

Everyday

Engineers, Planners and Surveyors

A.B.N 33 128 918 347

Bushfire Management Plan

Material Change of Use – Transport Depot (Minor)

***Situated at
4586-4600 Mount Lindesay Highway, NORTH MACLEAN
Lot 54 on SP180530***

Commissioned by

Queensland Mulching Pty Ltd

September 2022

***Everyday Engineers, Planners and Surveyors
Trading for and on behalf of***

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This document has been reviewed and approved by the following appropriately qualified and experienced Registered Professional Engineer of Queensland (RPEQ). This document represents Version 1 (Formal Issue) of the Bushfire Management Plan prepared in respect of 4586-4600 Mount Lindesay Highway, NORTH MACLEAN.



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In preparing this report we have made certain assumptions. We have assumed that all information and documents provided to us by the Client or as a result of a specific request or enquiry were complete, accurate and up-to-date. Where we have obtained information from a government register or database, we have assumed that the information is accurate. Where an assumption has been made, we have not made any independent investigations with respect to the matters the subject of that assumption. We are not aware of any reason why any of the assumptions are incorrect.

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Limitations

The outcomes of this report are based on the proposal outlined within the body of the report. In preparing this report we have made certain assumptions. We have assumed that all information and documents provided to us by the Client or as a result of a specific request or enquiry were complete, accurate and up-to-date. Where we have obtained information from a government register or database, we have assumed that the information is accurate. Where an assumption has been made, we have not made any independent investigations with respect to the matters the subject of that assumption. We are not aware of any reason why any of the assumptions are incorrect.

Everyday Engineers, Planners and Surveyors, in preparing the report herein has performed the services in a manner that is seen to be consistent with the normal level of care and expertise exercised by members of the profession community. Everyday Engineers, Planners and Surveyors' assessment is limited strictly to the applicable Planning Scheme, notably the *Logan Planning Scheme 2015*.

The findings, recommendations, and the conclusions had within this report are based upon the reading of the current version of the applicable Planning Scheme as absorbed on the day of the assessment. The conclusions had in respect of the appropriateness of the development proposal are limited to the level of compliance with the applicable Planning Scheme provisions, and as such should not be seen to represent advice as to the economic viability of the development proposal. The commentary provided represents the professional opinion(s) of the professional personnel of Everyday Engineers, Planners and Surveyors, with respect to the development proposal and the level of compliance had with the applicable Planning Scheme.

Changes, alterations and or modifications of the applicable Planning Scheme provisions, post preparation of this report, cannot be seen to reasonably apply.

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Executive Summary

Everyday Engineers, Planners and Surveyors have been commissioned by the Directors of **Queensland Mulching Pty Ltd** (the "**Client**"), to facilitate the preparation of a Bushfire Management Plan (BMP). The BMP is afforded in support of a development application (Material Change of Use – Transport Depot (Minor)).

The subject lands are formally described as **Lot 54 on SP180530**, situated at **4586-4600 Mount Lindesay Highway, NORTH MACLEAN**.

The assessment afforded herein aims to consider the bushfire hazard and associated potential threats relevant to such a proposal with regards to *Part E* of the *Queensland State Government Single State Planning Policy* (SPP) (2014) and *Part 8 – Overlays, Section 2 – Overlay Codes, Subsection 3 Bushfire Hazard Overlay Code*, of the *Scenic Rim Planning Scheme 2020*. These documents set out the State's and Local Authority's interest in ensuring that natural bushfire hazards are adequately considered when making decisions regarding development.

The Australian Standard *AS3959-2009 Construction of Buildings in Bushfire Prone Areas* applies to Buildings located within a designated bushfire area. The Bushfire Management Plan (BMP) herein, will therefore require that the building structures (Tourist Cabins / Caretaker's Accommodation) will meet the provisions (performance criteria) outlined within the BCA, notably the requirement to comply with the provisions of AS3959-2009.

This BMP found that the subject lands are not technically sited within Bushfire Prone Lands (SDAT Mapping 2017), although the lands are partially seen to fall within a Potential Impact Buffer.

