impact on adjoining or downstream properties; and
- No increase in post-development flows, up to and including the Q_{100} ARI storm event.

2.2 Lawful Point of Discharge

As previously outlined above, the subject site constitutes multiple catchments due to the existing ridge located centrally to the site. The Lawful Point of Discharge for the catchment is taken as the Round Hill Road reserve to the west of the subject site. The eastern catchment discharges over the eastern property boundary and subsequently to the Lady Elliott Drive road reserve to the east of the site.

2.3 Stormwater Quantity Analysis

The analysis of the surface water runoff from the site was performed using the non-linear program XP-Rafts.

2.3.1 Data Collation

The design rainfall Intensity Frequency Duration (IFD) data for the storm events up to 100 year ARI flood event was derived based on the CMDG D5 Stormwater Drainage Design and the AR&R.

The design IFD data for the catchment is summarised in Table 2.1 below.

Table 2.1: IFD Data for Agnes Water

2 Year ARI Rainfall Intensities	50 Year ARI Rainfall Intensities	Skewness and Geographical Factors
$^{2}I_{1}$ = 47.38	$^{50}I_{1}$ = 87.16	Skewness, G = 0.20
$^{2}I_{12}$ = 9.27	$^{50}I_{12}$ = 22.23	Geographical Factor, F_2 = 4.32
$^{2}I_{72}$ = 2.97	$^{50}I_{72}$ = 6.69	Geographical Factor, F_{50} = 17.98

2.3.2 XP-Rafts Modelling Inputs

Rainfall loss parameters for each sub-catchment were applied using an initial and continuing rainfall loss model. The design loss parameters input into the XP-Rafts model are based on the guideline values recommended by Book 2 Section 3 of the AR&R, and other relevant industry standards.

The loss parameters adopted for this XP-Rafts model are tabulated below.

Table 2.2: Adopted XP-Rafts Initial and Continuing Loss Parameters

Storm Event	Pervious Areas		Impervious Areas	
ARI (years)	Initial Loss (mm)	Continuing Loss (mm)	Initial Loss (mm)	Continuing Loss (mm)
2-5	15	2.5	1	0
10-20	10	2.5	1	0
50-100	2.5	2.5	0	0

2.3.3 XP-Rafts Model Validation

The calibration of the XP-Rafts model was undertaken through the comparison of the XP-Rafts flow rates to the Rational Method calculations. The pre-development Rational Method calculations are included in Appendix D.

The Rational Method adopted a C_{10} coefficient of runoff of 0.66 for the pre-development catchment, in accordance with Table 4.05.3(b) of QUDM for medium/dense density vegetation. As detailed in Table 2.3 the flows calculated using the Rational Method are generally comparable to the results obtained from the XP-Rafts model. We can therefore reasonably adopt the flows generated from the XP-Rafts model.

2.3.4 Critical Duration Analysis

Storm durations ranging from 15 minutes to 720 minutes were simulated in the XP-Rafts model analysis to determine the design flows.

2.3.5 Existing Discharge Points

As outlined in the previous sections of this report the development site generally falls to the Round Hill Road reserve being the Lawful Point of Discharge as well as the adjacent properties to the east of the site.

It is proposed to retain the existing discharge locations during the post-development scenario.

2.4 Hydrologic Analysis

2.4.1 Pre-development Scenario

The results generated from the XP-Rafts model generally show that the critical storm duration throughout the catchment for all ARI flood events is the 60 minute storm event.

A percentage impervious area of 0.00 was calculated for the pre-development catchment (Catchment A) from aerial photography and the topographic data included in Appendix B.

The pre-development catchment discharges for the Q_2, Q_5, Q_{10}, Q_{20}, Q_{50} and Q_{100} ARI events are detailed in Table 2.3 below.

