18 Triton Crescent

Material Change of Use for Multi Unit Housing (Two Townhouses)



November 2007



CONTENTS

| EXEC | CUTIVE SUMMARY | 2 |
|-------------|---|----|
| 1. | INTRODUCTION | 3 |
| 1.1. | Purpose of this Report | 3 |
| 2. | SITE AND LOCALITY | 4 |
| 2.1 | Property Details | 4 |
| 2.2 | Site and locality description | 4 |
| 2.3 | Current Use | 5 |
| 3. | APPLICATION AND DEVELOPMENT DETAILS | 5 |
| 5.1 | Application particulars | 5 |
| 5.2 | Description of the Proposed Development for the MCU | 5 |
| 5.3 | Streetscape character | 5 |
| 6 | ASSESSMENT OF PROPOSAL | 6 |
| 6.1 | Matters for consideration | 6 |
| 6.2 | Douglas Shire Council Planning Scheme and Policies | 6 |
| 7 | CONCLUSION | 16 |
| APPE | ENDIX A | 16 |
| APPE | ENDIX A | 17 |
| APPF | FNDIX B | 18 |

EXECUTIVE SUMMARY

Site Details

SITE ADDRESS 18 Triton Crescent, Port Douglas

REAL PROPERTY Lot 90 RP 729069
DESCRIPTION Parish of Cairns.
SITE AREA Total: 1063 m²

LOCAL GOVERNMENT AREA Douglas Shire PLANNING SCHEME ZONE Residential 1

Application Details

APPLICATION Development permit for Material Change of Use for

Multi-unit Housing (2 townhouses)

ASSESSMENT PROCESS Impact Assessment IDAS REFERRALS Refer to Appendix A

APPLICANT Janet Yang

C/- Studio Mango 457 Draper Street

PARAMATTA PARK, QLD 4870

Contact: James Maude Studio Mango

Phone: 07 4041 1394

Fax: 4041 7597

Development Details

PROPOSED USE Multi Unit housing (2 townhouses)

GROSS FLOOR AREA 337m2

HEIGHT OF BUILDINGS Approx. 6.0m

CARPARKING 4 cars

1. INTRODUCTION

1.1. Purpose of this Report

This Proposal Report supports an application for a Multi Unit housing development for two townhouses.

The site is situated at 18 Triton Crescent, Port Douglas and described as lot 90 on Registered Plan 729069.

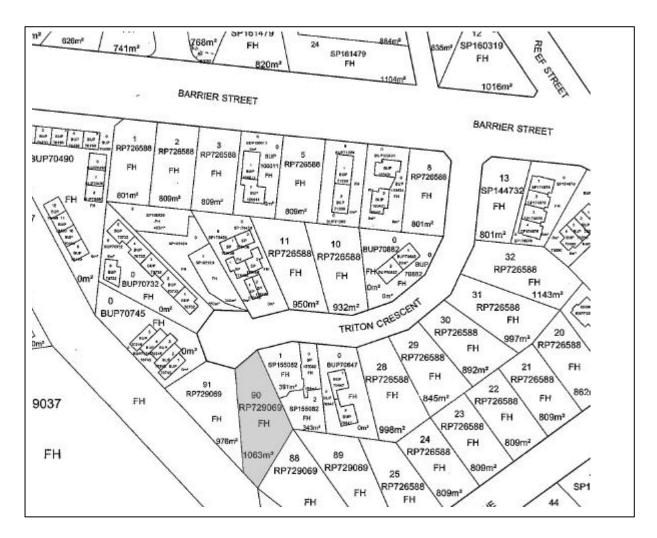


Figure 1: Copy of Cadastral Map including the subject property

The application is made by Janet Yang pursuant to the Integrated Development Assessment System (IDAS) and seeks a Development Permit for a Material Change of Use.

This Proposal Report sets out information required for Council's consideration, including drawings of the proposed development. The report shows that the proposed development is consistent with Council's planning scheme and the character of the local area.

2. SITE AND LOCALITY

2.1 Property Details

ADDRESS 18 Triton Crescent, Port Douglas

REAL PROPERTY DESCRIPTION Lot 90 RP 729069

Parish of Cairns

SITE AREA Total: 1063 m²
PLANNING SCHEME Commercial

DESIGNATIONS

EXISTING USE House

2.2 Site and locality description

The large triangular shaped site has an existing single story 3 bedroom masonry block house on it built in 1990. The site is well landscaped with some mature trees and there is an existing swimming pool. It is well drained with some stormwater draining to the street but most draining to soakage areas toward the rear and ultimately to the drainage reserve at the back of the lot.

The site has 14m frontage to the end of Triton Crescent, similar to the other properties at this end. It has full access to all services.

Triton Crescent has a range of developments including houses, units and townhouse. On one side of the property is a detached house and on the other attached townhouses.

Due to the size of the lot, the current house is set well back from the road leaving space for a small infill development, which is the subject of this proposal.



view from street



Location of new driveway

2.3 Current Use

The site is currently used as a house.

3. APPLICATION AND DEVELOPMENT DETAILS

5.1 Application particulars

Application Details

APPLICATION Development permit for Material Change of Use for

Multi-unit Housing (2 townhouses)

ASSESSMENT PROCESS Impact Assessment IDAS REFERRALS Refer to Appendix A

APPLICANT Janet Yang

C/- Studio Mango 457 Draper Street

PARAMATTA PARK, QLD 4870

Contact:

James Maude

Phone: 07 4041 1394

Fax: 4041 7597

5.2 Description of the Proposed Development for the MCU

The proposal is for two attached houses on the lot.

The existing house would be one of the houses. It would have a new garage and tandem parking for a second car built to the side boundary. A new entrance would provide better access and privacy. A private courtyard would be formed around its existing verandah.

A new 3 bedroom house would be built around and over the existing carport. This makes efficient use of the carport slab and structure. The new house would be two storey to minimise its footprint. It follows the setback of the existing carport but is set in further along part of the upper storey. This house is designed with the living areas and main bedroom upstairs and with a deck overlooking the street. It also has a private courtyard and access to the pool and rear gardens.

A new driveway services the two garages. It has been set out to preserve a medium sized melaleuca in the front yard. The pool will become a common recreation area along with the rear garden.

5.3 Streetscape character

The streetscape of Triton Crescent is quite varied with a mix of uses and building types. Some parts are well landscaped to the street frontage. Nearby units are dominated by concrete driveways and have very little landscape. Some carports are built to the boundary or close, while others are set well back. Buildings are predominately single storey however there are two storey units nearby.



The proposed development aims to retain much of the existing landscape character while building a new townhouse on the site of the existing driveway. It is designed in a Queensland vernacular style with a balcony overlooking the street. As such it complies with the desired streetscape character of Port Douglas.

6 ASSESSMENT OF PROPOSAL

6.1 Matters for consideration

This section of the report addresses the matters required to be considered and the extent that they are relevant to the application.

