

C/- Elizabeth Taylor
Town Planner
23 Valley Street
FRESHWATER QLD 4870

Your reference: SDA-1116-035437
Our reference: ET15/027

15 December, 2016

Department of Infrastructure, Local
Government and Planning
PO Box 2358
CAIRNS QLD 4870

Dear Sir/Madam,

RE: INFORMATION REQUEST RESPONSE – SDA 1016- 034187

**LOT 146 ON SR861, LOT 126 ON SR868, LOT 103 ON SR500 AND INLET STREET
ROAD RESERVE, KNOWN AS THE REEF MARINA SITE.**

The following response is provided to the Information Request (IR) issued by correspondence dated 12 December, 2016. For ease of reference each item is reproduced below, followed by a response.

Also attached, at **Appendix 1**, is the SARA Response Form, duly executed by my client.

Tidal works, or work within a coastal management district

Please provide a more thorough response to SDAP Module 10, clearly outlining how the proposed development complies with the performance outcomes with references to specific sections within other appendices of the application documents where applicable. In particular, please address the following sections of SDAP Module 10:

ITEM 1.

PO1 – Development in in a coastal hazard area is compatible with the level of severity of the coastal hazard.

Provide a detailed response to AO1.2 addressing how the proposed development within the high coastal hazard area minimises the exposure of people and permanent structures to coastal hazard impacts and mitigates residual impacts where it is not practicable to locate the development outside a high coastal hazard area.

AO1.2 Development referred to in AO1.1(6) avoids being located within a high coastal hazard area, or where this is not practicable, minimises the exposure of people and permanent structures to coastal hazard impacts.

Response

Background

“Port Douglas is an internationally renowned tourist destination and is the largest urban settlement in the Douglas region” (Douglas Shire Local Disaster Management Plan Doc ID416365 p23). The Reef Marina site is located on Dickson Inlet immediately southwest of the Port Douglas Town Centre adjacent to an area used for marine activities since the 1890’s. A slipway shed is evident in the 1974 Department of Natural Resources Aerial photography with other structures accreting over time. The Marina Mirage development opened in 1988 and represented a major urban extension of the Port Douglas Town Centre. The site has direct water access, is a major tourism activity centre, and has been designated for redevelopment in the Douglas Shire Planning Scheme and Port Douglas Waterfront Master Plan.

While the subject site is highly desirable from town consolidation, tourism and residential perspectives, Port Douglas is subject to risks associated with the Coastal Hazard location, principally tropical cyclones, and these factors must be considered in any redevelopment. The DILGP mapping shows that the subject site falls within the Coastal Zone, Tidal Waterways, High and Medium Coastal Hazard areas and Erosion prone area.

The peak tourist season (and highest Port Douglas population) is between June and October with a significantly lower population during the rest of the year which coincides with the Cyclone season (November through to May) as indicated in the ABS Room Occupancy table below. Port Douglas is least desirable as a tourist destination during the period when extreme weather events are most likely to occur.

Month 2015	Room Occupancy	Month 2016	Room Occupancy
July	76.7%	Jan	56.5%
August	79.9%	Feb	56.7%
September	72.8%	Mar	58.0%
October	68.9%	April	56.1%
November	62.9%	May	59.9%
December	57.2%	June	61.7%

ABS 8635D001 201516 Tourist Accommodation Australia 2015-16
<http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/8635.02015-16?OpenDocument>

While this seasonal population variation naturally reduces the risk to people from coastal hazard impacts, more specific measures to minimise the exposure of people and permanent structures to coastal hazard impacts/risks are outlined in the following section. It is intended that there will be flexibility in tenure to allow for both short term and permanent residents within the redevelopment. However, the primary market are is second home buyers requiring a tropical destination to escape cold southern winters, with occupancy likely to be during the tropical winter months, outside the cyclone season.

A comprehensive Extreme Weather Event Contingency Plan will be developed to cover both short term and permanent residents.

Site Resilience Strategy

The redevelopment proposal has adopted the following approaches/initiatives to address

issues associated with the Coastal Hazard location and especially Storm Tide Inundation:

- Repair/upgrade the existing erosion control structures to accommodate the new Boardwalk and the loads induced by storm events to maintain the shoreline and protect buildings.
- Buildings and structures designed to accommodate the proposed loads induced by storm events including Storm Tide Inundation.
- Adopting 3.87AHD) for ground floor level of habitable rooms and commercial tenancies. This level is the result of recent Storm Tide Inundation studies, includes a 0.8 metre sea level rise and allowances for wave setup and wave run up (although this latter factor is a process that only occurs on exposed open coast beaches). A rock revetment wall/boardwalk shoreline would tend to dissipate wave energy lowering the expected Storm event level.
- Limiting single storey ground floor residential units which allow occupants to be accommodated in alternative higher level units within the development, or a safe refuge.
- Designing all ground floor areas to be resilient and accommodate inundation without major damage. This would include ensuring electrical/communication outlets, etc. are located as high as practicable while meeting Code and disability access requirements.
- Locating infrastructure such as switchboards, air conditioning equipment, hot water systems, etc. at or above 3.87AHD.
- New transformer pad heights located at 3.87AHD minimum.
- No basement parking with parking shielded by buildings allowing for lower floor levels as the wave effect would be significantly reduced. Generally parking is sited at above 2.9 AHD.
- Sheltering in place and inclusion of safe refuges within the development. The refuges are intended to accommodate any unhoused people associated with the marina (eg: boat crews) and the 5% of unit residents located in ground floor units desiring added safety, or requiring support.
- Develop a comprehensive *Extreme Weather Event Contingency Plan* including protocols for residents prior, during and after an event. This document would primarily be aimed at both short and long term residents, as the Marina and Commercial operations are covered by specific Plans.

Existing Development

The existing site survey (refer to Combined Application, Appendix 2) shows existing buildings and levels. The key components are:

- Existing Marina with berthing for 164 vessels including the Quicksilver tourism fleet.
- The existing Reef Shopping Centre and boardwalk with a total building area of 5,200m² at 3.25 AHD.
- The existing shoreline with top of bank ranging from 2.2 to 2.4 AHD.
- The existing Bally Hooley Railway station with an area of 180m² and the platform set at 3.5AHD.
- 6 existing buildings adjacent to the Duck Pond and Dickson Inlet (on Lots 126 and 103) with a total floor area of 1,430 m² and floor levels ranging from 2.44 to 2.99 AHD.
- Parking for a total for approximately 330 vehicles including street parking on Inlet Street.

