

Our Ref: 34579-001-01
 Your Ref:

Principals
 s.r. motti | p.j. murphy | r.j. melick | g.l. allwood

20 September 2018

The Chief Executive Officer
 Mareeba Shire Council
 PO Box 154
MAREEBA QLD 4880

Attention: Planning and Approvals

Dear Sir/Madam

**DEVELOPMENT APPLICATION FOR RECONFIGURATION OF A LOT (1 LOT INTO 9 LOTS)
 72-76 MASON ROAD, KURANDA – LOT 100 ON SP202702**

We act on behalf of the Applicants, A. & A. Salinovic in relation to the abovementioned.

On behalf of the Applicants we now submit to Mareeba Shire Council an application seeking a Development Permit for Reconfiguring a Lot (1 lots into 9 lots) on land located at 72-76 Mason Road, Kuranda, precisely described as Lot 100 on SP202702. The following has been prepared to assist with Council's assessment of the proposed development:

THE SITE

The subject land is located 72-76 Mason Road, precisely described as Lot 100 on SP202702. Figure 1 below identifies the subject site.



Figure 1: Satellite image of the subject land (source – Google Earth/Queensland Globe July 2018)

The subject site comprises a total land area of 4.426ha, contains a single dwelling and associated infrastructure. The south-eastern region of the site is vegetated. The vegetated area is protected by environmental covenant, Covenant G on SP202702. The balance of the site is clear of vegetation and can be described as maintained grassland. Photographs of the site are included with *Attachment D*.

Essential infrastructure utilities including reticulated water, stormwater drainage, electricity and telecommunications are located within the Mason Road reserve, with access to these services readily available. Sewerage disposal is via onsite wastewater disposal systems.

The Title Searches included at *Attachment B* confirms that Ante and Anica Salinovic are the registered owners of the subject land. The Title Searches also confirm that there is an existing covenant, Covenant G on SP202702, encumbering the land to Mareeba Shire Council for environmental purposes. A current SmartMap and copy of the current survey plan, SP202702 are also included at *Attachment B*, which identifies the existing lot configuration.

PROPOSAL

Approval of the Development Application will authorise a Development Permit for Reconfiguring a Lot for the creation of nine (9) rural residential lots. The development of the site will be undertaken in two (2) stages as identified on the plan of proposed reconfiguration, Brazier Motti Drawing No. 34579/001A, *Attachment E*.

The subject land is unique to the Kuranda locality as it is clear and vegetation and is connected to Council's water supply network. The areas of the proposed lots will range from 3,664m² to 9,590m². Building envelopes have been designated within the proposed lots that are sufficient area to site a dwelling and associated infrastructure.

Details on the proposed staging is provided below.

Stage 1

Stage 1 will result in the creation of proposed Lots 1-5 and the associated easements for access, drainage and services. The existing dwelling will be contained within proposed Lot 5. All proposed lots will share the existing crossover and driveway from Mason Road. The shared driveway will be extended for the full length of the 10.0m wide access strip within proposed Lot 1. Easement A will be created for the provision of access, drainage and services to proposed Lots 2-5. The access strip is of sufficient width to contain the driveway, passing bay, service conduits, drainage infrastructure and the provision of landscaping.

Stormwater will be discharged into existing infrastructure within the Mason Road reserve. Drainage easements within proposed Lots 1 – 3 will be created to ensure lawful point of discharge for the subject lots within Stage 1.

Stage 2

Stage 2 will result in the creation of proposed Lots 6-9 and associated easements for access, drainage and services. A new crossover and driveway will be constructed within the 10.0m wide access strip of proposed Lot 6 to service the proposed lots. Easement B within proposed Lot 6 will be created for the provision of access, drainage and services to proposed Lots 7-9.

The existing shed will be contained within proposed Lot 7.

Overall, it is considered that the proposed reconfiguration is appropriate for the site while keeping with the character and amenity of the surrounding area.

MAREEBA SHIRE COUNCIL PLANNING SCHEME

Under the Mareeba Shire Planning Scheme the site is included in the Rural Residential Zone and not identified to be within a precinct. The Table of Assessment for the Rural Residential Zone identifies that Reconfiguring a Lot is Impact Assessable when the subject land is not located within the 4,000m², 1 or 2 hectare precincts.

The table below provides an overview of the planning scheme elements applicable to the subject land and the proposed development provisions under the Mareeba Shire Planning Scheme:

Zone	Rural Residential Zone
Local Plan	Not Applicable
Overlays	<ul style="list-style-type: none"> • Bushfire Hazard Overlay (part high intensity and part potential impact buffer) • Environmental Significance Overlay (waterway and waterway buffer) • Hill and Slope Overlay • Residential Dwelling House and Outbuilding Overlay • Transport Network Overlay (Access Road)

The Table of Assessment also identifies that the proposed development is assessable against the following planning scheme codes:

Applicable Codes	Rural Residential Zone Code Bushfire Hazard Overlay Code Environmental Significance Overlay Code Hill and Slope Overlay Code Residential Dwelling House and Outbuilding Overlay Code Transport Infrastructure Overlay Code Landscaping Code Parking and Access Code Works, Services and Infrastructure Code Reconfiguring a Lot Code
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All aspects of the proposed development are considered to be generally consistent with the relevant acceptable measures and/or performance criteria of each of the applicable codes identified above. An assessment against the applicable codes is provided below:

RURAL RESIDENTIAL ZONE CODE

The subject lot is included in the Rural Residential Zone. The purposes of the Rural Residential Zone is to provide for residential developments on large lots where local government infrastructure and services may not be provided.

The subject land is not included within the 4,000m², 1 hectare or 2 hectare precincts. Rural Residential Zoned land not contained within any precincts would be considered to be highly constrained with minimal development potential. The subject land is clear of vegetation and is connected to Council's water supply network. One would agree that land described above would be more suitably contained within the 4,000m² precinct. Land to the north (Williamson Drive and surrounding area) is contained within the 4,000m² precinct and would be considered to be more constrained than the land subject to this application.

It is considered appropriate for this proposal to be assessed as if the subject land was contained in the 4,000m² precinct.

The proposed reconfiguration will result in the creation of nine (9) lots with areas ranging from 3,664m² to 9,590m². Building envelopes have been nominated on each of the proposed lots. The building envelopes on each lot are setback 6.0 metres from the Mason Road, 5.0 metres from adjoining properties and clear of steep land. The building envelopes are sufficient area to accommodate a dwelling and associated infrastructure.

Overall it is considered that the proposed reconfiguration will not adversely affect the residential character and amenity of the area as it will not have any detrimental impacts on traffic, noise, dust, odour, lighting, or other existing physical environs.

BUSHFIRE HAZARD OVERLAY CODE

The majority of the subject land is identified as being within the very high intensity and medium potential intensity bushfire hazard areas. Accordingly assessment against the Bushfire Hazard Overlay Code is applicable.

As previously mentioned the site is clear of vegetation. The nominated building envelopes provide adequate setbacks from surrounding vegetation. It is also noted that the lots will be connected to a reticulated water supply that would be adequate and accessible for fire-fighting purposes.

Overall it is considered that the proposed development achieves consistency with the applicable Acceptable and Performance Outcomes of the Bushfire Hazard Overlay Code

ENVIRONMENTAL SIGNIFICANCE OVERLAY CODE

The subject land is identified as containing a significant waterway and regulated vegetation. Accordingly assessment against the Environmental Significance Overlay Code is applicable.

The identified waterway and vegetation are already protected by the means of the existing environmental covenant, Cov G on SP202702. Development will be undertaken in previously cleared areas.

Overall it is considered that the proposed development achieves consistency with the applicable acceptable and performance outcomes of the Natural Areas Overlay Code

HILL AND SLOPE OVERLAY CODE

The subject land is identified as being within the Hill and Slope Area. Accordingly assessment against the Hill and Slope Overlay Code is applicable.

While the areas of site is identified as being within the hillslopes area, the topography of that part of the site where the building envelopes are proposed is quite usable and will not require complex engineering solutions. The photographs contained within *Attachment D* further reinforces that the subject land is usable and suitable for the proposed development.

It is considered that the proposed development will not have an impact on the ecological values, landscape character or scenic amenity of the hillslopes.

Overall it is considered that the proposed development achieves consistency with the applicable Acceptable and Performance Outcomes of the Hill and Slope Overlay Code

RESIDENTIAL DWELLING AND OUTBUILDING OVERLAY CODE

The purpose of the Residential Dwelling and Outbuilding Overlay Code is to ensure that dwelling houses, including residential outbuildings, are appropriately designed, located and serviced within the residential areas of the shire.

The proposed development seeks to create nine (9) rural residential lots. The code will be addressed at the time that dwellings are constructed within the proposed lots.

TRANSPORT INFRASTRUCTURE OVERLAY CODE

The purpose of the Transport Network Overlay Code is to ensure that development provides transport infrastructure that supports a safe, efficient transport network, including the active transport network.

Access to the proposed Lots 1-5 will be via the existing access from Mason Road. The driveway will be contained within proposed Lot 1 with an easement benefitting proposed Lots 2-5. A new crossover and driveway will be constructed within proposed Lot 6 to service proposed Lots 6-9. Vehicle crossovers and driveways for each allotment will be constructed in accordance with the requirements of the FNQROC Development Manual.

Overall, the proposed development is consistent with intended role and function of the transport network, does not compromise the safety and efficiency of Mason Road and is consistent with the Transport Network Overlay Code.

LANDSCAPING CODE

The Landscaping Code seeks to ensure all development is landscaped to a standard that compliments site and locality.

It is intended to provide landscaping within the access strips contained within proposed Lots 1 & 6. Mason Road frontage is already vegetated. The approval can be appropriately conditioned to ensure that landscaping will be undertaken within the access strips.

Overall it is considered that the proposed development achieves consistency with the applicable acceptable outcomes and performance outcomes of the Landscaping Code.

PARKING AND ACCESS CODE

The Parking and Access Code seeks to ensure sufficient parking is designed to service new developments.

The proposed development seeks to create nine (9) rural residential lots. Access from Mason Road to the proposed lots will be via two (2) private driveways contained within proposed Lots 1 & 6. With a width of 10m, the access strips are of sufficient width to contain a driveway, passing bay, service conduits, drainage infrastructure and landscaping. The access crossover and driveways will be constructed in accordance with FNQROC standard. Access and services easements will be created over the access strips to provide lawful access to the respective lots.

All proposed lots are of sufficient area to accommodation the required parking in accordance with Table 9.4.3.3B.

Overall it is considered that the proposed development achieves consistency with the applicable acceptable outcomes and performance outcomes of the Parking and Access Code.

WORKS, SERVICES AND INFRASTRUCTURE CODE

The Infrastructure Works Code seeks to ensure that development is safely and efficiently serviced by and connected to infrastructure.

The proposed development will seek to utilise the existing infrastructure services which are available to the site, this will include connection to Council's water supply, stormwater, electricity and telecommunications. Connections to each of the required infrastructure services will be undertaken in accordance with the specifications of the FNQROC Development Manual.

The wastewater disposal report prepared by Wastewater Consultants, *Attachment C*, demonstrates that the proposed lots are able to accommodate appropriate wastewater disposal systems.

Enquiries with Council's engineering department confirms that the existing water infrastructure contained within the Mason Road reserve is of sufficient capacity to service the development.

Overall it is considered that the proposed development achieves consistency with the applicable acceptable outcomes and performance outcomes of the Infrastructure Works Code.

RECONFIGURING A LOT CODE

The Reconfiguring a Lot Code seeks to ensure that development results in lots that are suitable for their intended use, locality, are of a high standard of amenity, and provide all necessary infrastructure and services.

It is acknowledged that the site is not located within the 4,000m², 1 or 2 hectare precincts. Rural Residential Zoned land not contained within any precincts would be considered to be highly contained with minimal development potential. The subject land is clear of vegetation and is connected to Council's water supply network. The properties of the subject land would be more appropriately described contained within the 4,000m² precinct.

Areas of the proposed Lots range from 3,664m² to 9,590m² and are able to contain building envelopes that are sufficient area to accommodate a dwelling and associated infrastructure. The proposal results in eight (8) lots accessing Mason Road from access strips contained within proposed Lots 1 & 6. The proposed access strips have widths of 10.0m ensuring that they are sufficient width to contain a sealed driveway, passing bay, service conduits, drainage infrastructure and landscaping. Easements will be created over the access strips benefitting the required lots.

The use of access strips will not adversely affect the amenity of the proposed lots or the safety and efficiency of Masons Road.

Overall it is considered that the proposed development achieves consistency with the applicable Acceptable and Performance Outcomes of the Reconfiguring a Lot Code.

PLANNING ACT 2016 CONSIDERATIONS

The table below provides an overview of the legislative context of the development application under the provisions of the *Planning Act 2016* and *Planning Regulation 2017*.

Assessable Development	The proposed development constitutes assessable development under the Mareeba Shire Planning Scheme. Accordingly, pursuant to Section 44(3) of the <i>Planning Act 2016</i> a development approval is required.
Assessment Manager	Pursuant to Schedule 8 of the <i>Planning Regulation 2017</i> the Assessment Manager for this development application is Mareeba Shire Council.
Category of Assessment	The Mareeba Shire Planning Scheme identifies that the proposed development is Impact Assessable development.
Public Notification	The Application is Impact Assessable, therefore, in accordance with section 53 of the <i>Planning Act 2016</i> public notification is required.
Referrals	The application does not trigger referral to any referral agencies.

CONCLUSION

The abovementioned has demonstrated that the proposed Reconfiguration of a Lot at 72-76 Mason Road, Kuranda has been assessed against the assessment benchmarks of the Mareeba Shire Planning Scheme and is considered to comply with the relevant provisions.

It is acknowledged that the site is not located with the 4,000m², 1 or 2 hectare precincts. Taking into the consideration the minimal constraints on the subject land, the proposed reconfiguration is of a scale and nature that contributes to the proper and orderly development of the locality and is unlikely to have any significant impacts on the infrastructure, environment or community of the surrounding area.

The proposal is considered consistent with the purpose of the Rural Residential Zone and provides allotments which are of sufficient size and dimensions to allow for an appropriate building envelope, provision of associated utilities, vehicle crossover, parking and private open space.

Accordingly, subject to the imposition of reasonable and relevant conditions, we request that Council issue a Development Permit for Reconfiguring of a Lot as detailed in above.

SUPPORTING DOCUMENTS

Please see enclosed the following supporting documents to assist with Council's assessment of the application:

- Attachment A: DA Form 1;
- Attachment B: Title Search, SmartMap, Survey Plan SP202702;
- Attachment C: Wastewater Disposal Report;
- Attachment D: Photographs of site; and
- Attachment E: Plan of Proposed Reconfiguration (Brazier Motti Drawing No. 34579/001A)



We trust that the enclosed documentation is sufficient to allow Council's assessment of the proposed development, however, should you have any further queries or wish to discuss please do not hesitate to contact this office.

Yours faithfully,

MICHAEL TESSARO

Senior Planner

Brazier Motti Pty Ltd



Attachment A

DA Form 1 – Development application details

Approved form (version 1.1 effective 22 JUNE 2018) made under section 282 of the Planning Act 2016.

This form **must** be used to make a development application **involving code assessment or impact assessment**, except when applying for development involving building work.

For a development application involving **building work only**, use *DA Form 2 – Building work details*.