Table 2.3: Pre-development Catchment Details and Discharges

Catchment	Area (ha)	Impervious (%)	Average Slope (%)	XP-Rafts Results						Rational Method (C_{10} = 0.66)
				Q_2 (m^3/s)	Q_5 (m^3/s)	Q_{10} (m^3/s)	Q_{20} (m^3/s)	Q_{50} (m^3/s)	Q_{100} (m^3/s)	Q_{100} (m^3/s)
A	12.887	0.00	10.0	1.868	2.868	3.555	4.322	5.535	6.337	5.450
B	5.233	0.00	25.0	1.047	1.752	2.073	2.244	2.546	2.872	2.490
Site Total	**18.120**	**0.00**	-	**2.915**	**4.620**	**5.628**	**6.566**	**8.081**	**9.209**	-

2.4.2 Post-development Scenario – Unmitigated

The proposed development will deliver a nature based tourism (camp ground) development comprising of 74 camp sites, 2 amenities buildings, 2 camp kitchens, walking tracks and internal road over the existing allotment. For the purposes of this analysis the post-development catchment has been further split into sub-catchments, being the development's roof, road/hardstand and ground areas. Based on the layouts contained within Appendix A we have estimated roof areas in the order of 54m^2 for the proposed amenities blocks and 180m^2 for the proposed camp kitchens with 25m^2 assumed per camp site. The road areas have been estimated from the layout provided by Zone Planning Group with bitumen sealed (impervious) sections incorporated where road grades are greater than 16% (to be confirmed by topographic survey). For the purposes of this assessment it is assumed that the camp site impervious areas have a grade of 2-5%. We note that this does not affect the overall grade of Catchments A and B.

A copy of the site plans is included in Appendix A. The post-development catchment plan is included in Appendix C.

The impervious areas have been modelled using the second sub-catchment option within XP-Rafts. The total impervious area for each catchment is tabulated below. The results of the XP-Rafts post-development analysis indicate that the critical storm duration throughout the catchment for all ARI flood events is generally the 60 minute storm event.

Table 2.4 summarises the post-developed peak flow rates for post-development catchment.

Table 2.4: Post-development Catchment Details and Discharges (Unmitigated)

Catchment	Total Area (ha)	Average Slope (%)	Impervious Area (ha)	XP-Rafts Results					
				Q_2 (m^3/s)	Q_5 (m^3/s)	Q_{10} (m^3/s)	Q_{20} (m^3/s)	Q_{50} (m^3/s)	Q_{100} (m^3/s)
A	12.887	10.0	0.1330	1.866	2.796	3.551	4.317	5.541	6.344
B	5.223	25.0	0.0930	1.047	1.756	2.075	2.255	2.554	2.878
Site Total	**18.120**	-	**0.2260**	**2.913**	**4.552**	**5.626**	**6.572**	**8.095**	**9.222**

A comparison of the XP-Rafts results in Tables 2.3 and 2.4 shows negligible (within 1%) decreases and increases of between the pre-development and post-development scenarios across the various design storms analysed. These small fluctuations can be attributed to the largely unchanged catchment characteristics observed during the post-development scenario. Furthermore, we note that it is envisaged that minor earthworks will be undertaken in and around the proposed camp sites, camp kitchens and amenities which will effectively level parts of the subject site and decrease stormwater discharge from the subject site.

2.5 Post Development Stormwater Mitigation Strategy

The following strategy is proposed to mitigate the post-development stormwater discharge to the site's pre-development discharge rates.

- No attenuation of post-development stormwater discharge is required due to the minimal change in site conditions from pre-development scenario. It is considered that 1% fluctuations in discharge are observed between the pre-development and post-development scenarios are deemed to be within reasonable modelling tolerances and do not warrant stormwater detention;
- Discharge of stormwater to the Lawful Points of Discharge via piped (Q_2) (as required below tracks and roads) and overland flow (up to Q_{100});
- Construct and maintain a network of swales, flood-ways and cross road/track pipe culverts to ensure that stormwater discharge is directed to the Lawful Points of Discharge without concentrating flows or resulting in major changes to the natural topography; and
- Construct bitumen seals over sections of the proposed access tracks steeper than 16% (to be confirmed by topographic survey). It is envisaged that the sealed sections will not result in any actionable nuisance to upstream or downstream properties.
- Generally maintain the existing drainage regimes and drainage discharge locations.