6.2 Douglas Shire Council Planning Scheme and Policies

| Site Area Front Boundary | 1063m2 14m | |
|-------------------------------|---|--|
| | | |
| Length | | |
| Details of any | none | |
| easements on the | | |
| site | | |
| Neighbouring land | Residential 1 (Previously Residential B) | |
| uses & development | | |
| Planning Area | Residential 1 | |
| Proposed Use | Development permit for Material Change of Use for Multi- | |
| | Housing (2 townhouses) Impact assessable | |
| Self, Code or Impact | impact assessable | |
| assessable Relevant overlays | | |
| Relevant Overlays | Acid sulphate soils | |
| Plot Ratio | | |
| Designation | Low Scale | |
| Relevant Codes | Residential 1 Planning Area Code | |
| | Residential Trianning Alea Code | |
| | Port Douglas and Environs Code | |
| | Acid sulphate Soil Code | |
| | Multi Unit Housing Code | |
| | Landscaping code | |
| | · · | |
| | Vehicle Parking Access code | |
| Proposed site cover | Site cover – 265 m ² | |
| | 25% | |
| | 2070 | |
| Proposed Plot ratio | Gross Floor Area - 340m2 | |
| · | Plot ratio 0.32:1 | |
| | r ioi ratio v.32. I | |
| Desired | The key DEO that supports this application is DEO 10. This DEO seeks | |
| Environmental | arrange of housing options and different residential lifestyles. This | |
| Outcomes | proposal seeks to provide a small infill development of a new | |
| | townhouse in front of an existing house. As such it improves housing | |
| | diversity while making efficient use of resources with minimal impact | |
| | on the community around it. | |
| Planning Scheme | This report has been prepared by a James Maude, Queensland | |
| Policy No 2 Building | registered architect No 3069. It is confirmed that the proposal | |
| Design and | incorporates architectural elements detailed in the Policy and | |
| Architectural | building design features that enable the building to be described as | |

| Elements | tropical Queensland vernacular architecture. |
|--|---|
| Residential 1 | Purpose |
| Planning Area Code | The critical purpose of this code as it applies to this proposal is to "maintain and enhance the residential character and amenity of established residential neighbourhoods" which this proposat achieves. As a quality small scale infill development, it does not degrade the existing character and provides an improved streetscape. |
| | Consistent and Inconsistent Uses |
| | A1.1 Complies |
| | Multi unit is not identified as an inconsistent use in the Assessment table unless in Special Management Area 1. This is consistent with the established character of the area which has a mix of houses and units. |
| | Site coverage - other than a house |
| · NON | A2.1 refer below |
| | Building setbacks - other than a house |
| | A3.1 refer below |
| | Fencing |
| * // // // // // // // // // // // // // | A4.1 Complies |
| | The proposed fencing at the front is 1.2 m in height and the existing side fencing is 1.8m in height |
| | Landscaping |
| | P5 Substantially Complies |
| | The front setback will have 2m of landscaping to include 60% dense planting however the side setbacks will vary. The side with the driveway will have a variable width of landscaping to allow sufficient room fro access. This will be dense planted but varies from 800mm to 2400mm. The varying width will provide visual interest and form and incorporate native vegetation. Included in this setback is the melaleuca tree to be preserved. Currently there is very little landscape along most of the boundary so the proposed landscape will improve privacy and visual interest. |
| | In addition it is proposed to build a garage on the boundary. This will also achieve the privacy requirements. |
| | A5.2 complies |
| | The existing swimming pool will be a public recreation area and is connected to both. |
| | Multi Unit housing |

A6.1 N/A

Triton Cres is an established area.

A7.1 Complies

The lot area is over 1000m2 so complies with A7.1, but the frontage is only 14m. However this is consistent with the established character of the area – most of the other large lots at the end of Triton Cres have multi unit housing. See also P7.

A7.2 Complies

There are two units proposed for 1063m2, so this complies.

A7.3

Both units have only three bedrooms so this complies.

A7.4 Complies

The site coverage is 25% so is well below the 35% for two storey development.

A7.5 Complies

The proposed setbacks do not comply with A7.5 but as argued below comply with P7.

A7.6 Complies

A total of 448m² or 42% is provided as landscape and recreation space which complies. The single storey house has a directly accessible recreation area however the two storey house has a decent sized balcony instead. It has dedicated landscape area accessible from the lower level bedrooms and garage. Notwithstanding this, 398m² of the communal area is provided in one place

A7.7 Complies

Dedicated bin areas are provided for each unit in their private yards.

A7.8 Complies

The balcony for the two storey unit is not enclosed.

P7 Complies.

The proposal's siting setbacks does not comply with the setbacks under A7.5 but are considered reasonable and complementary to the residential character of the area. The basic premise of the development proposal is to site the new house to the front to reduce the impact on the established tropical landscape to the rear. While it would have been possible to site a building in the rear yard, by the time it was sited and the driveway extended right down the side of the house, most of the established landscape would have gone, and impacts on neighbours would have been

greater. It was therefore decide to site the unit in the front yard which required the removal of less landscape but some compromise with setbacks to cope with the narrowing of the lot.

The decision was also made to build over the existing carport to enable re-use of the existing slab and structure to reduce embodied energy of construction. Finally the established melaleuca tree required the new house to be pushed toward the northern boundary so that cars could manoeuvre around it.

Setbacks to the front boundary vary due to the angled boundary line and are a minimum of four metres. Front setbacks of other buildings in Triton Cres. vary. The immediate southern neighbours are approximately four metres so this figure has been used to set an appropriate dimension for this proposal. Other structures in Triton Cres are erected on the boundary, while others set further back than 6m.

The proposal complies with A7.5 for the rear setbacks.

The side setbacks vary. The existing house setbacks comply with A7.5 except for the existing garage which is 2.2m from the boundary. The new garage for the existing house has been located on the southern boundary. It is considered that this is an appropriate solution as it is only a short length of this boundary, is of low height and improves visual and aural privacy between neighbours. The alternative is to have a thin strip of space between the garage and the fence that would hard to maintain and of little benefit.

As the proposal for the new house builds over the existing garage, this existing setback has been used for this part of the second storey. However it has been designed to reduce any impacts on the neighbouring property. The two storey part that is 2.2m from the boundary is reduced in height due to the design of the sloping roof. The rest is only single storey and so has negligible impacts on the neighbours. Generally the house is oriented away from this boundary. As the house is Class 1, not Class 2 units these setbacks comply with the Building Code of Australia and are similar to the setbacks allowed under the Queensland Development Code Part 12 for houses. Thus they are consistent with, and complement the residential amenity of the area.

Port Douglas and Environs Code

Purpose

The proposal does not involve tourist development so assists in protecting residential areas from tourist accommodation.

It complements the tropical image of the town with Queensland vernacular architecture.

General Requirements

A1.1 Complies

The maximum height is under 6.5m, the roof is under 3.5m and the new building is only two stories.

A2.1 Complies

| | New service connections will be underground |
|--------------------|--|
| | A3.1 Complies |
| | See landscaping plans by Hortulus. |
| | A4.1 Complies |
| | All roads, driveways and manoeuvring areas will be deigned by a civil engineer and will comply with FNQROC development manual. |
| | Residential Development outside Tourist Areas |
| | A14.1 Complies |
| | Triton Cres. is not part of Solander Estate or Reef Park |
| | A15.1 Complies |
| | The land is designated low scale with a base plot ratio of 0.25:1 and a maximum of 0.35:1. The proposed plot ratio is 0.32:1 . The additional plot ratio is achieved by complying with Planning Scheme Policy No. 2. In particular the new building incorporates the following features: |
| | Pitched roof form (25deg) with dutch gable facing the street and corrugated steel roofing. 10% Large windows and doors that are shaded by large eaves and awnings. Solid louvers that self shade. 15% Eaves are a mix of width from 300 to 900 depending on need. The building addresses the street. 5% There are windows and balconies on the street frontage 10% Balconies that are more than 2m x 3m and incapable of being enclosed. 20% Some battened privacy screens 5% Total length of the building does not exceed 30m and no single wall is longer than 15m. 10% |
| | Total bonus incorporated: 75% or 0.325:1 |
| | A16.1 Complies |
| | Site cover is 25%. |
| | A17.1 N/A |
| | Protection of Scenic amenity and Natural Values |
| | N/A |
| Multi Unit Housing | Purpose |
| Code | · |

This proposal is compatible and complementary to the surrounding development by being in the middle of the different scales of development that already exist in Triton Crescent. As two small houses it is in total only as big, or not much bigger than many of the existing houses. It is smaller than the existing multi unit

developments.

