GMA Certification Group Pty Ltd

BUILDING SURVEYORS

Queensland's leaders in Building Certification Services

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23 June 2017

The Chief Executive Officer
Douglas Shire Council
PO Box 723
MOSSMAN Q 4873

Attention: Development Assessment

Dear Sir,

Re: Material Change of Use
Lot 8 SP176447 South Arm Drive, Wonga

GMA Certification Group has been engaged to assess an application for the construction of a dwelling and shed on the abovementioned allotment. A preliminary assessment of the proposal has revealed the property is zoned Rural Settlement under the Douglas Shire Planning Scheme.

Accordingly, the application for Material Change of Use is enclosed for Council's assessment, which includes:

1. Forms 1 & 5
2. Planning Assessment
3. Waste Water Report, and
4. 1 x copy of plans

Should you require any further information or wish to discuss the application, please contact me on 4098 5150 or by email jevans@gmacert.com.au

Kind Regards,

Jeff Evans

GMA Certification Group
Encl.

IDAS form 1—Application details

(*Sustainable Planning Act 2009* version 4.3 effective 5 December 2016)

This form must be used for **ALL** development applications.

You **MUST** complete **ALL** questions that are stated to be a mandatory requirement unless otherwise identified on this form.

For all development applications, you must:

- complete this form (*IDAS form 1—Application details)*
- complete any other forms relevant to your application
- provide any mandatory supporting information identified on the forms as being required to accompany your application.

Attach extra pages if there is insufficient space on this form.

All terms used on this form have the meaning given in the *Sustainable Planning Act 2009* (SPA) or the Sustainable Planning Regulation 2009.

This form and any other IDAS form relevant to your application must be used for development applications 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*. Whenever a planning scheme is mentioned, take it to mean land use plan for the strategic port land, Brisbane core port land or airport land.

PLEASE NOTE: This form is not required to accompany requests for compliance assessment.

Mandatory requirements

Applicant details (Note: the applicant is the person responsible for making the application and need not be the owner of the land. The applicant is responsible for ensuring the information provided on all IDAS application forms is correct. Any development permit or preliminary approval that may be issued as a consequence of this application will be issued to the applicant.)

Name/s (individual or company name in full)	JUSTIN WARD
For companies, contact name	
Postal address	c/- QMA CERTIFICATION GROUP P/L P.O. BOX 831
Suburb	PORT DOUGLAS
State	Q
Postcode	4877
Country	
Contact phone number	
Mobile number (non-mandatory requirement)	0419 778 554
Fax number (non-mandatory requirement)	

Email address (non-mandatory requirement) jwardac @ hotmail.com

Applicant's reference number (non-mandatory requirement)

1. What is the nature of the development proposed and what type of approval is being sought?

Table A—Aspect 1 of the application (If there are additional aspects to the application please list in Table B—Aspect 2.)

a) What is the nature of the development? (Please only tick one box.)

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

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

☐ Preliminary approval under s241 of SPA ☐ Preliminary approval under s241 and s242 of SPA ☑ Development permit

c) Provide a brief description of the proposal, including use definition and number of buildings or structures where applicable (e.g. six unit apartment building defined as a *multi-unit dwelling*, 30 lot residential subdivision etc.)

DWELLING & SHED

d) What is the level of assessment? (Please only tick one box.)

☐ Impact assessment ☑ Code assessment

Table B—Aspect 2 of the application (If there are additional aspects to the application please list in Table C—Additional aspects of the application.)

a) What is the nature of development? (Please only tick one box.)

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

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

☐ Preliminary approval under s241 of SPA ☐ Preliminary approval under s241 and s242 of SPA ☐ Development permit

c) Provide a brief description of the proposal, including use definition and number of buildings or structures where applicable (e.g. six unit apartment building defined as a *multi-unit dwelling*, 30 lot residential subdivision etc.)

d) What is the level of assessment?

☐ Impact assessment ☐ Code assessment

Table C—Additional aspects of the application (If there are additional aspects to the application please list in a separate table on an extra page and attach to this form.)

☐ Refer attached schedule ☐ Not required

2. Location of the premises (Complete Table D and/or Table E as applicable. Identify each lot in a separate row.)

Table D—Street address and lot on plan for the premises or street address and lot on plan for the land adjoining or adjacent to the premises (Note: this table is to be used for applications involving taking or interfering with water.) (Attach a separate schedule if there is insufficient space in this table.)

☑ Street address **and** lot on plan (All lots must be listed.)

☐ Street address **and** lot on plan for the land adjoining or adjacent to the premises (Appropriate for development in water but adjoining or adjacent to land, e.g. jetty, pontoon. All lots must be listed.)

Street address					**Lot on plan description**		**Local government area** (e.g. Logan, Cairns)
Lot	Unit no.	Street no.	Street name and official suburb/ locality name	Post-code	Lot no.	Plan type and plan no.	
i)		90	SOUTH ARM DR	4873	8	SP	DOUGLAS
ii)			WONGA BEACH			176447	SHIRE
iii)							COUNCIL

Planning scheme details (If the premises involves multiple zones, clearly identify the relevant zone/s for each lot in a separate row in the below table. Non-mandatory)

Lot	Applicable zone / precinct	Applicable local plan / precinct	Applicable overlay/s
i)			
ii)			
iii)			

Table E—Premises coordinates (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.) (Attach a separate schedule if there is insufficient space in this table.)

Coordinates (Note: place each set of coordinates in a separate row)				**Zone reference**	**Datum**	**Local government area (if applicable)**
Easting	Northing	Latitude	Longitude			
					☐ GDA94 ☐ WGS84 ☐ other	

3. Total area of land on which the development is proposed (indicate square metres)

1.001 HECT.

4. Current use/s of the premises (e.g. vacant land, house, apartment building, cane farm etc.)

VACANT

5. Are there any current approvals (e.g. a preliminary approval) associated with this application? (Non-mandatory requirement)

☑ No ☐ Yes—provide details below

List of approval reference/s	Date approved (dd/mm/yy)	Date approval lapses (dd/mm/yy)

6. Is owner's consent required for this application? (Refer to notes at the end of this form for more information.)

☐ No

☑ Yes—complete either Table F, Table G or Table H as applicable

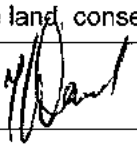
Table F	
Name of owner/s of the land	
I/We, the above-mentioned owner/s of the land, consent to the making of this application.	
Signature of owner/s of the land	
Date 16.06.17	

Table G	
Name of owner/s of the land	
☐ The owner's written consent is attached or will be provided separately to the assessment manager.	

Table H	
Name of owner/s of the land	
☐ By making this application, I, the applicant, declare that the owner has given written consent to the making of the application.	

7. Identify if any of the following apply to the premises (Tick applicable box/es.)

☐ Adjacent to a water body, watercourse or aquifer (e.g. creek, river, lake, canal)—complete Table I

☐ On strategic port land under the *Transport Infrastructure Act 1994*—complete Table J

☐ In a tidal water area—complete Table K

☐ On Brisbane core port land under the *Transport Infrastructure Act 1994* (No table requires completion.)

☐ On airport land under the *Airport Assets (Restructuring and Disposal) Act 2008* (no table requires completion)

☐ Listed on either the Contaminated Land Register (CLR) or the Environmental Management Register (EMR) under the *Environmental Protection Act 1994* (no table requires completion)

Table I
Name of water body, watercourse or aquifer

Table J	
Lot on plan description for strategic port land	Port authority for the lot

Table K	
Name of local government for the tidal area (if applicable)	Port authority for the tidal area (if applicable)

8. Are there any existing easements on the premises? (e.g. for vehicular access, electricity, overland flow, water etc)

☑ No ☐ Yes—ensure the type, location and dimension of each easement is included in the plans submitted

9. Does the proposal include new building work or operational work on the premises? (Including any services)

☐ No ☑ Yes—ensure the nature, location and dimension of proposed works are included in plans submitted

10. Is the payment of a portable long service leave levy applicable to this application? (Refer to notes at the end of this form for more information.)

☑ No—go to question 11 ☑ Yes

10a. Has the portable long service leave levy been paid? (Refer to notes at the end of this form for more information.)

☐ No

☑ Yes—complete Table L and submit, with this application, the local government/private certifier's copy of the accepted QLeave form

Table L		
Amount paid	Date paid (dd/mm/yy)	QLeave project number (6 digit number starting with A, B, E, L, P or S)

11. Has the local government agreed to apply a superseded planning scheme to this application under section 96 of the *Sustainable Planning Act 2009*?

☑ No

☐ Yes—please provide details below

Name of local government	Date of written notice given by local government (dd/mm/yy)	Reference number of written notice given by local government (if applicable)

12. List below all of the forms and supporting information that accompany this application (Include all IDAS forms, checklists, mandatory supporting information etc. that will be submitted as part of this application)

Description of attachment or title of attachment	Method of lodgement to assessment manager
FORMS 1, 2, 5.	
PLANS	

13. Applicant's declaration

☑ By making this application, I declare that all information in this application is true and correct (Note: it is unlawful to provide false or misleading information)

Notes for completing this form

- Section 261 of the *Sustainable Planning Act 2009* prescribes when an application is a properly-made application. Note, the assessment manager has discretion to accept an application as properly made despite any non-compliance with the requirement to provide mandatory supporting information under section 260(1)(c) of the *Sustainable Planning Act 2009*

Applicant details

- Where the applicant is not a natural person, ensure the applicant entity is a real legal entity.

Question 1

- Schedule 3 of the Sustainable Planning Regulation 2009 identifies assessable development and the type of assessment. Where schedule 3 identifies assessable development as "various aspects of development" the applicant must identify each aspect of the development on Tables A, B and C respectively and as required.

Question 6

- Section 263 of the *Sustainable Planning Act 2009* sets out when the consent of the owner of the land is required for an application. Section 260(1)(e) of the *Sustainable Planning Act 2009* provides that if the owner's consent is required under section 263, then an application must contain, or be accompanied by, the written consent of the owner, or include a declaration by the applicant that the owner has given written consent to the making of the application. If a development application relates to a state resource, the application is not required to be supported by evidence of an allocation or entitlement to a state resource. However, where the state is the owner of the subject land, the written consent of the state, as landowner, may be required. Allocation or entitlement to the state resource is a separate process and will need to be obtained before development commences.

Question 7

- If the premises is listed on either the Contaminated Land Register (CLR) or the Environmental Management Register (EMR) under the *Environmental Protection Act 1994* it may be necessary to seek compliance assessment. Schedule 18 of the Sustainable Planning Regulation 2009 identifies where compliance assessment is required.

Question 10

- The *Building and Construction Industry (Portable Long Service Leave) Act 1991* prescribes when the portable long service leave levy is payable.
- The portable long service leave levy amount and other prescribed percentages and rates for calculating the levy are prescribed in the Building and Construction Industry (Portable Long Service Leave) Regulation 2013.

Question 10a

- The portable long service leave levy need not be paid when the application is made, but the *Building and Construction Industry (Portable Long Service Leave) Act 1991* requires the levy to be paid before a development permit is issued.
- Building and construction industry notification and payment forms can be completed on the QLeave website at www.qleave.qld.gov.au. For further information contact QLeave on 1800 803 481.

Privacy—The information collected in this form will be used by the Department of Infrastructure, Local Government and Planning (DILGP), assessment manager, referral agency and/or building certifier in accordance with the processing and assessment of your application. Your personal details should not be disclosed for a purpose outside of the IDAS process or the provisions about public access to planning and development information in the *Sustainable Planning Act 2009*, except where required by legislation (including the *Right to Information Act 2009*) or as required by Parliament. This information may be stored in relevant databases. The information collected will be retained as required by the *Public Records Act 2002*.

OFFICE USE ONLY

Date received		Reference numbers	

NOTIFICATION OF ENGAGEMENT OF A PRIVATE CERTIFIER

To _____ Council. I have been engaged as the private certifier for the building work referred to in this application

Date of engagement	Name	BSA Certification license number	Building classification/s

QLEAVE NOTIFICATION AND PAYMENT (For completion by assessment manager or private certifier 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

The *Sustainable Planning Act 2009* is administered by the Department of Infrastructure, Local Government and Planning. This form and all other required application materials should be sent to your assessment manager and any referral agency.

IDAS form 5—Material change of use assessable against a planning scheme

(*Sustainable Planning Act 2009* version 3.1 effective 3 August 2015)

This form must be used for development applications for a material change of use assessable against a planning scheme.

You **MUST** complete **ALL** questions that are stated to be a mandatory requirement unless otherwise identified on this form.

For all development applications, you must:

- complete *IDAS form 1—Application details*
- complete any other forms relevant to your application
- provide any mandatory supporting information identified on the forms as being required to accompany your application.