A Stormwater Management Layout providing a conceptual design of the proposed stormwater management strategy outlined above is included in Appendix E.

3 Stormwater Quality

3.1 Water Quality Objectives

Although the proposed development site has a total area greater than 2,500m^2 and will effectively create more than six dwellings, we note that the current population of Agnes Water is below the 3,000 person trigger outlined in the Queensland State Planning Policy (July 2016), and as such the water quality impacts of the proposed development can be minimised through the use of Stormwater Quality Best Management Practice (SQBMP) treatment measures.

3.2 Proposed SQBMP Treatment Measures

The following techniques will be adopted within the development to promote SQBMP. In accordance with SQBMP, stormwater runoff from the development's impervious areas will be directed to the soft landscaping surrounding the development prior to being discharged from site wherever possible. The soft landscaping will promote infiltration, thus reducing pollutant runoff and aid in reducing the flows from the development's impervious areas. A plan detailing the above is included in Appendix E.

Further to the above the following strategies will be implemented during the construction and operational phases of the project to manage water quality.

3.2.1 Education

Education of workers though site inductions during the Construction phase and tenants during the Operational phase of the development will be implemented to reduce the likelihood of pollutant generation.

3.2.2 Grass Buffers and Soft Landscaping

Landscape buffers or grass strips shall be utilised across the site where possible, providing at source buffer treatment to runoff from adjacent impervious surfaces (pathways, roads, etc.).

Grass and landscape buffer strips are commonly used as an at source control measure. They are effective in the removal of coarse to medium sized sediments and minor removal of nitrogen and phosphorous.

3.2.1 Acid Sulphate Soils

A review of Council's interactive online mapping system has determined that the site is located within an area potentially affected by Acid Sulphate Soils. As such, we note that further investigations may be required by a geotechnical engineer to determine the extent of and treatment methods for Acid Sulphate Soils.

3.2.2 Erosion and Sediment Management

The Erosion and Sediment Management strategies for the site for the Construction and Operational phases are detailed in Section 4 below.

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4 Erosion and Sediment Control Strategy

The objective of erosion and sediment management on construction sites is to minimise soil erosion and control silt and/or sediment discharge from the sites through the use of suitable control devices during the four primary phases of the project lifecycle being:

1. Pre-construction/Establishment Phase;
2. Bulk Earthworks/Change to Ground Level Phase;
3. Construction Phase; and
4. Post-development/Operational Phase.

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Sections 4.2 and 4.3 below outline the typical and industry best practice erosion and sediment control measures that will be implemented throughout the life cycle of this project.

4.1 Development Lifecycle Erosion and Sediment Management

4.1.1 Pre-construction Phase

Prior to the commencement of construction, during the site establishment phase of the works, the following sediment and erosion control measures will be implemented in order to minimise site disturbance and ensure that water quality is maintained.

- Silt/Sediment fences will be installed around the proposed bulk earthworks site (along the toe of the batter alignment) and any environmentally sensitive areas; and
- A construction vehicle entry/exit shakedown area will be installed and will comprise of a vibratory cattle grid or gravel/rock pad in accordance with the IEAust Guidelines.

4.1.2 Bulk Earthworks Phase/Change to Ground Level

Excavation during the bulk earthworks/change to ground level phase of the project will be staged in a manner that runoff will generally be directed towards sediment and erosion controls established during the pre-construction phase.

As applicable, sediment basins will be constructed within proposed park/open space areas generally in the location of the proposed bio-retention basins to ensure that all sediment runoff is intercepted and treated prior to discharging from site.

4.1.3 Construction Phase

During the construction phase of the project, the following erosion and sediment controls will be implemented to ensure water quality is maintained.

- Sediment fences will be erected at the base of all batters and stockpiles to prevent sediment transportation offsite;
- All sediment and erosion control structures will be maintained and inspected regularly as well as after each storm event to ensure the ongoing integrity is maintained. No structure is to accumulate sediment above 40% of its capacity; and
- Regular monitoring of water quality will be undertaken to determine the effectiveness of the sediment and erosion control measures. Testing may be required and shall be provided to the Local Authority on request.