The development does not impact on the natural environment, is in an appropriate residential location, and create a pleasant living environment designed fro the tropical climate.

Site Requirements

A1.1/P1 Complies

The site is over the required 1000m2. The frontage, at 14m, is less than 25m. However, as argued above this is the same frontage as other units in Triton Cres. As can be seen from the site plan, the frontage is sufficient to enable safe vehicular access, and to fit the buildings and structures. See also the siting discussion in the Residential 1 Planning Area Code.

Site Layout

A2.1 Complies

The building is 30m long. However we note it is very articulated along this length, changing height, width and setbacks. Arguably it reads as two buildings.

A2.2 Complies

No wall plane is longer than 15m

A2.3 Complies

Building bulk is significantly reduced by the changes in number of stories, building width, recesses and setbacks, balconies and entry structures, and changes in materials.

A2.4 Complies

The new building elevations provide interest with building elements and changes to colours, textures and materials. The design is in accordance with Planning Scheme Policy No 2 – Building design and Architectural Elements. See attached letter of certification.

A3.1 Complies

The new building has a balcony that faces the street.

A3.2 Complies

See above

A4.1 Complies

The existing house remains as is with its habitable rooms oriented to the verandah and private courtyard.

The new house is mostly oriented to the street and to the driveway. On the driveway side it looks across to the back of unit garages rather than habitable rooms. On the northern side it has potential impacts on the neighbours privacy. On the ground floor these are

considered negligible due to the 1800 high fence and substantial existing neighbours landscaping and proposed landscaping. The upper level kitchen and study however potentially overlook the outdoor space and living areas of the northern neighbour. Privacy screens have been provided below these windows to block looking down, however views are still available out to the trees.

A4.2 Complies

There is no overlooking from the one balcony as it addresses the street.

A5.1 Complies

The new house incorporates the cars underneath to reduce footprint. The existing house car park is well behind the front building line.

A5.2 Complies

The car parking will have night time proximity lighting. It is largely private garaging so has standard ventilation for a domestic garage, is screened from adjoining development and is 75% covered.

A5.3/ P5 Substantially complies

The driveway setback varies along the southern boundary starting from 2.8m reducing to just under 1m to get around the front unit, widening again to 2.4m around the melaleuca and then narrowing again to just under a metre to service the rear garage. This setback will have 1.5m high landscaping screen.

This driveway is in the only location that makes sense given the siting decisions given above in the Residential 1 Planning Area Code, and works toward preserving significant existing landscape on the rest of the site. As it only services two units it will not have a significant impact on the adjoining development.

A6.1 Complies

There is no cut proposed.

Landscaping and Open Space

A7.1 Complies

Each house requires 60m2 of landscape and recreation area. A total of 691m² is provided on site. Of this 398m² is provided as one communal area.

A7.2 Complies

The rear house has an existing private roofed verandah of 27m2 with a minimum dimension of 2.8m

The front house has a private balcony of 12m2 with a minimum dimension of 3.1m.

| | A72 Committee | |
|----------------------------|--|--|
| | A7.3 Complies | |
| | The existing swimming pool is not in the front setback. | |
| | A8.1 Complies | |
| | Each house has its own drying area in its service court. | |
| | A8.2 Substantially complies | |
| | Each house has a number of locations to store standard wheelie bins in the service courts or adjacent garaging. As this is essentially domestic in nature it is not considered necessary to roof the area and drain to sewer. | |
| Acid Sulfate Soils Code | This is not applicable as there is no proposal to remove more than 100m³ or fill more than 500m³ | |
| Vehicle Parking and | Vehicle parking Numbers | |
| Access Code | | |
| | A1.1 Complies | |
| | Schedule 1 requires 1.5 car spaces per unit. 2 car spaces per unit are provided, with 75% covered. The rear house has its second car space as a tandem. This is considered appropriate fro the scale of development and because this space is not shared with the front house. | |
| | A2.1 N/A | |
| | Neither house is wheelchair accessible so no wheelchair accessible space have been provided. | |
| | A3.1 N/A | |
| | A4.1 N/A | |
| | A 5.1 N/A | |
| | No dedicated bicycle spaces provide however there is clearly sufficient room on site for parking of bicycles in individual garages and service courtyards. | |
| | A6.1-A6.3 Complies | |
| | There will be only one access point, the redundant point will be removed and the access will comply with Australian standards. | |
| | P7 Complies | |
| | Visitor parking is shared with dedicated house parking and so is close to building entries. Parking is convenient, largely hidden from view and safe. It does not detract from the streetscape. | |
| | P8 Complies | |

As the car parking is to service dedicated houses, it does not have to cater for a wide range of users. It is sized to handle small to large cars, and delivery trucks are capable of standing on site for deliveries or removals.

The covered areas are fully enclosed garages.

A9.1 Complies

Driveways will be designed by a civil engineer and will be in accordance with the relevant Australian Standards.

P10 Complies

The driveway will be coloured concrete.

A11.1 Complies

There is no requirement for access for Class 1 houses.

P12 Complies

On a development of this scale it is not appropriate to have a separate defined pedestrian access. There are two house served by the driveway which can be dual use, A separate path simply takes up important landscape space.

P13 Complies

As per P12.

P14 Complies

Car parking spaces are to AS2890.

On site Driveways, Manoeuvring Areas and Parking / Standing Areas

P15 Complies

All driveways will be sealed, have minimal gradient and maintained for the use of the residents.

Vehicle Circulation, Queuing and Set Down Areas

A1.1, 2.1 & 3.1. Circulation, driveways and set down areas will comply with AS2890.1 & 2890.2

| Landscape Code | Landscape Design |
|----------------|---|
| | A1.1. A Landscape Plan has been drawn to comply with this Code and Planning Policy No 7. |
| | Landscape Character and Planting |
| | A2.1-2.3 Complies |
| | See landscape plan |
| | P3 Complies |
| | As discussed above, the retention of the existing significant landscaping is an integral part of the site layout and design. By positioning the house and driveway predominately on the existing driveway and front lawn, removal of existing landscape is minimised. The significant melaleuca is also retained. |
| | P4 Complies |
| | The landscape design has been undertaken by design professionals and in accordance with Planning Scheme Policy No 7. |
| | P5 N/A |
| | Screening |
| | P7 complies |
| | See landscape plan. Fences are 1200 high at the front. |
| | P7 complies |
| | This is largely the existing landscape with some changes for access and additional plantings. |
| | P8-P9 complies |
| | See landscape plans |
| | Streetscape and Site Amenity |
| | P10 Complies |
| | See landscape plans |
| | Maintenance and Drainage |
| | P12 Complies |
| | See landscape plans |
| | P13 Complies |
| | Most stormwater runoff will follow the existing drainage lines to the west. Most of this soaks away through the sandy soils. Excess water |

makes it way to the drainage reserve on the west side of the lot.

The eastern side of the driveway will drain to the street.

Safety

P15 Complies

The common areas around the driveway have good surveillance and will have proximity lighting.