In summary, the following recommendations have been based on the Specific Outcomes assessment criteria outlined in the *QLD Government State Planning Policy* and the *Beaudesert Shire Planning Scheme 2007*:

- The bushfire mitigation measures outlined within Section 3 of this Report pertaining to the existing Building Structure (Carport) are to be complied with, notably:
 - Provision is to be made for the construction of a 1.8 metre high Colour Bond Fence constructed along the common boundary with the property to the north.

It is had that there are no supplementary bushfire mitigation measures required in order to address the potential hazard posed by the area(s) of hazardous vegetation. There is sufficient space between the existing carport and the perceived vegetation hazard(s) (Body of the Vegetation Community to the North) to afford the appropriate APZ widths for a BAL – 12.5 once the Colour Bond Fence is in place.

In summary, the following measures are recommended to enable the proposal to adequately address the potential bushfire hazard threat as established within this report:

- The bushfire mitigation measures outlined within Section 3 of this Report are to be complied with; and
- The ongoing management actions outlined within Section 4 of this Report are to be complied with.

This assessment has been made based on the bushfire hazards in and around the area of the proposed development at the time of the conduct of the site inspection which in-turn has led to the production of this report.

Should the recommendations above be duly considered and implemented, the bushfire hazard present should be reduced to a level considered appropriate to provide an adequate level of protection to life and property on the site.

The proper implementation of this Bushfire Management Plan will assist to reduce the potential risk posed to individuals, their property and third parties that may be called upon in response to a bushfire event. It is important to note however, that the proper implementation of the Bushfire Management Plan will not eliminate the risk posed by bushfire events. Individuals residing within bushfire prone areas should take a proactive approach to mitigating the potential impacts that may come about as a result of a bushfire event. In saying this, individuals should be mindful of their own limitations and those of their family, and accordingly take appropriate actions / measures to prevent the loss of life, homes and property.

1. The Introduction

This *Bushfire Management Plan* has been prepared on behalf of the Directors of **Queensland Mulching Pty Ltd** (the “*Client*”), in support of a development application (Material Change of Use (MCU) – Transport Depot) seeking approval for the establishment of a Transport Depot upon the lands the subject of the application. The subject lands are formally described as **Lot 54 on SP180530**, situated at **4586-4600 Mount Lindesay Highway, NORTH MACLEAN**.

The assessment aims to consider the bushfire hazard and associated potential threats relevant to such a proposal with regards to *Part E* of the *Queensland State Government Single State Planning Policy (SPP)* (2014) and Chapter 8 Part 2 Table 8.2.3.3.1 Bushfire Hazard Overlay Code: Accepted Development (Subject to Requirements) and Assessable Development, of the *Logan Planning Scheme 2015*. These documents set out the State’s and Local Authority’s interest in ensuring that natural bushfire hazards are adequately considered when making decisions regarding development.

The Australian Standard *AS3959-2009 Construction of Buildings in Bushfire Prone Areas* applies to Building Structures located within a designated bushfire area. The Standard specifies requirements for the construction of buildings in bushfire-prone areas in order to improve their resistance to bushfire attack from burning embers, radiant heat, flame contact and combinations of the three attack forms. Although the Standard is designed to improve the performance of buildings when subjected to bushfire attack in designated bushfire-prone areas there can be no guarantee that a building will survive a bushfire event on every occasion. This is substantially due to the unpredictable nature and behaviour of fire and extreme weather conditions.

The purpose of the *Bushfire Management Plan* (BMP) herein, is therefore to mitigate the potential hazard(s) posed by bushfire activity to the structures (existing and or proposed as the case may be) sited upon the subject lands. Notwithstanding the provisions of this BMP, any and all future structures to be afforded for upon the subject lands will need to meet the provisions (performance criteria) outlined within the BCA, notably the requirement to comply with the provisions of AS3959-2009. The Bushfire Hazard Assessment afforded for herein, has regard to the CSIRO report titled ‘*A new methodology for State-wide mapping of bushfire prone areas in Queensland*’, where applicable. It should be noted that the Bushfire Hazard Areas identified within the *Logan Planning Scheme 2015 – Bushfire Hazard Area Overlay Mapping*, were prepared with specific focus had to the methodology for the classification of bushfire hazard areas as outlined within the CSIRO report.