Attach extra pages if there is insufficient space on this form.

All terms used on this form have the meaning given in the *Sustainable Planning Act 2009* (SPA) or the Sustainable Planning Regulation 2009.

This form must also be used for material change of use on 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* that requires assessment against the land use plan for that land. Whenever a planning scheme is mentioned, take it to mean land use plan for the strategic port land, Brisbane core port land or airport land.

Mandatory requirements

1. Describe the proposed use. (Note: this is to provide additional detail to the information provided in question 1 of *IDAS form 1—Application details*. Attach a separate schedule if there is insufficient space in this table.)

General explanation of the proposed use	Planning scheme definition (include each definition in a new row) (non-mandatory)	No. of dwelling units (if applicable) or gross floor area (if applicable)	Days and hours of operation (if applicable)	No. of employees (if applicable)
PROPOSED HOUSE	HOUSE	1	—	—
& SHED				

2. Are there any current approvals associated with the proposed material change of use? (e.g. a preliminary approval.)

☑ No ☐ Yes—provide details below

List of approval reference/s	Date approved (dd/mm/yy)	Date approval lapses (dd/mm/yy)

3. Does the proposed use involve the following? (Tick all applicable boxes.)

The reuse of existing buildings on the premises	☑ No	☐ Yes
New building work on the premises	☐ No	☑ Yes
The reuse of existing operational work on the premises	☑ No	☐ Yes
New operational work on the premises	☑ No	☐ Yes

Mandatory supporting information

4. Confirm that the following mandatory supporting information accompanies this application

Mandatory supporting information	Confirmation of lodgement	Method of lodgement
All applications		
A site plan drawn to an appropriate scale (1:100, 1:200 or 1:500 are **recommended** scales) which shows the following: • the location and site area of the land to which the application relates (*relevant land*) • the north point • the boundaries of the relevant land • any road frontages of the relevant land, including the name of the road • the location and use of any existing or proposed buildings or structures on the relevant land (note: where extensive demolition or new buildings are proposed, two separate plans [an existing site plan and proposed site plan] may be appropriate) • any existing or proposed easements on the relevant land and their function • the location and use of buildings on land adjoining the relevant land • all vehicle access points and any existing or proposed car parking areas on the relevant land. Car parking spaces for persons with disabilities and any service vehicle access and parking should be clearly marked • for any new building on the relevant land, the location of refuse storage • the location of any proposed retaining walls on the relevant land and their height • the location of any proposed landscaping on the relevant land • the location of any stormwater detention on the relevant land.	☑ Confirmed	
A statement about how the proposed development addresses the local government's planning scheme and any other planning instruments or documents relevant to the application.	☑ Confirmed	
A statement about the intensity and scale of the proposed use (e.g. number of visitors, number of seats, capacity of storage area etc.).	☑ Confirmed	
Information that states: • the existing or proposed floor area, site cover, maximum number of storeys and maximum height above natural ground level for existing or new buildings (e.g. information regarding existing buildings but not being reused) • the existing or proposed number of on-site car parking bays, type of vehicle cross-over (for non-residential uses) and vehicular servicing arrangement (for non-residential uses).	☑ Confirmed ☐ Not applicable	

A statement addressing the relevant part(s) of the State Development Assessment Provisions (SDAP).	☐ Confirmed ☑ Not applicable	
When the application involves the reuse of existing buildings		
Plans showing the size, location, existing floor area, existing site cover, existing maximum number of storeys and existing maximum height above natural ground level of the buildings to be reused.	☐ Confirmed ☐ Not applicable	
When the application involves new building work (including extensions)		
Floor plans drawn to an appropriate scale (1:50, 1:100 or 1:200 are **recommended** scales) which show the following: • the north point • the intended use of each area on the floor plan (for commercial, industrial or mixed use developments only) • the room layout (for residential development only) with all rooms clearly labelled • the existing and the proposed built form (for extensions only) • the gross floor area of each proposed floor area.	☐ Confirmed	
Elevations drawn to an appropriate scale (1:100, 1:200 or 1:500 are **recommended** scales) which show plans of all building elevations and facades, clearly labelled to identify orientation (e.g. north elevation)	☐ Confirmed	
Plans showing the size, location, proposed site cover, proposed maximum number of storeys, and proposed maximum height above natural ground level of the proposed new building work.	☐ Confirmed ☐ Not applicable	
When the application involves reuse of other existing work		
Plans showing the nature, location, number of on-site car parking bays, existing area of landscaping, existing type of vehicular cross-over (non-residential uses), and existing type of vehicular servicing arrangement (non-residential uses) of the work to be reused.	☐ Confirmed ☐ Not applicable	
When the application involves new operational work		
Plans showing the nature, location, number of new on-site car parking bays, proposed area of new landscaping, proposed type of new vehicle cross-over (non-residential uses), proposed maximum new vehicular servicing arrangement (non-residential uses) of the proposed new operational work.	☐ Confirmed ☐ Not applicable	

Privacy—Please refer to your assessment manager, referral agency and/or building certifier for further details on the use of information recorded in this form.

OFFICE USE ONLY

Date received | Reference numbers

The *Sustainable Planning Act 2009* is administered by the Department of Infrastructure, Local Government and Planning. This form and all other required application materials should be sent to your assessment manager and any referral agency.

Planning Report

Application for a Development Permit for a Material Change of Use for the purpose of a Dwelling & Shed on land described as

Lot 8 on SP176447 South Arm Drive, Wonga

June 2017

1.0 Application Details

Table 1. Summary of relevant details of the application.

Applicant	Justin Ward
Registered Owner of Land	Justin Ward
Contact	Jeff Evans GMA Certification Group Pty Ltd PO Box 831 PORT DOUGLAS Q 4877 Ph 07 4098 5150 Fax 07 4098 5180 Email Jevans@gmacert.com.au
Real Property Description	Lot 8 SP176447
Location	South Arm Drive, Wonga
Tenure	Free Hold
Total Area	1.001 Hectares
Present Use	Vacant
Contaminated Lands or Environmental Management Registers	Nil
Easements and Encumbrances	None
Proposal	Development Permit for a Material Change of Use for a Dwelling and Shed
Local Government Authority	Douglas Shire Council
Planning Scheme	2008 Douglas Shire Planning Scheme
Planning Area	Rural Settlement
Overlays	Acid Sulfate Soils

2.0 Proposed Development

The application seeks a Development Permit for a Material Change of Use for the purpose of a dwelling and shed on the subject allotment.

The attached plans illustrate:

- Site plan, indicating the location of the proposed dwelling and shed ; and,
- Architectural plans including floor plans and elevations.

3.0 Level of Assessment

The proposed development is 'assessable development' under the Douglas Shire Planning Scheme and as defined in the Sustainable Planning Act, 2009 [SPA].

Under the provisions of the SPA and the Douglas Shire Planning Scheme, the following level of assessment is applicable, in accordance with the IDAS process:

- 'Code Assessable" – Material Change of Use for the purpose of a house within the Rural Settlement locality.

4.0 Planning Considerations

The Sustainable Planning Act 2009, provides a legislative framework within Queensland for local and state authorities to assess development applications. Relevant matters within the SPA with respect to the application are considered below.

4.1 Douglas Shire Planning Scheme Code Assessment

Table 2 provides an assessment of the proposal with regard to the Douglas Shire Planning Scheme's associated Codes. The proposal generally complies with the Acceptable Solutions of the Scheme.

Table 2. Assessment Against the Douglas Shire Planning Scheme Codes

Rural Areas and Rural Settlement Locality Code

General Requirements

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	COMMENTS
P1 Buildings and structures complement the Height of surrounding development and are subservient to the surrounding environment and are in keeping with the unique character of the Locality.	**A1.1** In all Planning Areas in this Locality the maximum Height of Buildings/structures is 6.5 metres and 2 Storeys. In addition, the roof or any ancillary roof features do not exceed a maximum Height of 3.5 metres.	The maximum height of the proposed dwelling and shed is 4.5m and 4.0m, respectively.
P2 Development is connected to all urban services or to sustainable on site infrastructure.	**A2.1** Development is connected to available urban services by underground connections, wherever possible. AND/OR Contributions are paid when applicable in accordance with the requirements of Planning Scheme Policy No 11 – Water Supply and Sewerage Headworks and Works External Contributions. OR Water storage tank/s with a minimum capacity of not less than 30 000 litres to service the proposed use, including fire fighting capacity and Access to the tank/s for fire trucks. Tank/s to be fitted with a 50 mm ball valve with a camlock fitting and installed and connected prior to occupation and screened with Dense Planting. AND An environmentally acceptable and energy efficient power supply is constructed and connected prior to occupation and sited so as to be visually unobtrusive. AND On-site sewerage facilities are provided in accordance with the On-site Sewerage Code and screened with Dense Planting.	Power, water and telecommunications services will be provided to the dwelling and shed as appropriate. N/A N/A Reticulated water supply is available. N/A A compliance certificate will be issued by Council prior to the issue of the Development permit for Building Work.

P3 Landscaping of development Sites complements the existing rural character of the Locality.	**A3.1** Landscaping incorporates the requirements of Planning Scheme Policy No 7 – Landscaping with particular emphasis on appropriate species for this Locality AND A minimum of 60%of the total proposed species are endemic or native species.	Landscaping shall be provided over time while the owners reside on the property.
P4 Development Sites are provided with efficient and safe vehicle Access and manoeuvring areas on Site and to the Site, to an acceptable standard for the Locality.	**A4.1** All Roads, driveways and manoeuvring areas on Site and adjacent to the Site are designed and maintained to comply with the specifications set out in the Planning Scheme Policy No 6 – FNQROC Development Manual.	A compliant cross-over will be installed providing access to the property and the on-site driveways will be gravel.

Protecting Rural/Rural Settlement Amenity – General

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	COMMENTS
P5 Industrial development in a rural area relies on or has a strong nexus with the primary rural activity undertaken on Site or in the surrounding area.	**A5.1** Any industrial development is limited to rural industrial activities which, by necessity, are related to primary industries in the surrounding area and require a rural location and where an urban location is inappropriate.	None proposed.
P6 Any community facilities or service infrastructure located in a rural area or rural settlement areas are sited to protect the general amenity and the visual amenity of the surrounding rural area/rural settlement area.	**A6.1** Community facilities are only sited in a rural area or a rural settlement area by necessity and where an urban location is inappropriate. **A6.2** Community facilities are screened from adjacent Roads by landscape buffers of Dense Planting a minimum of 5 metres in width. AND All side and rear boundaries are provided with Dense Planting for a minimum width of 1.5 metres.	N/A
P7 Rural settlement areas are visually	**A7.1** The old Rocky Point School Site	N/A

	unobtrusive in the rural landscape to protect the integrity of the rural areas as a dominant landscape element of high quality.	is developed for residential purposes in accordance with the following: • reconfiguration is in accordance with the Rural Settlement Planning Area requirements specified in Table 1 of the Reconfiguring a Lot Code and all the relevant requirements of the Reconfiguring a Lot Code, taking account of the existing topography of the Site. AND The remnant vegetation on the western boundary of the Site is dedicated as public park.	
P8	Areas at Rocky Point included in the Residential 1 Planning Area maintain the integrity of the dominant landscape qualities of the area and ensure safe Access onto Mossman-Daintree Road.	**A8.1** The minimum lot size in this area is 3500 m2. AND Any proposed reconfiguration of existing lots in this area only occurs utilising the Access driveway servicing the existing lot, by including reciprocal Access easements over the existing Access driveway for any additional lots. **A8.2** Any new lots are included in a Designated Development Area (DDA) identified on the proposal plan of reconfiguration and ultimately, on the registered survey plan. **A8.3** Development located within a Designated Development Area is sited where Clearing is limited to a maximum area of 800 m2 of the Site or 4% Site Coverage of the Site, whichever is the lesser. (The 800m2 area of Clearing does not include an access driveway.) OR, ALTERNATIVELY If a greater part of the Site is to be cleared, that part of a Site not cleared is to be included in a Conservation Covenant to protect the integrity of the natural environment. **A8.4** Clearing is limited to the DDA and the DDA is sited on that part of the lot which is least constrained by slope, vegetation or Access constraints, and does not require extensive cut and fill and/or complex geotechnical solutions. **A8.5** The DDA is sited so that the	N/A

	development of a House does not obstruct the views from any adjacent existing Houses. AND Ensures the new House is not visually prominent from adjacent public viewing points, such as Mossman-Daintree Road and Rocky Point.	
P9 Development of Lot 32 on RP 850495, Vixies Road, Wonga Beach is connected to urban services.	**A9.1** Any future reconfiguration of Lot 32 on RP 850495 for Rural Settlement purposes only occurs in association with connection to reticulated sewerage and water supply servicing Wonga Beach.	N/A
P10 The development of part of Lots 10 and 11 on SP 132055 for residential purposes is undertaken to protect the environmental values of the site and the scenic amenity of the local area.	**A10.1** Residential development occurs on the more gently sloping part of the site, elevated above the steep bank adjacent to Mossman-Daintree Road. AND The area appropriate for residential development is determined on the basis of contour and vegetation surveys of the site. AND Only one access point from the site to the State-Controlled Road is permitted. AND At reconfiguration stage a broad vegetation screen is provided along the elevated frontage of the site to the Mossman-Daintree Road so that the residential development is screened from the road. AND The balance of the site is protected from clearing to maintain the forested mountain landscape and no further reconfiguration of the balance area occurs.	N/A

Protection of Scenic Amenity and Natural Values

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	COMMENTS
P11 Development does not adversely impact on areas of sensitive natural vegetation, foreshore	No Acceptable Solution. (Information that the Council may request to demonstrate compliance	N/A

areas, Watercourse and areas of tidal inundation which contribute to the Scenic Amenity and natural values of the Locality.	with the Performance Criteria is outlined in Planning Scheme Policy No 10 – Reports and Information the Council May Request, for code and impact assessable development).	