Utilities and services

P16 Complies

7 CONCLUSION

This proposal is for a small urban infill development in an established neighbourhood. It has been carefully sited and designed to maximize the retention of the existing mature landscape and for efficient vehicular access. It fits into the neighbourhood which is a mix of multi unit housing and single detached housing. It provides an attractive streetscape with vernacular architecture.

While some setbacks do not comply with the acceptable solutions, they are a response to retaining significant vegetation on the site. The setbacks are appropriate to the scale of the development; being small infill townhouses, as opposed to a large unit development, and do not reduce the neighbours' amenity.

It is recommended the proposal be approved.









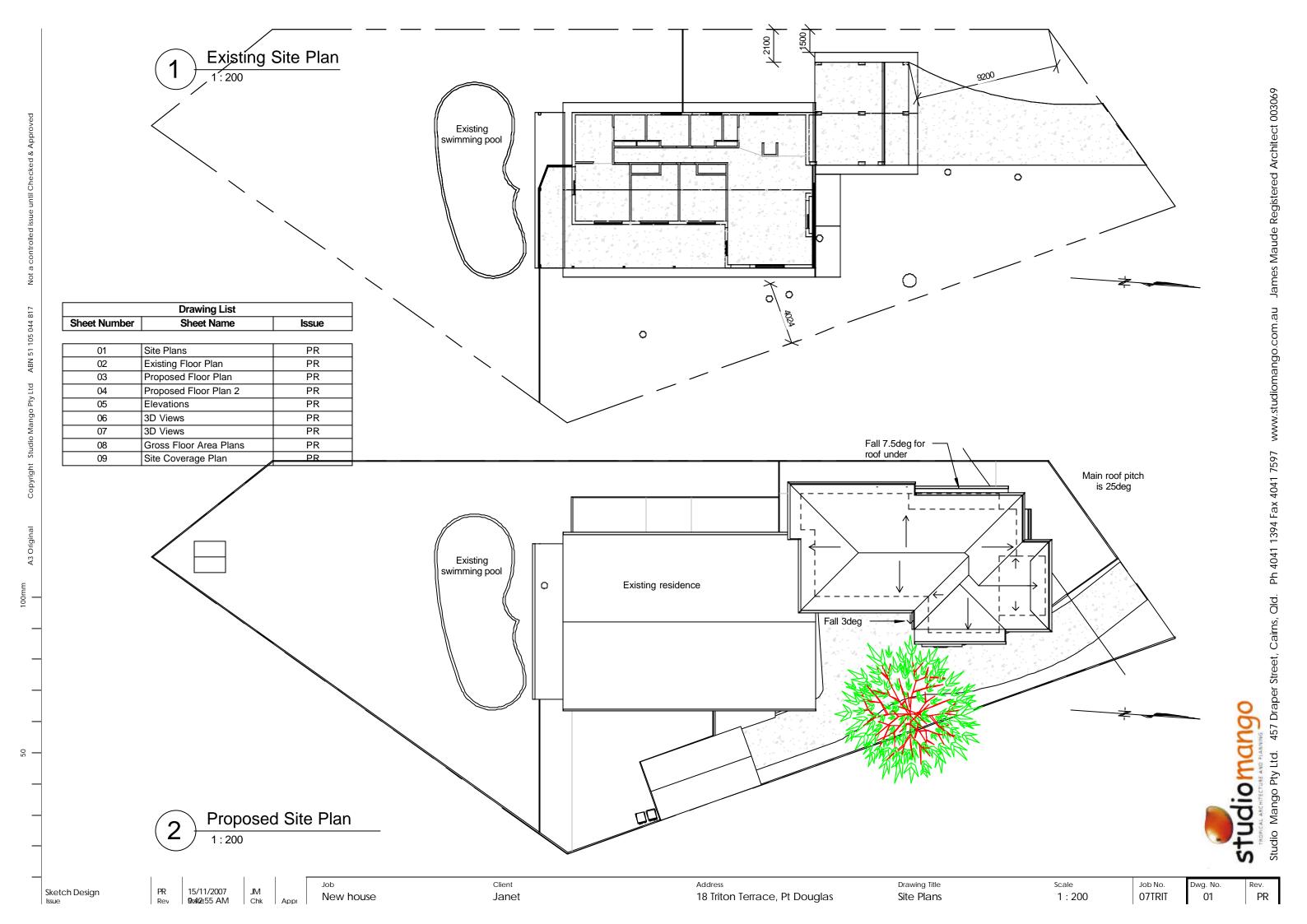
November 2007 Page 16

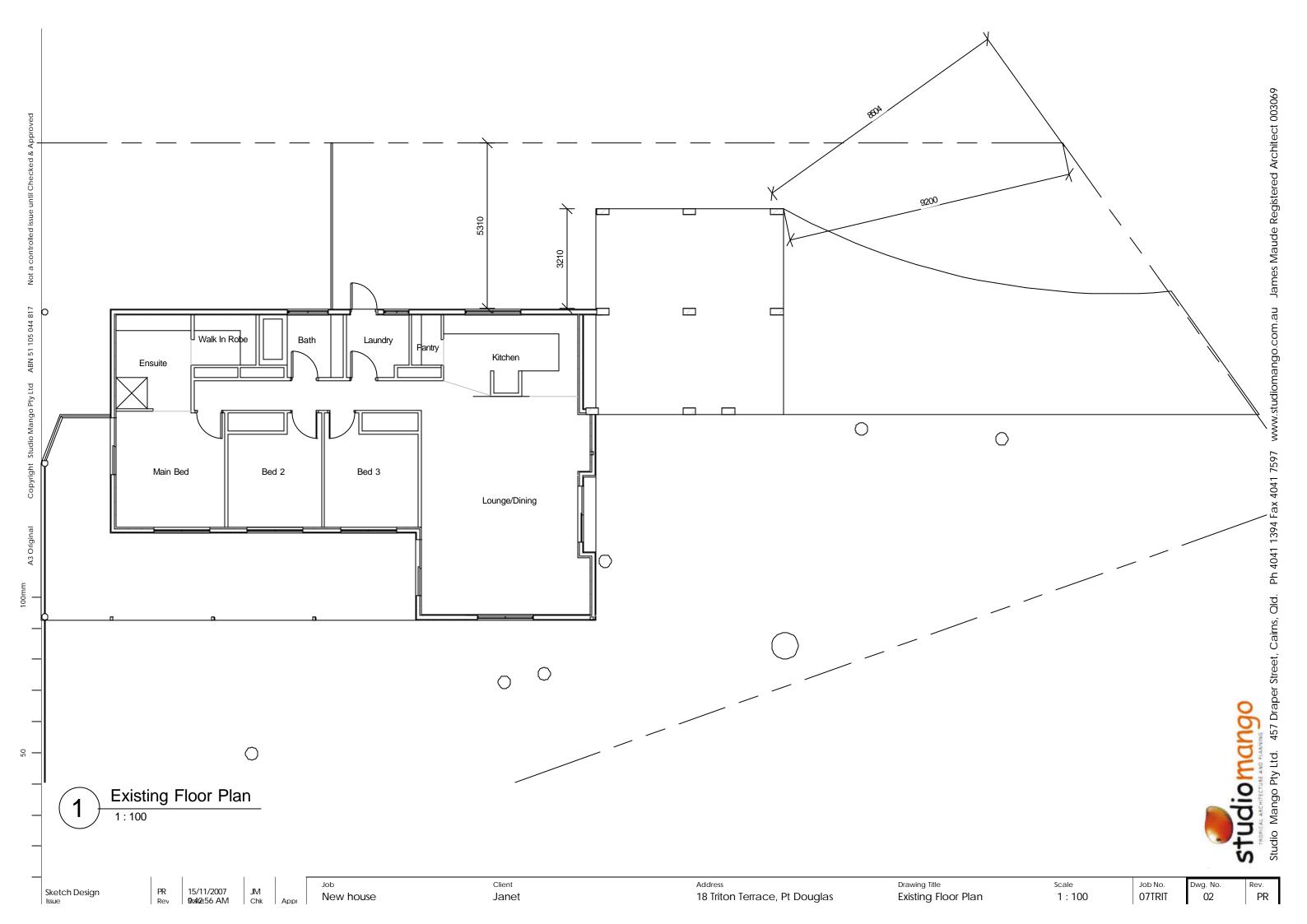