For a development application involving **building work associated with any other type of assessable development (i.e. material change of use, operational work or reconfiguring a lot)**, use this form (*DA Form 1*) and parts 4 to 6 of *DA Form 2 – Building work details*.

Unless stated otherwise, all parts of this form **must** be completed in full and all required supporting information **must** accompany the development application.

One or more additional pages may be attached as a schedule to this development application if there is insufficient space on the form to include all the necessary information.

This form and any other form relevant to the development application must be used to make a development application relating to strategic port land and Brisbane core port land under the *Transport Infrastructure Act 1994*, and airport land under the *Airport Assets (Restructuring and Disposal) Act 2008*. For the purpose of assessing a development application relating to strategic port land and Brisbane core port land, any reference to a planning scheme is taken to mean a land use plan for the strategic port land, Brisbane port land use plan for Brisbane core port land, or a land use plan for airport land.

Note: All terms used in this form have the meaning given under the *Planning Act 2016*, the *Planning Regulation 2017*, or the *Development Assessment Rules (DA Rules)*.

PART 1 – APPLICANT DETAILS

1) Applicant details	
Applicant name(s) <i>(individual or company full name)</i>	A. & A. Salinovic c/- Brazier Motti Pty Ltd
Contact name <i>(only applicable for companies)</i>	Attn: Michael Tessaro
Postal address <i>(P.O. Box or street address)</i>	PO Box 1185
Suburb	Cairns
State	QLD
Postcode	4870
Country	Australia
Contact number	07 4033 2377
Email address <i>(non-mandatory)</i>	cns.planning@braziermotti.com.au
Mobile number <i>(non-mandatory)</i>	
Fax number <i>(non-mandatory)</i>	
Applicant's reference number(s) <i>(if applicable)</i>	34579-001-01

2) Owner's consent	
2.1) Is written consent of the owner required for this development application?	
<input type="checkbox"/> Yes – the written consent of the owner(s) is attached to this development application	
<input checked="" type="checkbox"/> No – proceed to 3)	

PART 2 – LOCATION DETAILS

3) Location of the premises (complete 3.1) or 3.2), and 3.3) as applicable)

Note: Provide details below and attach a site plan for any or all premises part of the development application. For further information, see DA Forms Guide: Relevant plans.

3.1) Street address and lot on plan

☒ Street address **AND** lot on plan (all lots must be listed), **or**

☐ Street address **AND** lot on plan for an adjoining or adjacent property of the premises (appropriate for development in water but adjoining or adjacent to land e.g. jetty, pontoon; all lots must be listed).

a)	Unit No.	Street No.	Street Name and Type	Suburb
		72-76	Masons Road	Kuranda
	Postcode	Lot No.	Plan Type and Number (e.g. RP, SP)	Local Government Area(s)
	4881	100	SP202702	Mareeba Shire Council
b)	Unit No.	Street No.	Street Name and Type	Suburb
	Postcode	Lot No.	Plan Type and Number (e.g. RP, SP)	Local Government Area(s)

3.2) Coordinates of premises (appropriate for development in remote areas, over part of a lot or in water not adjoining or adjacent to land e.g. channel dredging in Moreton Bay)

Note: Place each set of coordinates in a separate row. Only one set of coordinates is required for this part.

☐ Coordinates of premises by longitude and latitude

Longitude(s)	Latitude(s)	Datum	Local Government Area(s) (if applicable)
		<input type="checkbox"/> WGS84 <input type="checkbox"/> GDA94 <input type="checkbox"/> Other:	

☐ Coordinates of premises by easting and northing

Easting(s)	Northing(s)	Zone Ref.	Datum	Local Government Area(s) (if applicable)
		<input type="checkbox"/> 54 <input type="checkbox"/> 55 <input type="checkbox"/> 56	<input type="checkbox"/> WGS84 <input type="checkbox"/> GDA94 <input type="checkbox"/> Other:	

3.3) Additional premises

☐ Additional premises are relevant to this development application and their details have been attached in a schedule to this application

☒ Not required

4) Identify any of the following that apply to the premises and provide any relevant details

☐ In or adjacent to a water body or watercourse or in or above an aquifer

Name of water body, watercourse or aquifer:

☐ On strategic port land under the *Transport Infrastructure Act 1994*

Lot on plan description of strategic port land:

Name of port authority for the lot:

☐ In a tidal area

Name of local government for the tidal area (if applicable):

Name of port authority for tidal area (if applicable):

☐ On airport land under the *Airport Assets (Restructuring and Disposal) Act 2008*

Name of airport:

<input type="checkbox"/> Listed on the Environmental Management Register (EMR) under the <i>Environmental Protection Act 1994</i>	
EMR site identification:	
<input type="checkbox"/> Listed on the Contaminated Land Register (CLR) under the <i>Environmental Protection Act 1994</i>	
CLR site identification:	

5) Are there any existing easements over the premises?

Note: Easement uses vary throughout Queensland and are to be identified correctly and accurately. For further information on easements and how they may affect the proposed development, see [DA Forms Guide](#).

- ☐ Yes – All easement locations, types and dimensions are included in plans submitted with this development application
- ☒ No

PART 3 – DEVELOPMENT DETAILS

Section 1 – Aspects of development

6.1) Provide details about the first development aspect

a) What is the type of development? *(tick only one box)*

- ☐ Material change of use ☒ Reconfiguring a lot ☐ Operational work ☐ Building work

b) What is the approval type? *(tick only one box)*

- ☒ Development permit ☐ Preliminary approval ☐ Preliminary approval that includes a variation approval

c) What is the level of assessment?

- ☐ Code assessment ☒ Impact assessment *(requires public notification)*

d) Provide a brief description of the proposal *(e.g. 6 unit apartment building defined as multi-unit dwelling, reconfiguration of 1 lot into 3 lots):*

ROL – 1 Lot into 9 Lots over 2 stages

e) Relevant plans

Note: *Relevant plans are required to be submitted for all aspects of this development application. For further information, see [DA Forms guide: Relevant plans](#).*

- ☒ Relevant plans of the proposed development are attached to the development application

6.2) Provide details about the second development aspect

a) What is the type of development? *(tick only one box)*

- ☐ Material change of use ☐ Reconfiguring a lot ☐ Operational work ☐ Building work

b) What is the approval type? *(tick only one box)*

- ☐ Development permit ☐ Preliminary approval ☐ Preliminary approval that includes a variation approval

c) What is the level of assessment?

- ☐ Code assessment ☐ Impact assessment *(requires public notification)*

d) Provide a brief description of the proposal *(e.g. 6 unit apartment building defined as multi-unit dwelling, reconfiguration of 1 lot into 3 lots):*

e) Relevant plans

Note: *Relevant plans are required to be submitted for all aspects of this development application. For further information, see [DA Forms Guide: Relevant plans](#).*

- ☐ Relevant plans of the proposed development are attached to the development application

6.3) Additional aspects of development

- ☐ Additional aspects of development are relevant to this development application and the details for these aspects that would be required under Part 3 Section 1 of this form have been attached to this development application
- ☒ Not required

Section 2 – Further development details**7) Does the proposed development application involve any of the following?**

Material change of use	<input type="checkbox"/> Yes – complete division 1 if assessable against a local planning instrument
Reconfiguring a lot	<input checked="" type="checkbox"/> Yes – complete division 2
Operational work	<input type="checkbox"/> Yes – complete division 3
Building work	<input type="checkbox"/> Yes – complete <i>DA Form 2 – Building work details</i>

Division 1 – Material change of use

Note: This division is only required to be completed if any part of the development application involves a material change of use assessable against a local planning instrument.

8.1) Describe the proposed material change of use

Provide a general description of the proposed use	Provide the planning scheme definition (include each definition in a new row)	Number of dwelling units (if applicable)	Gross floor area (m ²) (if applicable)

8.2) Does the proposed use involve the use of existing buildings on the premises?

<input type="checkbox"/> Yes		
<input type="checkbox"/> No		

Division 2 – Reconfiguring a lot

Note: This division is only required to be completed if any part of the development application involves reconfiguring a lot.

9.1) What is the total number of existing lots making up the premises?

1

9.2) What is the nature of the lot reconfiguration? (tick all applicable boxes)

<input checked="" type="checkbox"/> Subdivision (complete 10))	<input type="checkbox"/> Dividing land into parts by agreement (complete 11))
<input type="checkbox"/> Boundary realignment (complete 12))	<input type="checkbox"/> Creating or changing an easement giving access to a lot from a construction road (complete 13))

10) Subdivision**10.1) For this development, how many lots are being created and what is the intended use of those lots:**

Intended use of lots created	Residential	Commercial	Industrial	Other, please specify:
Number of lots created	9			

10.2) Will the subdivision be staged?

- ☒ Yes – provide additional details below
- ☐ No

How many stages will the works include?	2 Stages
What stage(s) will this development application apply to?	Stages 1 & 2

11) Dividing land into parts by agreement – how many parts are being created and what is the intended use of the parts?

Intended use of parts created	Residential	Commercial	Industrial	Other, please specify:
Number of parts created				

12) Boundary realignment

12.1) What are the current and proposed areas for each lot comprising the premises?

Current lot		Proposed lot	
Lot on plan description	Area (m ²)	Lot on plan description	Area (m ²)

12.2) What is the reason for the boundary realignment?

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13) What are the dimensions and nature of any existing easements being changed and/or any proposed easement? (attach schedule if there are more than two easements)

Existing or proposed?	Width (m)	Length (m)	Purpose of the easement? (e.g. pedestrian access)	Identify the land/lot(s) benefitted by the easement

Division 3 – Operational work

Note: This division is only required to be completed if any part of the development application involves operational work.

14.1) What is the nature of the operational work?

- | | | |
|--|-------------------------------------|--|
| <input type="checkbox"/> Road work | <input type="checkbox"/> Stormwater | <input type="checkbox"/> Water infrastructure |
| <input type="checkbox"/> Drainage work | <input type="checkbox"/> Earthworks | <input type="checkbox"/> Sewage infrastructure |
| <input type="checkbox"/> Landscaping | <input type="checkbox"/> Signage | <input type="checkbox"/> Clearing vegetation |
| <input type="checkbox"/> Other – please specify: <table border="1" style="display: inline-table; width: 300px; height: 20px;"></table> | | |

14.2) Is the operational work necessary to facilitate the creation of new lots? (e.g. subdivision)

<input type="checkbox"/> Yes – specify number of new lots:	
<input type="checkbox"/> No	

14.3) What is the monetary value of the proposed operational work? (include GST, materials and labour)

\$

PART 4 – ASSESSMENT MANAGER DETAILS

15) Identify the assessment manager(s) who will be assessing this development application

Mareeba Shire Council

16) Has the local government agreed to apply a superseded planning scheme for this development application?

- ☐ Yes – a copy of the decision notice is attached to this development application
- ☐ Local government is taken to have agreed to the superseded planning scheme request – relevant documents attached
- ☒ No

PART 5 – REFERRAL DETAILS

17) Do any aspects of the proposed development require referral for any referral requirements?

Note: A development application will require referral if prescribed by the Planning Regulation 2017.

☒ No, there are no referral requirements relevant to any development aspects identified in this development application – proceed to Part 6

Matters requiring referral to the **Chief Executive of the Planning Regulation 2017:**

- ☐ Clearing native vegetation
- ☐ Contaminated land (*unexploded ordnance*)
- ☐ Environmentally relevant activities (ERA) (*only if the ERA have not been devolved to a local government*)
- ☐ Fisheries – aquaculture
- ☐ Fisheries – declared fish habitat area
- ☐ Fisheries – marine plants
- ☐ Fisheries – waterway barrier works
- ☐ Hazardous chemical facilities
- ☐ Queensland heritage place (*on or near a Queensland heritage place*)
- ☐ Infrastructure – designated premises
- ☐ Infrastructure – state transport infrastructure
- ☐ Infrastructure – state transport corridors and future state transport corridors
- ☐ Infrastructure – state-controlled transport tunnels and future state-controlled transport tunnels
- ☐ Infrastructure – near a state-controlled road intersection
- ☐ On Brisbane core port land near a State transport corridor or future State transport corridor
- ☐ On Brisbane core port land – ERA
- ☐ On Brisbane core port land – tidal works or work in a coastal management district
- ☐ On Brisbane core port land – hazardous chemical facility
- ☐ On Brisbane core port land – taking or interfering with water
- ☐ On Brisbane core port land – referable dams
- ☐ On Brisbane core port land - fisheries
- ☐ Land within Port of Brisbane's port limits
- ☐ SEQ development area
- ☐ SEQ regional landscape and rural production area or SEQ rural living area – tourist activity or sport and recreation activity
- ☐ SEQ regional landscape and rural production area or SEQ rural living area – community activity
- ☐ SEQ regional landscape and rural production area or SEQ rural living area – indoor recreation
- ☐ SEQ regional landscape and rural production area or SEQ rural living area – urban activity
- ☐ SEQ regional landscape and rural production area or SEQ rural living area – combined use
- ☐ Tidal works or works in a coastal management district
- ☐ Reconfiguring a lot in a coastal management district or for a canal
- ☐ Erosion prone area in a coastal management district
- ☐ Urban design
- ☐ Water-related development – taking or interfering with water
- ☐ Water-related development – removing quarry material (*from a watercourse or lake*)
- ☐ Water-related development – referable dams
- ☐ Water-related development – construction of new levees or modification of existing levees (*category 3 levees only*)
- ☐ Wetland protection area

Matters requiring referral to the **local government:**

- ☐ Airport land
- ☐ Environmentally relevant activities (ERA) (*only if the ERA have been devolved to local government*)
- ☐ Local heritage places

Matters requiring referral to the chief executive of the distribution entity or transmission entity : <input type="checkbox"/> Electricity infrastructure
Matters requiring referral to: <ul style="list-style-type: none"> • The Chief executive of the holder of the licence, if not an individual • The holder of the licence, if the holder of the licence is an individual <input type="checkbox"/> Oil and gas infrastructure
Matters requiring referral to the Brisbane City Council : <input type="checkbox"/> Brisbane core port land
Matters requiring referral to the Minister under the Transport Infrastructure Act 1994 : <input type="checkbox"/> Brisbane core port land (inconsistent with Brisbane port LUP for transport reasons) <input type="checkbox"/> Strategic port land
Matters requiring referral to the relevant port operator : <input type="checkbox"/> Land within Port of Brisbane's port limits (below high-water mark)
Matters requiring referral to the Chief Executive of the relevant port authority : <input type="checkbox"/> Land within limits of another port (below high-water mark)
Matters requiring referral to the Gold Coast Waterways Authority : <input type="checkbox"/> Tidal works, or work in a coastal management district in Gold Coast waters
Matters requiring referral to the Queensland Fire and Emergency Service : <input type="checkbox"/> Tidal works marina (<i>more than six vessel berths</i>)

18) Has any referral agency provided a referral response for this development application?		
<input type="checkbox"/> Yes – referral response(s) received and listed below are attached to this development application <input type="checkbox"/> No		
Referral requirement	Referral agency	Date of referral response
Identify and describe any changes made to the proposed development application that was the subject of the referral response and the development application the subject of this form, or include details in a schedule to this development application (<i>if applicable</i>).		