Redevelopment

The redevelopment proposal on the land associated with Lot 146 on SR861, Lot 126 on SR868, Lot 103 on SR500 and Inlet Street Road Reserve, includes the elements outlined below and as shown in Combined Application, Appendix 16 – DA-S-104 Revision 03 Master Site Plan:

- Retaining the existing marina, southern boardwalk and the existing southern shopping centre wing. The existing 308 vehicle car park will be reconfigured to accommodate 209 vehicles (or 179 cars and 10 buses).
- Demolition of the western shopping centre wing totalling 2,060m² and reconfiguring the entry for the new pedestrian connection to the town centre, refer to [Appendix 2](#) attached to this correspondence.
- `Demolition of 5 single storey commercial/industrial/restaurant buildings totalling 1,430m². The area also includes open grade parking for approximately 30 vehicles. The existing site configuration is shown in Combined Application, Appendix 2.
- New public waterfront boardwalk adjacent to Dickson Inlet and the Duck Pond. Levels will range from RL 2.4AHD at the southern Marina end to 3.7AHD around Stage 2a. Refer to Combined Application, Appendix 16 – DA-S-104 Revision 03 Master Site Plan.
- Renovated/new overwater dining structure on Dickson Inlet. Refer to Combined Application, Appendix 16 – DA-S-104 Revision 03 Master Site Plan and IR Appendix 15.
- New public plaza and pedestrian link from the shopping centre to link to the Port Douglas town centre. The public

plaza will include 45m² of temporary structures to house tourism activities and activate the plaza. Refer to Combined Application, Appendix 16 – DA-S-104 Revision 03 Master Site Plan and IR Appendix 4 Plaza.

- Stage 1a – 5 three level townhouses with parking for 10 vehicles at ground level. Refer to Combined Application, Appendix 5.
- Stage 1b – 14 apartments over three levels with ground level parking for 16 cars. Refer to Combined Application, Appendix 6.
- Stage 2a – mixed use development with commercial/reception at ground level and two levels of apartments above with a total of 35 apartments. The building includes a resident's lounge and function areas which can be adapted as common safe refuges. Parking is at ground level and accommodates 41 vehicles. Refer to Combined Application, Appendix 7.
- Stage 2c – mixed use development with small commercial/reception area and 4 units at ground level and two levels of accommodation units totalling 50 units (24 dual key and 2 x 1 bedroom units). There is parking at ground level for 26 cars under the building footprint and 8 external ground level spaces. Refer to Combined Application, Appendix 8
- Stage 3a – 5 flexible use 2 storey townhouses. Refer to Combined Application, Appendix 9.
- Retaining the existing slipway with a total of 160m² of new temporary storage/workshop containers. Refer to Combined Application, Appendix 15.
- A new Marina Entry Structure and a Maintenance Building, refer to [Appendix 3](#) attached to this correspondence.

The redevelopment involves the demolition of 3,490m² of commercial, restaurant and industrial buildings at ground level. These will be replaced with mixed-uses totally 3,730m² including 200m² of converted shipping containers associated with the Plaza and Slipway. This represents an increase of under 4% on the current ground floor area (excluding parking) which is considered a modest change/increase.

There are a total of 338 car spaces currently on the site and Inlet Street which will be slightly reduced to 317 under the redevelopment proposal.

No residential accommodation currently exists on-site and 108 units are proposed. However, the Site Resilience Strategy places 85% of the units at or above 6.87AHD; 9% (10, units) (Stages 1a and 3a multi-level townhouses) have main living areas at 6.87AHD, and the remaining 6% (Stage 1b and 2c) (6 units) will have access to upper levels within buildings or communal safe refuges at 7.87AHD or above.

AO1.2

The proposed development is a “medium-scale tourist development” and is redevelopment

“within an existing built-up urban area.” The redevelopment proposal constitutes the area identified in the Douglas Shire Planning Scheme as the Port Douglas Waterfront North Planning Area which incorporates the aims and aspirations of the Port Douglas Waterfront Master Plan 2009 and resulted from extensive public consultation. Both documents highlight the importance of the subject site for consolidation of the town centre, providing physical connection with the water and enhancing tourism opportunities. In addition, tourist and residential accommodation uses are land uses contemplated on the site, all being code-assessable development under the Planning Scheme.

The current proposal is generally in accordance with these documents and will create an integrated mixed use waterfront marina redevelopment. The redevelopment will only marginally increase the existing ground floor use area and will be designed to current Storm Tide Inundation requirements. This will be a significant improvement on the existing permanent structures.

While the development site falls within the erosion prone area, the shoreline is well defined and relatively stable due to the existing erosion control structures which are primarily rock revetment walls along the Dickson Inlet and Duck Pond shore lines. A key component of the redevelopment proposal is the provision of a boardwalk along Dickson Inlet (refer Combined Application, Appendix 16 – DA-S-104 Revision 03 Master Site Plan) which will include the repair and consolidation of the existing revetment rock walls. The revetment walls will be designed to accommodate the proposed boardwalk and the loads induced by storm events, in addition to maintaining the integrity of adjacent buildings.

While there will be a number of residential units on site, the majority of these will be at 6.87AHD or higher with initiatives put in place to ensure residential units located at the 3.87AHD have clear action strategies in place to deal with Storm Tide Inundation as outlined in the Site Resilience Strategy.

The redevelopment of the site has taken into consideration the potential for impacts from coastal hazards and will minimise the exposure of people and permanent structures. The redevelopment is considered to achieve Performance Outcome – PO1.

ITEM 2

PO2 – *Development siting, layout and access in a coastal hazard area responds to potential inundation due to a defined storm tide event and minimises associated risks to personal safety and property.*

AO2.1 Development within a coastal hazard area is located, designed, constructed and operated to maintain or enhance the community’s resilience to a defined storm tide event by limiting the exposure of people and structures to associated impacts.