APPENDIX A

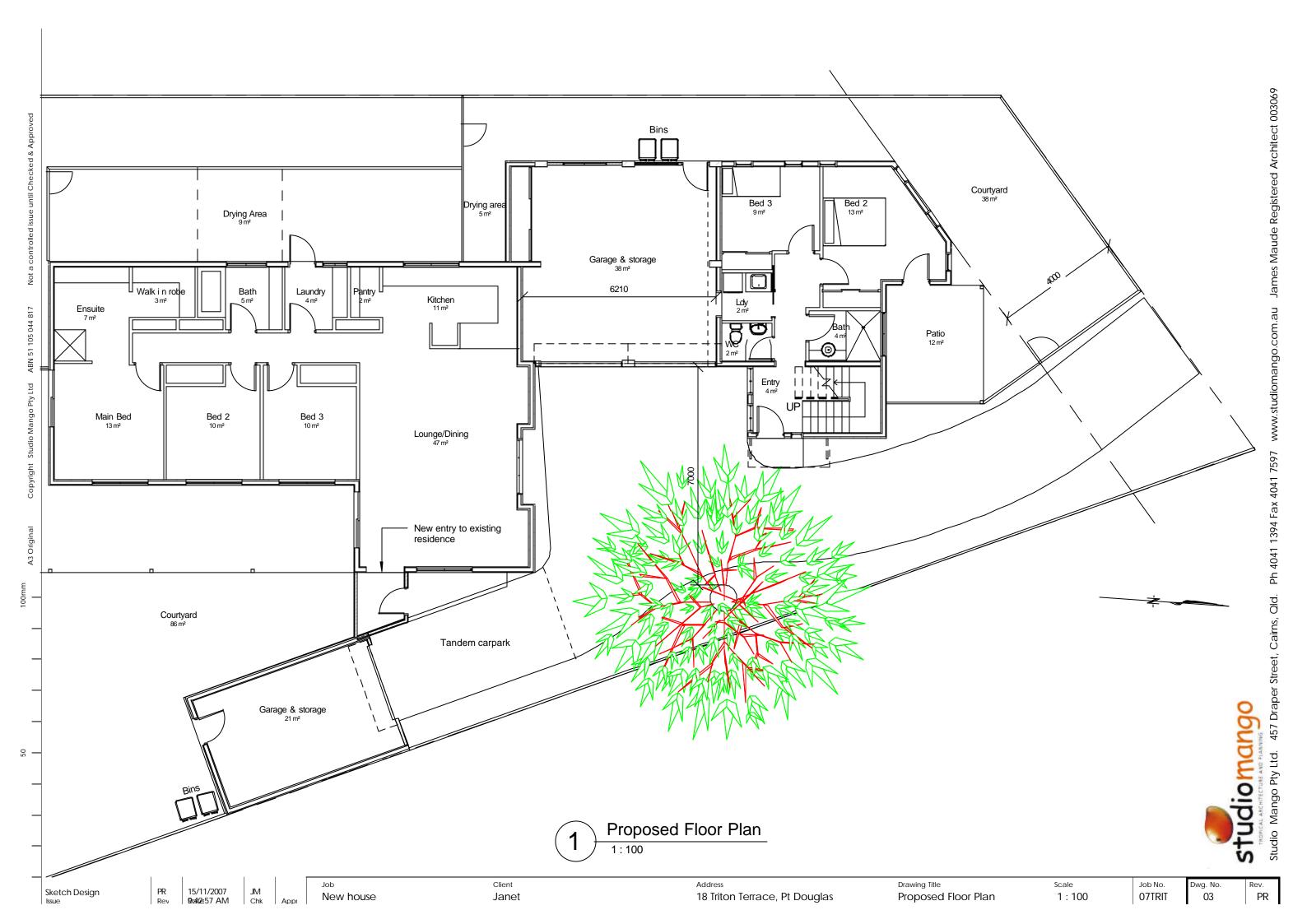
IDAS Forms and Assessment Checklist

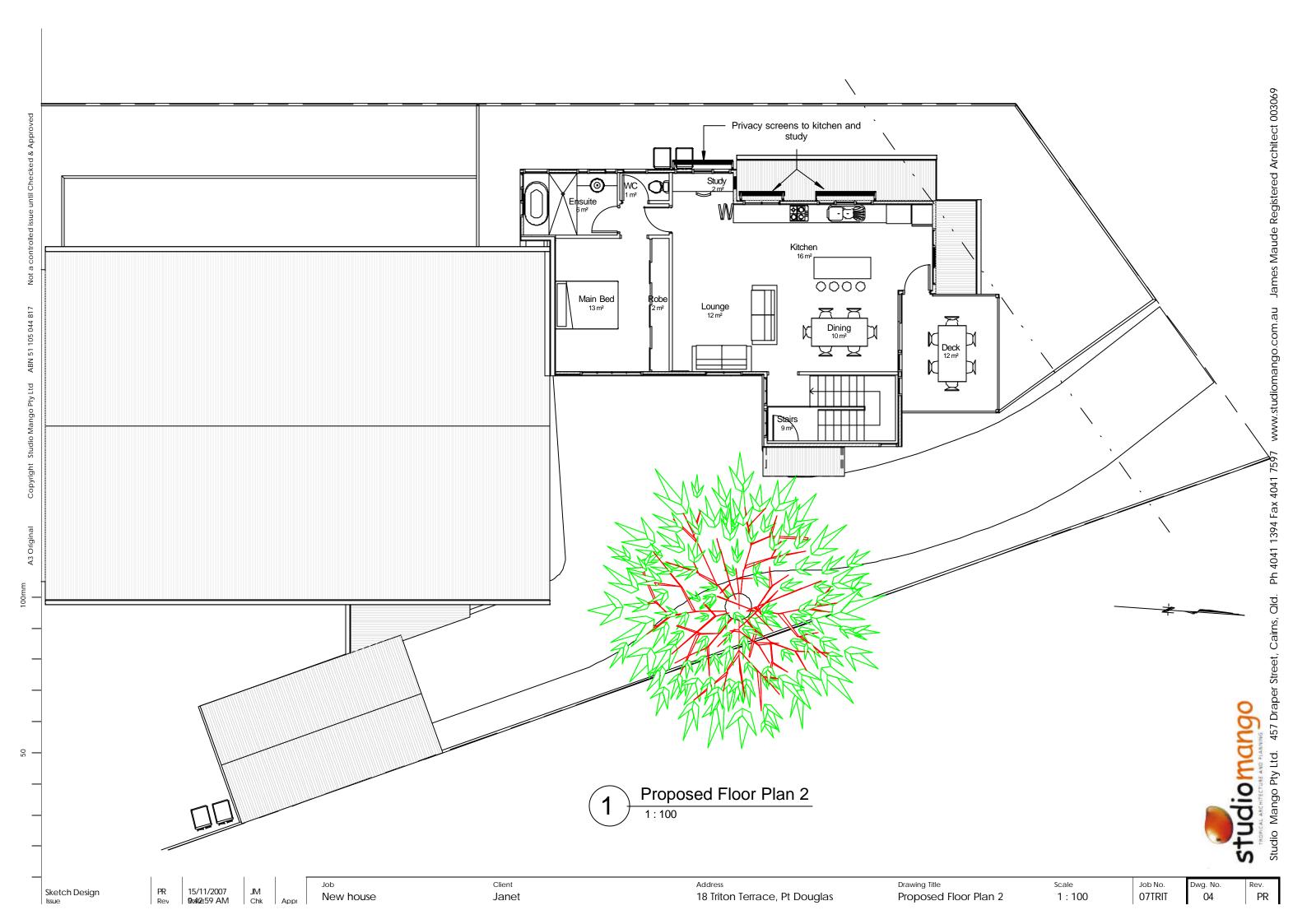
APPENDIX B

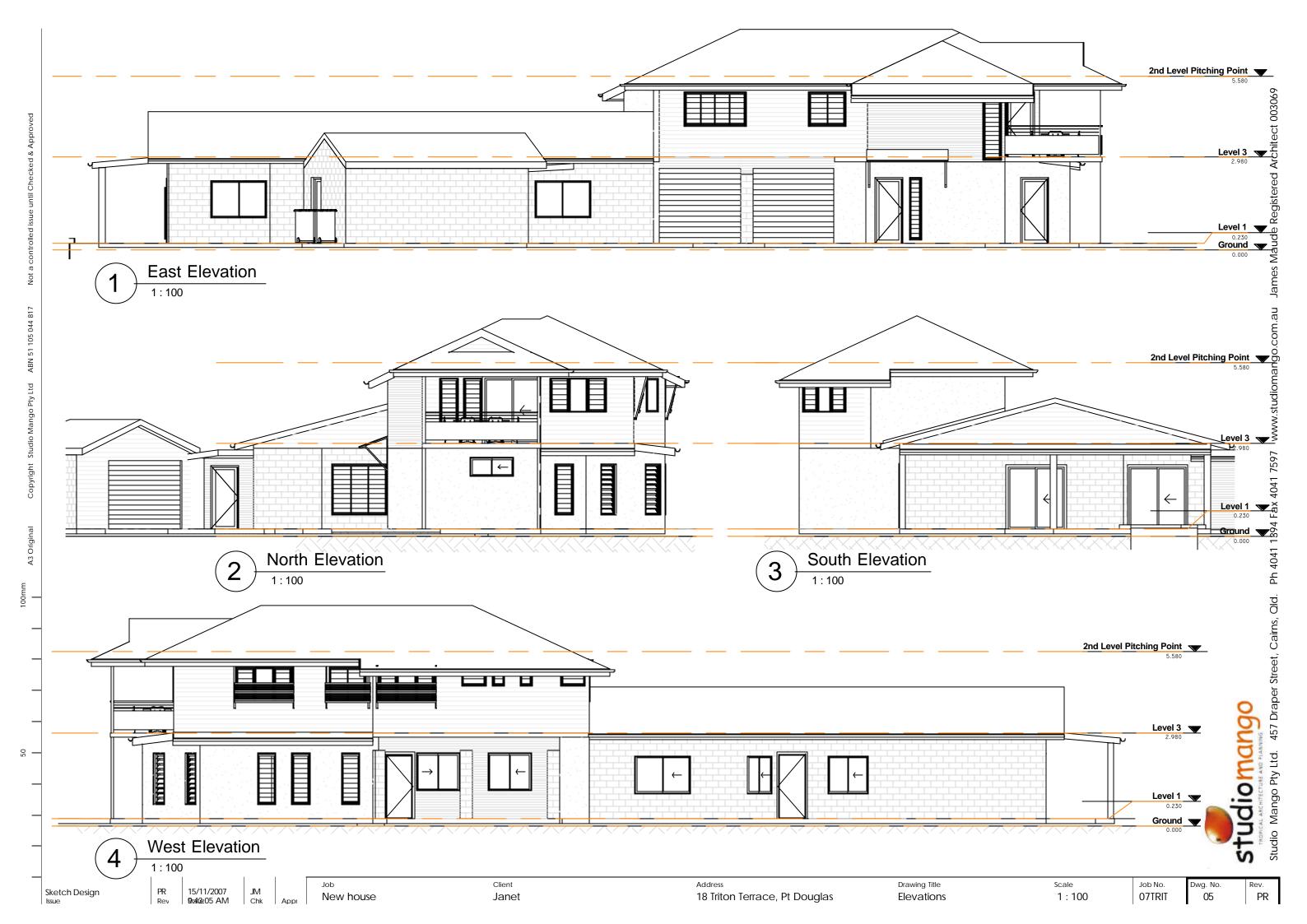
Development Concept Drawings









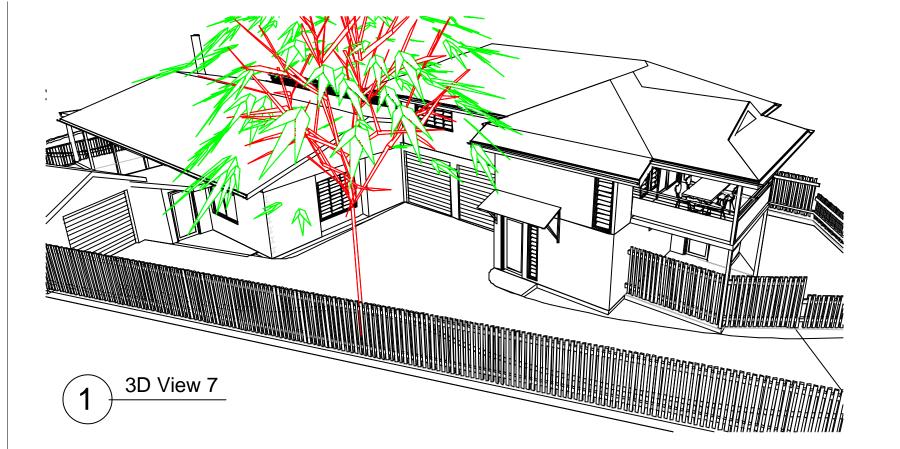


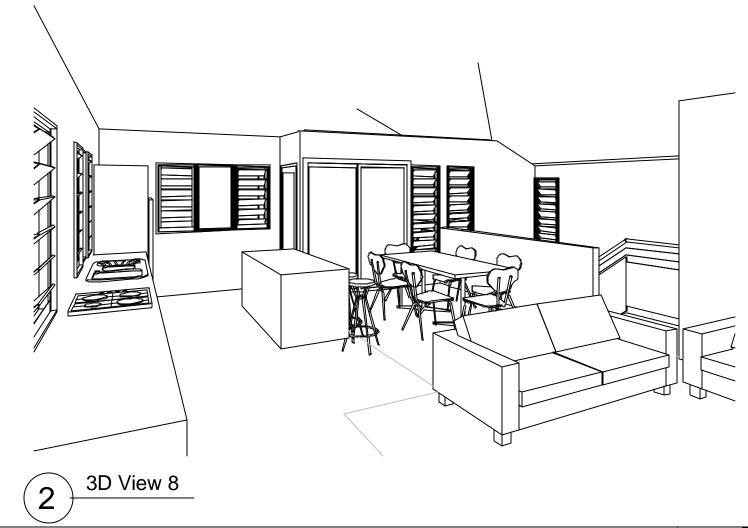
Rev.

udiomango

www.studiomango.com.au James Maude Registered Architect 003069

Studio Mango Pty Ltd. 457 Draper Street, Cairns, Old.