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Indigenous Interests

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	COMMENTS
P12 The land use aspirations in any Indigenous Land Use Agreement (ILUA) are acknowledged and facilitated.	**A12.1** Development is consistent with any ILUA relating to the land and the relevant provisions of the Planning Scheme.	N/A

Landscaping Code

Landscape Design

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	COMMENTS
P1 Landscape design satisfies the purpose and the detailed requirements of this Code.	**A1.1** Landscaping is undertaken in accordance with a Landscape Plan drawn to scale which complies with and illustrates all the relevant requirements of this Code and Planning Scheme Policy No 7 – Landscaping. AND Landscaping is maintained in accordance with the requirements specified in this Code and Planning Scheme Policy No 7 – Landscaping.	Landscaping shall be provided over time while the owners reside on the property.

Landscape Character and Planting

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	COMMENTS
P2 Landscaping contributes to a sense of place, is functional to the surroundings and provides dominant visual interest	**A2.1** A minimum of 80% of the proposed landscape area is open to the sky for sunlight and ventilation.	Landscaping shall be provided over time while the owners reside on the property.

and form.	**A2.2** The percentage of native or endemic species utilised in the Landscaping is as specified in the Locality Code. OR Where not specified in the Locality Code, in accordance with Planning Scheme Policy No. 7 – Landscaping. **A2.3** Landscaping includes planting layers comprised of canopy, middle storey, screening and groundcovers, with palm trees used as accent plants only.	
P3 Landscaping is consistent with the existing landscape character of the area and native vegetation existing on the Site is to be retained wherever possible and integrated with new Landscaping.	**A3.1** Existing native vegetation on Site is retained and incorporated into the Site design, wherever possible. **A3.2** Any mature vegetation on the Site which is removed or damaged during development of the Site is replaced with advanced native species. **A3.3** Where there is an existing landscape character in a street or locality which results from existing vegetation, similar species are planted on Site or on the street. **A3.4** Street trees are 100% native species which enhance the landscape character of the streetscape, with species chosen from the Plant Species Schedule in Planning Scheme Policy No 7 – Landscaping.	Vegetation not affected by the construction of the dwelling and shed will remain.
P4 Plant species are selected with consideration to the scale and form of development, screening, buffering, streetscape, shading and the locality of the area.	**A4.1** Species are selected in accordance with the Plant Species Schedule in Planning Scheme Policy No 7 – Landscaping.	N/A
P5 Shade planting is provided in car parking areas where uncovered or open, and	**A5.1** Where car parking areas are uncovered or open, shade trees are planted at regular intervals (a	N/A

adjacent to driveways and internal Roadways.	minimum of 1 shade tree is provided for every 5 car parks) throughout the car parking areas, and adjacent to driveways and internal Roadways. **A5.2** A minimum of 1 shade tree is provided for every 10 metres along a driveway or internal Roadway. **A5.3** Landscape beds and trees are protected by garden edging, bollards or wheel stops. **A5.4** Trees within car parking areas have a minimum planting area the equivalent of 1 car parking bay, with a minimum topsoil depth of 0.8 metre.	

Screening

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	COMMENTS
P6 Fences along street Frontages are articulated with appropriate Landscaping.	**A6.1** Perimeter fencing to any street Frontage complies with the relevant Planning Area Code. **A6.2** Trees, shrubs and groundcovers are planted within any recessed areas along the fence line.	No additional fencing is proposed at this time.
P7 Landscaping within Recreation Areas of residential development are functional, well designed and enhance the residential amenity.	**A7.1** One shade tree is provided for each private open space or private Recreation Area. **A7.2** Tree species provide 30% shade over the area within 5 years. **A7.3** A minimum of 50% of the Landscaping and Recreational Area is landscaped, with trees, shrubs, groundcovers, minimising large expanses of hardstand areas and structures. **A7.4** Plants are located to provide shelter and shade to Habitable Rooms and outdoor Recreation Areas from the hot summer sun.	N/A
P8 Undesirable features are screened with	**A8.1** Landscaping of Dense Planting is planted along and near	Landscaping shall be provided over time while the owners reside on the property.

Landscaping.	retaining walls, long blank walls of Buildings, mechanical and air-conditioning units, clothes drying areas, bin enclosures and other utility structures with appropriate trees, shrubs and groundcovers.	
P9 The environmental values of the Site and adjacent land are enhanced.	**A9.1** Landscaping using similar endemic or native species, is planted on-Site on land adjoining an area of natural environmental value.	N/A

Streetscape and Site Amenity

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	COMMENTS
P10 Landscaping for residential development enhances the streetscape and the visual appearance of the development.	**A10.1** Dense Planting along the front of the Site incorporates: • shade canopy trees to provide shade to the Frontage of the Site within 5 years of planting; • landscape screening of blank walls; • low shrubs, groundcovers and mulch to completely cover unsealed ground. **A10.2** Dense Planting to the rear of the Site incorporates: • 1 shade tree for an average of every 75 m2, growing to the Building eave Height within 5 years of planting; • screening shrubs to grow to 3 metres in Height within 2 years of planting; • low shrubs, groundcovers and mulch to completely cover unsealed ground. **A10.3** Dense Planting to the side boundaries incorporates: • trees planted for an average of every 10 metres where adjacent to a Building; • low shrubs, groundcovers and mulch to completely cover unsealed ground.	Landscaping shall be provided over time while the owners reside on the property.

P11 Landscaping for non-residential development enhances the streetscape and the visual appearance of the development.	**A11.1** Dense Planting along the front boundary of the Site where a Building is Setback from the front alignment, incorporates: • shade canopy trees to provide shade to the Frontage of the Site within 5 years of planting where appropriate; • landscape screening of blank walls; • low shrubs, groundcovers and mulch to completely cover unsealed ground. **A11.2** Dense Planting to the rear of the Site where a Building is Setback from the rear alignment, incorporates: • 1 shade tree for an average of every 75 m2 growing to the Building eave Height within 5 years of planting; • screening shrubs to grow to 3 metres in Height within 2 years of planting; • low shrubs, groundcovers and mulch to completely cover unsealed ground. **A11.3** Dense Planting to the side boundaries where visible from the street or adjoining a boundary to a different Planning Area, and where a Building is Setback from the side boundary, incorporates: • trees planted for an average of every 10 metres where adjacent to a Building; • screening shrubs, low shrubs and groundcover appropriate for the amount of space, light and ventilation of the area; • low shrubs, groundcovers and mulch to completely cover unsealed ground. **A11.4** A minimum of 20% of shade trees and shrubs is	Landscaping shall be provided over time while the owners reside on the property.

	incorporated in all areas of Landscaping growing to the Building eave Height within 5 years.	

Maintenance and Drainage

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	COMMENTS
P12 Landscaped areas are designed in order to be maintained in an efficient manner.	**A12.1** A maintenance program is undertaken in accordance with the Maintenance Schedule in Planning Scheme Policy No 7 – Landscaping. **A12.2** A reticulated irrigation system is provided to common Landscaping and Recreation Areas and planter boxes in accordance with Australian Standards, with 1 hose cock within each area. **A12.3** Turf areas are accessible by standard lawn maintenance equipment. **A12.4** Plant species are selected with long life expectancy and minimal maintenance requirements where on-Site management will be limited. **A12.5** Mulching is provided to all garden beds to reduce weed growth and to retain water, and is to be replenished every year in the ongoing maintenance program.	Landscaping shall be provided over time while the owners reside on the property.
P13 Stormwater runoff is minimised and reused in Landscaping through water infiltration, where appropriate.	**A13.1** Adequate drainage is provided to all paving, turf and garden beds, including the use of swales, spoon drains, subsurface drainage, field gullies, rock or pebble lined Watercourses and stormwater connections. **A13.2** Overland flow paths are	N/A

	not to be restricted by Landscaping works. **A13.3** Water runoff is re-used through draining of hard surface areas towards permeable surfaces, turf, garden beds and by minimising impervious surfaces on the Site.	

Safety

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	COMMENTS
P14 Tree species and their location accommodate vehicle and pedestrian sight lines.	**A14.1** Trees located near pathways, driveways, Access points, parking areas and street corners have a minimum 3.0 metres of clear trunk.	N/A
P15 The landscape design enhances personal safety and reduces the potential for crime and vandalism.	**A15.1** Security and foot lighting is provided to all common areas, including car parks, entries, driveways and pathways. **A15.2** Hard surfaces are stable, non-slippery and useable in all weathers. **A15.3** Bushfire hazard is minimised with planting of bushfire resistant species near bushfire prone areas, (refer to the Bushfire Risk Overlay on the relevant Locality Map). **A15.4** Lighting for bicycle paths is provided in accordance with the relevant Australian Standards	N/A

Utilities and Services

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	COMMENTS
P16 The location and type of plant species does not adversely affect the function and accessibility of services and facilities and service areas.	**A16.1** Plant species are selected and sited with consideration to the location of overhead and underground services. **A16.2** All underground services are to be located under pathways and below the eaves of the Building.	N/A

	A16.3 Irrigation control devices are located in the common Landscaping and Recreation Area. **A16.4** Landscaping is located to enable trade persons to Access and view meters and other mechanical equipment within the Site. **A16.5** Landscaping does not limit Access for service vehicles or rubbish trucks to utility areas, bin enclosures or docking areas. **A16.6** Landscaping near electric lines or substations is designed and developed so that any vegetation at maturity or Landscaping structures or works do not exceed 40 metres in Height on land: • in an electric line shadow; or • within 5.0 metres of an electric line shadow; or within 5.0 metres of a substation boundary. **A16.7** Elsewhere, vegetation is planted at a distance that is further from the nearest edge of an electric line shadow or substation boundary than the expected maximum Height at maturity of the vegetation. **A16.8** On a Site adjoining an electricity substation boundary, the vegetation foliage at maturity is not within 3.0 metres of the substation boundary. However, where a substation has a solid wall along any part of its boundary, foliage may extend to, but not above or beyond, that solid wall.	

Vehicle Parking and Access Code

Vehicle Parking Numbers

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	COMMENTS

P1 Sufficient parking spaces are provided on the Site to accommodate the amount and type of vehicle traffic expected to be generated by the use or uses of the Site, having particular regard to: • the desired character of the area in which the Site is located; • the nature of the particular use and its specific characteristics and scale; • the number of employees and the likely number of visitors to the Site; • the level of local accessibility; • the nature and frequency of any public transport serving the area; • whether or not the use involves the retention of an existing Building and the previous requirements for car parking for the Building; • whether or not the use involves an identified Valuable Conservation Feature and Valuable Site; and • whether or not the use involves the retention of significant vegetation.	**A1.1** The minimum number of vehicle parking spaces provided on the Site is not less than the number prescribed in Schedule 1 of this Code for the particular use or uses. Where the number of spaces calculated from the Schedule is not a whole number, the number of spaces provided is the next highest whole number.	There is adequate area on-site for vehicle parking.

Parking for People with Disabilities

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	COMMENTS
P2 Parking spaces are provided to meet the needs of vehicle occupants with disabilities.	**A2.1** For parking areas with a total number of ordinary vehicle spaces less than 50, wheelchair accessible spaces are provided as follows:	N/A

	• Medical, higher education, entertainment facilities and shopping centres – 2 spaces; • All other uses – 1 space. **A2.2** For parking areas with 50 or more ordinary vehicle spaces, wheelchair accessible spaces are provided as follows: • Medical, higher education, entertainment facilities and shopping centres – 3% (to the closest whole number) of the total number of spaces required; • All other uses – 2% (to the closest whole number) of the total number of spaces required.	