4.1.4 Post-development/Operational Phase

Following the completion of the construction phase of the project and the development reaching 'Practical Completion' and/or 'On-maintenance', a monitoring program will be established for the stormwater treatment devices outlined previously within this report, where applicable. The monitoring program will ensure the ongoing integrity and effectiveness of these stormwater treatment devices following the completion of the construction phase of the project.

4.2 Dust Suppression and Erosion Control Measures

The time of disturbance onsite will be kept to a minimum by ensuring that the civil works are undertaken directly following the earthworks phase. Consideration to staging of the works shall be given in order to minimise the area of exposed earthworks at any given time.

Erosion control and dust suppression measures shall be applied to the exposed areas of the site as deemed necessary by the site supervisor in order to prevent the emission of dust from the site.

A number of erosion control measures are available inclusive of but not limited to the following:

- Water spraying (by water truck);
- Dust suppressants;
- Surface stabilisation; and
- Covering of exposed areas.

4.3 Sediment Control Measures

With reference to the IEAust Guidelines and Current Industry Best Practice, there are three (3) fundamental sediment control principles that have been identified for use during construction:

- Construction Vehicle Shakedown and/or Entry/Exit;
- Sediment Fences; and
- Sediment Barriers.

4.3.1 Construction Vehicle Shakedown and/or Entry/Exit

A dedicated construction vehicle shakedown will be installed at the site's entry/exit point for road and construction vehicles. This construction vehicle shakedown area will be established to facilitate the removal of soil, mud, dust and debris from the tyres of vehicles prior to leaving the construction site. The construction shakedown will comprise of a gravel/rock pad designed or a vibratory grid system constructed and maintained in accordance with the IEAust Guidelines. The advantages of the vibratory grid system include ease of movement and ability to reuse for several years at different construction sites.

4.3.2 Sediment Fences

Sediment fencing will be established at the bottom of slopes on any exposed earthworks batters where there is an established risk of contaminated water discharging from the site prior to clearing and earthworks commencing. Sediment fencing may be required at regular spacing down the disturbed slope to limit scour and rutting caused by channelising of stormwater discharge. Sediment fences will be used to protect any temporary stockpile sites as required. Sediment collected from sediment barriers will be regularly removed and either taken offsite as part of the earthworks phase or stockpiled for use during revegetation works.

4.3.3 Sediment Barriers

Sediment barriers will be constructed around all stormwater drainage gully pits and field inlets where contaminated water may enter the existing and proposed stormwater network. The provision of these sediment barriers will facilitate the settlement of sediments prior to entering the downstream stormwater drainage network. Sediment barriers will generally comprise of gravel wrapped in geotextile 'sausage', sediment fences around field inlets or similar approved products.

4.4 Monitoring and Maintenance

The site supervisor will be responsible for the following regular monitoring and maintenance activities during the various phases of the development:

- Inspection of downstream stormwater network as well as sediment and erosion controls will be conducted at the end of each construction day and after each rainfall event greater than 25mm.
- If any established complaints by neighbouring property owners and/or local authority or evidence of water quality deterioration is reported downstream of the works site the following actions are to be taken immediately:
    - locate source of stormwater quality deterioration.
    - construct temporary erosion and sediment controls to prevent the continuing short term stormwater quality deterioration.
    - repair existing erosion and sediment controls, modify construction procedures or construct additional controls to prevent further deterioration.

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5 Conclusions and Recommendations

This report outlines the stormwater management strategy developed to manage potential impacts due to the proposed nature based tourism (camp ground) development located at 2546 Round Hill Road, Agnes Water.

As noted above, although it is proposed to develop the camp sites over three stages, this SBSMP has only investigated the ultimate development scenario as the post-development site largely retains its pre-development features.