The State Planning Policy Interactive Mapping (SDAP Mapping - 2017), shows the subject lands (notably the area of the proposed development) as being sited within a ‘Potential Impact Buffer’, as such the subject lands are not seen to be subject to any of the higher order bushfire hazard designations. Whilst this may well be the case, in the initial instance the Development Application is subject to assessment against the provisions of the *Logan Planning Scheme 2015*.

The proper implementation of this *Bushfire Management Plan* will assist to reduce the potential risk posed to individuals, their property and third parties that may be called upon in response to a bushfire event. It is important to note however, that the proper implementation of the *Bushfire Management Plan* will not eliminate the risk posed by bushfire events. Individuals residing within bushfire prone areas should take a proactive approach to mitigating the potential impacts that may come about as a result of a bushfire event. In saying this, individuals should be mindful of their own limitations and those of their staff, and accordingly take appropriate actions / measures to prevent the loss of life, property and equipment directly and or indirectly associated with the business.

1.1 Site Details

A summary of the site details are detailed in **Table 1** below.

Application and Site Details	
Site Address:	4586-4600 Mount Lindesay Highway, NORTH MACLEAN
Real Property Description:	Lot 54 on SP180530
Registered Owner:	<i>Mark Leslie Vary and Linda Maree Vary</i>
Site Area:	23,600 square metres
Road Frontage(s):	Mount Lindesay Highway Service Road
Local Authority:	Logan City Council
Applicable Planning Scheme:	Logan City Planning Scheme 2015
Local Area Plan:	Nil
Zone / Precinct:	Rural Residential Zone / Cottage Rural Precinct
Applicable Overlays:	Biodiversity Areas Overlay Bushfire Hazard Overlay Regional Infrastructure Corridors and Substations Overlay Transport Noise Corridors Overlay Waterway Corridors and Wetlands Trigger
Water Reticulation:	Yes
Sewer Reticulation:	No
Current Land Use:	Dwelling House (MCUR/191/2020) Transport Depot (Subject to Show Cause Notice)
Topography:	The subject lands are all but flat, with little to no slope, refer Appendix A . The subject lands contain no significant topographical features.

Table 1: Site Details

1.2 Scope of Proposed Works

The scope of works affords for the preparation of a *Bushfire Management Plan* (BMP) based upon the Bushfire Hazard Assessment afforded herein, per the provisions of the SPP and the Logan Planning Scheme (LPS 2015).

The purpose of this Bushfire Management Plan is to:

- Confirm the potential bushfire hazard exposure of the subject lands as a whole;
- Confirm whether the existing structure(s) sited upon the subject lands are seen to be exposed to bushfire attack;
- Confirm whether there is an intention to establish any supplementary building structures upon the subject lands, and if so where best to site the structures so as to minimise the potential bushfire exposure;
- Determine measures to be utilised to reduce bushfire hazard(s) to any existing building structures and or proposed building structure(s);
- Determine measures to be utilised to mitigate any remaining bushfire hazard; and
- Determine the Bushfire Attack Level (BAL) classification to be adopted in respect of any proposed building structures.

1.3 Proposed Development

General Overview

The Applicant in placing the development application before Council is seeking approval to establish a Transport Depot (Minor) upon the subject lands. The Transport Depot (Minor) shall be seen to represent a Secondary 'Use' afforded for upon the subject lands, the Primary 'Use' being that of a Dwelling House. Whilst the Dwelling House 'Use' is yet to be established upon the subject lands, Council has issued a separate MCUR Development Approval (MCUR/191/2020) in respect of the proposed Dwelling House 'Use'. Due in part to the COVID 19 Pandemic, and the resultant supply chain issues (Building Products), the owner(s) of the subject lands have delayed the establishment of the proposed Dwelling House upon the subject lands. In that the Transport Depot (Minor) shall be seen to represent a Secondary 'Use', the Dwelling House (Primary Use) would need to be seen to have commenced upon the subject lands prior to the commencement of the Transport Depot (Minor) 'Use'.