Motor Cycles

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	COMMENTS
P3 In recognition that motorcycles are low Road-space transport, a proportion of the parking spaces provided may be for motorcycles. The proportion provided for motor cycles is selected so that: • ordinary vehicles do not demand parking in the spaces reserved for motor cycles due to capacity constraints; and, • it is a reflection of the make-up of the likely vehicle fleet that uses the parking; and, • it is not a reflection of the lower cost of providing motorcycle parking.	**A3.1** Parking for motorcycles is substituted for ordinary vehicle parking to a maximum level of 2% per cent of total ordinary parking. AND The motorcycle parking complies with other elements of this Code.	N/A

Compact Vehicles

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	COMMENTS

P4 A proportion of the parking spaces provided may be for compact vehicles. The proportion of total parking provided for compact vehicles is selected considering: • compact vehicles spaces are not available to non-compact vehicles; and, • it is a reflection of the proportion of the likely vehicle fleet that uses the parking; and, • compact vehicle spaces are located so as to be proximate to pedestrian destinations such that they present significant inclination for use by users of compact vehicles; and, • the scale of parking spaces, likely users and the likely degree of familiarity with the availability of such spaces	**A4.1** For parking areas exceeding 100 spaces for short term users or 50 spaces for long-term users, parking is provided for compact vehicles as a substitute for ordinary vehicle parking so that: • compact vehicle parking does not exceed 10% of total vehicle parking required; and, • the parking location is proximate to the entry locations for parking users; and, • the parking provided complies with other elements of this Code.	N/A

Bicycles Parking

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	COMMENTS
P5 Sufficient bicycle parking spaces with appropriate security and end of trip facilities are provided on-Site to accommodate the amount of bicycles expected to be generated by the use or uses.	**A5.1** The minimum number of bicycle parking spaces provided on Site is not less than the number prescribed in Schedule 1 of this Code, for the particular use or uses.	N/A

Vehicular Access to the Site

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	COMMENTS
P6 The location of Access points minimises conflicts and is designed to operate efficiently and safely taking into account:	**A6.1** The location of the Access points is in accordance with the provisions of the relevant Australian Standards. AND	Access from South Arm Drive will be provided in accordance with the FNQROC Manual.

• the amount and type of vehicular traffic; • the type of use (eg long-stay, short-stay, regular, casual); • Frontage Road traffic conditions; • the nature and extent of future street or intersection improvements; • current and future on-street parking arrangements; • the capacity of the adjacent street system; and • the available sight distance.	Where the Site has Frontage to more than one street, the Access is from the lowest order street. **A6.2** All redundant Accesses must be removed and a suitable barrier Erected to prevent further use of the Access. **A6.3** Only one Access point is to be provided to each Site unless stated otherwise in another Code.	

Accessibility and Amenity for Users

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	COMMENTS
P7 On-Site vehicle parking is provided where it is convenient, attractive and safe to use, and does not detract from an attractive or existing streetscape character.	**A7.1** Short term visitor parking is provided at the front or on the main approach side of the Site, with easy Access to the Building entry, where such provision is in keeping with the desired character of the area in which the Site is located. AND In mixed use premises that include residential or accommodation uses (excluding, Port Douglas – Tourist Centre), at least 50% of the required number of parking spaces for the nonresidential use/s on the Site is provided in an easily accessible location on the premises, so as to be convenient to use for customers and other visitors.	N/A
P8 The layout of parking areas provides a high degree of amenity and accessibility	**A8.1** The layout of the parking area provides for the accessibility and amenity of the following:	N/A

for different users.	• People with Disabilities • Cyclists • Motorcyclists • Compact Vehicles • Ordinary Vehicles • Service Delivery Vehicles. **A8.2** Where covered parking areas are required in accordance with Schedule 1 of this Code, sails or other secure structural forms of covering provide shade and weather protection for vehicles and passengers.	

Access Driveways

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	COMMENTS
P9 The dimensions of Access driveways cater for all vehicles likely to enter the Site and minimises the disruption of vehicular, cyclist and pedestrian traffic.	**A9.1** Access driveways are designed in accordance with the provisions of the relevant Australian Standards.	Access from South Arm Drive will be provided in accordance with the FNQROC Manual.
P10 The surface construction materials of Access driveways within the Road reserve contribute to the streetscape and alerts pedestrians to the location of the driveway.	**A10.1** Surface construction materials are consistent with the current or intended future streetscape or character of the area and contrast with the surface construction materials of any adjacent footpath.	A gravel driveway is proposed at this time.

Access for People with Disabilities

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	COMMENTS
P11 Access for people with disabilities is provided to the Building from the parking area and from the street.	**A11.1** Access for people with disabilities is provided in accordance with the relevant provisions of the Australian Standards.	N/A

Access for Pedestrians

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	COMMENTS
P12 Access for pedestrians is provided to the Building from the parking area and from the street.	**A12.1** Defined, safe pedestrian pathways are provided to the Building entry from the parking area and from the street.	N/A

Access for Cyclists

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	COMMENTS
P13 Access for cyclists is provided to the Building or to bicycle parking area from the street.	**A13.1** Access pathways for cyclists are provided in accordance with the relevant provisions of the Australian Standards. AND Where Access for cyclists is shared with Access for pedestrians and vehicles, the shared use is identified by signage and linemarking.	N/A

Dimensions of Parking Spaces

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	COMMENTS
P14 Parking spaces must have adequate areas and dimensions to meet user requirements.	**A14.1** Car parking for the disabled, ordinary car parking spaces and motorcycle parking spaces meet the requirements of the relevant Australian Standards. AND Parking spaces for special vehicles that are classified in accordance with the relevant Australian Standards meet the requirements of that Standard. AND Parking spaces for standard sized buses have the following minimum dimensions: • width: 4 metres • length: 20 metres	N/A

	• clear Height: 4 metres. AND Parking spaces for compact vehicles have the following minimum dimensions: • 15 per cent less in width measurements than required by Australian Standards for any ordinary vehicle; and, • 20 per cent less in length measurements than required by Australian Standards for any ordinary vehicle. AND Parking spaces for special vehicles meet the requirements dictated by the vehicle dimensions and manoeuvring characteristics and provide sufficient clearance to obstructions and adjacent vehicles to achieve a level of service to users equivalent to that specified by the relevant Australian Standards. **A14.2** Parking spaces for bicycles meet the requirement of the relevant Australian Standard.	

On-Site Driveways, Manoeuvring Areas and Parking/Standing Areas

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	COMMENTS
P15 On-Site driveways, manoeuvring areas and vehicle parking/standing areas are designed, constructed and maintained such that they: • are at gradients suitable for intended vehicle use; • consider the shared movements of pedestrians and cyclists; • are effectively drained and surfaced; and	**A15.1** On-Site driveways, vehicle manoeuvring and loading/unloading areas: • are sealed in urban areas: AND upgraded to minimise noise, dust and runoff in other areas of the Shire in accordance with the relevant Locality Code; • have gradients and other design features in accordance with the provisions of the relevant Australian Standards; and	Gravel driveway will be suitably graded and drained.

• are available at all times they are required.	• drain adequately and in such a way that adjoining and downstream land is not adversely affected. **A15.2** Parking areas are kept and used exclusively for parking and are maintained in a suitable condition for parking.	

Vehicle Circulation, Queuing and Set Down Areas

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	COMMENTS
P16 Sufficient area or appropriate circulation arrangements are provided to enable all vehicles expected to use the Site to drive on and off the Site in forward gear.	**A16.1** Circulation and turning areas comply with the provisions of the relevant Australian Standards.	N/A
P17 An on-Site circulation system provides safe and practical Access to all parking, loading/unloading and manoeuvring areas.	**A17.1** Circulation driveways comply with the provisions of the relevant Australian Standards.	N/A
P18 Where vehicle queuing, set down or special vehicle parking is expected, sufficient queuing or parking area is provided to enable vehicles to stand without obstructing the free flow of moving traffic or pedestrian movement.	**A18.1** Queuing and set down areas comply with the relevant Australian Standard and any relevant AUSTROAD Guidelines.	N/A

Rural Settlement Planning Area Code

Consistent and Inconsistent Uses

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	COMMENTS
P1 The establishment of uses is consistent with the outcomes sought for the Rural Settlement Planning Area.	**A1.1** Uses identified as inconsistent uses in the Assessment Table are not established in the Rural Settlement Planning Area.	The proposal is a consistent use according to the assessment table.

Site Coverage

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	COMMENTS
P2 The built form is subservient to the natural environment or the rural character of the area.	**A2.1** The maximum Site Coverage for all Buildings (including Outbuildings) contained on an allotment is 450 m2. **A2.2** An Outbuilding used for purposes ancillary to a House has a maximum Site Coverage not greater than 20% of the total Site Coverage specified in A2.1 above.	The proposed dwelling and shed have a site cover of 357sqm. The proposed shed is to have a floor area of 204m². The land has an area of approximately 10,000m². Therefore, the percentage site cover is approximately 3.6%. The proposed shed is to utilized for residential and vehicle storage by the owner. The rural character of the area will not be affected. The shed will be located 6m from the side boundary and will remain subservient to the rural character of the area. Further, there are other large sheds in the vicinity as typically, owners of these allotments have large boats and gain access to the Daintree River and Coral Sea via the close by private boat ramp.

Building Setbacks

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	COMMENTS
P3 Buildings/structures are Setback to: • maintain the natural or rural character of the area; and • achieve separation from neighbouring Buildings and from Road Frontages.	**A3.1** Buildings/structures are Setback not less than: • 40 metres from the property boundary adjoining a State-Controlled Road; or • 25 metres from the property boundary adjoining the Cape Tribulation Road; or • 20 metres from the property boundary fronting any other Road;	The proposed dwelling and shed setbacks comply with the Scheme.

	and • 6 metres from the side and rear property boundaries of the Site.	
P4 Buildings/structures are screened from any adjacent Road to maintain the natural or rural character of the area.	**A4.1** At the time that a Site is developed for any purpose, the Road Frontage Setback areas are landscaped so that 10 metres of the Setback area immediately adjacent to any Road Frontage, where the minimum total Setback required is 20 metres or greater, is landscaped with Dense Planting.	There is no vegetation currently on-site. The owners will provide vegetative screening to the dwelling and shed if required.

Scenic Amenity

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	COMMENTS
P5 Buildings/structures are designed to maintain the low-density rural settlement character of the area and sited to minimise impacts on the environment and Scenic Amenity values of the area.	**A5.1** White and shining metallic finishes are avoided on external surfaces in prominent view.	External colours include: Roof – Colorbond Woodland Grey Walls – Consistent with Colorbond Dune
P6 Buildings/structures are sited to achieve the retention of native trees and protect existing Watercourses, riparian vegetation and wildlife corridors.	**A6.1** No Acceptable Solution. (Information that the Council may request to demonstrate compliance with the Performance Criteria is outlined in Planning Scheme Policy No 10 – Reports and Information the Council May Request, for code and impact assessable development).	N/A

Sloping Sites

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	COMMENTS
P7 Building/structures are designed and sited to be responsive to the constraints of sloping Sites.	**A7.1** Building/structures are Erected on land with a maximum slope not exceeding 15%. OR Development proposed to be Erected on land with a maximum slope between 15% and 33% is accompanied by a Geotechnical Report prepared by a qualified engineer at development application stage. OR Development proposed to be Erected on land with a maximum slope above 33% is accompanied by a Specialist Geotechnical Report prepared by a qualified engineer at development application stage which includes signoff that the Site can be stabilised. AND Any Building/structures proposed to be Erected on land with a maximum slope above 15% are accompanied by an additional Geotechnical Report prepared by a qualified engineer at building application stage. (Information that the Council may request as part of the Geotechnical Report are outlined in Planning Scheme Policy No 10 – Reports and Information the Council May Request, for code and impact assessable development.)	The land is level.
P8 The building style and construction methods used for development on sloping Sites are responsive to the Site constraints.	**A8.1** A split level building form is utilised. **A8.2** A single plane concrete slab is not utilised. **A8.3** Any voids between the floor	N/A

	of the Building and Ground Level, or between outdoor decks and Ground Level, are screened from view by using lattice/batten screening and/or Landscaping.	
P9 Development on sloping land minimises any impact on the landscape character of the surrounding area.	**A9.1** Buildings/structures are sited below any ridgelines and are sited to avoid protruding above the surrounding tree level.	N/A
P10 Development on sloping sites ensures that the quality and quantity of stormwater traversing the Site does not cause any detrimental impact to the natural environment or to any other Sites.	**A10.1** All stormwater drainage discharges to a lawful point of discharge and does not adversely affect downstream, upstream, underground stream or adjacent properties.	Stormwater to be managed on-site.