AND

AO2.2 Development mitigates any residual impacts from storm tide inundation in a coastal hazard area including by ensuring:

- (1) habitable rooms of built structures are located above the defined storm tide event level and any additional freeboard level that would ordinarily apply in a flood prone area under a relevant planning scheme standard, or
- (1) a safe refuge is available for people within the premises during a defined storm tide event, or
- (2) at least one evacuation route remains passable for emergency evacuations during a defined storm tide event, including consideration of the capacity of the route to support the

evacuation of the entire local population within a reasonably short timeframe (for example, 12 hours).

AND

AO2.3 Development within a coastal hazard area is located, designed and constructed to ensure exposed structures can sustain flooding from a defined storm tide event.

Provide a detailed response to AO2.1, AO2.2 and AO2.3 addressing:

- ☐ how the proposed development within a coastal hazard area is located, designed, constructed and operated to maintain or enhance the community's resilience to a defined storm tide event by limiting the exposure of people and structures to associated impacts.
- ☐ how the proposed development mitigates any residual impacts from storm tide inundation in a coastal hazard area, and how it will ensure exposed structures can sustain flooding from a defined storm tide event.

AO2.1

All buildings will be designed, engineered and constructed to meet current code requirements.

The Department of Transport and Main Roads *Extreme Weather Event Contingency Plan 2016/2017* requires "all vessels to evacuate and clear the port area" and relocate to the creeks, waterways and mangroves off Dickson Inlet in an extreme weather event.

It is also important to note that Dickson Inlet is not a flowing river system so the site is not subject to flooding events caused by land run-off. It provides a safe haven for vessels, a completely different coastal environment too many exposed and unprotected coastal sites that bear the brunt of severe weather events.

The Contingency Plan also designates the Marina Manager's Office at The Reef Marina as the Port Douglas Emergency Control Centre. This effectively closes the Marina operations with all tours cancelled and no people arriving for tours for the duration of the weather event. Due to the lack of visitors, commercial businesses tend to close or operate with essential staff only, minimising the number of people on site. It is anticipated that this approach will not change after redevelopment.

The inclusion of residential accommodation on site will increase the number of people on site but this will be managed by the measures/initiatives outlined above in the Site Resilience Strategy. In addition, the resident population will be at its lowest occupancy due to the peak tourism cycle falling outside the Storm season. Specific Residential Contingency Plans will ensure that residents have a number of strategies available in a storm event (including sheltering in place and evacuating) with management on hand to ensure procedures are followed.

AO2.2

Habitable room levels at ground floor have adopted 3.87AHD as the minimum level. This

level has also been adopted for ground floor commercial uses. As outlined in the Site Resilience Strategy, all ground floors will be designed and constructed to be resilient and accommodate inundation without major damage. The Stage 1a and 3a townhouse buildings will also have main living areas at 6.87AHD allowing residents to shelter in place well above the defined Storm Tide level. Occupants of ground floor units in Stage 1b and 3a (only 6 units) will have access to upper level units/communal areas within the relevant buildings as part of the *Extreme Weather Event Contingency Plan* should the need arise.

Two communal safe refuges will be located in Stage 2a at 7.87AHD and 10.87AHD (Lounge Level 1 and Function Level 2).

The Douglas Shire Council Port Douglas evacuation routes, show the main evacuation route from the town centre along Macrossan Street to Davidson Street and the Captain Cook Highway providing access to the designated Evacuation Centre at the Port Douglas State School adjacent to the highway. There are several possible evacuation routes from the subject site including north along Wharf Street to Macrossan; south along Wharf Street to Port Street and then Davidson; north along Grant Street to Macrossan and east along Mowbray to Davidson.



Detail from Douglas Shire Council Area 3 - Far Northern Area, Port Douglas Evacuation Routes Map 3-304.

DILGP mapping for Coastal hazard area – High Storm Tide Inundation area indicates that an evacuation route would be possible north along Wharf Street to Macrossan. The mapping for Medium Storm Tide inundation area indicates that there will be some inundation on all routes requiring early evacuation.

Provide a detailed response to AO3.1 addressing how the proposed development avoids increasing the number of premises from which people would need to be evacuated to prevent death or injury from a defined storm tide event.

AO3.1 Development avoids increasing the number of premises from which people would need to be evacuated to prevent death or injury from a defined storm tide event.

AO3.1

The redevelopment results in a net gain in ground level useable area of 240m² which is considered a modest increase. The existing Marina and Shopping Centre are primarily focused on the tourism market and effectively discontinue operations leading up to and during a storm event due to the requirement for all vessels to be evacuated from the marina. Only essential staff is on site during a storm event. The redevelopment will maintain this approach.

While short term and long term residents will be accommodated on site, buildings will be designed to be resilient and meet the structural requirements for the location and predicted events. This allows for sheltering in place, in addition to self-evacuation with good planning.

The potential for damage to premises will not be increased as all new development will comply with specified floor level heights required by Council and non-compliant existing built form will, in part, be demolished. In addition, new coastal infrastructure will improve resilience and minimise potential impacts. The redevelopment is considered to achieve Performance Outcome – PO3.

Advice Item

1. The assessment against Module 10 – Coastal protection of the SDAP, provided in *Town Planning Report – combined application for material change of use and reconfiguration of a lot – staged development, development permits on land described as Lot 146 SR861, part of Lot 126 SR686 and Inlet Street Road Reserve located at Wharf Street, Port Douglas*, dated September 2016, is quite limited and relies heavily on Council's specifications and Planning Scheme as justification for the proposed material change of use and reconfiguring a lot complying with the performance outcomes. Please provide a more thorough response to SDAP Module 10 as outlined in the information requested section above.

Response

Council's specifications, Planning Scheme and the planning intent outlined in the Port Douglas Waterfront Master Plan (2009) are informed by the Storm Tide Study work undertaken to address Coastal protection aims. This is summarised in the Cairns Regional Council minutes of the Infrastructure Services Committee Meeting dated 17 March 2010 (www.cairns.qld.gov.au/__data/assets/pdf_file/.../17march10_infrastructure_cl3.pdf). The key points are:

BMT WBM Pty Ltd, a Brisbane-based consultancy firm was engaged to conduct the Study on behalf of Council.

This Study represents significant benefit to the Cairns Region, producing a consistent set

of storm surge maps for the area that will greatly assist in disaster planning and community education.