Following the investigation, the following stormwater design strategy has been adopted for the site:

- No attenuation of post-development storm discharge is required due to the minimal change in site conditions from pre-development scenario. It is considered that 1% changes in discharge are within reasonable modelling tolerances and do not warrant stormwater detention;
- Discharge of stormwater to the Lawful Points of Discharge via piped (Q_2) (as required below tracks and roads) and overland flow (up to Q_{100});
- Construct and maintain a network of swales, flood-ways and cross road/track pipe culverts to ensure that stormwater discharge is directed to the Lawful Points of Discharge without concentrating flows or resulting in major changes to the natural topography; Construct bitumen seals over sections of the proposed access tracks steeper than 16% (to be confirmed by topographic survey). It is envisaged that the sealed sections will not result in any actionable nuisance to upstream or downstream properties;
- Best practice stormwater quality management techniques will be implemented to achieve water quality objectives by directing stormwater runoff from the development to soft landscaping wherever possible prior to discharge from site; and
- Implementation of typical erosion and sediment control devices during the four (4) primary phases of the proposed development.

Following the conclusion of this investigation we can conclude that the development site, with the implementation of the stormwater management strategy outlined in this report, will result in a 'no worsening' effect of the current stormwater discharge conditions upstream or downstream of the site.

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6 Reference Documentation

GRC Planning Scheme Policies (GRC, 2015)

Capricorn Municipal Design Guidelines (CMDG, 2015)

Institution of Engineers, Australia (2001) "Australian Rainfall and Runoff – A Guide to Flood Estimation"

Neville Jones & Associates (2008) "Queensland Urban Drainage Design Manual (QUDM)", Edition 2

The State of Queensland: Department of State Development, Infrastructure and Planning, December 2013. State Planning Policy

Water by Design (2009) "MUSIC Modelling Guidelines for South-East Queensland" – Draft 01, December 2009

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Decision Notice No. DA/32/2017
Per ..... Date 12.3.18
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Queensland Government

Department of Infrastructure, Local Government and Planning

Our reference: SDA-0517-039311
Your reference: DA/32/2017

21 September 2017

The Chief Executive Officer
Gladstone Regional Council
PO Box 29
Gladstone QLD 4680

Email: info@gladstonerc.qld.gov.au

Attention: Helen McLaren-Griess

Dear Sir/Madam

Amended concurrence agency response – with conditions
2546, 2590 & Lot 21 Round Hill Road and Lot 900 Unnamed Road, Agnes Water
(Given under section 290(1)(b) of the *Sustainable Planning Act 2009*)

The Department of Infrastructure, Local Government and Planning (the department) issued a concurrence agency response under section 285 of the *Sustainable Planning Act 2009* on 29 May 2017. On 28 July 2017, the department received representations from the applicant regarding a missed referral under section 357 of the Act.

The department has considered the missed referral trigger and issued the following amended concurrence agency response under section 290(1)(b)(i) of the Act.

Applicant details

Applicant name:	Tim Lawry
Applicant contact details:	C/- Zone Planning Group PO Box 3805 Burleigh Town QLD 4220 Email: stephen@zoneplanning.com.au

Fitzroy and Central Regional Office
Level 2, 209 Bolsover Street
PO Box 113
Rockhampton QLD 4700

Site details

Street address:	2546, 2590 & Lot 21 Round Hill Road and Lot 900 Unnamed Road, Agnes Water
Lot on plan:	Lots 19-21 on RP616664 and Lot 900 on SP264882
Local government area:	Gladstone Regional Council

Application details

Proposed development:	Development Permit for a Material Change of Use for Nature Based Tourism

Aspects of development and type of approval being sought

Nature of Development	Approval Type	Brief Proposal of Description	Level of Assessment
Material Change of Use	Development Permit	Nature Based Tourism (74 camping sites in three stages)	Code

Referral triggers

The development application was referred to the department under the following provisions of the *Sustainable Planning Regulation 2009*:

Referral trigger	Schedule 7, Table 3, Item 2 – Development impacting on State transport infrastructure Schedule 7, Table 3, Item 10 – Clearing vegetation

Conditions

Under section 287(1)(a) of the *Sustainable Planning Act 2009*, the conditions set out in Attachment 1 must be attached to any development approval.

Reasons for imposing conditions

Under section 289(1) of the *Sustainable Planning Act 2009*, the department must set out the reasons for imposing conditions. These reasons are set out in Attachment 2.