PART 6 – INFORMATION REQUEST

19) Information request under Part 3 of the DA Rules
<input checked="" type="checkbox"/> I agree to receive an information request if determined necessary for this development application <input type="checkbox"/> I do not agree to accept an information request for this development application Note: By not agreeing to accept an information request I, the applicant, acknowledge: <ul style="list-style-type: none"> • that this development application will be assessed and decided based on the information provided when making this development application and the assessment manager and any referral agencies relevant to the development application are not obligated under the DA Rules to accept any additional information provided by the applicant for the development application unless agreed to by the relevant parties • Part 3 of the DA Rules will still apply if the application is an application listed under section 11.3 of the DA Rules. Further advice about information requests is contained in the <u>DA Forms Guide</u> .

PART 7 – FURTHER DETAILS

20) Are there any associated development applications or current approvals? (e.g. a preliminary approval)

- ☐ Yes – provide details below or include details in a schedule to this development application
☒ No

List of approval/development application references	Reference number	Date	Assessment manager
<input type="checkbox"/> Approval			
<input type="checkbox"/> Development application			
<input type="checkbox"/> Approval			
<input type="checkbox"/> Development application			

21) Has the portable long service leave levy been paid? (only applicable to development applications involving building work or operational work)

- ☐ Yes – a copy of the receipted QLeave form is attached to this development application
☐ No – I, the applicant will provide evidence that the portable long service leave levy has been paid before the assessment manager decides the development application. I acknowledge that the assessment manager may give a development approval only if I provide evidence that the portable long service leave levy has been paid
☒ Not applicable (e.g. building and construction work is less than \$150,000 excluding GST)

Amount paid	Date paid (dd/mm/yy)	QLeave levy number
\$		

22) Is this development application in response to a show cause notice or required as a result of an enforcement notice?

- ☐ Yes – show cause or enforcement notice is attached
☒ No

23) Further legislative requirements

Environmentally relevant activities

23.1) Is this development application also taken to be an application for an environmental authority for an **Environmentally Relevant Activity (ERA)** under section 115 of the *Environmental Protection Act 1994*?

- ☐ Yes – the required attachment (form ESR/2015/1791) for an application for an environmental authority accompanies this development application, and details are provided in the table below
☒ No

Note: Application for an environmental authority can be found by searching “ESR/2015/1791” as a search term at www.qld.gov.au. An ERA requires an environmental authority to operate. See www.business.qld.gov.au for further information.

Proposed ERA number:		Proposed ERA threshold:	
Proposed ERA name:			

- ☐ Multiple ERAs are applicable to this development application and the details have been attached in a schedule to this development application.

Hazardous chemical facilities

23.2) Is this development application for a **hazardous chemical facility**?

- ☐ Yes – Form 69: Notification of a facility exceeding 10% of schedule 15 threshold is attached to this development application
☒ No

Note: See www.business.qld.gov.au for further information about hazardous chemical notifications.

Clearing native vegetation

23.3) Does this development application involve **clearing native vegetation** that requires written confirmation that the chief executive of the *Vegetation Management Act 1999* is satisfied the clearing is for a relevant purpose under section 22A of the *Vegetation Management Act 1999*?

☐ Yes – this development application includes written confirmation from the chief executive of the *Vegetation Management Act 1999* (s22A determination)

☒ No

Note: 1. Where a development application for operational work or material change of use requires a s22A determination and this is not included, the development application is prohibited development.

2. See <https://www.qld.gov.au/environment/land/vegetation/applying> for further information on how to obtain a s22A determination.

Environmental offsets

23.4) Is this development application taken to be a prescribed activity that may have a significant residual impact on a **prescribed environmental matter** under the *Environmental Offsets Act 2014*?

☐ Yes – I acknowledge that an environmental offset must be provided for any prescribed activity assessed as having a significant residual impact on a prescribed environmental matter

☒ No

Note: The environmental offset section of the Queensland Government's website can be accessed at www.qld.gov.au for further information on environmental offsets.

Koala conservation

23.5) Does this development application involve a material change of use, reconfiguring a lot or operational work within an assessable development area under Schedule 10, Part 10 of the Planning Regulation 2017?

☐ Yes

☒ No

Note: See guidance materials at www.des.qld.gov.au for further information.

Water resources

23.6) Does this development application involve **taking or interfering with underground water through an artesian or subartesian bore, taking or interfering with water in a watercourse, lake or spring, or taking overland flow water under the Water Act 2000**?

☐ Yes – the relevant template is completed and attached to this development application and I acknowledge that a relevant authorisation or licence under the *Water Act 2000* may be required prior to commencing development

☒ No

Note: Contact the Department of Natural Resources, Mines and Energy at www.dnrme.qld.gov.au for further information.

DA templates are available from <https://planning.dsdmip.qld.gov.au/>. If the development application involves:

- Taking or interfering with underground water through an artesian or subartesian bore: complete DA Form 1 Template 1
- Taking or interfering with water in a watercourse, lake or spring: complete DA Form 1 Template 2
- Taking overland flow water: complete DA Form 1 Template 3.

Waterway barrier works

23.7) Does this application involve **waterway barrier works**?

☐ Yes – the relevant template is completed and attached to this development application

☒ No

DA templates are available from <https://planning.dsdmip.qld.gov.au/>. For a development application involving waterway barrier works, complete DA Form 1 Template 4.

Marine activities

23.8) Does this development application involve **aquaculture, works within a declared fish habitat area or removal, disturbance or destruction of marine plants**?

☐ Yes – an associated resource allocation authority is attached to this development application, if required under the *Fisheries Act 1994*

☒ No

Note: See guidance materials at www.daf.qld.gov.au for further information.

Quarry materials from a watercourse or lake

23.9) Does this development application involve the **removal of quarry materials from a watercourse or lake** under the *Water Act 2000*?

- ☐ Yes – I acknowledge that a quarry material allocation notice must be obtained prior to commencing development
- ☒ No

Note: Contact the Department of Natural Resources, Mines and Energy at www.dnrme.qld.gov.au and www.business.qld.gov.au for further information.

Quarry materials from land under tidal waters

23.10) Does this development application involve the **removal of quarry materials from land under tidal water** under the *Coastal Protection and Management Act 1995*?

- ☐ Yes – I acknowledge that a quarry material allocation notice must be obtained prior to commencing development
- ☒ No

Note: Contact the Department of Environment and Science at www.des.qld.gov.au for further information.

Referable dams

23.11) Does this development application involve a **referable dam** required to be failure impact assessed under section 343 of the *Water Supply (Safety and Reliability) Act 2008* (the Water Supply Act)?

- ☐ Yes – the 'Notice Accepting a Failure Impact Assessment' from the chief executive administering the Water Supply Act is attached to this development application
- ☒ No

Note: See guidance materials at www.dnrme.qld.gov.au for further information.

Tidal work or development within a coastal management district

23.12) Does this development application involve **tidal work or development in a coastal management district**?

- ☐ Yes – the following is included with this development application:
- ☐ Evidence the proposal meets the code for assessable development that is prescribed tidal work (*only required if application involves prescribed tidal work*)
 - ☐ A certificate of title
- ☒ No

Note: See guidance materials at www.des.qld.gov.au for further information.

Queensland and local heritage places

23.13) Does this development application propose development on or adjoining a place entered in the **Queensland heritage register** or on a place entered in a local government's **Local Heritage Register**?

- ☐ Yes – details of the heritage place are provided in the table below
- ☒ No

Note: See guidance materials at www.des.qld.gov.au for information requirements regarding development of Queensland heritage places.

Name of the heritage place:		Place ID:	
-----------------------------	--	-----------	--

Brothels

23.14) Does this development application involve a **material change of use for a brothel**?

- ☐ Yes – this development application demonstrates how the proposal meets the code for a development application for a brothel under Schedule 3 of the *Prostitution Regulation 2014*
- ☒ No

Decision under section 62 of the Transport Infrastructure Act 1994

23.15) Does this development application involve new or changed access to a state-controlled road?

- ☐ Yes - this application will be taken to be an application for a decision under section 62 of the *Transport Infrastructure Act 1994* (subject to the conditions in section 75 of the *Transport Infrastructure Act 1994* being satisfied)
- ☒ No

PART 8 – CHECKLIST AND APPLICANT DECLARATION

24) Development application checklist	
I have identified the assessment manager in question 15 and all relevant referral requirement(s) in question 17 <i>Note: See the Planning Regulation 2017 for referral requirements</i>	<input checked="" type="checkbox"/> Yes
If building work is associated with the proposed development, Parts 4 to 6 of <i>DA Form 2 – Building work details</i> have been completed and attached to this development application	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> Not applicable
Supporting information addressing any applicable assessment benchmarks is with development application <i>Note: This is a mandatory requirement and includes any relevant templates under question 23, a planning report and any technical reports required by the relevant categorising instruments (e.g. local government planning schemes, State Planning Policy, State Development Assessment Provisions). For further information, see DA Forms Guide: Planning Report Template.</i>	<input checked="" type="checkbox"/> Yes
Relevant plans of the development are attached to this development application <i>Note: Relevant plans are required to be submitted for all aspects of this development application. For further information, see DA Forms Guide: Relevant plans.</i>	<input checked="" type="checkbox"/> Yes
The portable long service leave levy for QLeave has been paid, or will be paid before a development permit is issued (<i>see 21</i>)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> Not applicable

25) Applicant declaration
<input checked="" type="checkbox"/> By making this development application, I declare that all information in this development application is true and correct <input checked="" type="checkbox"/> Where an email address is provided in Part 1 of this form, I consent to receive future electronic communications from the assessment manager and any referral agency for the development application where written information is required or permitted pursuant to sections 11 and 12 of the <i>Electronic Transactions Act 2001</i> <i>Note: It is unlawful to intentionally provide false or misleading information.</i>
<p>Privacy – Personal information collected in this form will be used by the assessment manager and/or chosen assessment manager, any relevant referral agency and/or building certifier (including any professional advisers which may be engaged by those entities) while processing, assessing and deciding the development application. All information relating to this development application may be available for inspection and purchase, and/or published on the assessment manager's and/or referral agency's website.</p> <p>Personal information will not be disclosed for a purpose unrelated to the <i>Planning Act 2016</i>, <i>Planning Regulation 2017</i> and the <i>DA Rules</i> except where:</p> <ul style="list-style-type: none"> such disclosure is in accordance with the provisions about public access to documents contained in the <i>Planning Act 2016</i> and the <i>Planning Regulation 2017</i>, and the access rules made under the <i>Planning Act 2016</i> and <i>Planning Regulation 2017</i>; or required by other legislation (including the <i>Right to Information Act 2009</i>); or otherwise required by law. <p>This information may be stored in relevant databases. The information collected will be retained as required by the <i>Public Records Act 2002</i>.</p>

PART 9 – FOR OFFICE USE ONLY

Date received: Reference number(s):

Notification of engagement of alternative assessment manager	
Prescribed assessment manager	
Name of chosen assessment manager	
Date chosen assessment manager engaged	
Contact number of chosen assessment manager	

Relevant licence number(s) of chosen assessment manager	
---	--

QLeave notification and payment

Note: For completion by assessment manager if applicable

Description of the work	
QLeave project number	
Amount paid (\$)	
Date paid	
Date receipted form sighted by assessment manager	
Name of officer who sighted the form	

Attachment B

CURRENT TITLE SEARCH

NATURAL RESOURCES, MINES AND ENERGY, QUEENSLAND

Request No: 29548811

Search Date: 14/09/2018 09:07

Title Reference: 50752514

Date Created: 18/12/2008

Previous Title: 50478668

REGISTERED OWNER

Dealing No: 712047231 14/11/2008

ANTE SALINOVIC

ANICA SALINOVIC

JOINT TENANTS

ESTATE AND LAND

Estate in Fee Simple

LOT 100 SURVEY PLAN 202702

Local Government: MAREEBA

EASEMENTS, ENCUMBRANCES AND INTERESTS

1. Rights and interests reserved to the Crown by
Deed of Grant No. 20824151 (POR 41V)
2. COVENANT No 712047256 14/11/2008 at 10:33
TABLELANDS REGIONAL COUNCIL
OVER COVENANT G ON SP202702
3. MORTGAGE No 715708333 10/04/2014 at 12:38
WESTPAC BANKING CORPORATION A.B.N. 33 007 457 141

ADMINISTRATIVE ADVICES - NIL

UNREGISTERED DEALINGS - NIL

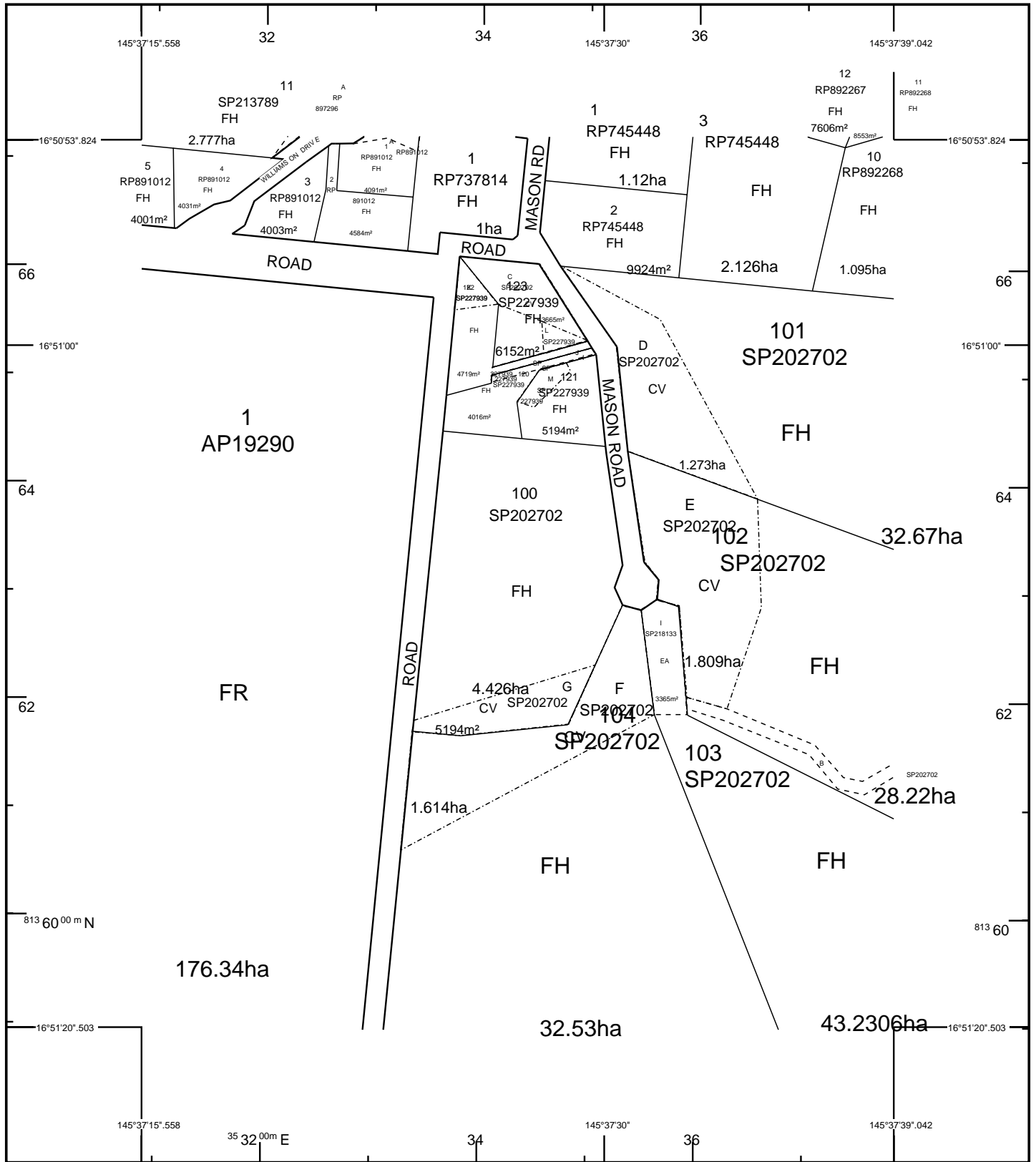
CERTIFICATE OF TITLE ISSUED - No

Caution - Charges do not necessarily appear in order of priority

** End of Current Title Search **

COPYRIGHT THE STATE OF QUEENSLAND (NATURAL RESOURCES, MINES AND ENERGY) [2018]

Requested By: D-ENQ URBIS PRO



STANDARD MAP NUMBER
8064-34221

MAP WINDOW POSITION &
NEAREST LOCATION

145°37'27\"/>

SUBJECT PARCEL DESCRIPTION

DCDB	
Lot/Plan	100/SP202702
Area/Volume	4.426ha
Tenure	FREEHOLD
Local Government	MAREEBA SHIRE
Locality	KURANDA
Segment/Parcel	9954/723

CLIENT SERVICE STANDARDS

PRINTED (dd/mm/yyyy) 29/06/2018

DCDB 28/06/2018

Users of the information recorded in this document (the Information) accept all responsibility and risk associated with the use of the Information and should seek independent professional advice in relation to dealings with property.