BACKGROUND:

The Cairns Region lies within an active cyclone zone. There is potential for storm surge accompanying a cyclone and elevated wave conditions may pose significant inundation risks to urban areas of the region. In order to evaluate these risks, a Storm Tide Study was undertaken by Council in conjunction with BMT WBM Pty Ltd, to model the effects of storm surge on the coastline and likelihoods of such events occurring. This information was used to update the existing storm tide mapping for the former Cairns City area, and create new mapping for the former Douglas area, East Trinity and Bramston Beach.

COMMENT:

The Study involved using Light Detection and Ranging (LiDAR) digital elevation data of the Cairns Region along with simulated cyclone/storm surge models to determine the effects on the coastline. The calibrated coastal models (wind, wave and storm surge) were used to simulate a range of design storm surge events: 1%, 0.5%, 0.2%, 0.1%, 0.01% AEP (Annual Exceedance Probability) and PME (Probable Maximum Event).

The procedure involved in making these estimates included the following components:

- 1) Derivation of historical cyclone climatology (statistics);*
- 2) Simulation of 320 representative cyclone events;*
- 3) Development of storm surge and wave parametric models;*
- 4) Simulation of 50,000 years of cyclone activity;*
- 5) Statistical interpretation and mapping of results; and*
- 6) Allowance for sea level rise (due to predictions for enhanced Greenhouse Effect) and wave run-up.*

This mapping is in accordance with the joint Federal/State Government publication - National Storm Tide Mapping Model for Emergency Response (2002).

The Storm Tide Study findings concluded the following:

- 7) The use of recent LiDAR survey of the coastline has allowed a better definition of storm tide risk in the northern areas between Port Douglas and Cape*

Tribulation and the southern area around Bramston Beach;

- 8) Very little of the region's urban development is at risk for the 1% AEP event;*
- 9) Several coastal areas of Wonga, Cooya and Cairns CBD are at risk areas with regard to 0.1% AEP events and higher;*
- 10) The mapping of storm surge inundation and flood inundation will enable Council to better manage the risks associated with this type of natural hazard.*

The Storm Tide Study will be used to inform Disaster Management and emergency staff on the vulnerability of areas and the likelihood of such events occurring. This will be used for planning and other disaster management purposes. For example, the Study is being used to inform the current phase of the Cairns Region Evacuation Strategy, in determining the vulnerability zones along the coastline.

CONSULTATION:

The Local Disaster Management Group – Cairns Region (LDMG-CR) was consulted throughout the project. The consultants attended the LDMG-CR meeting on 26 May 2009 to conduct a presentation on the methodology for the Study and seek approval and additional input/feedback. The Regional Emergency Management Queensland office have also reviewed and approved the Study and its outcomes.

In a discussion held on 13th December 2016, between Mr John Loneragan TRM architect and Mr Matthew Barnes of BMT WBM Pty Ltd (author of the Storm Tide Studies, 2010 & 2013) the following observations were made:

1. The AHD 3.87 design water level for Port Douglas corresponds to the 1% Annual Exceedance Probability (AEP) event in the year 2100 and includes a 0.8 metre allowance for sea level rise. In addition, this level also includes allowances for wave setup and wave runup, with the latter being a process that only occurs on exposed open coast beaches (i.e. not typically observed at marinas or other sheltered locations). For locations where wave runup processes cannot occur, then the year 2100 1% AEP design water level will be lower. A rock revetment wall and boardwalk configuration along the shoreline would act to dissipate wave energy and limit the potential for wave runup.
2. The Study found that for locations where wave runup processes cannot occur, the year 2100 1% AEP storm tide level (i.e. surge plus tide only) would be 2.7 AHD.
3. Cairns Regional Council commissioned a review and update of the original study in 2013 after Cyclone Yasi (2011) which allowed the assumptions of the original study to be tested against an unprecedented weather event. The review led to

some minor changes in design water levels throughout the study area. The design water levels referred to above are based on the outcomes of the 2013 review study and are considered the most up-to-date source of information for the Port Douglas region.

The redevelopment of TRM site has adopted the AHD 3.87 as the level for habitable rooms, commercial uses and critical infrastructure at ground level as outlined in the Site Resilience Strategy. This level is compliant with the outcomes of the original Storm Tide Study 2010 and Update Study 2013 and the adopted AHD level now appears more conservative as a result of the outcomes of the updated Study. TRM has made every effort to take account of coastal hazards in the design and proposed future management of the site and compliance with the relevant Performance Outcomes of Module 10 – Coastal protection of the State Development Assessment Provisions (SDAP) are considered to be satisfied.

This concludes TRM's response, in full, to the Information Request. My client looks forward to the State's favourable consideration of the Combined Application.

Yours faithfully,

A handwritten signature in dark ink, appearing to read 'Elizabeth Taylor', is written on a light-colored rectangular background.

Elizabeth Taylor
Town Planner

APPENDIX: 1

Our reference:

Your reference: SDA-1116-035437

Attn: Michele Creecy

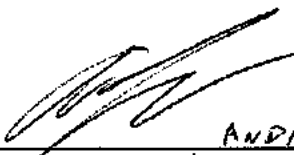
Response to information request—concurrence agency(Given under section 278 of the *Sustainable Planning Act 2009*)

Lot on plan	Street address
Lot 146 on SR861	Wharf Street Port Douglas
Lot 126 on SR868	7 Ashford Avenue Port Douglas
Lot 103 on SR500	38-42 Wharf Street Port Douglas

Assessment manager reference: CA1685/2016**Local government area:** Douglas Shire Council