The subject lands are to be development for the purposes of a Dwelling House 'Use' under MCUR Development Approval MCUR/191/2020, and the proposed Transport Depot 'Use' in accordance with the proposed Plan(s) of Development, refer **Appendix B**. The development application materials relating to the 'Dwelling House', and the Development Approval (MCUR/191/2020) afforded the Dwelling House Development Application should be seen to represent 'relevant matters' (refer s45(5)(b) of the Planning Act) for the purposes of the assessment of the current development application. The Applicant submits that the current development application should be assessed in light of the existing development approval had for the establishment of a dwelling house upon the subject lands.

The Applicant's Proposal

The Applicant's proposal affords for the parking of a maximum of four (4) heavy vehicles and or machines upon a hardstand area sited immediately to the rear of the existing Class 10a Building Structure (Shed) sited upon the subject lands. The existing Class 10a Building Structure (Shed) is to be retained for purposes associated with the primary Use (Dwelling House), notably the storage of equipment utilised in respect of the ongoing maintenance of the subject lands (i.e., tractor slashers, ride-on mower, etc...).

The Applicant's proposal will afford for:

- The construction of a reinforced concrete access crossover (heavy duty) to the standard(s) required of the Local Authority.
- The construction of a sealed access driveway (minimum 5.0 metre width with a 25mm minimum thickness Asphaltic Concrete (AC) Surfacing). The access driveway arrangement shall be sited within the current location albeit that the access driveway crossover, and the access driveway will require reconstruction to the satisfaction of the Local Authority.

The sealed access driveway arrangement shall extend from the concrete access crossover to the area of the proposed Transport Depot hardstand area. The sealed access driveway arrangement shall incorporate adequate area for a heavy vehicle to facilitate a turning movement to ensure all vehicles access and egress the subject lands in forward gear.

The access arrangement to the dwelling house afforded under development approval MCUR/191/2020 shall be taken from the sealed access driveway and shall be similarly sealed.

- The installation of supplementary landscaping works adjacent the access driveway. The landscaping works to be afforded adjacent the access driveway is detailed within the MCUR/191/2020 Development Approval.
- The construction of a reinforced concrete hardstand area upon which the four (4) heavy vehicles and or machinery are to be parked. The concrete hardstand area is to incorporate an appropriate drainage design to afford for the capture of any wash off (rainfall) from the paved area.
- The removal of rubbish, and the by-products of previous human activities upon the subject lands, notably within the north-eastern portion of the property.
- The remediation of the lands to the east of the concrete handstand area to a state that pre-dated any development upon the subject lands.

The exceptions being:

- The area(s) of the Powerlink Easement (Electricity Easement) which passes through the southern portion of the subject lands which is to be maintained as a mown lawn area; and
- The rehabilitation of the existing dam sited within the north-eastern portion of the property to create a 'wet pond', capable of containing the increase in surface runoff from the Transport Depot car parking area, and the biological treatment of pollutant wash off from the parking area.
- The conduct of landscaping works to screen the area of the proposed Transport Depot (Hardstand Area), and to enhance the rehabilitation works to be afforded for within the eastern portion of the subject lands.
- The construction of a 1.8 metre high Colour Bond Fence along the common boundary with 4576-4584 Mount Lindesay Highway, NORTH MACLEAN.
- The construction of a 1.8 metre high Timber Paling Fence (Lapped) along the street frontage of the subject lands (if deemed relevant by Council).
- The installation of street tree planting (where permissible and does not impact upon overhead electrical infrastructure works) along the street frontage of the subject lands.
- The parking of Heavy Vehicle driver's personal vehicle within the existing carport present upon the subject lands.

In respect of the operation of the proposed Transport Depot, the following operational management protocols derived from the *Operational Management Plan* will be seen to apply:

- The operation of the Transport Depot is merely seen to represent a 'Staging Post', between sites of operation. The utilisation of the Transport Depot is primarily for the overnight parking and or weekend parking of a Fleet Vehicle(s) (Heavy Vehicles) owned and operated by Queensland Mulching Pty Ltd (ABN 32 167 633 481) enroute between sites of operation.

The exception being where Fleet Vehicle(s) (Heavy Vehicles) may be parked over a Public Holiday or lay down period (i.e., Easter Holiday Period). Traditionally TMR restricts the movement of heavy vehicles during these periods upon Queensland Main Roads.