Land Use Code

House Code

General

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	COMMENTS
P1 Buildings on a lot have the appearance and bulk of a single House with ancillary Outbuildings.	**A1.1** A lot contains no more than one House. **A1.2** Ancillary Outbuildings have a maximum Site Coverage of 10% of the balance area of the Site not otherwise taken up by the House.	Complies
P2 The House is used for residential purposes.	**A2.1** The House is used by one Household.	Complies
P3 Resident's vehicles are accommodated on Site and are sited to minimise the dominance of car accommodation on the streetscape.	**A3.1** A minimum of 2 vehicle spaces are provided on Site and may be provided in tandem.**A3.2** At least one garage, carport or designated car space must be located at least 6 metres from the Main Street Frontage.	Vehicle parking is adequate.

General Codes

Filling and Excavation Code

Cut and fill is not proposed for the site, therefore this Code is not applicable.

Natural Areas and Scenic Amenity Code

Not applicable

Overlay Codes

Acid Sulfate Soils Code

The development will not result in excavation or filling of more than 100m^3 or 500m^3, respectively.

Cultural Heritage and Valuable Sites

Overlay is not applicable

Natural Hazards

The subject site is mapped as being Low Risk Hazard – Bushfire.

5.0 Conclusion

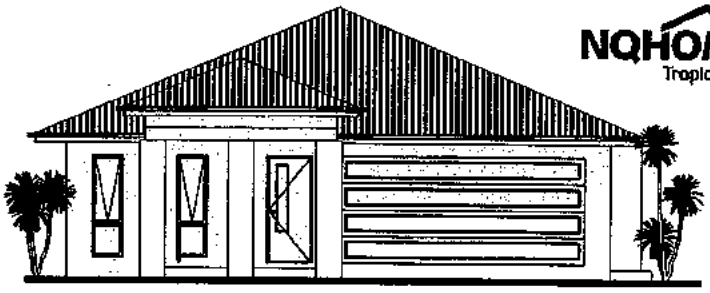
The development application seeks a Development Permit for Material Change of Use for the purpose of a dwelling and shed on land describes as Lot 8 SP176447 South Arm Drive, Wonga.

The proposed development is considered consistent with the relevant Planning Scheme Codes and the surrounding locality.

In summary the report concludes:

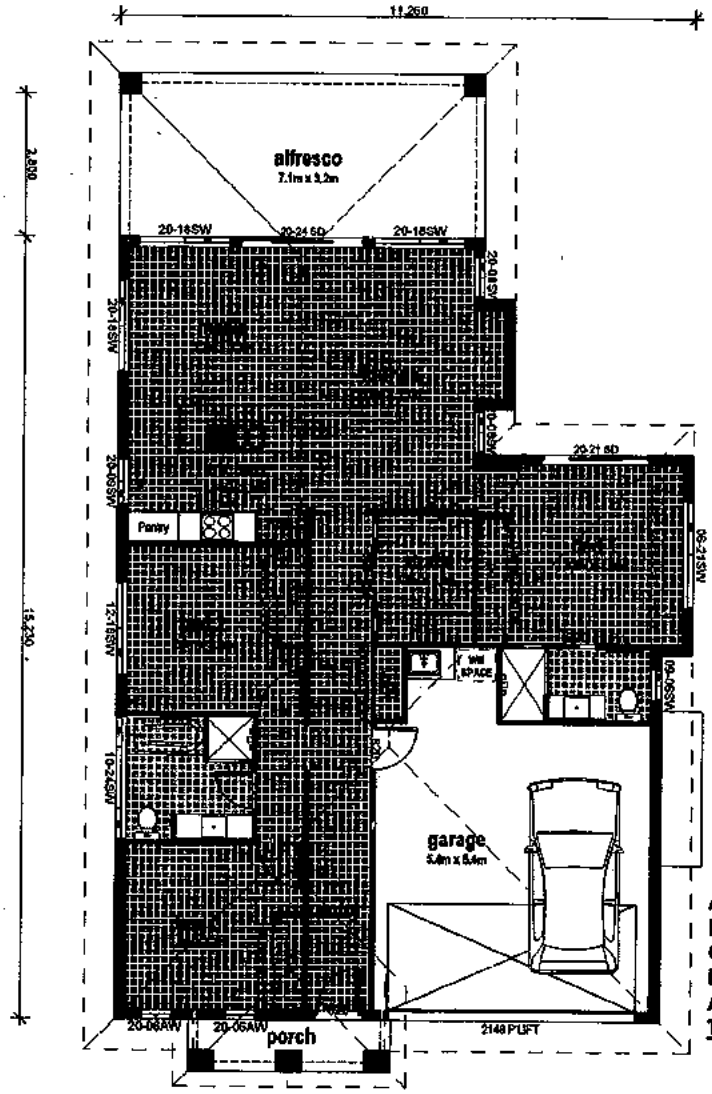
- The proposal complies with the requirements for making a Development Application under the Sustainable Planning Act; &
- The proposal is consistent with the existing and future use of the property.

Maximum building height 4.5m



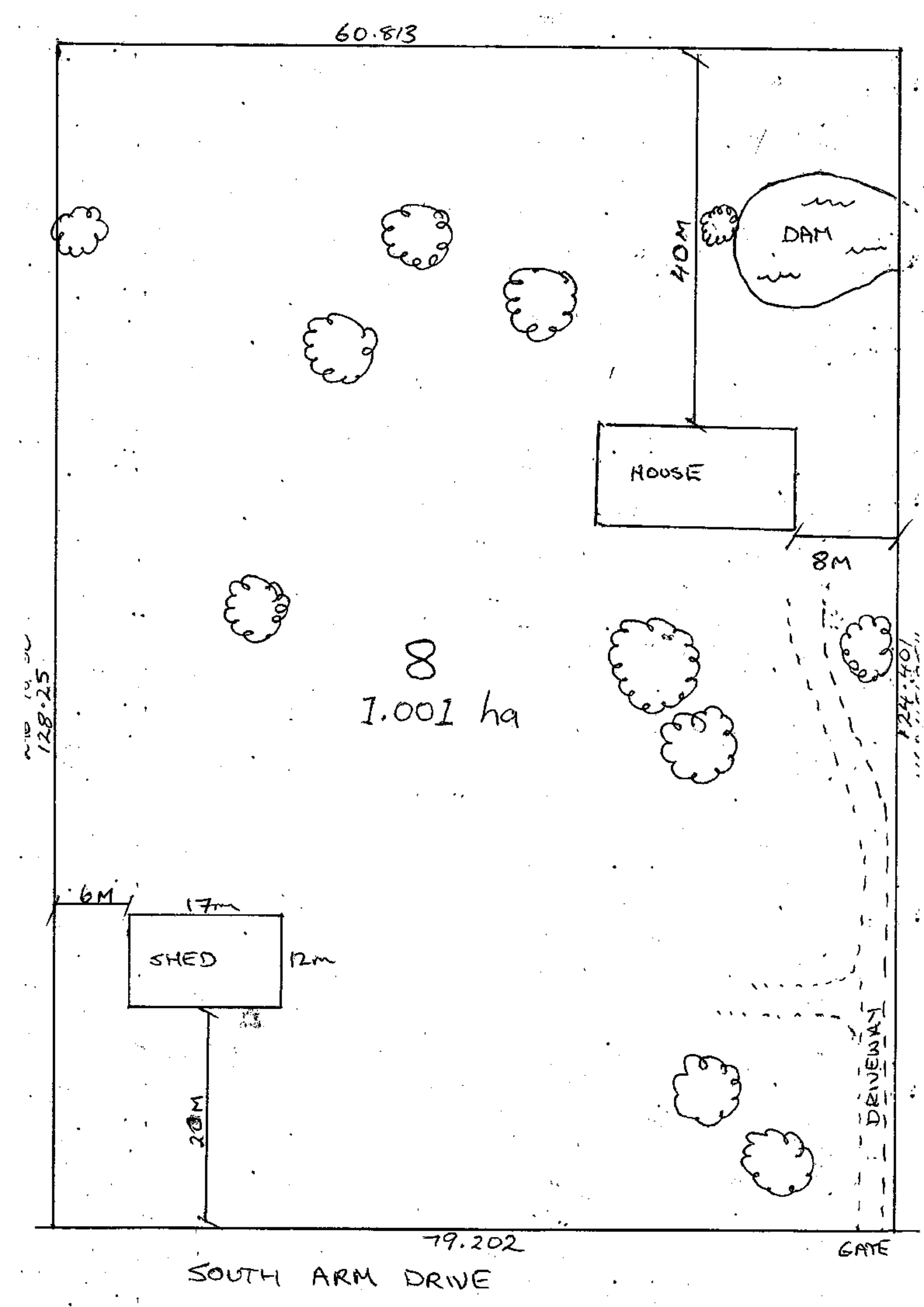
NQHOMES
Tropical Living

ELEVATION



Areas:	
Living:	116.11sqm
Garage:	35.15sqm
Porch:	3.95sqm
Alfresco:	22.9sqm
Total:	178.11sqm 19.35sqs

MILLIN 178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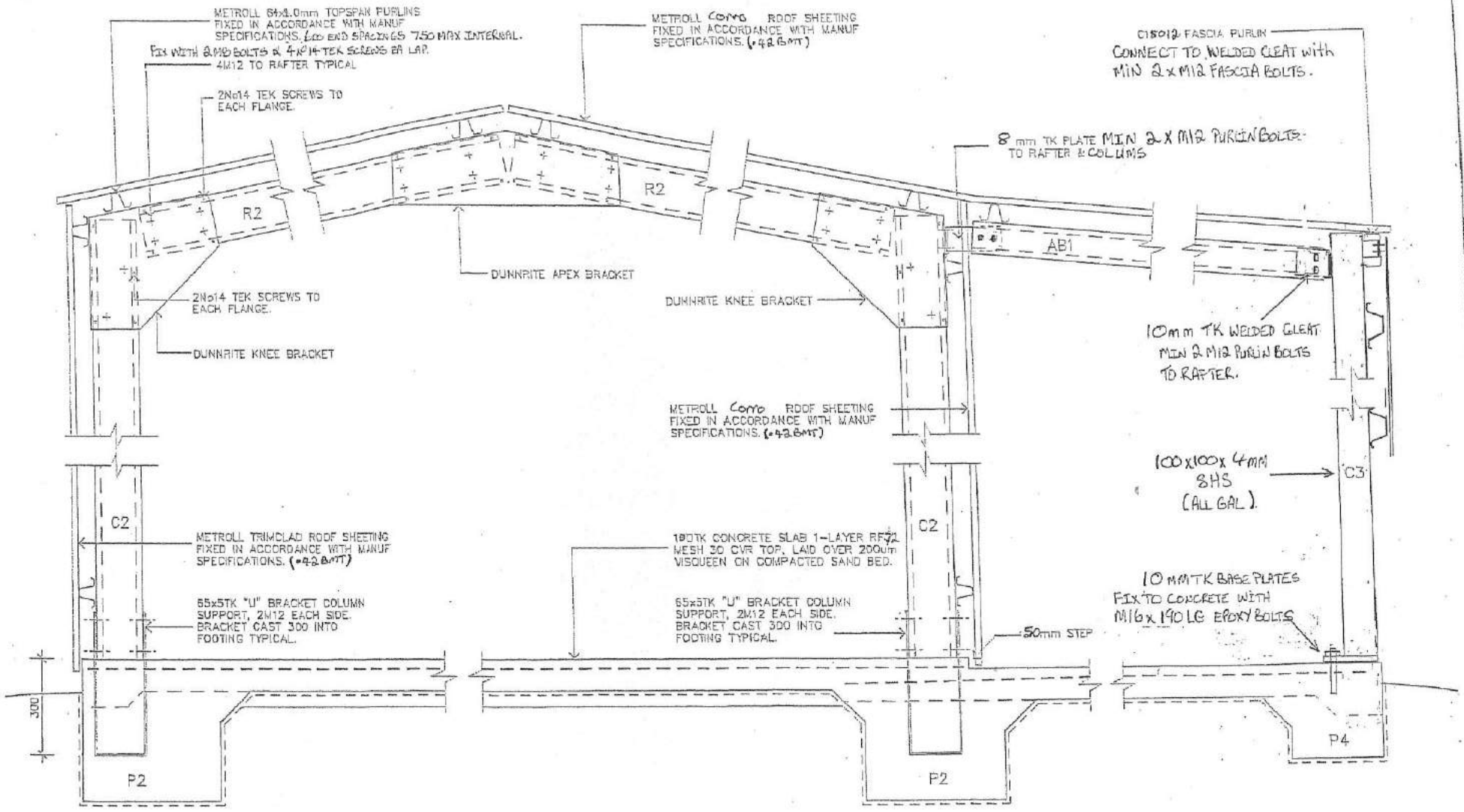