Approved plans and specifications

The department requires that the following plans and specifications set out below and in Attachment 3 must be attached to any development approval.

Drawing/Report Title	Prepared by	Date	Reference no.	Version/Issue
Aspect of development: material change of use				
PROPOSED STAGING PLAN	Zone Planning Group	19/04/2017	SK03	B (as amended in red by DILGP on 20 September 2017)

The applicant has provided written agreement to this amended concurrence agency response, as attached.

For further information, please contact Carl Porter, A/Principal Planning Officer, on 07 4924 2918 or via email at RockhamptonSARA@dilgp.qld.gov.au who will be pleased to assist.

Yours sincerely

Graeme Bolton
Executive Director

cc: Tim Lawry C/- Stephen Enders, Zone Planning Group, stephen@zoneplanning.com.au
enc: Attachment 1—Amended conditions to be imposed
Attachment 2—Amended reasons for imposing conditions
Attachment 3—Approved plans and specifications
Applicant written agreement to amended concurrence agency response

Our reference: SDA-0517-039311
Your reference: DA/32/2017

Attachment 1—Amended conditions to be imposed

No.	Conditions	Condition timing
Material change of use		
Schedule 7, Table 3, Item 10–Clearing vegetation—Pursuant to section 255D of the *Sustainable Planning Act 2009*, the chief executive administering the Act nominates the Director-General of the Department of Natural Resources and Mines to be the assessing authority for the development to which this development approval relates for the administration and enforcement of any matter relating to the following condition:		
1.	Clearing of regulated vegetation is limited to the areas associated with the proposed development and infrastructure (camp kitchens, amenities buildings, walking tracks, campsites and internal access roads) only, as shown on '*PROPOSED STAGING PLAN*, prepared by Zone Planning Group, dated 19/04/2017, Plan Ref. SK03, Rev B' (as amended in red by DILGP on 20 September 2017).	At all times.

Our reference: SDA-0517-039311
Your reference: DA/32/2017

Attachment 2—Amended reasons for imposing conditions

The reasons for imposing conditions are:

- To ensure the clearing of vegetation is carried out generally in accordance with the plan of development submitted with the application.