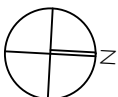
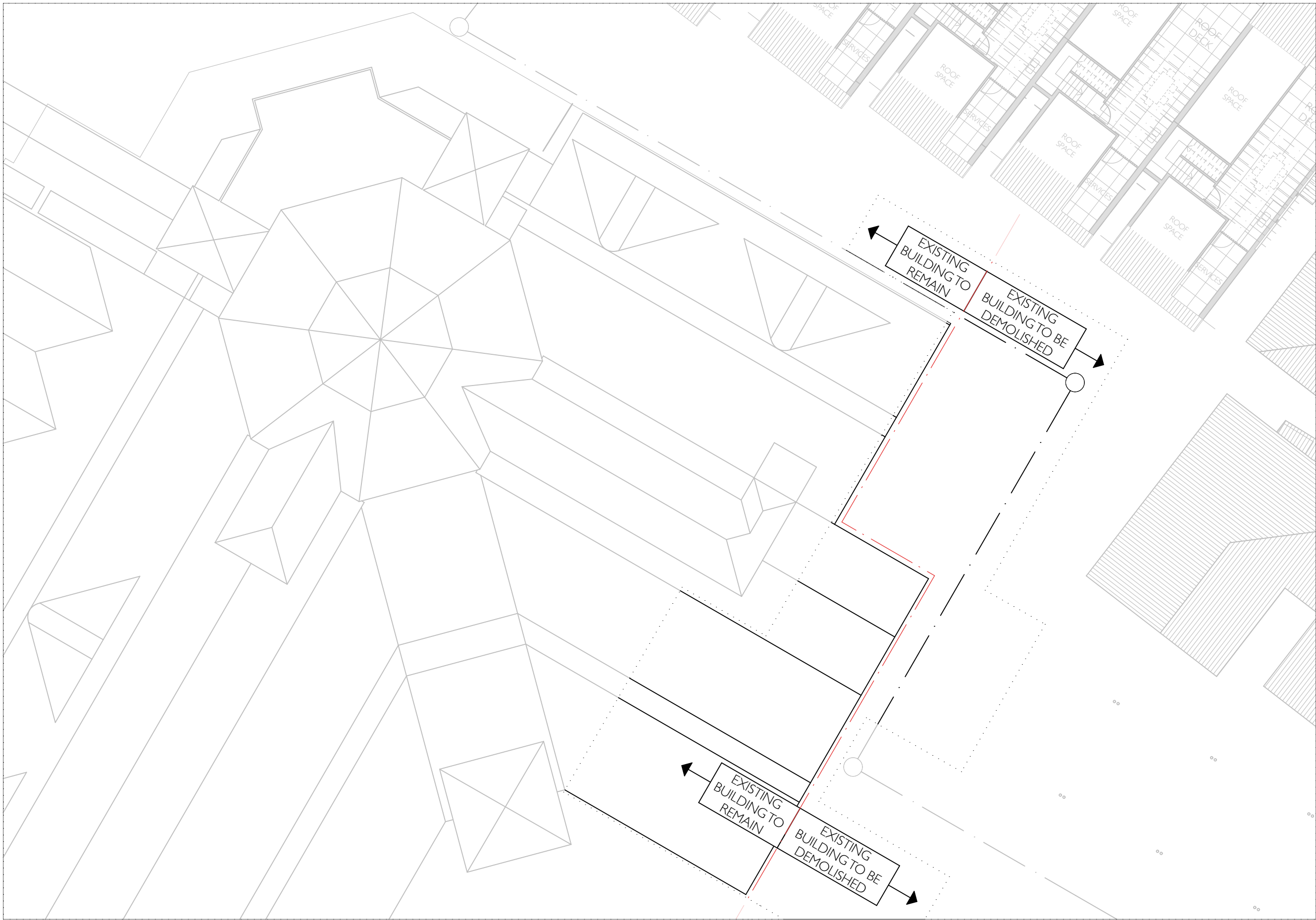
As the applicant of the above development application, I am responding to your information request by:

- ☒ Enclosing all of the information requested.
- ☐ Enclosing part of the information requested and asking that the requesting authority proceed with the assessment of the application.
- ☐ Advising that I do not intend to supply any of the information requested and asking that the requesting authority proceed with the assessment of the application.

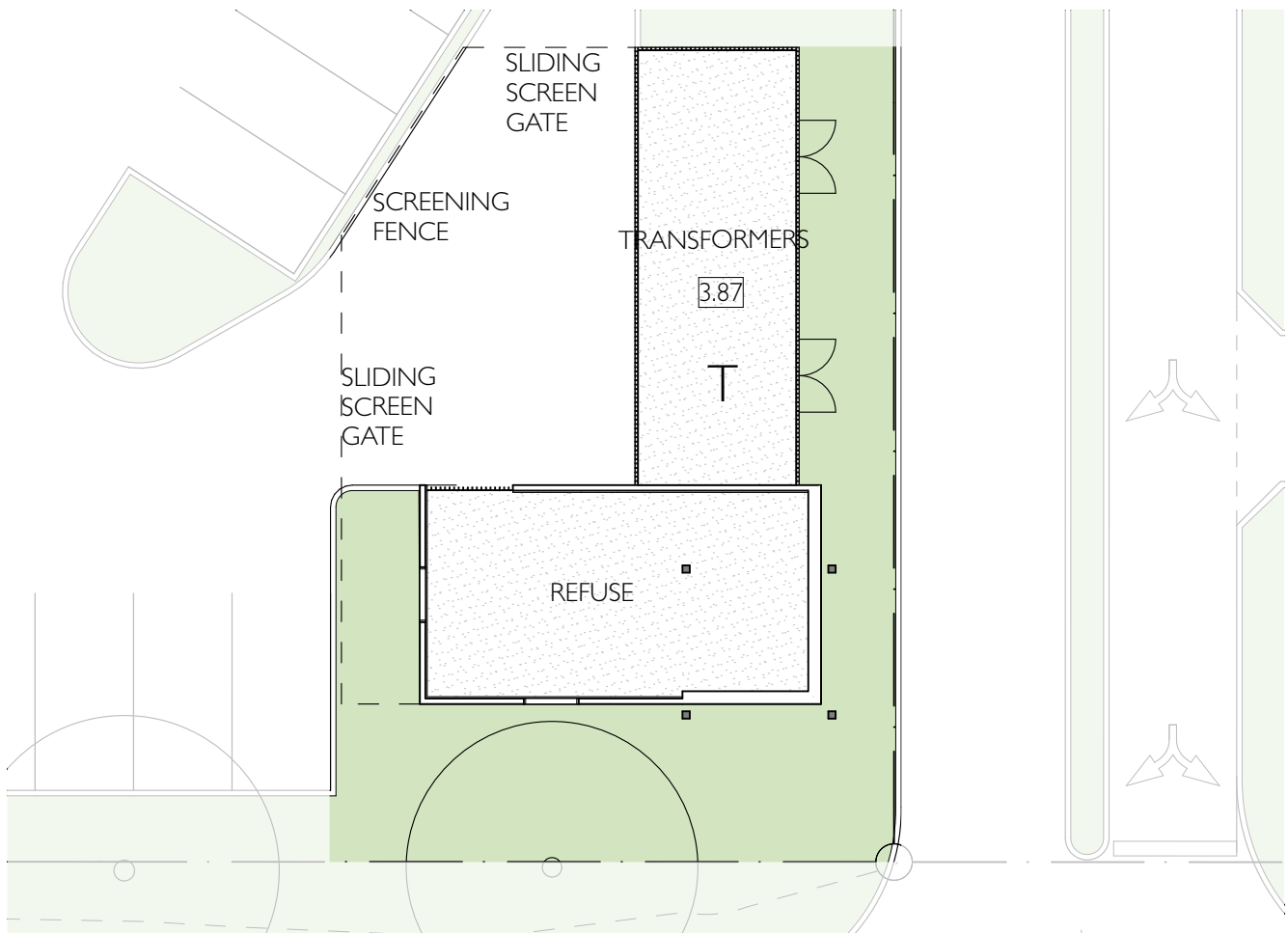
Name of applicant: The Reef Marina Pty Ltd**Signature of applicant:**