A SECTION
NOT TO SCALE

CMG CONSULTING ENGINEERS PTY. LTD.
A.C.N. 011 095 376
STRUCTURAL AND CIVIL
206 Buchan Street, CAIRNS, 4870. Phone: (07) 4031 2775
P.O. Box 5901, Cairns Mail Centre, Fax: (07) 4051 9013

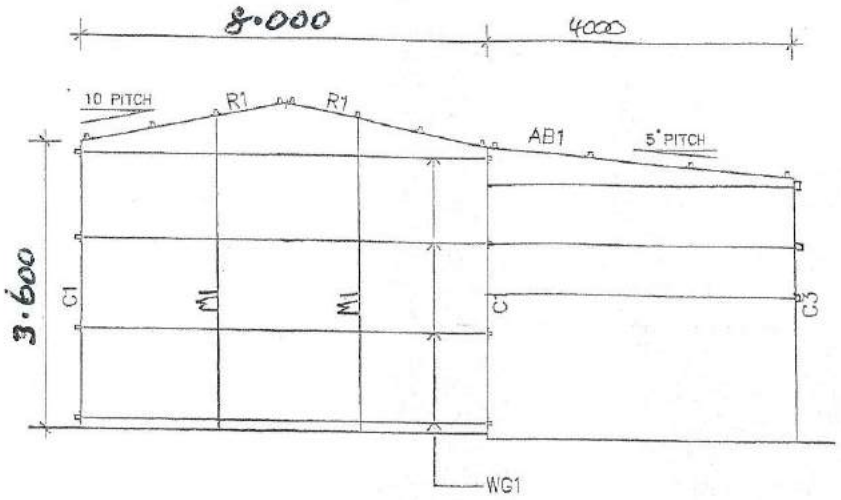
PROPOSED GREG JACK SHED

AT 90 SOUTH ARM DR Wonga Beach

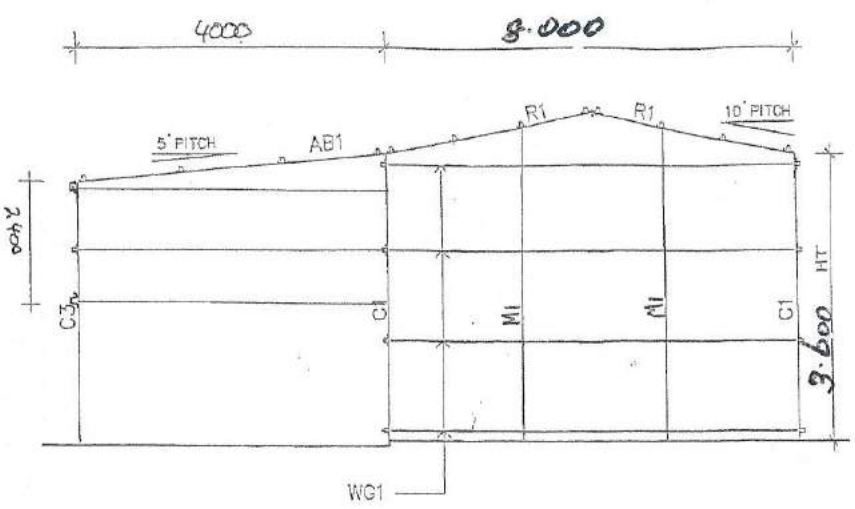
FOR JUSTIN WARD

ELEVATIONS & SECTIONS.

SCALE	HOR. AS SHOWN	DRAWN	JD
		DESIGNED	CMG
DATE	17	CHECKED	CMG
APPROVED			
DWG NUMBER	31527-S2	AMDT	A



1 ELEVATION
N.T.S.

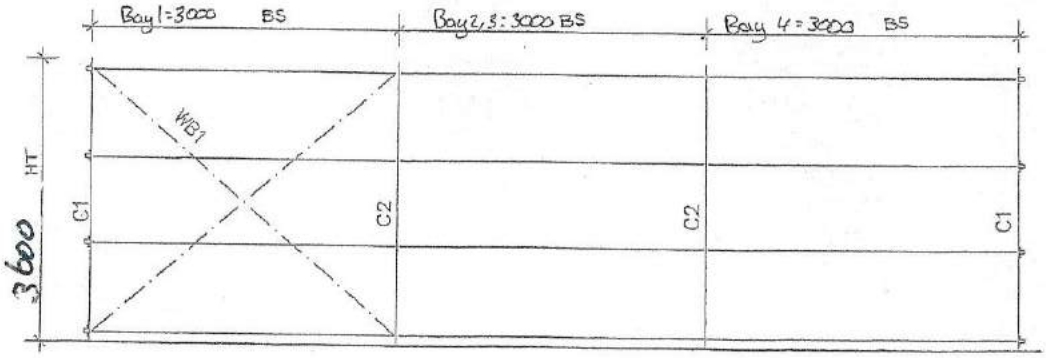


2 ELEVATION
N.T.S.

MEMBER SCHEDULE
C1 = C25019
R1 = C25019
C2 = C25024 x2
R2 = C25024 x2
C3 = 100x40
AB1 = C20019
AB2 = C20019 x2
M1 = C20019
RB1 = 30x1, GI STRAP
WB1 = 30x1.2 GI STRAP
PL1 = METROLL 54x1.0 TOP
WG1 = SPAN BATTENS.

BS = BAY SPACING	= 3 m
HT = HEIGHT	= 4.5 m

RB1 & WB1 = M10 & N°14 TEK SCREWS AT EACH END OF BRACING.



3 ELEVATION
N.T.S.

4 ELEVATION (SIMILAR)
N.T.S.

P1 & P2 = 800x800x800 DEEP MASS CONCRETE FOOTING

P3 = 400x400x400 DEEP MASS CONCRETE FOOTING

RF1 = 150x150 SLAB EDGE THICKENING

SJ = 25mm DEEP SAW CUT WITHIN 24 HRS OF PLACEMENT OF CONCRETE.

C.M.G. CONSULTING ENGINEERS PTY.LTD.
A.C.N. 011 065 375 STRUCTURAL AND CIVIL
208 Buchan Street CAIRNS, 4870. Phone: (07) 4031 2775
P.O. Box 5901 Cairns Mail Centre Fax: (07) 4051 9013

PROPOSED GREG JACK SHED
AT 90 SOUTH ARM DR Wonga Beach
FOR JUSTIN WARD

ELEVATIONS

SCALE	HOR AS SHOWN	DRAWN	JD
		DESIGNED	CMG
DATE	18 7	CHECKED	CMG
APPROVED			
DWG NUMBER	18527-S3	AMDT	A

EARTH TEST

Site Classification

And

Wastewater Management System

For

Justin Ward

At

90 South Arm Drive

Wonga Beach

Postal address: Earth Test, PO Box 1042, Tolga, Qld 4882. Phone: 4095 4734
e-mail: len@earthtest.com.au

INTRODUCTION:

Earth Test has been engaged by Justin Ward to assess, design and report on Site Classification and a Domestic Wastewater Management System at 90 South Arm Drive, Wonga Beach.
Real Property Description:-
Lot 8, on SP 176447
Local Authority: Douglas Shire Council.
It is understood the intention is to construct a new dwelling and shed with amenities at the site.
A site and soil evaluation was carried out in June 2017.

SITE FACTORS:

The site was identified during a meeting with the owner on-site.
The lot has an area of 1.001 hectares and is predominantly covered with grass and some trees.
The water supply to the site is from a bore as shown on the site plan.
No rock outcrops were noted at the site. There is a small dam as shown on the site plan.
Two Dynamic Cone Penetrometer tests were performed at locations DCP1 and DCP2 and one borehole BH1 as shown on the site plan.
Atterberg Limits tests were performed on a disturbed sample from Borehole1.

BH1 being drilled at 90 South Arm Drive, Wonga Beach.

SITE INVESTIGATION REPORT

BOREHOLE LOG

CLIENT: Justin Ward. **PROJECT:** 90 South Arm Drive, Wonga Beach. **REPORT DATE:** 15/06/2017	**DATE SAMPLED:** 7/06/2017 **Sampled by:** L. Quinn

BOREHOLE No: BH1

DEPTH (m)	DESCRIPTION	COMMENTS
0.0-0.3	Black Silty-Sand	Disturbed sample 0.6- 0.9m.
0.3-0.5	Grey Silty-Sand	Watertable not encountered
0.5-2.0	Brown Silty-Sand	

BH2 being drilled at 90 South Arm Drive, Wonga Beach.

ATTERBERG LIMITS TEST REPORT

CLIENT: Justin Ward

PROJECT: 90 South Arm Drive, Wonga Beach

SAMPLE DETAILS: BH1 0.6-0.9m

REPORT DATE:

SAMPLE No: SI 205-17

DATE SAMPLED: 7/06/2017

Sampled by: L. Quinn

Tested By: B. Wyatt

TEST METHOD	RESULT
Liquid Limit: AS 1289.3.9.2	31%
Plastic Limit: AS 1289.3.2.1	Non-Plastic
Plasticity Index: AS 1289.3.3.1	Non-Plastic
Linear Shrinkage: AS 1289.3.4.1	0.0%
Length Of Mould:	250.1mm
Cracking, Crumbling, Curling, Number Of Breaks:	Nil
Sample History:	Air Dried
Preparation Method:	Dry Sieved
Insitu Moisture Content:	5.5%
% Passing 0.075mm:	2%

DYNAMIC CONE PENETROMETER REPORT
AS 1289.6.3.2

CLIENT: Justin Ward

PROJECT: 90 South Arm Drive, Wonga Beach.

SAMPLE DETAILS: Sites "DCP1 & DCP2" as per site plan.

REPORT DATE: 15/06/2017

SAMPLE No: SI 205-17

DATE SAMPLED: 7/06/2017

Tested By: L. Quinn

DEPTH (Metres)	Site: DCP1	Site: DCP2
	No Blows	No Blows
0.0 – 0.1	1	1
0.1 – 0.2	1	2
0.2 – 0.3	2	2
0.3 – 0.4	3	3
0.4 – 0.5	3	3
0.5 – 0.6	3	3
0.6 – 0.7	4	3
0.7 – 0.8	3	4
0.8 – 0.9	3	3
0.9 – 1.0	4	3
1.0 – 1.1	3	3
1.1 – 1.2	4	3
1.2 – 1.3	4	3
1.3 – 1.4		
1.4 – 1.5		
1.5 – 1.6		
1.6 – 1.7		
1.7 – 1.8		
1.8 – 1.9		
1.9 – 2.0		

SITE CLASSIFICATION

90 South Arm Drive, Wonga Beach.

The Dynamic Cone Penetrometer test results indicate adequate allowable bearing pressure to 1.5m.

The Atterberg Limits test results indicate a slightly reactive soil.

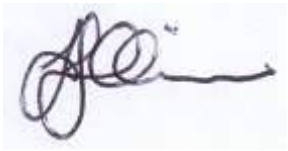
The characteristic surface movement (y_s) is estimated to be in the $0 < y_s \leq 20$mm range. According to TABLE 2.3 of AS 2870-2011 the site must be classified **CLASS-"S".**

To comply with the "Building Services Board Subsidence Policy" advice should be sought from a Registered Professional Engineer for footing design.

All site works must be carried out in accordance with AS 3798-2007 "Guidelines on earthworks for commercial and residential developments"

If the depth of any cut exceeds 0.5m or uncontrolled fill exceeds 0.4m the classification shall be reconsidered.

Because this investigation is limited in scope and extent, it is possible that areas may exist which differ from those shown on the test hole records and used in the site classification. Should any variation from the reported conditions be encountered during excavation work, this office must be notified immediately so that reappraisal of the classification can be made.



Leonard Quinn.
Earth Test.

SITE AND SOIL EVALUATION

90 South Arm Drive, Wonga Beach.

The site and soil evaluation carried out on 7/06/2017 provided the following results.

Site Assessment

Site Factor	Result
Slope	House = 2° Shed = 4°
Shape	Linear-Planar
Aspect	South
Exposure	Good.
Erosion/land slip	Not noted.
Boulders/rock outcrop	Not noted
Vegetation	Grass and some trees
Watercourse/Bores	Dam and bore as shown on the site plan.
Water table	1.6m.
Fill	Not encountered during investigation.
Flooding	Not likely.
Channelled run-off	Not found
Soil surface conditions	Firm, Moist
Other site specific factors	Nil

Soil Assessment

Soil Property	Result
Colour	Brown
Texture	Sandy-Loam
Structure	Weak
Coarse Fragments	Nil
Measured Permeability Ksat (m/d)	>3.0
Dispersion	Slakes
Soil Category	2
Resultant Design Load Rate, DLR (mm/day)	50

WASTEWATER MANAGEMENT SYSTEM

An "All-Waste" septic tank discharging into an "Advanced Enviro-Septic" bed is considered suitable for this site.