15/11/2007 19:24@:17 AM

Job No. 07TRIT



Drawing Title 3D Views

Job No. 07TRIT

Rev.

'udiomango

Studio Mango Pty Ltd. 457 Draper Street, Cairns, Old. Ph 4041 1394 Fax 4041 7597

www.studiomango.com.au James Maude Registered Architect 003069



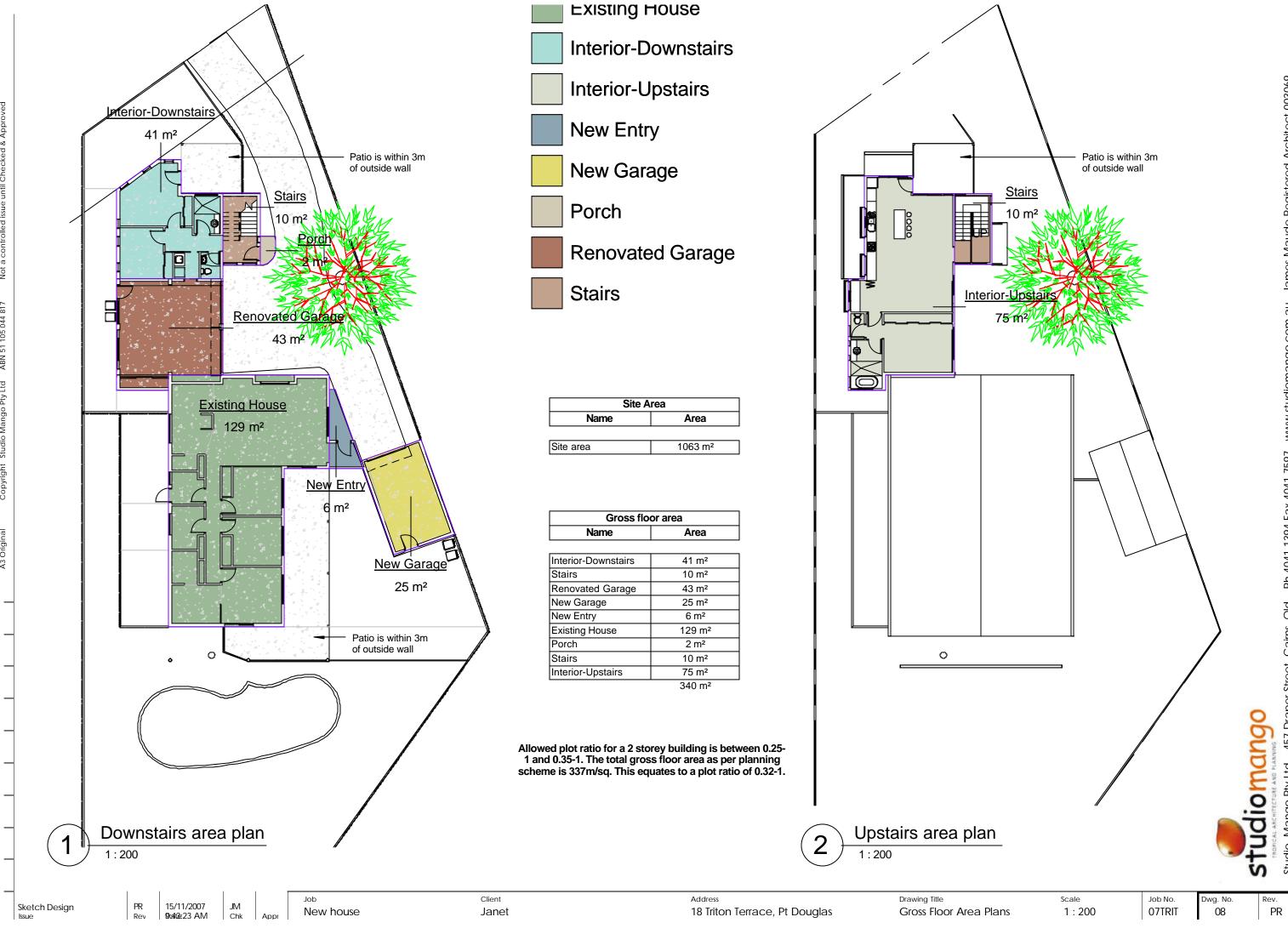
3D View 1

15/11/2007 19:24@:19 AM

New house

Janet

18 Triton Terrace, Pt Douglas



www.studiomango.com.au James Maude Registered Architect 003069 Ph 4041 1394 Fax 4041 7597

Janet

Job No. 07TRIT

Rev. PR



Building Footprint Plan 1:200

udiomango

www.studiomango.com.au James Maude Registered Architect 003069

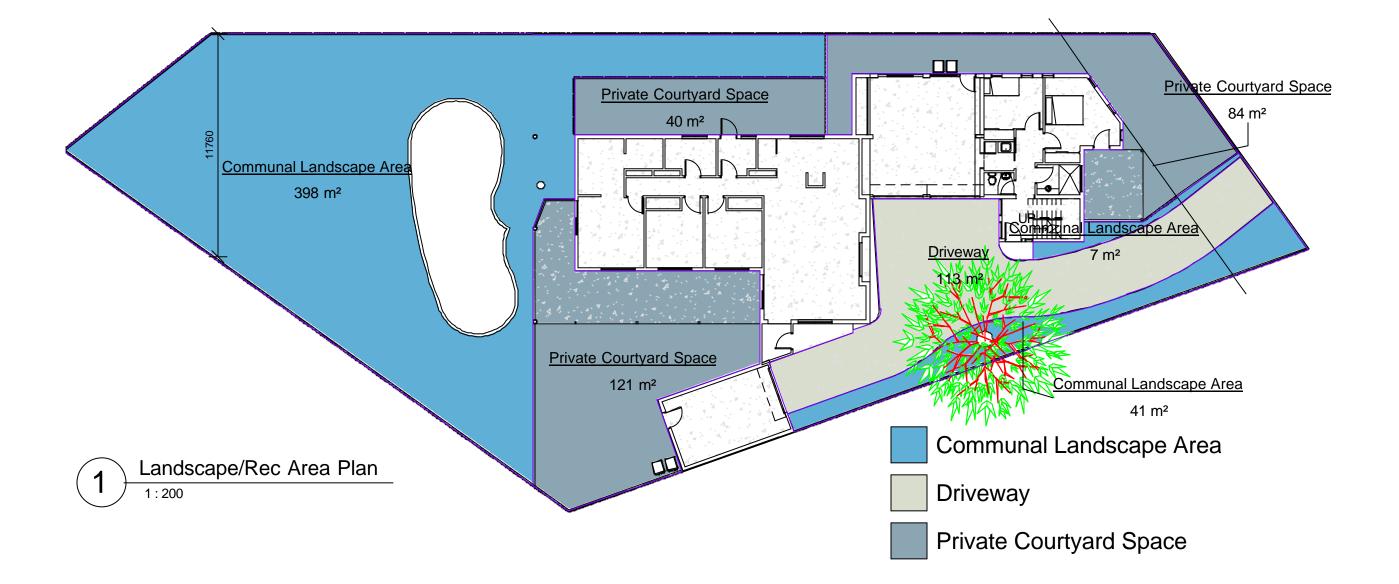
New house

07TRIT



diomango

www.studiomango.com.au James Maude Registered Architect 003069



| Site Area | |
|-----------|---------|
| Name | Area |
| | |
| Site area | 1063 m² |

| Landscape-Rec A | rea |
|-----------------|------|
| Name | Area |

| Communal Landscape Area | 398 m² |
|-------------------------|--------|
| Private Courtyard Space | 121 m² |
| Private Courtyard Space | 84 m² |
| Private Courtyard Space | 40 m² |
| Communal Landscape Area | 41 m² |
| Communal Landscape Area | 7 m² |
| | 691 m² |