 ANDREW HOOPER-NGUYEN
Date:

15/12/16

APPENDIX: 2

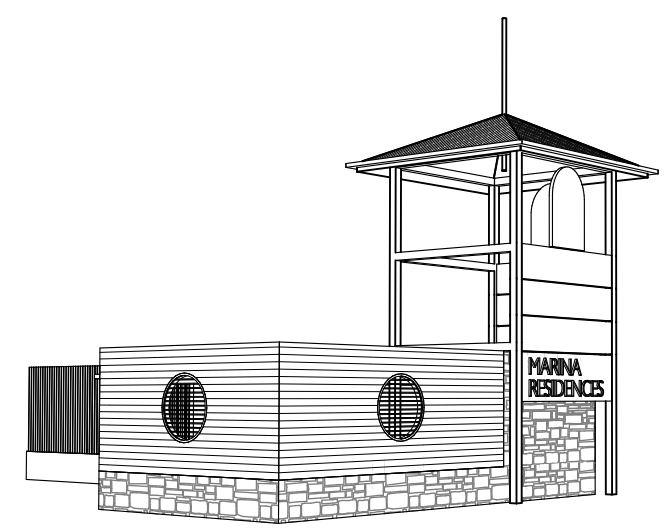
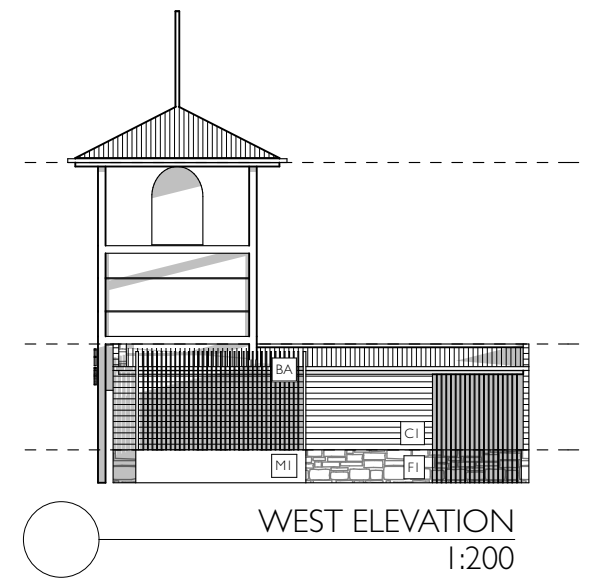
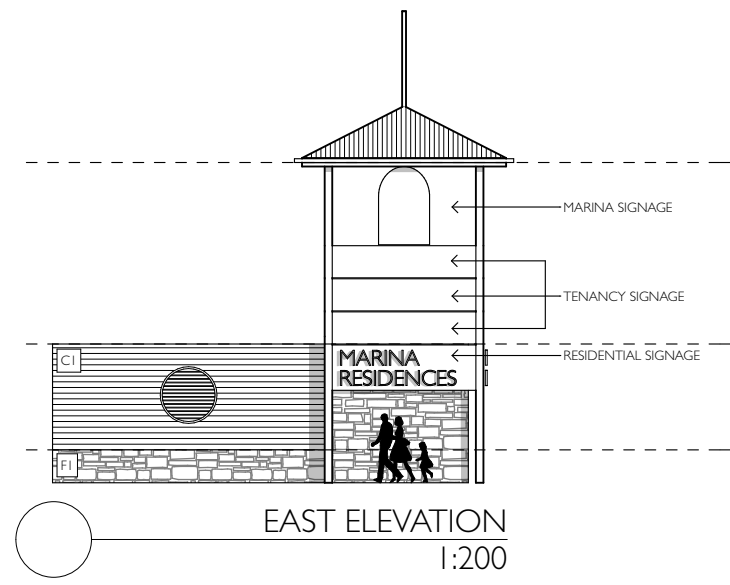
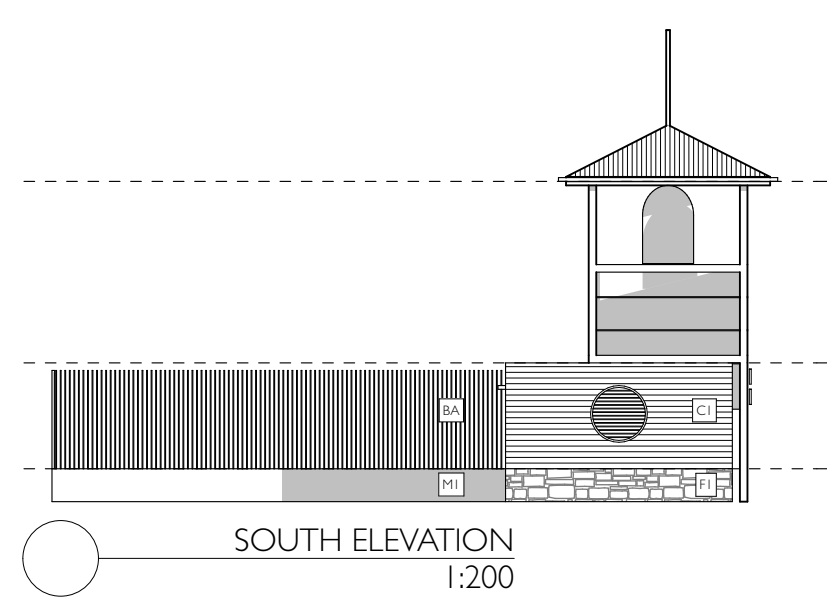
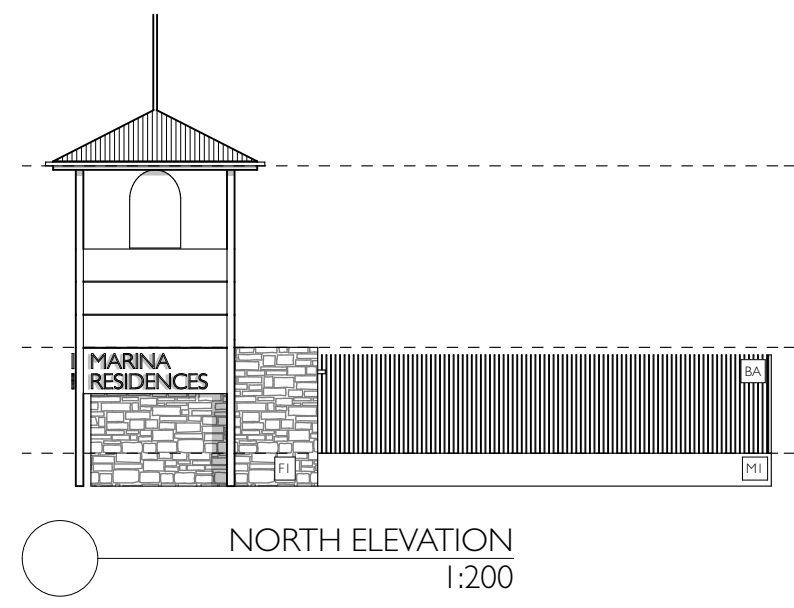
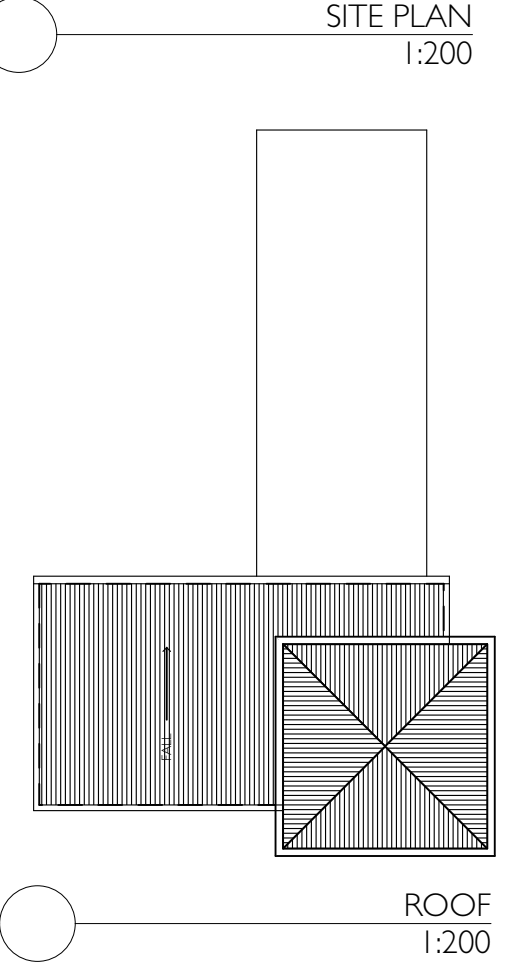