A pump well will be required to transfer effluent from the septic tank to the land application area. The discharge pipe shall be fitted with a non-return valve. A high water alarm float switch in the pump well shall be connected to an alarm light displayed in a prominent position in the residence.

This system has been designed to conform to the requirements of the following codes, acts, regulations and standards. All work to be carried out in accordance with the following codes.

- AS/NZ 1547:2012 On-site domestic-wastewater management.
- Queensland PLUMBING AND DRAINAGE ACT 2002.
- Queensland STANDARD PLUMBING AND DRAINAGE REGULATION 2003.
- Queensland PLUMBING AND WASTEWATER CODE.

SYSTEM SIZING FACTORS.

A population equivalent of five (5) persons has been chosen for the proposed three bedroom dwelling.

A population equivalent of two (2) persons has been chosen for the proposed shed with amenities.

The site is connected to a bore water supply system.

Standard water-reduction fixtures must be used to ensure the integrity of the system.
They shall include:-

- Dual flush 6/3 Litre water closets.
- Shower-flow restrictors.
- Aerator faucets (taps).
- Water-conserving automatic washing machines.

Note: - Garbage grinders are not permitted.

As per AS/NZ 1547:2012 Appendix H, Table H1 the "Typical wastewater design flow" for a "Reticulated water supply" gives a flow allowance of 150 L/Person/day.

The daily flow for the dwelling (5 persons @ 150 L/person/day) will be 750 L/day.

The daily flow for the shed (2 persons @ 150 L/person/day) will be 300 L/day.

From AS/NZ 1547:2012 Table J1 the minimum capacity of the All-Waste septic tank required is 3000 L at each location.
The tank must NOT be fitted with an outlet filter.

LAND-APPLICATION SYSTEM

DISPOSAL AREA SIZING – HOUSE SITE

From AS/NZ 1547:2012 APPENDIX L, L4 DESIGN AREA SIZING, L4.2 Sizing

L = Q / (DLRxW)

Where:

L = length in m
Q = design daily flow in L/day
DLR = Design Loading Rate in mm/d
W = Width in m

L = 750/(50*1.35)
= 11.1m.

Use one 15.6m long by 1.35m wide Advanced Enviro-Septic bed.
See site plan and detail cross-section.

DISPOSAL AREA SIZING – SHED SITE

From AS/NZ 1547:2012 APPENDIX L, L4 DESIGN AREA SIZING, L4.2 Sizing

L = Q / (DLRxW)

Where:

L = length in m
Q = design daily flow in L/day
DLR = Design Loading Rate in mm/d
W = Width in m

L = 300/(50*1.35)
= 4.44m.

Use one 6.6m long by 1.35m wide Advanced Enviro-Septic bed.
See site plan and detail cross-section.

SYSTEM SAND

All configurations of Advanced Enviro-Septic® require a minimum of 150mm of system sand surrounding the circumference of the pipe. This sand, typically gravelly coarse sand, must adhere to the following percentage and quality restrictions.

AS Sieve Size (mm)	Percent Passing %
9.50	100
4.75	95-100
2.36	80-100
1.18	50-85
0.600	25-60
0.300	5-30
0.150	0-10
0.075	0-2

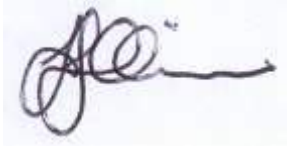
If there is any doubt if the sand media will pass requirements please contact Earth Test for further advice.

SYSTEM INSTALLATION

Avoid compaction by keeping people and machinery off the finished trench or bed floor. The system shall be installed by a licensed plumber in accordance with the manufacturer's recommendations and the relevant Australian Standards.

Operation and Maintenance

Homeowners should be fully informed of the proper operation and maintenance requirements of the on-site wastewater system.