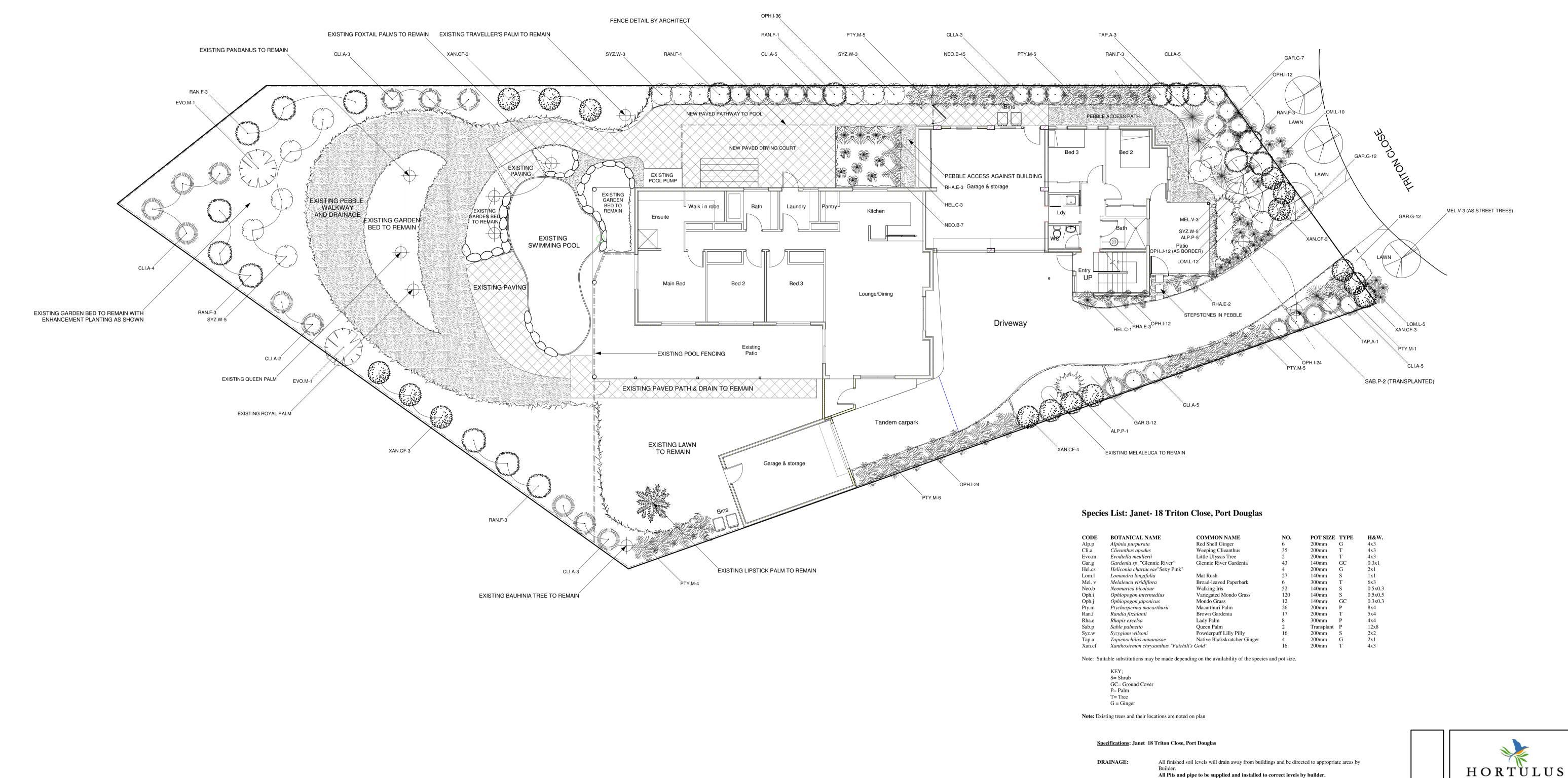
Landscape/Recreation Space is required to be 40% of site. This means that 425.2m/sq is to be designated as landscape/recreation space.

Communal space is required to be 50% of total landcsape/recreation area, with a minimum dimension of 6m in one direction. This means that 212.6m/sq is to be designated communal landscape/recreation space.

Landscape/Recreation space committed to occupants of both dwellings is 696m/sq. This is above the required 425.2m/sq and equates to 65% of the total landscape/recreation space for the entire site.

The communal space committed to occupants of both dwellings is $441 \, \text{m/sq}$. This is above the required 212.6m/sq and equates to 103% of the total landscape/recreation space.

Private courtyard space will be used for drying clothes, and also bin storage since they are private dwellings.



PROPOSED LANDSCAPE PLAN 18 TRITON CLOSE, PORT DOUGLAS QLD 4877

topping out with suitable topsoil high in organic matter. Turf areas to be cultivated to a depth of 100mm, before being raked and leveled ready for turf. Fertilise garden bed and turf areas, using a pelletised organic fertilizer, at a rate of 1kg/m2. This practice could be repeated every four months to maintain adequate nutrients. MULCH: Mulch all garden bed areas as shown on Landscape Plan, unless otherwise shown. Mulch shall be to a depth of 75mm to 100mm of aged organic matter such as woodchip or teatree mulch. For best results remulch biannually. Lay turf on suitably prepared and leveled soil; ensure drainage towards the top of kerb or **TURF:** garden bed. Use locally available couch/buffalo turf mix. Allow relaying of footpath area. Garden edges shall be a "spade edge". To be a fully automatic system, using shrub head sprays to all garden beds and popup sprinklers to all lawn areas. Appropriate backflow and filtration is to be allowed for according to local council laws. The control station is to be located in a common area where **the builder** will provide a suitable power source. **GRAVEL:** Gravel shall be used on the pebble paths & garden areas as shown on LP_01. It shall be cream coloured 10mm river gravel, layed to a depth of 100mm on top of a thin layer of bibbum geotextile. Where roof water impact is high or strong water flow through pebble is expected, 50mm cream river pebble may be used. Paving to match existing pavers. To be laid on a 100mm thick compacted crushed rock base with 20mm of level coarse washed sand. To be haunched with concrete on all sides. **EXISTING VEGETATION:**

All significant existing vegetation is to remain. Existing garden areas surrounding the existing

dwelling will be enhanced with native screen trees planting into existing garden areas to enhance

All Pits and pipe to be supplied and installed to correct levels by builder.

builder. Garden beds to be cultivated to a depth of 300mm using the local topsoil, before

SOIL PREPARATION: Site shall be cleared of any builders rubbish and with appropriate finished soil levels given by

John Sullivan B.App.Sc.Hort., M.A.I.H 18 TRITON CLOSE PORT DOUGLAS SC

job no: STM01D7 1:100 A1 14/11/07 LP_01 ISSUE_A

LANDSCAPE DESIGN & MANAGEMENT

PO BOX 798 PORT DOUGLAS QLD 4877

ph: 07 4099 1861 mob: 0412 944 793 hortulus_aust@conxx.com