APPENDIX: 3



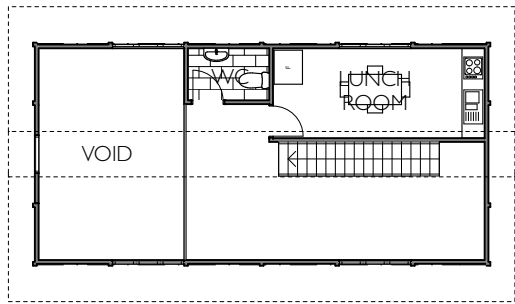
LEGEND

B1	GLAZED BALUSTRADE IN STAINLESS STEEL FRAME
B2	CFC WEATHERBOARD + GLAZED BALUSTRADE
B3	GLAZED BALUSTRADE IN STAINLESS STEEL FRAME
B4	GLAZED BALUSTRADE IN STAINLESS STEEL FRAME
B5	STAINLESS STEEL + WIRE BALUSTRADE
BA	BATTENED SCREEN
CI	CFC WEATHERBOARD CLADDING
C2	CFC WEATHERBOARD CLADDING
FI	IRREGULAR STONE FEATURE WALL
LI	POWDERCOATED ALUMINIUM LOUVRES
LS	STACKING LOUVRE SHUTTERS
PE	POWDERCOATED ALUMINIUM PERGOLA
PL	PANEL LIFT DOOR
M1	RENDERED MASONRY COLOUR 1
M2	RENDERED MASONRY COLOUR 2
MD	METAL DECK ROOFING
S1	POWDER COATED SHADING DEVICE WITH METAL DECK ROOFING
S2	POWDER COATED SHADING DEVICE WITH METAL DECK ROOFING
S3	POWDER COATED SHADING DEVICE WITH METAL DECK ROOFING