- The proposed 'Use' (Transport Depot) is to be limited to the parking of a maximum of four (4) heavy vehicles and or machines, with the definition of what is seen to represent a 'heavy vehicle' per the provisions of the 'Administrative Definitions' set forth within *Schedule 1 – Definitions, Section SC1.2 – Administrative Definitions* of the Logan Planning Scheme: v8.1.

There is to be no servicing of vehicles, no maintenance afforded to machinery and or equipment, no refuelling of vehicles / machinery and or equipment, no storage of any product (i.e., mulch, soil, sand, gravels, etc...), no storage of waste product of any form (i.e., stumps, logs, rock, etc....), no storage of materials or product not directly related to the primary use (Dwelling House), and or no storage of incidental items other than equipment utilised directly and solely for maintenance purposes associated with the subject lands (i.e., tractor slasher and or ride-on mower).

- The parking of heavy vehicles and or machinery is strictly limited to the hardstand area associated with the Transport Depot. There shall be no parking of heavy vehicles beyond the bounds of the hardstand area as defined upon the approved Plan of Development pertaining to the Transport Depot.
- The parking of heavy vehicles and or machinery upon the subject lands is limited to a vehicle and or machine owned by the landowner(s) and or a company to which the landowner(s) is/are seen to be a director thereof (i.e., Queensland Mulching Pty Ltd (ABN 32 167 633 481).
- There is to be no storage of flammable gases on the subject lands, other than that which are utilised in respect of the primary use (Dwelling House) (i.e., Gas Bottles used for the cooking or heating of water).

The Client is to observe the provisions of *Queensland's Work Health and Safety Regulation 2011*, and where required is to undertake any action required of the Regulations.

- There is to be no storage of flammable liquids (i.e., hydrocarbon fuels) on the subject lands, other than that held within the fuel tanks of the vehicles and or machines (minimal storage) parked / stored upon the subject lands and / or utilised for maintenance purposes associated with the primary use (Dwelling House) (i.e., fuel store for ride-on mower).

The Client is to observe the provisions of *Queensland's Work Health and Safety Regulation 2011*, and where required is to undertake any action required of the Regulations.

- With the exception of the provisions listed above, there is to be no storage of hazardous chemicals specified within Schedule 11 of the Queensland's Work Health and Safety Regulation 2011, upon the subject lands.

The Client is to observe the provisions of *Queensland's Work Health and Safety Regulation 2011*, and where required is to undertake any action required of the Regulations.

- No arrivals / departures outside of 6am-6pm Monday to Friday, and 7am-12am (noon) Saturdays.
- No commercial activities (arrivals and or departures) on public holidays, with the definition of a 'public holiday, being a day of 'holiday' declared by the State of Queensland.

In respect of the operation of the proposed Transport Depot, there will be no permanent individuals (staff) present upon the subject lands. The Transport Depot is seen as a secondary 'Use', with the primary 'Use' being that of a 'Dwelling House', as such the Transport Depot is not seen to operate as a business from the subject lands. The Applicant's business 'Queensland Mulching Pty Ltd (ABN 32 167 633 481)' (i.e., administrative component) may ultimately operate from the primary 'Use' (Dwelling House) as a Home-based Business however, at this time it is operated from the landowner's current residence as a Home-based business.

The Applicant's Proposal – Summary for Bushfire Mitigation Purposes

The Applicant's proposal affords for the establishment of a Transport Depot (Minor) upon the subject lands (4586-4600 Mount Lindesay Highway, NORTH MACLEAN). The subject lands are formally described as Lot 54 on SP180530.

The Applicant's proposal does not afford for the construction of any supplementary building structures (at this time) however consideration is to be given to:

- The potential impacts that could be had to the existing carport, and any vehicles stored within the immediate area of the carport if not beneath the carport; and
- The potential impacts that could be had to a heavy vehicle(s) parked upon the heavy vehicle parking bay(s).

The proposed Plan(s) of Development are afforded at **Appendix B**.