Despite Department of Natural Resources and Mines(DNRM)'s best efforts, DNRM makes no representations or warranties in relation to the Information, and, to the extent permitted by law, exclude or limit all warranties relating to correctness, accuracy, reliability, completeness or currency and all liability for any direct, indirect and consequential costs, losses, damages and expenses incurred in any way (including but not limited to that arising from negligence) in connection with any use of or reliance on the Information

For further information on SmartMap products visit <http://nrm.qld.gov.au/property/mapping/blinmap>

SmartMap

An External Product of
SmartMap Information Services

Based upon an extraction from the
Digital Cadastral Data Base



Queensland
Government

(c) The State of Queensland,
(Department of Natural
Resources and Mines) 2018.



Original information compiled from RP745448
RP892266 & SP162915 in the Department
of Natural Resources and Water.

SEE SHEET 3 FOR THE
REFERENCE MARKS TABLE.

Peg placed at all new corners, unless
otherwise stated.

PERMANENT MARKS

PM	ORIGIN	BEARING	DIST	NO
1-PM		351°10'10"	138.571	139678
12-PM		124°08'40"	9.628	139830

TRAVERSES ETC

LINE	BEARING	DISTANCE
1-2	90°0'	20.0

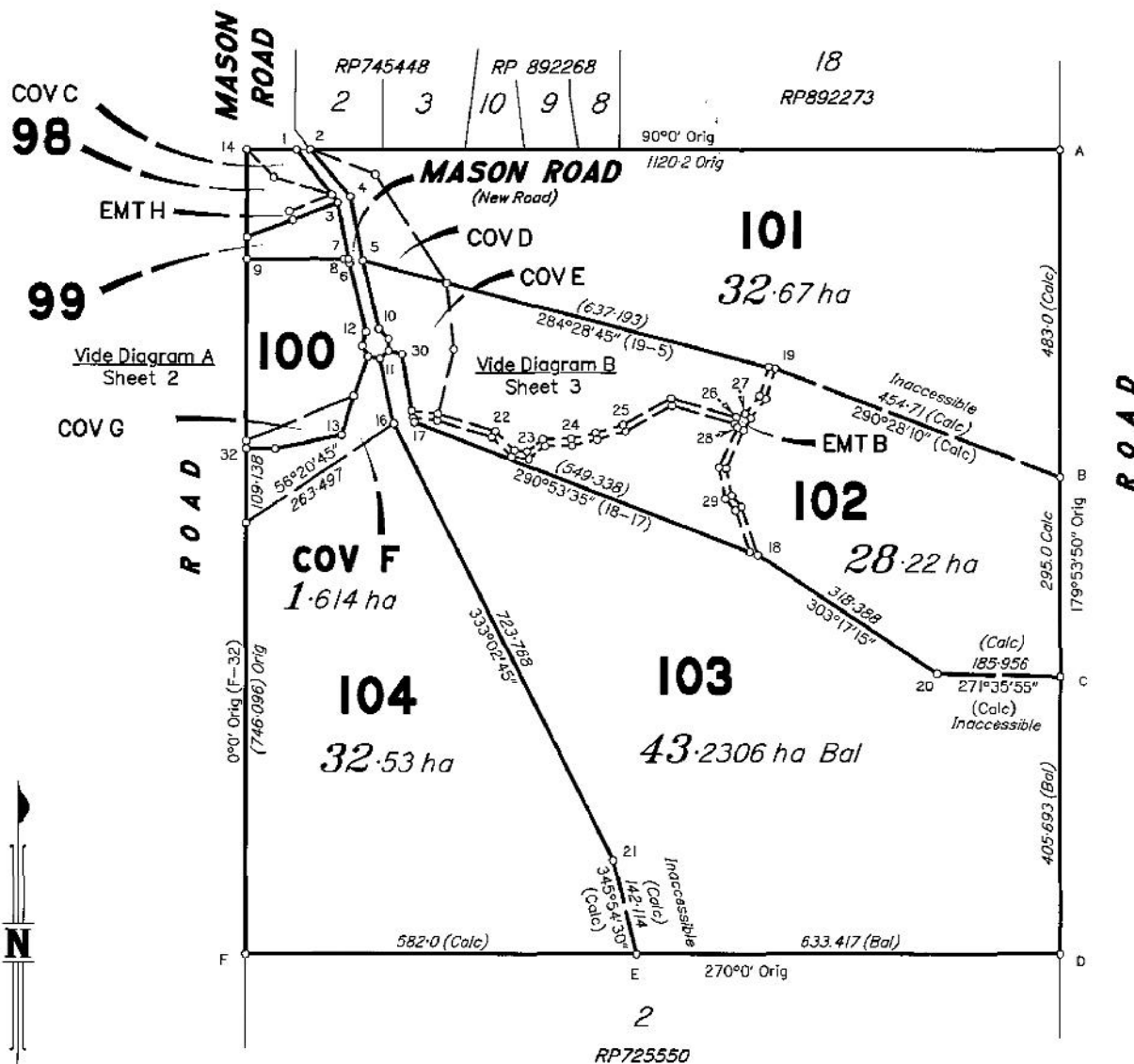
Area of New Road

(1-2-4-5-10-11-12-6-3-1)

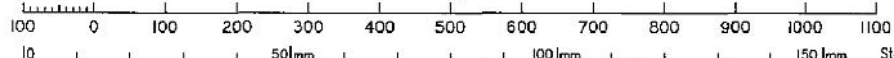
7001 m²

Lines 19-B, 20-C & 21-E have not been fully surveyed.

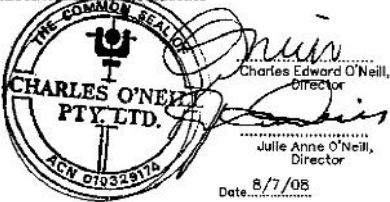
Future dealings in this land may require these boundaries to be surveyed.



Scale 1: 7500 - Lengths are in Metres.



CHARLES O'NEILL PTY. LTD. (ACN 010 329 174) hereby certify that the land comprised in this plan was surveyed by the corporation, by Aidan John Dillon, Surveying Graduate, for whose work the corporation accepts responsibility, under the supervision of Grant Harold Phillips, Cadastral Surveyor and that the plan is accurate, that the said survey was performed in accordance with the Survey and Mapping Infrastructure Act 2003 and Surveyors Act 2003 and associated Regulations and Standards and that the said survey was completed on 20/06/08



Plan of
Lots 98-104 and
Emts H & B in Lots 98 & 102 respectively
and Cows C-G
in Lots 98, 101, 102, 104 & 100 respectively

Cancelling Lot 1 on RP732710
& Lot 100 & 101 on SP162915

PARISH: CAIRNS

COUNTY: Nares

Meridian: RP732710

F/N's: No

Scale: 1: 7500

Format: STANDARD



SP202702

Plan Status:

WARNING : Folded or Mutilated Plans will not be accepted.
Plans may be rolled.
Information may not be placed in the outer margins.

712047231

CS 403

14/11/2008 10:26 \$884.80

Registered

5. Lodged by

MacDonnells Law
Cnr Shields & Grafton Sts
CAIRNS QLD 4870
Ph: (07) 4030 0600 Fax: 4030 0699
Email: lodgements.clerk@MacDonnells.com.au
754
(Include address, phone number, reference, and Lodger Code)

1. Certificate of Registered Owners or Lessees

X We ANTE SALINOVIC & ANICA SALINOVIC
ANTE SALINOVIC & ANICA SALINOVIC
TRUSTEE UNDER INSTRUMENT 708891311
ANTE SALINOVIC & ANICA SALINOVIC
TRUSTEE UNDER INSTRUMENT 710773160

(Names in full)

* as Registered Owners of this land agree to this plan and dedicate the Public Use
Land as shown hereon in accordance with Section 50 of the Land Title Act 1994.

* as Lessees of this land agree to this plan.

+ *Ante Salinovic Anica Salinovic*
Signature of *Registered Owners *Lessees

* Rule out whichever is inapplicable

2. Local Government Approval.

* ~~Tablelands Regional Council~~
hereby approves this plan in accordance with the :
% Integrated Planning Act 1997

Dated this Twenty-Third day of October 2008

Steven Ripper # Steven William Ripper
General Manager
Development & Environment

* Insert the name of the Local Government. % Insert Integrated Planning Act 1997 or
Insert designation of signatory or delegation Local Government (Planning & Environment) Act 1990

3. Plans with Community Management Statement:

CMS Number:

Name:

4. References:

Dept File:

Local Govt:

Surveyor: 5009SAL

6. Existing

Title Reference	Lot	Plan	Lots	Covs	Emts	Road
21073217	1	RP732710	98 - 99	C	H	YES
50478667	100	SP162915	101 - 104	D-F	B	YES
50478668	101	SP162915	100 - 104	D-G		YES

Created

Easement 707405323 (Emt A on SP162915) is to be extinguished
prior to the registration of this plan

98-104

Por 4 IV

Lots

Orig

7. Portion Allocation:

8. Map Reference:

8064-31334

9. Locality:

KURANDA

10. Local Government:

Tablelands Regional Council

11. Passed & Endorsed:

By: CHARLES O'NEILL PTY.LTD.

ACN 010 329 174

Date: 8/07/08

Signed: *Charles O'Neill*

Designation: Cadastral Surveyor

12. Building Format Plans only.

I certify that:

* As far as it is practical to determine, no part
of the building shown on this plan encroaches
onto adjoining lots or road;

~~* Part of the building shown on this plan
encroaches onto adjoining lots and road~~