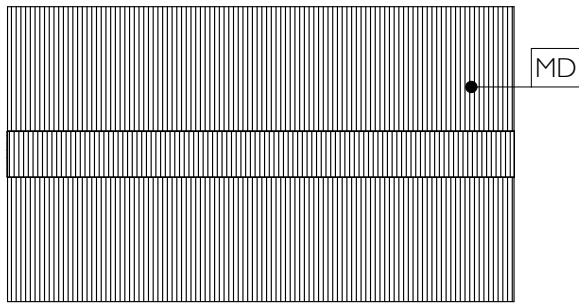




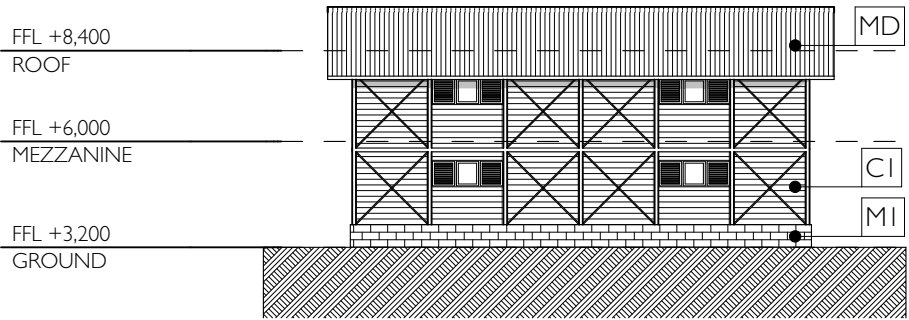
SITE PLAN
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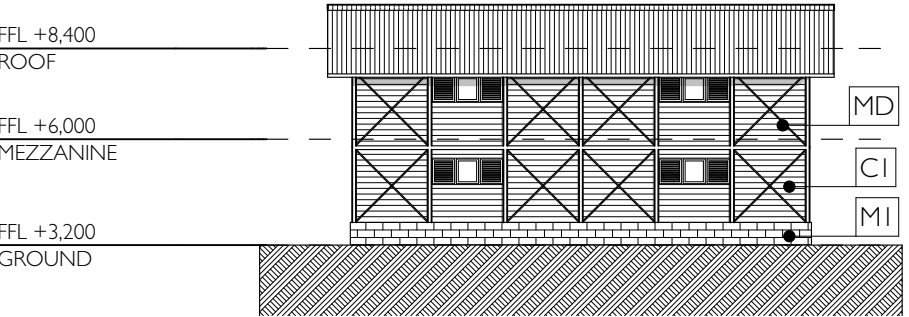
MEZZANINE
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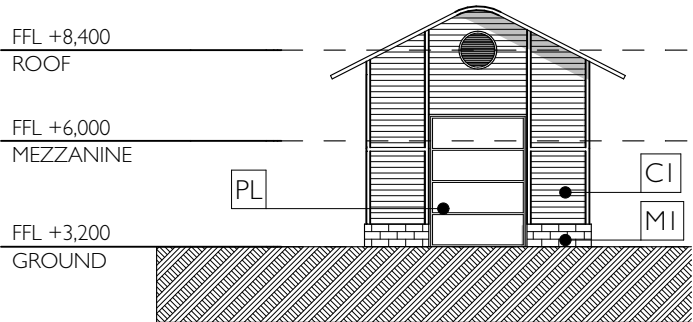
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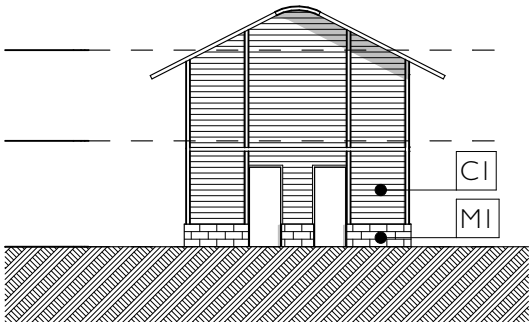
NORTH ELEVATION
1:200



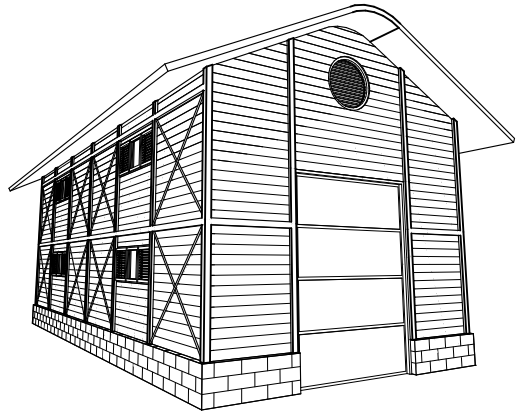
SOUTH ELEVATION
1:200



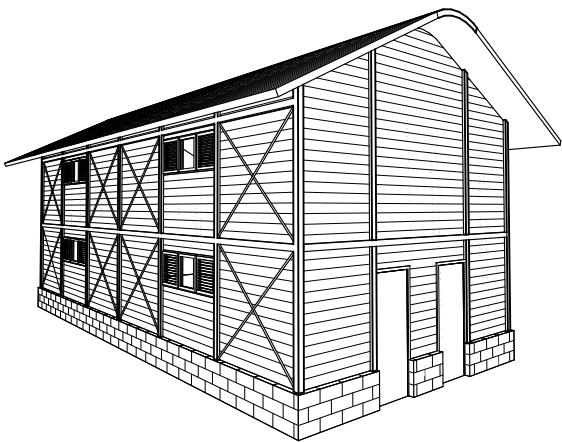
EAST ELEVATION
1:200



WEST ELEVATION
1:200



PERSPECTIVES



LEGEND	
B1	GLAZED BALUSTRADE IN STAINLESS STEEL FRAME
B2	CFC WEATHERBOARD + GLAZED BALUSTRADE
B3	GLAZED BALUSTRADE IN STAINLESS STEEL FRAME
B4	GLAZED BALUSTRADE IN STAINLESS STEEL FRAME
B5	STAINLESS STEEL + WIRE BALUSTRADE
BA	BATTENED SCREEN
CI	CFC WEATHERBOARD CLADDING
C2	CFC WEATHERBOARD CLADDING
FI	IRREGULAR STONE FEATURE WALL
LI	POWDERCOATED ALUMINIUM LOUVRES
LS	STACKING LOUVRE SHUTTERS
PE	POWDERCOATED ALUMINIUM PERGOLA
PL	PANEL LIFT DOOR
PO	POLYCARBONATE WITH TIMBER BATTEN SCREEN TO UNDERSIDE
MI	RENDERED MASONRY COLOUR 1
M2	RENDERED MASONRY COLOUR 2
MD	METAL DECK ROOFING
S1	POWDER COATED SHADING DEVICE WITH METAL DECK ROOFING
S2	POWDER COATED SHADING DEVICE WITH METAL DECK ROOFING
S3	POWDER COATED SHADING DEVICE WITH METAL DECK ROOFING

THE REEF MARINA
PORT DOUGLAS QLD



DRAWN: SG EB AT
CHECKED: JL PR JL
APPROVED: PR JL
DATE 6/12/2016

MAINTENANCE SHED

PROJ NO. 160303	DWG NO. DA-IR-107	REVISION: 03 STATUS: DEVELOPMENT APPLICATION
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