2. Bushfire Hazard Assessment

Bushfire activity is prevalent in landscapes that carry sufficient fuels (ground, near ground and aerial) to enable the establishment and thereafter the conveyance of a fire, the two predominant bushfire types being **grassland** and **forest fires**. Factors such as topographic characteristics and quantity of fuel loads influence the form, intensity and spread of fire.

An area that has the potential to be impacted upon by fire is seen to be within a bushfire prone area. With respect to the CSIRO Report titled 'A new methodology for State-wide mapping of bushfire prone areas in Queensland', a Bushfire Prone Area is defined as:

'...land that could support a significant bushfire or be subject to significant bushfire attack. The Bushfire Prone Area includes potentially hazardous vegetation with a Medium, High or Very High Potential Bushfire Intensity. Bushfires in these areas have the potential for high to extreme levels of flame attack, radiant heat and ember attack as a result of high potential fuel loads, slope and severe fire weather. Bushfire impacts in the Bushfire Prone Area are potentially harmful to people and to property.

Land that could be subject to significant bushfire attack from embers, flames or radiant heat is included in a Potential Impact Buffer with a default width of 100m from all areas of Medium, High or Very High Potential Bushfire Intensity."

This section assesses the types and nature of potential hazards surrounding the proposed development.

2.1 Existing Bushfire Prone Land Mapping

The lands the subject of the proposal are sited within a geographical area with a Fire Danger Index (FDI) rating of 40 (Queensland). The State Planning Policy Interactive Mapping (SDAP Mapping - 2017), shows the subject lands (notably the area of the proposed development) as being sited within a 'Potential Impact Buffer', as such the subject lands are not seen to be subject to any of the higher order bushfire hazard designations, refer **Figure 1**.



Figure 1 – SPP Interactive Mapping System showing the extents of the Bushfire Hazard Areas

Having regard to the *Logan Planning Scheme 2015 (LPS)*, the subject lands are mapped as being within a Potential Impact Buffer Area (**Figure 2**).



Figure 2 – Excerpt from the Logan Planning Scheme 2015 (LPS) showing the extents of the Potential Impact Buffer Area

(Source: Logan Planning Scheme 2015 v8.1)

It is noted that at the time of the preparation of this *Bushfire Management Plan* the *Logan Planning Scheme 2015 (LPS)* is the applicable statutory instrument. Having regard for the LPS 2015, the area within which the proposed development is sited is seen to form part of an Impact Buffer Area.

In that both the SPP Mapping and the LPS 2015 Overlay Mapping show the subject lands as being within a Potential Impact Buffer Area, this shall be seen to represent the extent of the risk posed to the proposed development (baseline assumption).

2.2 Vegetation Assessment (Verification)

Having due regard for the form of the vegetation present upon the subject lands, and the adjacent lands to the north-north-east, fire activity within the immediate area will be limited to that of a fast moving 'grassfire'. In saying this there is little threat to the subject lands from the lands to the south-west which typically would afford the highest bushfire danger in the months August through October. In effect the Mount Lindesay Highway serves as a significant fire break to an approaching fire from the south-west thru the north-west of the subject lands. The vegetation to the south-east of the subject lands affords little to no threat due to the absence of substantial ground – near ground fuels – grazing stock are seen to have eliminated all ground and near ground fuel loads in this instance.

When addressing the potential for grassfire activity within the immediate area of the site, to significantly impact upon the proposed development, reference has been had to the dialogue had within ***Grassfires – Fuel, Weather and Fire Behaviour*** by Phil Cheney and Andrew Sullivan, specifically in respect of *Fuels, Combustion of Grassy Fuels, Fire Behaviour, Predicting Fire Spread, Local Variation and Erratic Fire Behaviour, Fire Danger, and Wildfires and their Suppression*.

2.2.1 Methodology

The subject lands are technically located within Bushfire Prone Lands in that the lands are located within a Potential Buffer Zone. The Bushfire Hazard potential however is seen to be 'Low', with the lands for all intense purposes sited within a 'Low Bushfire Hazard Risk Area'.

Vegetation classification over the subject lands has been carried out as follows:

- Aerial Photograph interpretation to map the vegetation classification and extent;
- Queensland Department of Natural Resources and Mines Vegetation Mapping;
- CSIRO, A New Methodology for State-wide mapping of Bushfire Prone Areas in Queensland; and
- On-site Vegetation Assessment.