Cadastral Surveyor/Director * Date
*delete words not required

13. Lodgement Fees:

Survey Deposit \$

Lodgement \$

New Titles \$

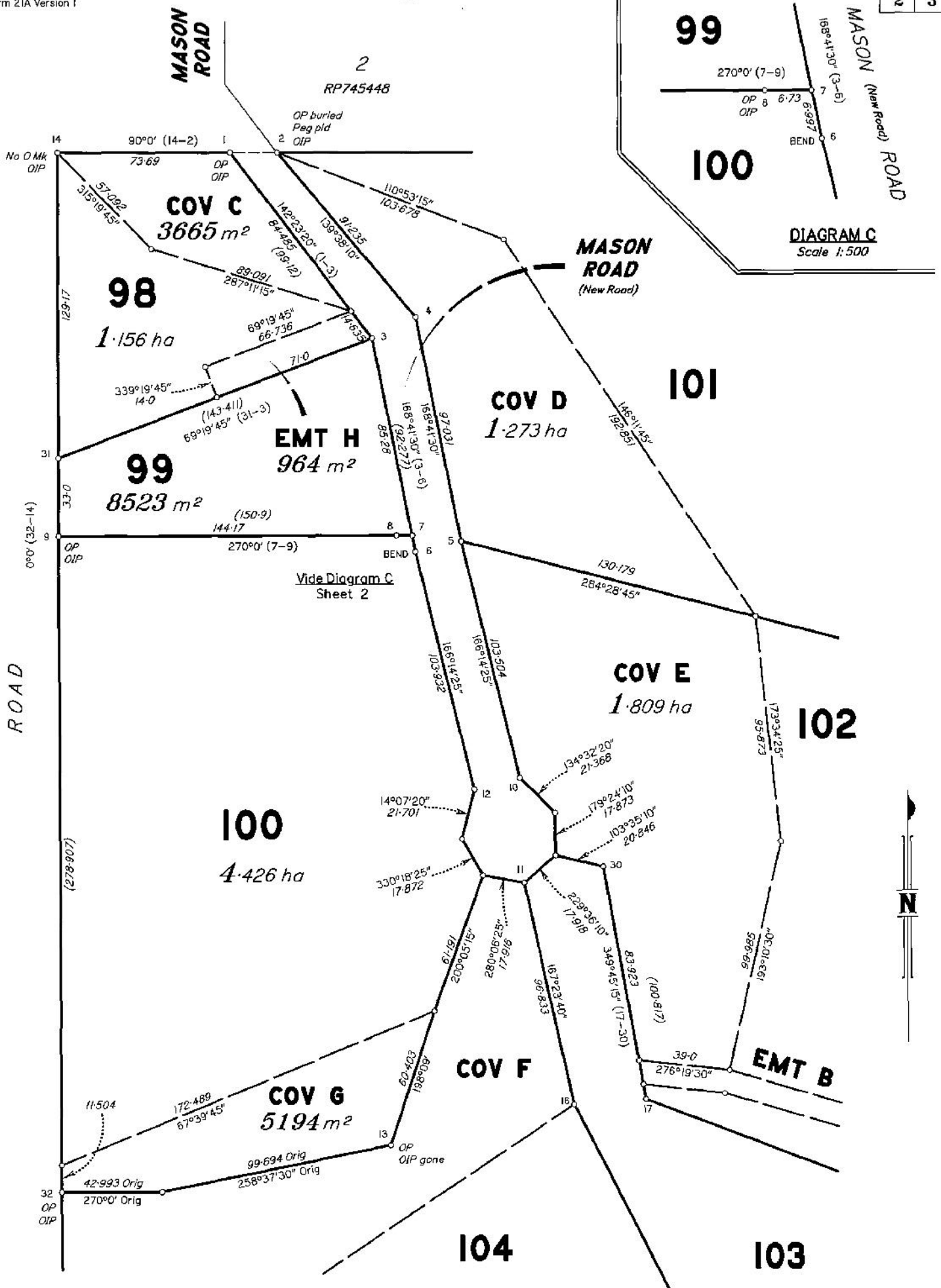
Photocopy \$

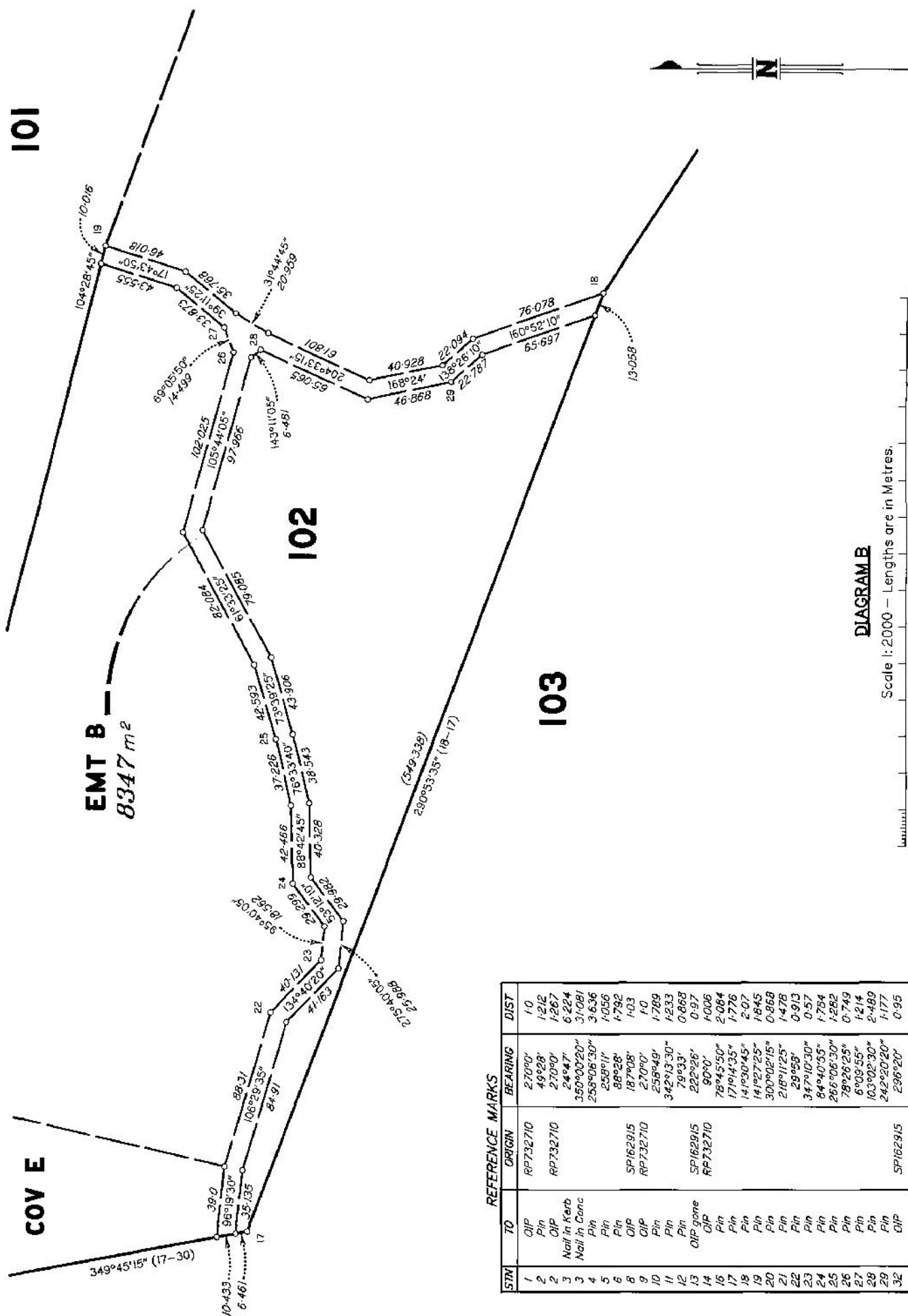
Postage \$

TOTAL \$

14. Insert
Plan
Number

SP202702





REFERENCE MARKS

STN	TO	ORIGIN	BEARING	DIST
1	Chp	RP732710	270°00'	1.0
2	Pin		49°28'	1.212
3	Chp	RP732710	270°00'	1.267
4	Nail in Kerb		24°47'	6.224
5	Nail in Conc		350°00'20"	3.1081
6	Pin		258°06'30"	3.636
7	Pin		258°11'	1.056
8	Pin		88°28'	1.792
9	Chp	SP162915	187°08'	1.03
10	Pin	RP732710	270°00'	1.789
11	Pin		258°49'	1.233
12	Pin		342°13'30"	0.868
13	Pin		79°33'	0.97
14	Chp gone	SP162915	222°26'	1.006
15	Chp	RP732710	90°00'	2.084
16	Pin		78°45'50"	1.776
17	Pin		171°14'35"	2.07
18	Pin		14°30'45"	1.845
19	Pin		14°27'25"	0.868
20	Pin		300°02'15"	1.478
21	Pin		218°11'25"	0.913
22	Pin		29°58'	0.57
23	Pin		347°10'30"	1.754
24	Pin		84°40'55"	1.262
25	Pin		266°06'30"	0.749
26	Pin		78°26'25"	1.214
27	Pin		6°09'55"	2.489
28	Pin		103°02'30"	1.177
29	Pin		242°20'20"	0.95
30	Chp	SP162915	296°20'	

State copyright reserved.

Insert Plan Number **SP202702**

Attachment C

Wastewater Consultants

QBCC Licence # 1312947

Email: sales@wastewaterconsultants.com.au

46 Kennedy Highway,
Tolga. Qld. 4882
P.O. Box 747,
Tolga. Qld. 4882
Ph. 07 40955211
Fax. 07 40955349

WASTEWATER DISPOSAL ASSESSMENT REPORT AND GENERAL SITE OVERLAY FOR PROPOSED SUBDIVISION AND RECONFIGURATION OF:

LOT 100 MASONS ROAD, KURANDA

■ Providing Approved
Sewage, Wastewater & Water Services

■ Site & Soil Assessment Reports ~
Land Application Designs ~
Subdivisional & Development
Assessment Reports ~
Pre Purchase Reports ~

■ Domestic & Commercial Septic
Disposal Systems.
Domestic Wastewater Aerated
Treatment Systems.
Commercial Wastewater Aerated
Treatment Systems.
Domestic & Commercial Advanced
Secondary Systems.
Secondary Systems.

■ Trench Systems or Trench Beds.
Evapo-Transpiration Trench Beds.
Recycling (CNL) Irrigation Networks.

■ Domestic & Commercial Servicing &
Reporting.
Replacement New & Reconditioned
Compressors & Pumps.
Concrete & Polymer Septic Tanks &
Grease Traps.
Rain Water or Storage Water Tanks.
Chemical Storage or Dosing Tanks.

■ Submersible Borehole Pumps.
Domestic or Commercial Pressure
Pumps.
Submersible Cutter / Macerator
Pumps.

■ Water Analysis Services &
Testing.
Filtration Systems & Replacement
Filters.
Chlorinator, RO and UV Filter
Systems.



Report No. WC20896

SITE ASSESSMENT DATE: 3rd September 2018

Prepared For: A & A Salinovic C/O Brazier Motti
PO Box 6628
Cairns QLD 4870

Document Control Summary


Job No:	WC20896			
Status:	For submission			
Project Manager:	Brazier Motti			
Title:	Wastewater Subdivision & Reconfiguration Assessment and Report			
Author/s:	Danny Raines			
Client:	A & A Salinovic			
Client Contact:	Michael Tessaro			
Date of Issue:	September 2018			
No. of Copies:	1			
Dispatched Via:	Electronic			
Delivery Format:	PDF			
Other Info or Requirements:	None			
Report Summary				
Key Words	Subdivision, Reconfiguration, "MSC" Mareeba Shire Council, Wastewater Disposal Options.			
Abstract	This report includes various treatment and disposal methods for effluent and sullage wastewater for unsewered properties and allotments, based on the assumed sizing, proposed reconfiguration and subdivided individual allotments being equal to or greater than 3500m2.			
Quality Assurance				
Author	Editor	Document Version	Approved for Issue by QA Manager	
			Date	Signature
Danny Raines Wastewater Consultants	Jessica Raines Wastewater Consultants	For submission	Sept. 2018	

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1.0 Introduction

Wastewater Consultants have been commissioned by Brazier Motti on behalf of the client to provide an assessment report for on-site sewerage disposal for the proposed reconfiguration of subdivisional allotments 1-9 at Masons Road, Kuranda, cancelling Lot 100 on plan number SP202702.

In particular the following areas have been assessed and carefully considered.

- Suitable Effluent Disposal Systems (DLR) Design Loading Rates and (DIR) Design Irrigation Rates.
- Local Government & Legislative Requirements
- Dispersivity, Permeability and Categories of Soils.
- Appropriate Separation Distances between Disposal Areas and Various Site Features.

This report includes various treatment and disposal methods for effluent and sullage wastewater for unsewered properties and allotments, based on the assumed sizing and proposed reconfiguration and subdivided individual allotments being equal to or greater than 3500m².

The Code of Practice for On-Site Wastewater Management AS1547-2012 Appendix C and D of this code covers on-site sewerage facilities for planning, rezoning and subdivision of land. The previous code AS1547-2000 and The On-Site Sewerage Code talks about On-Site Wastewater Management; these codes also recommend and require a complete site and soil evaluation to be carried out preferably at the planning stages.

It's recommended the site assessment and evaluation addresses all issues relating to health, environmental, legislation and economic factors, which shall contribute to the design of the on-site facilities. The assessment and evaluation provides soil characteristics which then be used to determine feasible on-site disposal options. The soil shall be assessed and the structure of the soils to be categorised and from this, a design, loading rate or design irrigation rate can be assumed and adopted for the site.

2.0 Site Description

This site is located in a rural-residential area not connected to council's sewerage infrastructure and surrounded by other residential dwellings on smaller allotments.

Proposed lots 1-9 are to be assessed for disposal of domestic residential effluent and wastewater. At present there are existing dwellings on Lots 5 & 7 which are currently serviced by primary treatment systems. The remaining lots are vacant and details of plans for future construction on these properties are unknown. The assessed parcel of land (existing Lot 100) is regarded as regular in shape, as are the proposed reconfigured lots. All proposed allotments are sloping and thus all future land application areas will need to be constructed level with a slope of $< 5\%$ on these sites.

On inspection, the property was identified by site plans supplied by Brazier Motti. A seasonal watercourse has been observed running through the south-east corner of proposed lot 9. As per the provided site plans, multiple easements for drainage throughout the subdivision have been proposed and for the purpose of this report they will be classed as intermittent watercourses. No other existing major water bodies or boreholes were currently observed on this property or neighbouring properties that would further influence the required setback and separation distances for disposal of effluent and wastewater. All setback and separation distances are further detailed within our report and provided site plan.

There were no other disposal concerns or impacts observed or identified at or surrounding this proposal. At the time of our site investigations the property was regarded as dry land with ground cover predominantly grass and existing native rainforest vegetation. It is assumed the intended water supply source for all proposed subdivided lots will be town water.

3.0 Field Work & Field Work Results

We carried out the required soil tests and test holes in various locations on and over the proposed allotments, most results indicating the site consists of typical red/brown loams confirming the soil types and textures should be designated and categorised as moderately structured clay loams.

Tests were undertaken comprising of 125mm machine augured test holes, core samples, tactile ribbon tests and visual assessments over the sites and to depths up to approximately 600mm below ground level. At the time of our investigations and in the chosen and selected test areas, there were no signs of any ground water, therefore we have assumed the ground water should not rise above 3 meters of natural ground levels and should be considered as suitable for this application; although it should be also noted the level of groundwater is affected by other various factors, including seasons, climate conditions and soil permeability and therefore may vary at different times.

For the design purposes of this report, the soils have thus been modelled on ***category 5 light clays*** which indicate the soils are considered poorly drained as to AS/NZS1547-2012 with clay content of 35-45%.

4.0 Comments

4.01 Soil Permeability:

Based on our soil test results, past experience and our visual and tactile assessment for this site and its soils, it is concluded that the soils at this site should be designated and regarded as **Category 5 light clays** which are expected to respond predominantly as “**poorly drained**” for the purpose of on-site effluent disposal. This conclusion was reached after further inspection and modelling of the soils, previous experience and sampling of the soils, numerous soil test holes and core samples and general exposures throughout the proposed reconfigured allotments.

4.02 Effluent Disposal:

Taking into account the “Deemed to Comply” provisions for horizontal and vertical separation of trenches, beds and irrigation systems with such features as seasonal and permanent watercourses and site features, it is recommended that the level of treatment within the standards and codes, both AS1547-2012 and the On-Site Sewerage Code, be further investigated so as to comply with the location and mapping of this application. Local council planning, assessing the local area and possible site impacts together with the assumed (LTAR) Long Term Acceptance Rates, system disposal sizing and previous discussions and current regulations with “MSC” Mareeba Shire Council were also taken into account.

With the above considerations taken into account, the minimum level of treatment that can be achieved, complying with the recommended setback and separation distances as to AS1547-2012, is assumed as **primary treated effluent utilising evapotranspiration absorption “ETA” trenches or wisconsin mounds for disposal of effluent on Lots 6, 7 & 8 and secondary treated effluent utilising sub-surface irrigation for disposal of effluent on all remaining allotments**. A minimum separation distance of 50m from any site features must be maintained for primary treatment of effluent and a minimum separation distance of 30m from any site features must be maintained for secondary treatment of effluent. Refer to the provided site plans indicating the suitable disposal systems along with the required setback and separation distances for future planning on these properties.

Therefore, as per AS/NZS1547-2012 and the on-site sewerage code, the Design Loading Rates (DLR) for a minimum of **primary treatment should be assumed at 5mm/day with disposal via “ETA” trenches or 8mm/day with disposal via a Wisconsin Mound**. The Design Irrigation Rates (DIR) for a minimum of **secondary treatment should be assumed at 3mm/day with disposal via sub-surface irrigation**. It is expected that the K-sat indicative permeability of the soils are to be regarded **at 0.12m/day – 0.5m/day** as per AS1547-2012.

4.03 Preferred Wastewater Treatment Disposal Options:

Three levels of effluent quality are identified and defined based on the level of treatment; primary, secondary and advanced secondary. The following highlighted parameters are the minimum required for this proposal and are as per the guidelines for effluent disposal.

Parameter	Primary Effluent (g/m3)	Secondary Effluent (g/m3)	Advanced Secondary Effluent (g/m3)
Biological Oxygen Demand	120 – 240	20	10
Total Suspended Solids	65 – 180	30	10
Thermo – Tolerant Organisms (org/100mg)	N/A	200	10
Suitable Treatment System	Septic Tank + Outlet Filter	Aerated Treatment System (AWTS)	Aerated Treatment System and or Nutrient Removal

As per AS/NZS1547-2012 identifying land application systems that are considered suitable for site, soil and climate factors.

4.04 Subsurface Placement of Effluent:

It is important that the effluent is placed in intimate contact with the soils so that initially the water fills the pores spaces (micropores and macropores) immediately around the distribution point and sets up a hydraulic gradient (a wet area tapering into a wetting front) as shown in Figure 4. As the amount of water entering the soil increases to saturation, the velocity that the water moves through the soil increases until it reaches a maximum rate at Ksat.

The hydraulic conductivity of unsaturated soils is lower and increases rapidly with degree of saturation. Depending upon the texture of the soil, the amount of water required to bring the soil to saturation will vary and the velocity of the movement of the water will also be constrained by soil texture. In sandy soils (coarse textured soils) water will move quite rapidly away from the distribution point because the larger pores fill rapidly as there is little surface tension to slow down the flow. In fine textured soils (clay loams and clays) the water has to fill capillaries rather than macropores and the movement of water away from the distribution point is constrained.