Our reference: SDA-0517-039311
Your reference: DA/32/2017

Attachment 3— Approved plans and specifications

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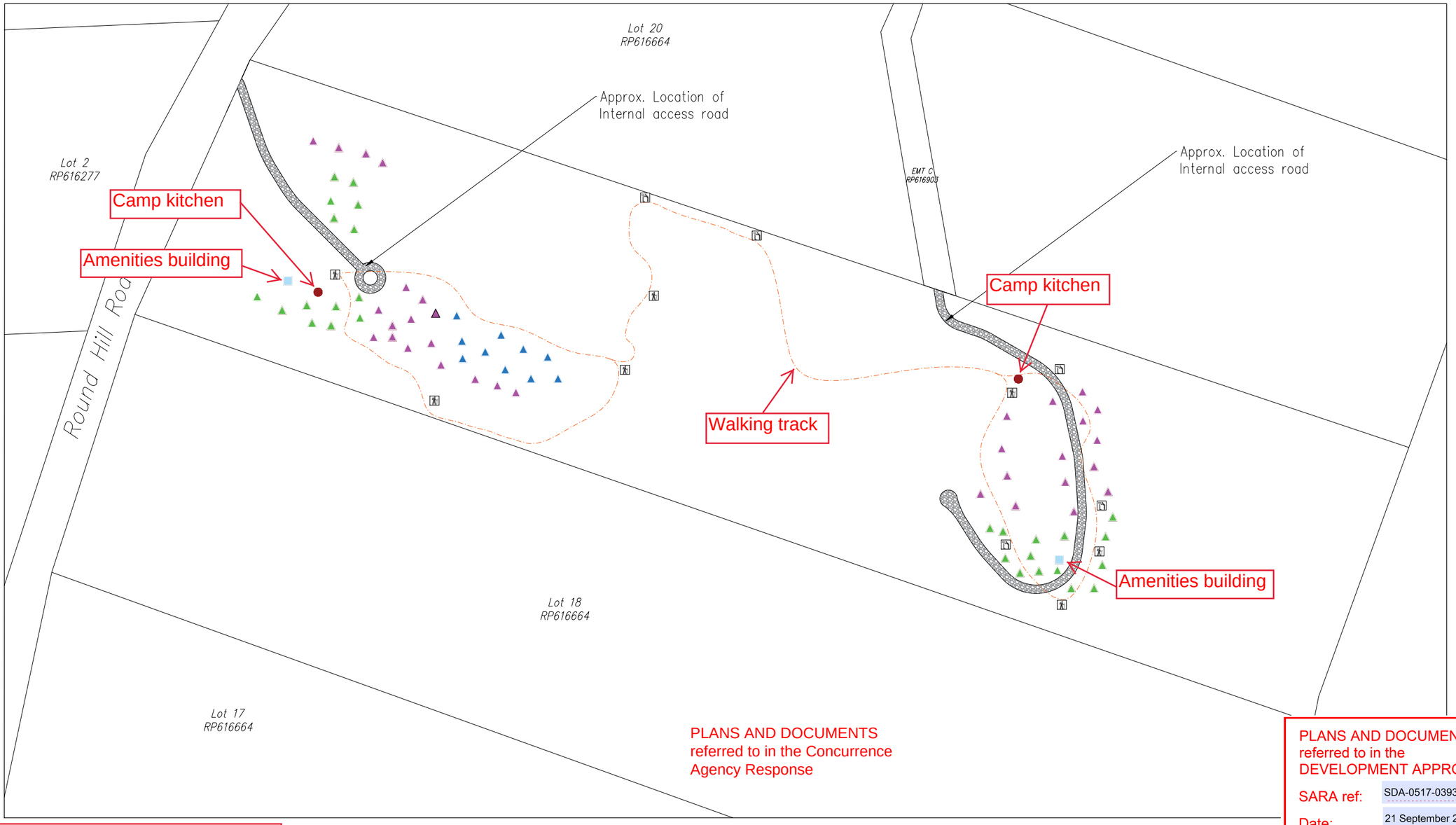

PLANS AND DOCUMENTS
referred to in the Concurrence
Agency Response

PLANS AND DOCUMENTS
referred to in the
DEVELOPMENT APPROVAL

Queensland Government

SARA ref: SDA-0517-039311

Date: 21 September 2017

Amended in red by DILGP on
20 September 2017

LEGEND - Campsites

Stage 1 Stage 2 Stage 3

Note
All dimensions and areas are approximate only, and are subject to survey and Council approval.

Dimensions have been rounded to the nearest 0.1 metres.

The boundaries shown on this plan should not be used for final detailed engineers design.

Contours supplied by Terranean Mapping Technologies.

REVISION	Level Datum	Date 19 April 2017	CLIENT **Tim Lawry**
	Origin	Comp By.	PROPOSED STAGING PLAN
		DWG Name. Z16280A	
	Scale 1:2500 / Sheet A3	Local Authority GLADSTONE REGIONAL COUNCIL	
		Locality	
		Job Reference Z16280	

PROJECT **Nature Based Camping Ground**

Plan Ref **SK-03** Rev **B**

zone Planning Group
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6/249 Scottsdale Drive
ROBINA QLD

Our reference: Z16280
Your reference: SDA-0517-039311

Attn: RockhamptonSARA@dilgp.qld.gov.au

Written agreement for the Department of Infrastructure, Local Government and Planning to amend its concurrence agency response
(Given under section 290(1)(b)(i) of the *Sustainable Planning Act 2009*)

Street address:	2546, 2590 & Lot 21 Round Hill Road and Lot 900 Unnamed Road, Agnes Water
Real property description:	Lots 19-21 on RP616664 and Lot 900 on SP264882
Assessment manager reference:	DA/32/2017
Local government area:	Gladstone Regional Council

As the applicant of the above development application, I hereby agree to the amended concurrence agency response provided to me in the notice dated 20 September 2017.

Name of applicant: Tim Lawry

Signature of applicant: (on behalf of Tim Lawry)

Date: 21/09/2017