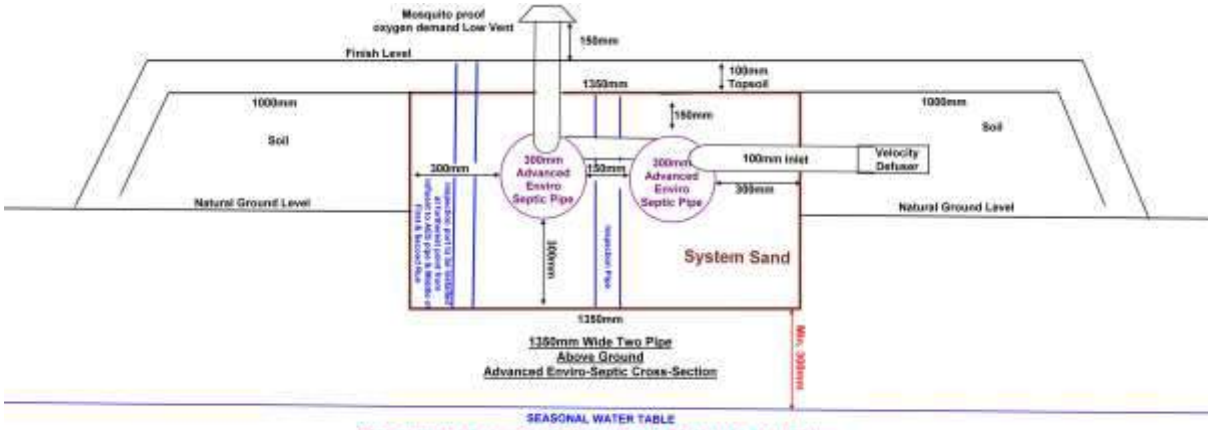


Leonard Quinn
Earth Test

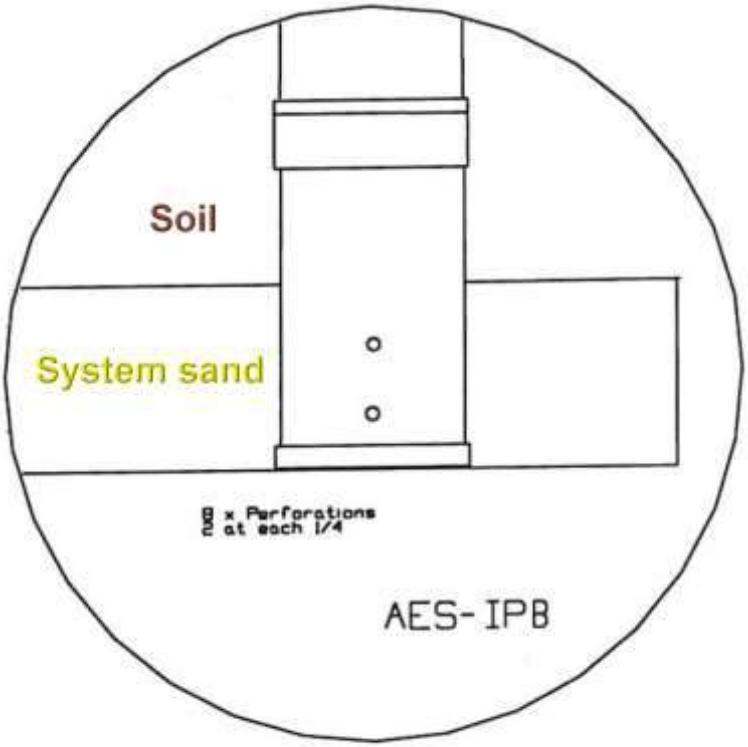
SITE PLAN

90 South Arm Drive, Wonga Beach.

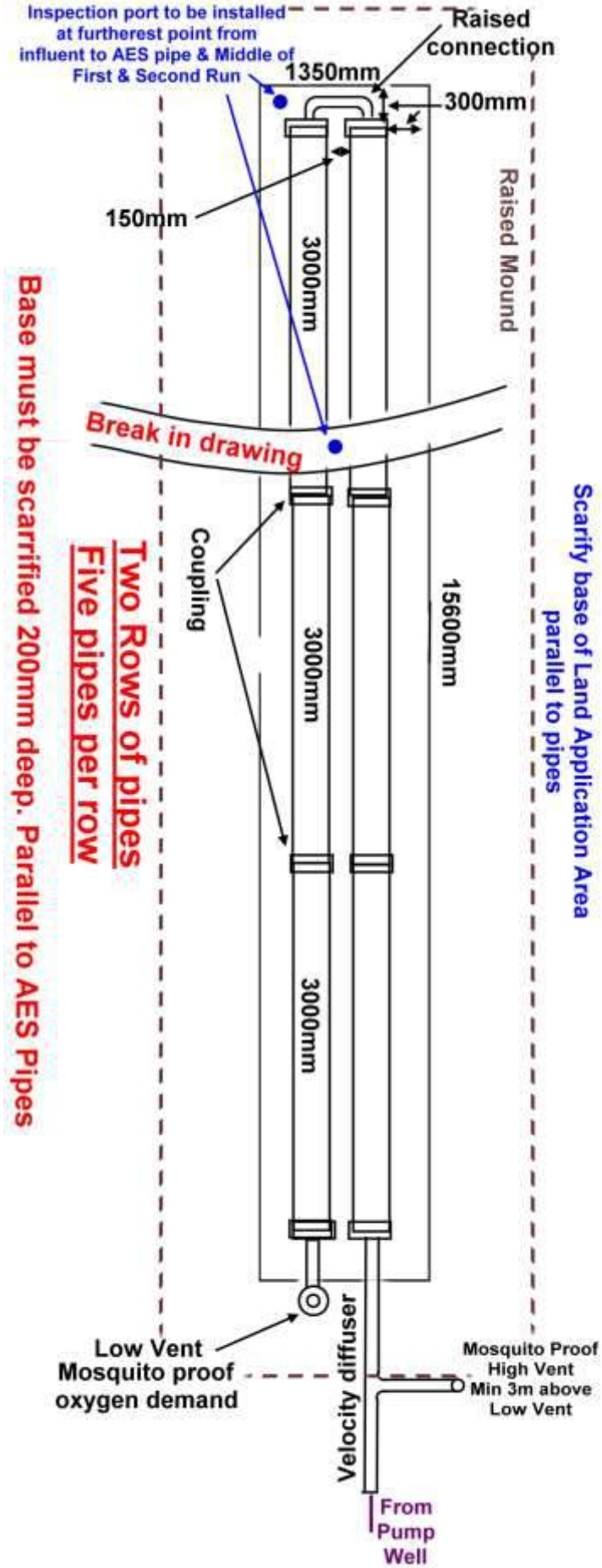
NOT TO SCALE

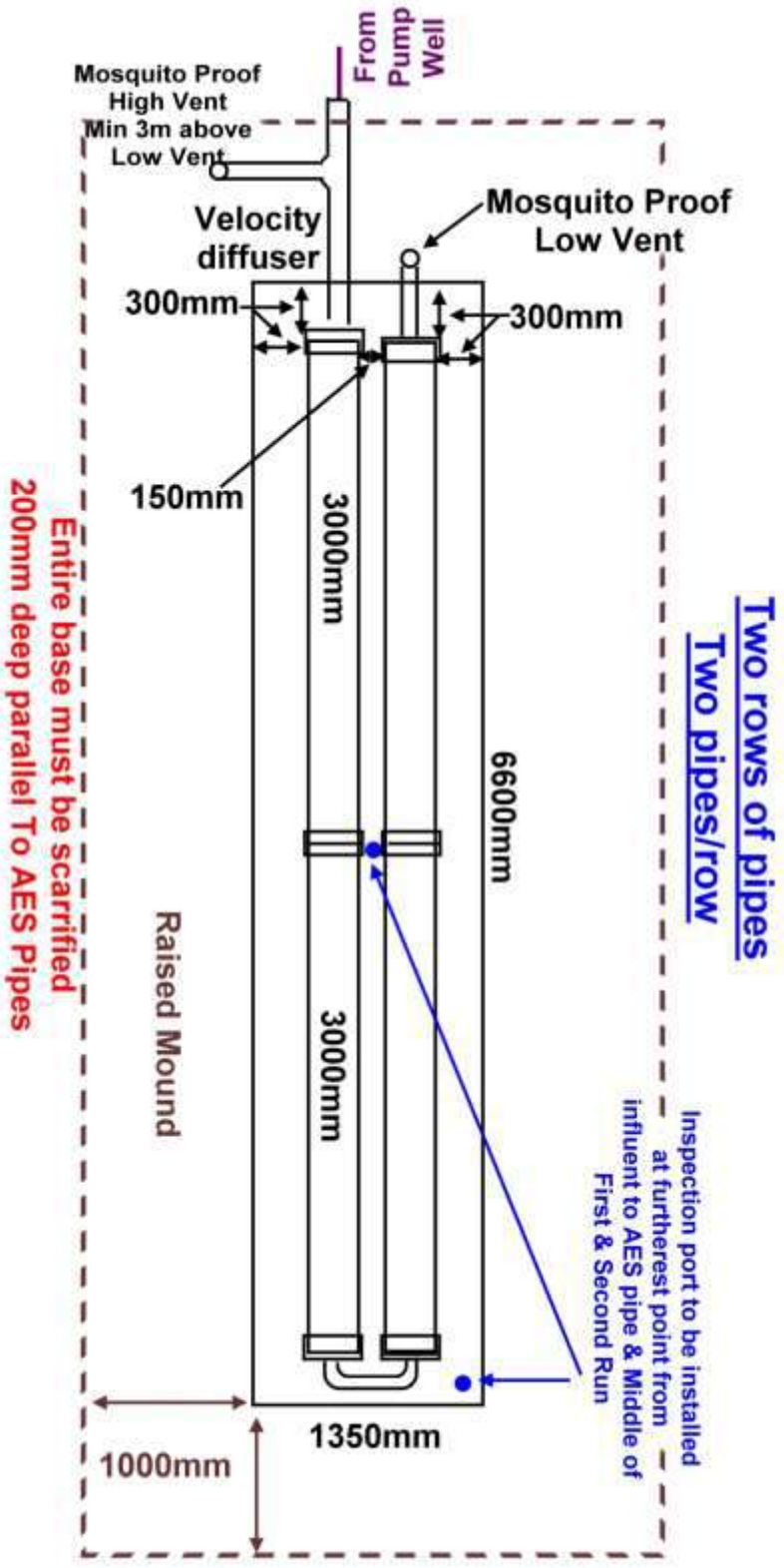


Base must be scarrified 200mm deep. Parallel to AES Pipes



AES Inspection point detail


Inspection port to be installed at furtherest point from influent to AES pipe & Middle of First & Second Run
Raised connection
1350mm
300mm
150mm
3000mm
Raised Mound
Break in drawing
Coupling
3000mm
15600mm
Scarify base of Land Application Area parallel to pipes
Two Rows of pipes
Five pipes per row
Base must be scarrified 200mm deep. Parallel to AES Pipes
3000mm
Low Vent
Mosquito proof
oxygen demand
Velocity diffuser
Mosquito Proof
High Vent
Min 3m above
Low Vent
From
Pump
Well


From Pump Well
Mosquito Proof High Vent Min 3m above Low Vent
Velocity diffuser
Mosquito Proof Low Vent
300mm
300mm
150mm
3000mm
3000mm
6600mm
Raised Mound
Entire base must be scarified 200mm deep parallel To AES Pipes
Two rows of pipes
Two pipes/row
Inspection port to be installed at furtherest point from influent to AES pipe & Middle of First & Second Run
1350mm
1000mm

House Site Calculator

ADVANCED ENVIRO-SEPTIC "Always The First Option"

Advanced Enviro-septic Design Calculator V8.5

"Always the BEST Option" until site and soil conditions rule it out.

Site Address	90 South Arm Drive, Wonga Beach (House)		State QLD	Post Code	
Client Name	Justin Ward				
Designers Name	Earth Test	Designers Ph Number	40954734	Designer Lic Number (eg QBCC)	1017941
Lic Plumber Name		Plumber Ph Number		Plumb / Drainer Lic Number	
Council Area	Douglas Shire Council	Designers AES Cert Number		Date	

This Calculator is a guide only, receiving soil classification, surface water, water tables and all other site constraints addressed by the qualified designer.

System Designers site and soil calculation data entry		IMPORTANT NOTES
Enter the AES ltre/meter loading rate, "30" for Advanced Secondary or "38" Secondary	30	>> *This design is for an ADVANCED SECONDARY system*
Is this a new installation Y or N	y	>> Minimun single vent size is 80mm or 2 x 50mm house vents
Number of person	5	a septic tank outlet filter is NOT RECOMMENDED
Daily Design Flow Allowance Litre/Person/Day	150	
Number of rows required to suit site constraints	2	>> The maximum lth of a single AES pipe run is 30 meters
Infiltration surface Soil Category as established by site and soil evaluation. CATEGORY	2	
Design Loading Rate based on site & soil evaluation DLR (mm/day)	50	
Bore log depth below system Basel area	800	>> Min depth below basel area is 600 mm to establish water table or restrictive layer
Enter System footprint Slope in % for standard AES systems to calculate extension	3.5	>> Consideration required for Sloping sites. Ref AS1547. refer comment.
Is this design a gravity system with no outlet filter? Y or N	n	>> A HIGH and LOW vent are required on this AES system as well as a velocity diffuser

COMMENTS :- *" The outcome must be important to everyone "*

- Designers need to be familar with special requirements of Local Authorities. IE - Minimun falls from Septic tank outlets to Land application areas. etc
- All Sloping sites require special consideration and management through design of slope percentage, surface water and construction methods as per AS1547.
- Plumbers are reminded to practice good construction techniques as per AS 1547 and as provided on AES installation instructions supplied with components.

AES System Calculator Outcomes		
Total System load - litres / day (Q).	750	l/d
Min Length of AES pipe rows to treat loading	12.5	lm
Number of FULL AES Pipe lengths per row	5	lths
Total Capacity of AES System pipe in Litres	2120	ltr.

AES dimensions	AES System	System Extension
Lth m : (L)	15.6	15.6
Width m:(W)	1.35	0.00
Sand Depth :	0.75	FALSE
Area m2	21.1	0.0

DO YOU WISH TO USE CUT LENGTHS OF PIPE IN THIS DESIGN? (ENTER Y)

IF YOU WISH TO USE A TRENCH EXTENSION DESIGN OPTION ENTER "Y"

Enter Custom Width in metre

AES INFILIRATION FOOT PRINT AREA - L = Q / (DLR x W)	Length		Width		Minimum AES foot print required .	
for this Basic Serial design is	15.6	x	1.35	=	21.1	m2 total

Code	AES System Bill of Materials		
AES-PIPE	AES 3 mtr Lths required	10	lths
AESC	AESC Couplings required	8	ea
AESO	AESO Offset adaptors	4	ea
AESODV	AES Oxgen demand vent	2	ea
AES-IPB	AES 100mm Inspection point base	2	ea
AES Equ	AES Speed Flow Equaliser		ea
	TOTAL SYSTEM SAND REQUIRED (Guide Only)	19	m3

PLEASE email your AES CALC and Drawings to DESIGNREVIEW@ENVIRO-SEPTIC.COM.AU

Chankar Environmental Use Only

ADVANCED ENVIRO-SEPTIC "Always The First Option"

Digitally signed by Kane Dickson
DN: cn=Kane Dickson, o=Chankar Environmental, ou=Design Review, email=designreview@enviro-septic.com.au, c=AU
Date: 2017.06.15 14:14:17 +10'00'

Designreview@enviro-septic.com.au

> The AES Calculator is a design aid to allow checking of the AES components and configuration and is a guide only. Site and soil conditions referencing the AS 1547 standard are calculated and designed by a Qualified Designer.

> Chankar Environmental has no responsibility for the soil evaluation, loading calculations or DLR entered by the designer for this calculator.

> AES pipes can be cut to lenght on site. They are supplied in 3 meter lths only.

Shed Site Calculator

ADVANCED ENVIRO-SEPTIC "Always The First Option"

Advanced Enviro-septic Design Calculator V8.5

"Always the BEST Option" until site and soil conditions rule it out.

Site Address	90 South Arm Drive, Wonga Beach Shed	State	QLD	Post Code	
Client Name	Justin Ward				
Designers Name	Earth Test	Designers Ph Number	40954734	Designer Lic Number (eg QBCC)	1017941
Lic Plumber Name		Plumber Ph Number		Plumb / Drainer Lic Number	
Council Area	Douglas Shire Council	Designers AES Cert Number		Date	

This Calculator is a guide only, receiving soil classification, surface water, water tables and all other site constraints addressed by the qualified designer.

System Designers site and soil calculation data entry		IMPORTANT NOTES
Enter the AES litre/meter loading rate, "30" for Advanced Secondary or "38" Secondary	30	>> *This design is for an ADVANCED SECONDARY system*
Is this a new installation Y or N	y	>> Minimun single vent size is 80mm or 2 x 50mm house vents
Number of person	2	a septic tank outlet filter is NOT RECOMMENDED
Daily Design Flow Allowance Litre/Person/Day	150	
Number of rows required to suit site constraints	2	>> The maximum lth of a single AES pipe run is 30 meters
Infiltration surface Soil Category as established by site and soil evaluation. CATEGORY	2	
Design Loading Rate based on site & soil evaluation DLR (mm/day)	50	
Bore log depth below system Basel area	800	>> Min depth below basel area is 600 mm to establish water table or restrictive layer
Enter System footprint Slope in % for standard AES systems to calculate extension	3.5	>> Consideration required for Sloping sites. Ref AS1547. refer comment.
Is this design a gravity system with no outlet filter? Y or N	n	>> A HIGH and LOW vent are required on this AES system as well as a velocity diffuser

COMMENTS :- *" The outcome must be important to everyone."*

- Designers need to be familar with special requirements of Local Authorities. IE - Minimun falls from Septic tank outlets to Land application areas. etc
- All Sloping sites require special consideration and management through design of slope percentage, surface water and construction methods as per AS1547.
- Plumbers are reminded to practice good construction techniques as per AS 1547 and as provided on AES installation instructions supplied with components.

AES System Calculator Outcomes		
Total System load - litres / day (Q).	300	l/d
Min Length of AES pipe rows to treat loading	5.0	lm
Number of FULL AES Pipe lengths per row	2	lths
Total Capacity of AES System pipe in Litres	848	ltr

AES dimensions	AES System	System Extension
Lth m : (L)	6.6	6.6
Width m:(W)	1.35	0.00
Sand Depth :	0.75	FALSE
Area m2	8.9	0.0

DO YOU WISH TO USE CUT LENGTHS OF PIPE IN THIS DESIGN? (ENTER Y)

IF YOU WISH TO USE A TRENCH EXTENSION DESIGN OPTION ENTER "Y"

Enter Custom Width in metre

AES INFILTRATION FOOT PRINT AREA - L = Q / (DLR x W)	Length		Width		Minimum AES foot print required .	
for this Basic Serial design is	6.6	x	1.35	=	8.9	m2 total

Code	AES System Bill of Materials		
AES-PIPE	AES 3 mtr Lths required	4	lths
AESC	AESC Couplings required	2	ea
AESO	AESO Offset adaptors	4	ea
AESODV	AES Oxgen demand vent	2	ea
AES-IPB	AES 100mm Inspection point base	2	ea
AES Equ	AES Speed Flow Equaliser		ea
	TOTAL SYSTEM SAND REQUIRED (Guide Only)	8	m3

PLEASE email your AES CALC and Drawings to
DESIGNREVIEW@ENVIRO-SEPTIC.COM.AU

Chankar Environmental Use Only

ADVANCED ENVIRO-SEPTIC "Always The First Option"

Digitally signed by Kane Dickson
DN: cn=Kane Dickson, o=Chankar Environmental, ou=Design Review, email=designreview@enviro-septic.com.au, c=AU
Date: 2017.06.15 14:15:40 +10'00'

Designreview@enviro-septic.com.au

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> *AES pipes can be cut to lenght on site. They are supplied in 3 meter lths only.*

GMA Certification Pty Ltd

A.B.N. 53 150 435 617

OFFICE ADDRESS:
Suite 26 "Advance Business Centre"
39-47 Lawrence Drive
NERANG QLD 4211

POSTAL ADDRESS:
PO Box 2760
NERANG QLD 4211

PHONE: 07 5578 1622
FAX: 07 5596 1294
EMAIL: admin@gmacert.com.au

PURCHASE ORDER

Purchase No: **00031936**
Date: 23-Jun-17
BA NUMBER: **20172508**

TO:

Douglas Shire Council
PO Box 723
Mossman QLD 4873

SITE ADDRESS: Lot 8 No.90 South Arm Drive, Wonga Beach

DESCRIPTION	AMOUNT	CODE
Planning Application Fee	$306.00	FRE

Your Invoice No.:

Vendor ABN: 71 241 237 800

Code	Rate	GST	Sale Amount
FRE	0%	$0.00	$306.00
GST	10%	$0.00	$0.00

GST:	$0.00
Total inc GST:	$306.00
Amount Applied:	$0.00
Balance Due:	**$306.00**

Please find attached our payment to the value of $306.00 for the above listed items.
PLEASE QUOTE our Purchase Order Number on the Receipt.
Receipts can be emailed or posted to the address at the top of this Purchase Order.