Hydraulic loading rates greater than K-sat can result in saturated conditions in the soil, leading to increased microbial activity that can fill pores spaces (Lank, 1986). The lower the hydraulic loading, the more aeration occurs between doses, thus limiting the accumulation of microbial matter in the pore spaces (Lesiker et al., 1998). Whenever the hydraulic gradient is maintained through the addition of more effluent, then the wetting front will be driven further afield (downwards and/or laterally). The design process of individual allotments must set out to minimise the rapid movement of effluent by using small intermittent doses and maintaining an unsaturated soil environment.

Figure 6 shows the location of a subsurface irrigation system within the surface horizon, maximising the absorption of water and the uptake of nutrient by the plants. The aim is to maximise unsaturated soil conditions and together with placement, intermittent dosing, appropriate spacing of laterals and emitters help to achieve that outcome.

Plants will respond to the subsurface application of effluent in various ways depending upon the placement of the effluent in proximity to roots such that the roots can access the water. Plant roots do not grow towards water as they cannot grow through dry soil, but grow as a response to water in the capillaries. Plants uptake nutrients dissolved in soil water for their metabolic requirements and the uptake efficiency is higher when the soil moisture is closer to field capacity as discussed previously. As soil dries out (approaches wilting point), plants require greater energy to acquire the water and nutrients and plant production will diminish. As one of the aims of subsurface application is to maximise uptake of water and nutrients, maintaining the soil water regime closer to field capacity is critical. When nutrient uptake is maximised, the potential for leaching is reduced, therefore appropriate nutrient hungry and water tolerant plants should be incorporated into the design of the disposal area.

Figure 6 shows the behaviour of the effluent discharge wetting front from both a point discharge (emitter, dripper or drilled hole) and a drainfield to a discontinuity in the soil texture profile. As the texture changes at the interface of the A2 horizon and the more clayey B horizon (B horizon by definition has higher clay content), so permeability decreases across the interface as a function of texture and biomat formation. The easiest path for the effluent to flow to the macropores (first stage of water movement) is through the coarser textured A2 horizon and so lateral flow begins. As the macropores in this horizon are now filled, water flows more rapidly to expand the wetting front and we have set up a preferential flow path. As a downward sloping landscape and gravity interacts to hasten the flow in the direction of the slope. It is, therefore, important to consider the impact of each of the horizons and the boundaries between those horizons as they impinge upon permeability.

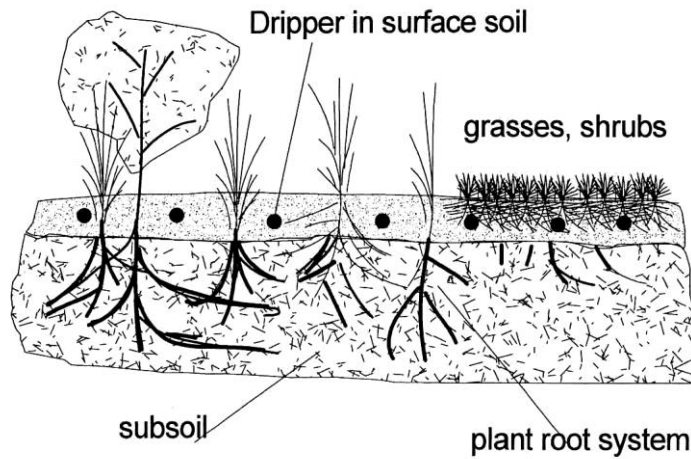


Figure 6: Placement of irrigation system under landscaped areas

4.05 Land Application Areas:

Treated effluent from a wastewater treatment plant should be disposed directly to a land application area/s.

Traditionally, the philosophy underpinning land application of treated effluent has been to focus on disposal with a minimum of adverse effects. Treated effluent (recycled water) is now widely regarded as a resource rather than a waste requiring disposal. With the protection of public health as an overarching principle, beneficial uses of recycled water should be encouraged where it is safe, practicable and economic to do so and where it provides the best environmental outcome.

4.06 Subsurface Infiltration Systems:

Subsurface infiltration systems such as the soil absorption trench and shallow subsurface drip irrigation are the most commonly used systems for dispersal of domestic on-site wastewater. Interactive surfaces are located in permeable, unsaturated natural soil or imported fill material so wastewater can infiltrate and percolate through the underlying soil to the groundwater. As the wastewater infiltrates through the soil, it is treated through a variety of physical, chemical and biochemical processes and reactions.

Many different designs and configurations are used but all incorporate soil infiltrative surfaces that are located in buried excavations (Figure 1). The primary infiltrative surface is the bottom of the excavation, but the sidewalls also may be used for infiltration. Perforated pipe is installed to distribute the wastewater over the infiltration surface. In the conventional soil absorption trench or bed a porous medium,

typically gravel or crushed rock is placed in the excavation below and around the distribution piping to support the pipe and spread the localised flow across the excavation. Another option is the self-supporting arch (Figure 2) that is substituted for the distribution piping and porous medium. In both cases a permeable geotextile fabric or other suitable material is laid over the porous medium or self-supporting arch before the excavation is backfilled to prevent clogging of porous medium.

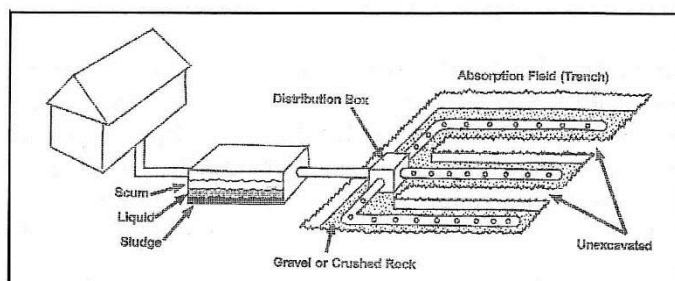


Figure 1: Conventional subsurface wastewater infiltration System. (Source U.S.E.P.A. 2002)

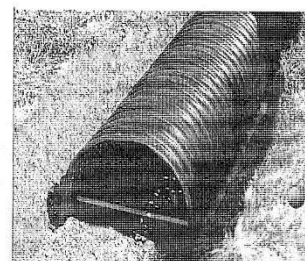


Figure 2: Self supporting arch. (Source Everhard Catalogue)

Subsurface infiltration systems are well suited for treatment of small wastewater flows. The conventional subsurface system shown in Figure 1 is traditionally used in unsewered areas by individual domestic residences, commercial establishments and caravan parks.

They are a proven technology but require specific site conditions to be successfully implemented. Site selection is based on the treatment capacity of the soil and the availability of sufficient land area of suitable topography. The treatment capacity of the soil depends primarily on the texture, structure and unsaturated thickness. For information on determining the size of a soil absorption trench refer to AS/NZS 1547:2012.

Gravity flow can be used where there is sufficient elevation between the outlet of the treatment system and the distribution pipe work. Gravity flow systems are simple and inexpensive to construct but are the least efficient method of distribution. Distribution is very uneven over the infiltration surface resulting in localised overloading.

The even distribution of the effluent over the infiltration surface is an important component of the design and installation of a soil absorption trench. Many trenches fail because the effluent is only covering part of the trench. This has the effect of increasing the hydraulic loading which can ultimately exceed the infiltrative capacity of the soil.

Pressure dosing using a pump should be considered when designing a soil absorption trench.

A pressure distribution system has the advantages over gravity distribution of providing a uniform small dose to the entire absorption area, promoting unsaturated flow and providing a consistent drying/re-aeration period between doses. The spacing and sizing of orifices should be uniform because the objective of pressure dosing is to provide uniform distribution with unsaturated flow beneath the pipe.

4.07 Mound System:

A mound system is a soil absorption system that is elevated above the natural soil surface in a suitable fill material. The purpose of the design is to overcome site restrictions that prohibit the use of conventional soil absorption systems (Converse et.al., 1978). Such restrictions are:

- 1) Slowly permeable soils,
- 2) Shallow permeable soils over creviced or porous bedrock, and
- 3) Permeable soils with high water tables.

In slowly permeable soils, the mound serves to improve absorption of the effluent by utilising the more permeable topsoil and eliminating construction in the wetter and more slowly permeable subsoil, where smearing and compaction are often unavoidable. In permeable soils with insufficient depth to groundwater or creviced or porous bedrock, the fill material in the mound provides the necessary treatment of wastewater. (See Figure 3 and 4).

The mound system consists of:

- 1) A suitable fill material,
- 2) An absorption area,
- 3) A distribution network,
- 4) A cap, and
- 5) Top soil

The effluent is pumped into the absorption area through a distribution network located in the upper part of the coarse aggregate. It passes through the aggregate and infiltrates the fill material. Treatment of the wastewater occurs as it passes through the fill material and the unsaturated zone of the natural soil. The topsoil provides a growth medium for the vegetation.

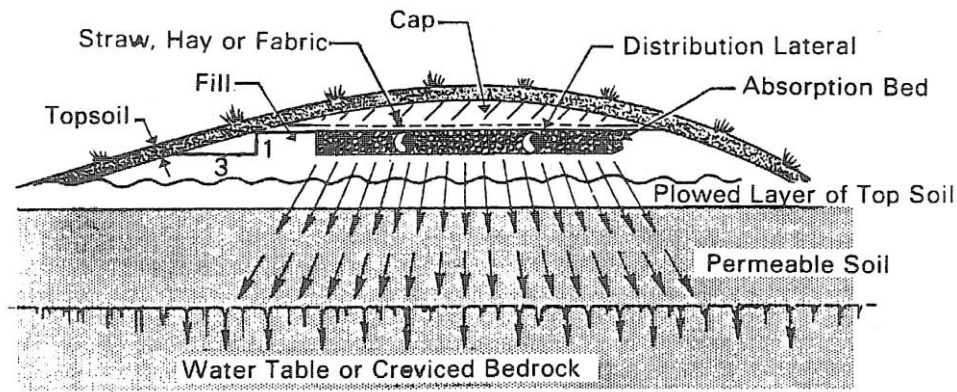
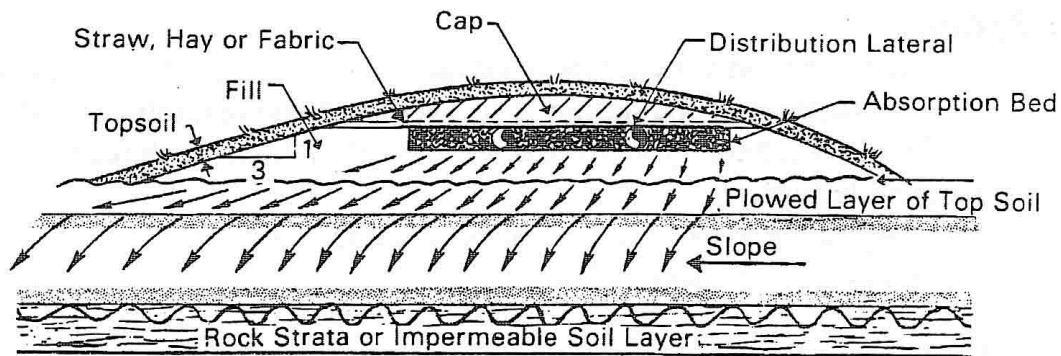


Figure 3: Typical mound system on permeable soils with high water tables or shallow permeable soils over creviced or porous bedrock



(a) Cross Section of a Mound System for Slowly Permeable Soil on a Sloping Site.

Figure 4: Typical mound system on s slowly permeable soil

The design of mound systems is a two-step process. Permeability tests are conducted on the native soils on the site at the depth at which the mound base will exist. The values of the indicative permeability are correlated to the design loading rate in Table 4.2A3, AS/NZS 1547:2012.

The design loading rate is then used to calculate the base area of the mound. The second step is to design the mound section. On the basis of the type of material used to construct the mound, the area of the application bed in the mound is determined. For further design information refer to AS/NZS 1547:2012.

4.08 Evapo-Transpiration Systems:

Evapo-transpiration systems can be used in areas where there is low rainfall. Effluent from the treatment tank is applied through perforated pipes to a sand bed underlaid by a liner. The sand depth is typically 450 mm in depth with 150 mm of topsoil placed over the sand.

The depth of sand depends on the storage required within the evapo-transpiration bed. The evapo-transpiration system can also be designed without the liner and the resultant system is referred to as an evapo-transpiration-absorption system. For further information refer to AS/NZS 1547:2012.

4.09 Shallow Subsurface Drip Irrigation:

Drip irrigation technology has advanced over the years to where nonclog emitters are available for both surface and subsurface uses. Sand filter and other high-quality effluent can be used in drip irrigation of landscape and other crops. Periodic chlorination of the drip tubing has been found successful in reducing the slime growths that clog the emitters and distribution lines. Figure 5 shows an example of a drip irrigation system using a recirculating sand filter as the treatment technology.

The emitters are designed with a turbulent flow path to minimise clogging from suspended solids and are often treated with an herbicide to protect them from root intrusion. These emitters operate at a flow rate of 1.6 to 8 L/hr with openings 1.5mm to 1.8mm in diameter. Typical onsite drip irrigation consists of emitter lines placed at 0.4 m to 0.6 m centres with 0.4 m to 0.6 m emitter spacing. This spacing is typical for sandy and loamy soils. Closer spacing's of 0.4 to 0.45 meters are used on clay soils where lateral movement of water is restricted.

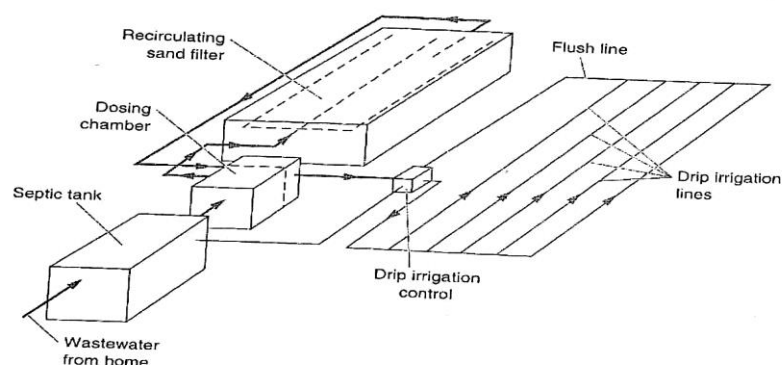


Figure 5 Example of a drip irrigation system with a recirculating sand filter.

The effluent applied to the land is released to the atmosphere through the mechanism of evapo-transpiration.

There are two main objectives in discharging effluent onto land and in considering any proposal the principal intention should be clearly established. It may be:

- 1) a means of treatment for improving effluent quality
- 2) a means of disposal of effluent
- 3) a combination of the above.

4.10 Nitrogen:

(NO₃⁻). Nitrogen compounds of concern are, inorganic ions ammonium (NH₄⁺) and nitrate. Ammonium is biologically transformed by bacteria to NO₃ (nitrification) causing oxygen consumption in receiving water bodies or tables (and hence likely fish death). Nitrate is of major concern in potable water supplies, especially groundwater, where a concentration of greater than 10 mg/L NO₃-N (or 45 mg/L NO₃) can cause methaemoglobinaemia in infants (blue baby syndrome). Elevated NO₃ levels in surface water bodies (>3 mg/L) when combined with elevated phosphorus levels can cause algal blooms which can be either toxic in themselves, or which give off foul odours and consume dissolved oxygen during their subsequent decay (Gardner, et.al., 1993).

4.11 Phosphorous:

Phosphorous is usually the element most limiting to algal growth in surface water bodies and tables. Data suggests that for the turbid Australian waters soluble P levels must exceed 0.17 mg/L for algal blooms to occur. As with nitrogen, P comes in a variety of organic and inorganic forms, but the forms which are available for biological uptake are the orthophosphates. Because phosphates are readily sorbed by most soils, the major export pathway of P from a land application area is via attachment on eroded soil particles (Gardner, et.al., 1993).

4.12 On-Site Sewage Code Requirements:

Table 1 from the NRM code recommends the following horizontal separation distances for land application areas. Where indicated the table may also represent actual separation distances assumed and or measured on-site.

Feature	Recommended Horizontal Separation Distance	Measured Distance
Footings of Buildings	Boundaries of land application areas should be positioned at least 2.0M down slope, 4.0M upslope from the footing or where the site is flat, 2.0M from any point of the building footing.	> 4M
Property Boundaries, Pedestrian Paths and Walkways, Recreation Areas.	Boundaries of land application areas should be positioned at least 2.0M down slope, 4.0M upslope from the feature in column one or where the site is flat, 2.0M from any point of the feature.	> 4M
Retaining Wall Footings	Boundaries of land application areas should be positioned at least 2.0M down slope, 4.0M upslope from the retaining wall footings or where the site is flat, 2.0M from any point of retaining wall footings.	N/A
Inground Swimming Pools	Boundaries of land application areas should be positioned at least 6.0M down slope, 6.0M upslope from the swimming pool or where the site is flat, 6.0M from any point of the pool	N/A
Inground Potable Water tanks	Primary effluent – 15M from the boundary of the land application area. Secondary effluent – 6M from the boundary of the land application area.	N/A
Note: The separation distances are recommended only. The local government may upon considering the public health and environmental risks reduce or increase the distances given in table 1.		

Recommended horizontal and vertical separation and setback distances Appendix R Table R1 need to be used in conjunction with Table R2 from AS/NZS1547-2012, R2 Application discusses minimum and maximum constraints for various properties and sites and in some cases the local government will have policy or guidelines that will override the R1 & R2 guideline distances suggested.

NRM Code recommends the following horizontal separation distances for land application areas.

Feature	Recommended Separation Distances	Measured Distance
Top of bank of permanent water course; Top of bank of intermittent water course; Top of bank of a lake, top water level of a surface water source used for agriculture, aquaculture or stock purposes; Easement boundary of unlined open stormwater drainage channel or drain.	Primary effluent: 50M (Horizontal) Secondary effluent: 30M (Horizontal) Advanced secondary effluent: 10M (Horizontal)	> 50 M > 30 M
Bore or a dam used or likely to be used for human and or domestic consumption	Primary effluent: 50M (Horizontal) Secondary effluent: 30M (Horizontal) Advanced secondary effluent: 10M (Horizontal)	> 50 M > 30 M
Unsaturated soil depth to a permanent water table	Primary effluent: 1.2M (Vertical) Secondary effluent: 0.6M (Vertical) Advanced secondary effluent: 0.3M (Vertical)	> 1.2 M > 0.6 M
Note: The separation distances are recommended and the local government may upon considering the public health and environmental risks reduce or increase the given in table 3		

In accordance with the above table for Vertical and Horizontal separation distance, the Vertical separation requirement for the minimum selection being primary or secondary treated effluent is 1.2M and 0.6M respectively. The groundwater is not assumed to rise within 3.0 metres of natural ground levels.

4.13 Legislative Requirements:

The On-site Sewerage Code was gazetted in 2003 and compliance with this code is a requirement of the plumbing and drainage act 2002. This code defines the on-site disposal of effluent.

During consideration of an application for the on-site treatment and disposal facilities, the local government is required to assess whether the application will trigger referral for an (ERA) Environmental Relevant Activity when daily flows exceed 4000 litres. This proposal for the subdivided and reconfigured allotments is as to AS1547-2012 and the local planning requirements and has been selected as residential with a maximum expected equivalent person capacity of **8EP**. It is assumed this proposal shall not exceed the daily 4000 litre flow limits per allotment and therefore will not require referral onto (DEHP) Department Environment and Heritage Protection

As per the Environmental Guidelines Sewerage Treatment Works Peak Design Capacities including septic tank and composting toilets, the proposed subdivided and reconfigured allotments would each have a maximum total equivalent person capacity of **8 persons** and therefore shall not trigger involvement by (DEHP) for this proposal.

We also would like to make note of the following:

All effluent disposal and construction shall comply with the requirements of The On-Site Sewerage Code, Plumbing and Drainage Act 2002 (Division 4), Standard Plumbing and Drainage Regulation 2003 (Part 2 - 8B), (QPW) Queensland Plumbing and Wastewater Code, AS/NZS1547-2000 & 2012 On-Site Domestic Wastewater Management, On-Site Facilities Guidelines - Effluent Quality (Jan 2004), Vertical and Horizontal Separation Distance (June 2002) and (DLGPS) Department of Local Government, Planning, Sport & Recreation.

Reserve land application areas require 100% for available future expansions as to AS/NZS1547-2000 & 2012. However, ***Clause: 4.2.3.4 of AS1547-2000, states that the reserve area may be reduced or even eliminated if an improved wastewater recycling treatment system is provided, i.e secondary or advanced secondary and or nutrient reduction treatment.***

The minimum assessed disposal options for this proposal have been considered as primary treatment for Lots 6,7 & 8 and secondary treatment for remaining lots. A reserve or duplication land application area on the proposed new allotments is still recommended. It's further recommended that Mareeba Shire Council "MSC" address all future individual applications and makes the final decision regarding reserve or duplication land application areas for the proposed new allotments.

5.0 Decision Notice

The reconfigured and proposed subdivided allotments for this application are suitable to dispose of all generated effluent and sullage waste in the manner discussed within this report. Council concerns regarding cumulative impacts of treated effluent on proposed Lots 1-9 should be limited and possibly unfounded as with the minimum recommendation and installation of primary treatment on Lots 6, 7 & 8 and secondary treatment on remaining lots, there shall be no cumulative cluster effects with disposal land application areas. All setback and separation distances can be achieved for disposal on site by maintaining the 50 meter setback from any site features required for primary treated effluent and the 30 meter setback from site features required for secondary treated effluent.

As details regarding future construction on all proposed allotments is unknown at this stage of the proposal, it is recommended that prior to any future applications for effluent treatment and disposal on all subdivided lots, further supporting information concerning setback and separation distances and sizing should be determined and submitted to Mareeba Shire Council “MSC” prior to the construction of any dwellings on each property.

6.0 System Installation Requirements

6.01 General:

An approved or licensed person in accordance with the manufactures recommendations and to the relevant Australian Standards shall install the disposal systems and all of its components. The operation and maintenance of the minimum proposed disposal systems shall be as per the manufacture's recommendations and as to AS3500 National Plumbing, AS1547-2012 and The On-Site Sewerage Code.

6.02 Wastewater Treatment Systems:

The minimum recommended primary treatment systems shall be sized as to any future proposed building applications and should be in accordance with the requirements AS1547-2012 and The On-Site Sewerage Code.

6.03 Earthworks and Stormwater:

All roof stormwater shall be collected and piped to suitable discharge points from all new buildings, limiting stormwater flow from the final selected land application disposal areas, diversion mounding, bunding and or cut off drains may be required to be installed at the land application area so as no water can flow over and through the land application area, so as to minimise run-off and also saturation of the LAA.

6.04 Operation and Maintenance:

Operation and maintenance will be required to be outlined further with each supporting application to Mareeba Shire Council "MSC". Regular minimum maintenance will be required with each disposal system; this is essential for the disposal systems long-term viability. The owner and subsequent owners should keep the records of all maintenance activities undertaken on the final selected system and disposal facility, i.e. maintenance reports on sludge tests and de-sludging / pump-out dates etc.

6.05 Estimation of Daily Flows:

Tables H1 and H2 in Appendix H of AS/NZS1547-2012 indicate the typical domestic wastewater design flow allowances for use in Australia. The allowance for residential premises would be typically ***150 litres per person per day*** with reticulated water supply.

However it's recommended with local government planning and for subdivision designs that flow allowances of ***200 litres per person per day*** be utilised and supported within the calculations for new residential domestic subdivisions unless proposing with a full and new application.

As for this application, we have based our findings on the maximum daily calculated flows, therefore with the calculations and sizing as per AS/NZS1547-2012 and all-waste septic tank capacities, the population equivalent persons of **eight (8)** has been selected for each proposed subdivided lot and daily maximum flow has been based on ***1600 litres per day***.

All final designs shall then be further determined with individual and site specific reports, calculations and designs when proposing a building application and submitting to Mareeba Shire Council "MSC" for compliance approval prior to any construction phase.

7.0 Conclusions:

Overall, the proposed subdivided and reconfigured allotments at this property shall and can comply with the minimum requirements of primary treatment for proposed Lots 6,7, & 8 and secondary treatment for all remaining lots.

Proposed Lots 6, 7 & 8 have suitable land application areas which can be satisfied by a minimum of primary treatment utilising evapotranspiration absorption “ETA” trenches or wisconsin mounds for disposal of effluent. All remaining proposed lots have suitable land application areas which can be satisfied by a minimum of secondary treatment utilising sub-surface irrigation for disposal of effluent. It is assumed most standard dwellings that would be constructed on these proposed sites would not exceed 4 - 5 bedrooms and therefore, after calculating the maximum daily flow of 1600L based on the population equivalent persons of 8, each allotment would require a maximum land application area of approximately *320m² for trenches, *200m² for wisconsin mounds or *534m² for sub-surface irrigation. ***If the minimum required land application area “LAA” is not available for these system proposals, alternative advanced secondary treatment systems will need to be further investigated.***

Thus, this proposal can comply with and including:

AS/NZS1547-2000 and AS/NZS1547-2012 - On-Site Domestic Wastewater Management.

AS3500 - National Plumbing Code, Codes and Guidelines and other Documents.

Department of Local Government, Planning, Sport and Recreation (DLGPS) – Queensland Plumbing and Wastewater (QPW) Code 2006
Queensland Water Recycling Guidelines - December 2005.

Department of Local Government and Planning ‘On-site Sewerage Facilities Guidelines for Vertical and Horizontal Separation Distance – January 2004.

The final selected disposal systems should be sized, designed and designated with any future building applications prior to submitting to Mareeba Shire Council “MSC”. It is recommended all future designs should therefore implement and comply with the minimum design considerations as to the requirements and advice included in this report.

8.0 Pollution Exclusion and Disclaimer:

Wastewater Consultants and its employees shall not be liable or responsible in respect of any claims for damage or damages to property or personal injury including costs and expenses incurred in preventing, removing, nullifying or clean up caused by arising directly or indirectly out of actual alleged or threatened discharge, dispersal, release or escape of waste materials, toxic chemicals, liquids or gases, smoke, fumes, soot, vapour's, acids, alkalis, or any other irritants, contaminants or pollutants into or upon any property, land, atmosphere or any water course or body of water including groundwater. Raines Industries T/As Wastewater Consultants carries all required insurances, however is exempt from private indemnity insurance as to QBCC.

APPENDIX (A)

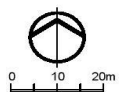
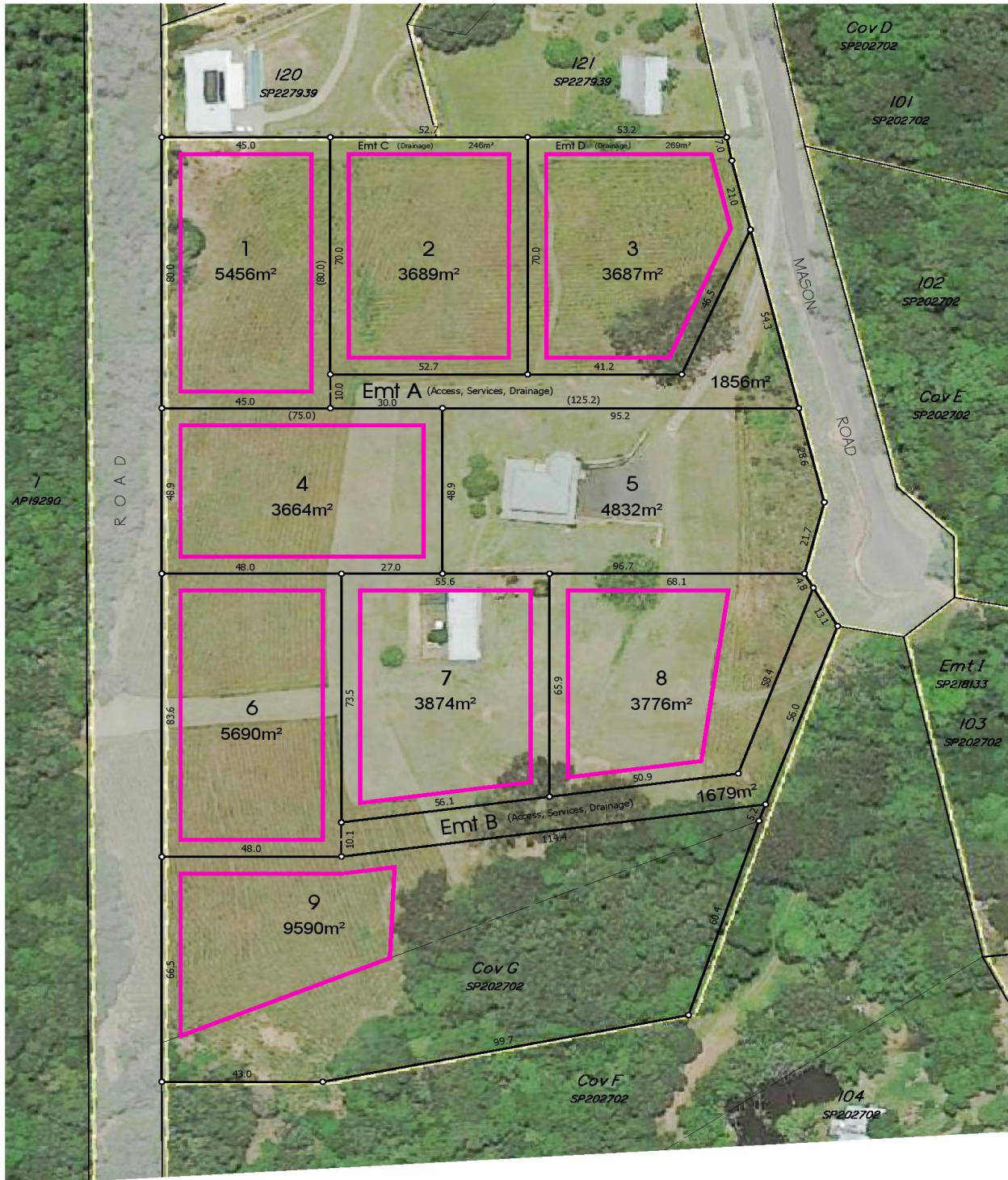
SITE ASSESSMENT PHOTOS



LOOKING OVER PROPOSED SUBDIVISION AND SOIL ON SITE.

APPENDIX (B)

AERIAL SITE PHOTOGRAPH



Building Envelope

PROPOSED RECONFIGURATION

Lots 1-9 & Emts A - D
Cancelling Lot 100 on SP202702
72-76 Masons Road, Kuranda



brazier moti
P 1300 267 878
W www.braziermoti.com.au

Date: 26th July 2018
Scale: 1:1000 @A3
Drawn: WCHO
Job No: 34579/1-1
Plan No: 34579/001A

surveying | town planning | project management | mapping and GIS

This plan is conceptual and for discussion purposes only. All areas, dimensions and land uses are preliminary, subject to investigation, survey, engineering, and Local Authority and Agency approvals.

This report is based on the on-site assessment and conditions assessed and encountered at the time of the site visit. Brazier Motti on behalf of the client provided information including the proposed reconfiguration and other relevant documentation for use with this application. Should any aspect of this report change or differ from those already indicated including the assessed soil types, Raines Industries T/A Wastewater Consultants must be contacted prior any proceedings as amendments and future designs may be required. No allowances for additional bedrooms or numbers of permanent people have been considered for expansion with this design and report.

In the event of any proceedings with the installation of the proposed treatment system where Wastewater Consultants is not nominated as the responsible person for compliance assessable work or where the installation varies from the report recommendations and design in full, the company and its employees shall not be liable for any system failures or issues that may arise. All equipment and materials must be installed as per the manufacturer's recommendations and specifications and must comply with Australian standards.

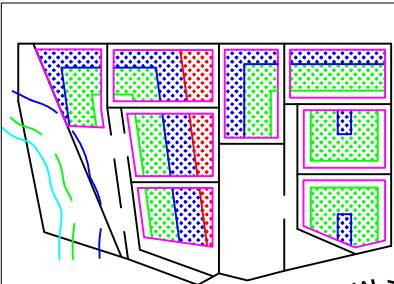
SITE INVESTIGATOR:

Wastewater Consultants
Danny Raines

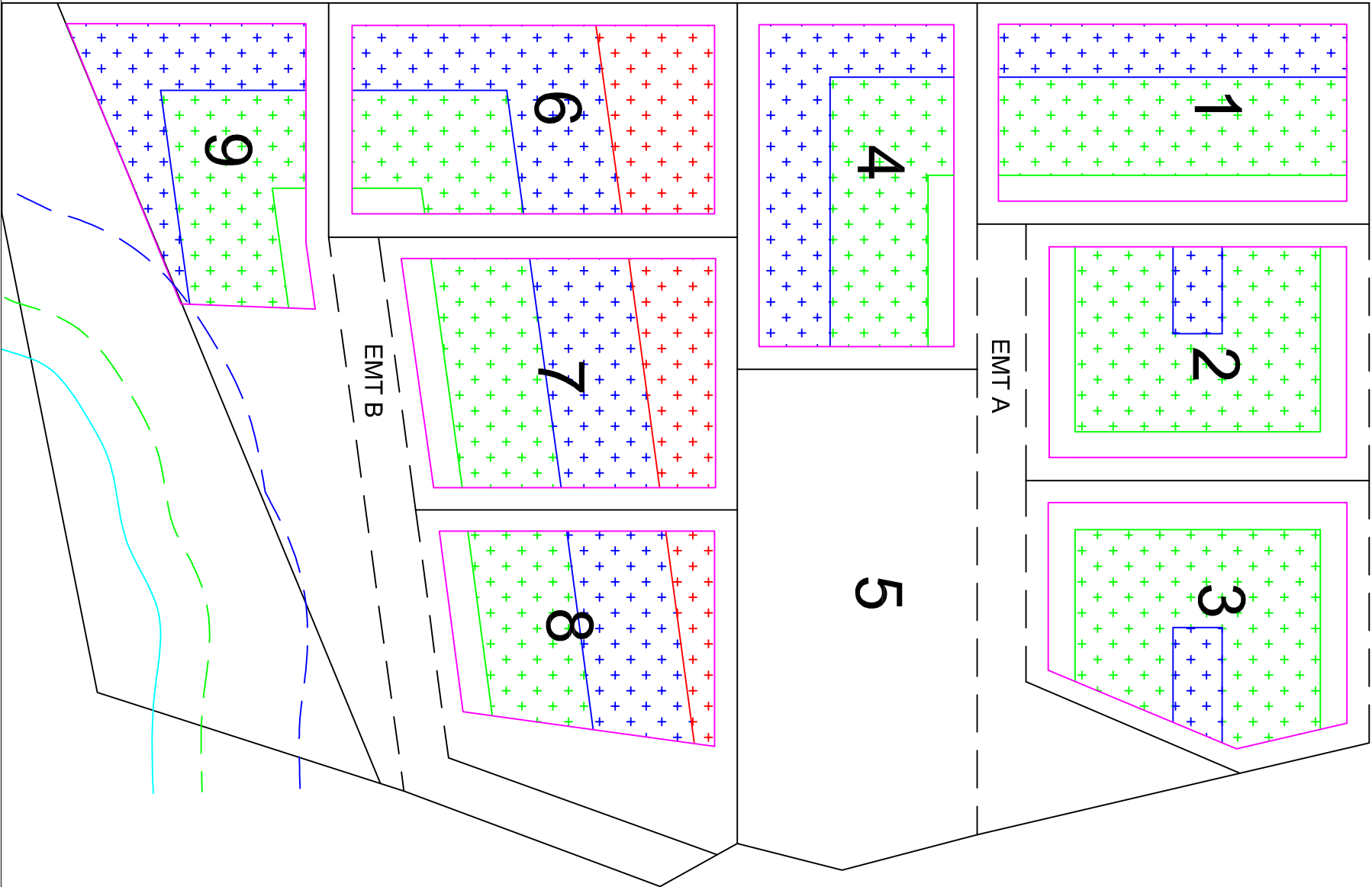
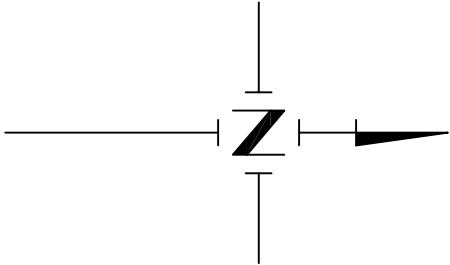
Signature: 

Date: 09/09/2018

**WASTEWATER CONSULTANTS
WASTEWATER MANAGEMENT SPECIALISTS**



- Seasonal or Permanent Water Course.
- 10m min. seperation distance req'd from watercourse for Advanced Secondary treatment
- 30m min. seperation distance req'd from watercourse for Secondary treatment
- 50m min. seperation distance req'd from watercourse for Primary treatment
- EMT boundaries
- Building envelope



All Plumbing and Draining to comply with AS3500

Real Property Description
Lot 100 ON SP202702
Parish of XXX
County of XXX
Site Area: XXX Ha m²

WASTEWATER DISPOSAL ASSESSMENT
72-76 MASONS RD, KURANDA
A & A SALINOVIC

PROPOSED SUBDIVISION

DATE: 09/09/2018
SCALE: To Fit Page

DRAWN: J.R. STAGE: 1 REPORT No: WC 20896 SHEET No: 01 REV: Sht. 1 of 1.

Rev.	Date	Amendment	By



Raines Industries Pty Ltd
ABN 46 299 473 685

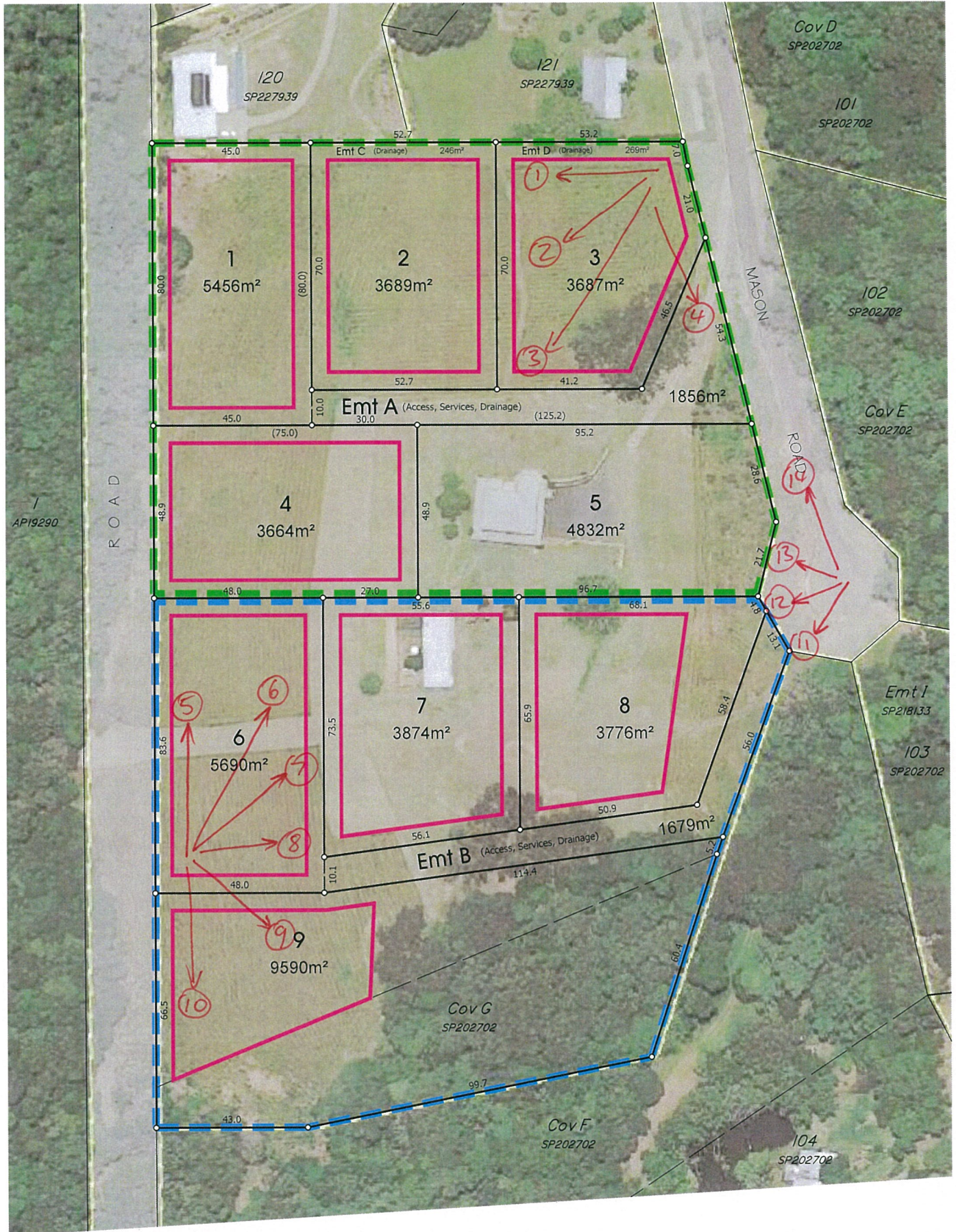
Wastewater Consultants

QBCC Licence No. 1312947

46 Kennedy Highway,
TOLGA, Qld. 4882
(PO Box 747, TOLGA, Qld. 4882)
Phone: (07) 40955211
Fax: (07) 40955349

Attachment D

Direction of Photographs.



- Stage 1
- Stage 2
- Building Envelope

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Photograph 1.



Photograph 2.



Photograph 3.



Photograph 4.



Photograph 5.



Photograph 6.



Photograph 7.



Photograph 8.



Photograph 9.



Photograph 10.



Photograph 11.



Photograph 12.

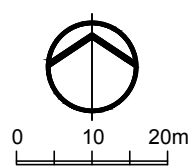
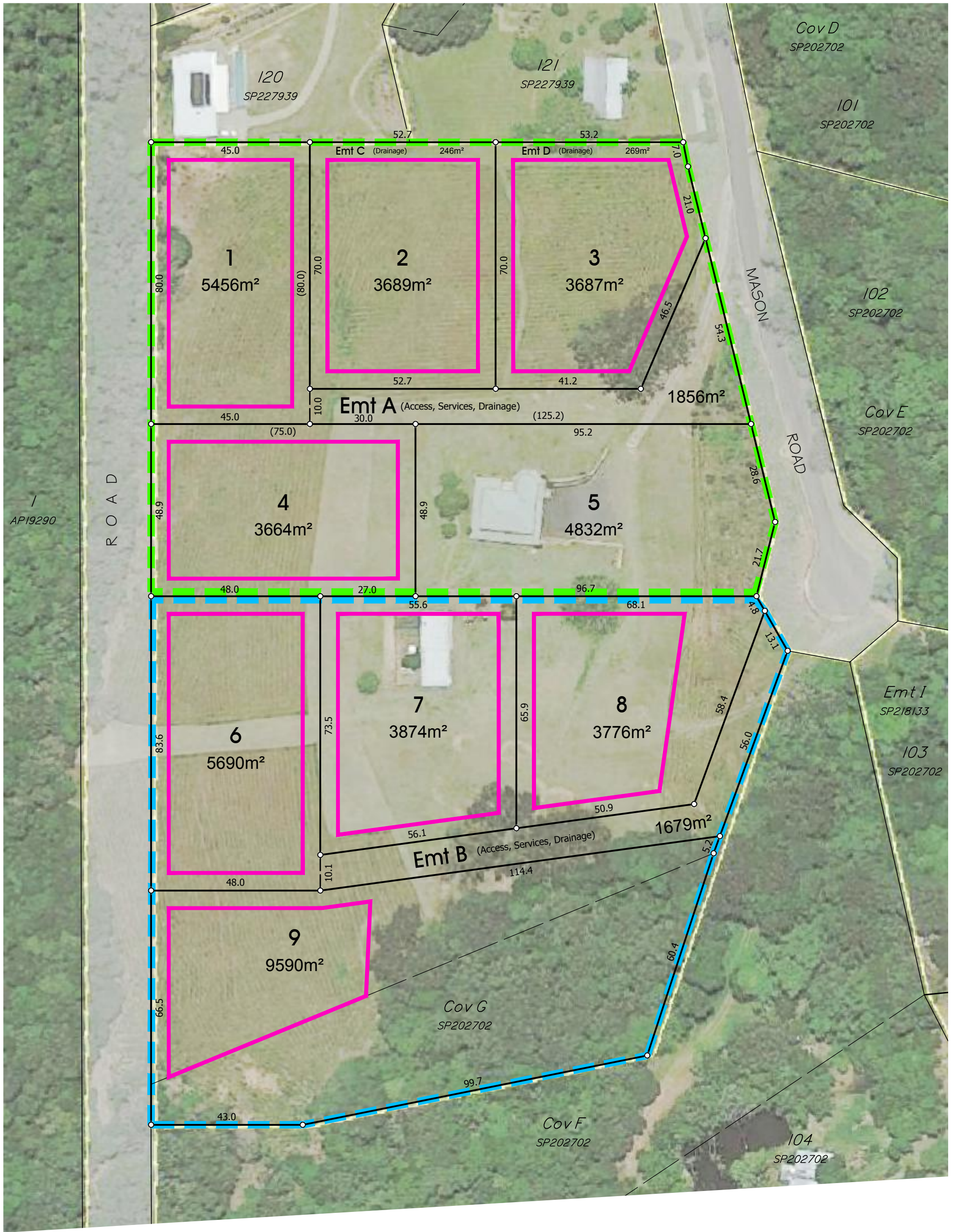


Photograph 13.



Photograph 14.

Attachment E



- Stage 1
- Stage 2
- Building Envelope

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