In accordance with AS3959-2009, an assessment of the vegetation over a distance of 100m in all directions from the area within which the proposed development is sited, was undertaken. The predominant vegetation was identified in all directions from the site. The vegetation was classified in accordance with Table 2.3 in AS3959-2009, Appendix A of CSIRO (2014) and the QLD Globe Vegetation Mapping.

2.2.2 Predominant Vegetation Formation

An Everyday Engineers, Planners and Surveyors Environmental Engineer has ground truthed all vegetation hazards surrounding the site in which the proposed development is sited, with reference to the QLD Department of Natural Resources and Mines (DNRM) Regulated Vegetation and Regional Ecosystem (RE) Mapping.

The site inspection observations were cross referenced with the CSIRO Report (2014) to determine the overall fuel load to provide the most accurate fuel load for the perceived hazard, refer **Table 2 Vegetation Classifications**.

Direction of Bushfire Attack	Vegetation or other infrastructure	Classification of Vegetation Formations AS3959-2009	DNRM Vegetation Mapping	Classification of Vegetation Formations CSIRO (2014)	Overall Fuel Load
North	<p>Rural Residential allotment Housing on adjacent allotment.</p> <p>The vegetation present is predominantly overgrown grasses (0.5 -1.0 metres in height), although recently slashed.</p> <p>There is an access driveway adjacent the common boundary which effectively limits ground fuels and near ground fuels.</p> <p>Fire activity would be dependent upon the prevailing weather conditions and the area</p>	<p>Group – Grassland G22 (Closest Form) (Low Threat Vegetation)</p> <p>The lands in question appear to have been maintained by slashing although there is long grass to the margins.</p> <p>Low Risk Environment</p>	N/A	Class 12	5 tonnes / ha

	available to develop a significant fire. Closest area of hazardous vegetation is sited >100 metres to the south of the subject lands.				
South	Rural Residential Housing on adjacent allotment (minimal to no vegetation – no hazardous vegetation). The lands in question are maintained as a mown lawn, particularly the area of electricity easement. Closest area of hazardous vegetation sited >300 metres to the south of the subject lands.	Group – Grassland G21 (Closest Form) (Low Threat Vegetation)	N/A	Class 12	5 tonnes / ha
East	Rural Residential Housing on adjacent allotment (minimal to no vegetation – no hazardous vegetation). Overgrown grass areas in and about the area of the existing dam.	Group – Grassland G21 (Closest Form) (Low Threat Vegetation)	N/A	Class 12	5 tonnes / ha
West	Mount Lindesay Service Road / Mount Lindesay Highway (minimal to no vegetation – no hazardous vegetation).	N/A	N/A	N/A	N/A

Table 2: Vegetation Classifications

The lands to the north of the proposed development represent the only real bushfire (grassfire) threat to the proposed development albeit that a fire within the vegetation (grasslands) is likely to represent little more than nuisance value. The lands in question appear to be maintained by slashing. The potential for fire exposure would tend to come about as a result of a ‘heading fire’ traversing the adjacent lands from the north-west towards the southern boundary of the subject lands.

The concern with the lands to the north predominantly revolves around the potential for a lack of maintenance afforded by the adjacent landowners. This in-turn has the potential to afford for a build-up in ground and near ground fuels April through August (albeit that the fuels will tend to break down late August) notably within the tussock grass forms present.

Ideally a physical barrier in the way of a 1.8 metre high colour bond fence should be afforded as a means of addressing any perceived nuisance value grass fire activity. Whilst, the flame length in a 'Tussock' grassland form has the potential to generate flame lengths in the order of 3-4 metres, the flame height is unlikely to exceed 2 metres in this instance given the reduce fuel loads adjacent the northern boundary of the subject lands. It is also felt that it is unlikely that a significant grassfire would be able to develop given the limited area of the overall grassland area.

The colour bond fence should extend the entire length of the common boundary to address any potential grass fire activity. The purpose of the fence is merely to offer a barrier between the grassed areas to the north and the existing shed / compound area.

In that the lands to the south (notably the area beneath the overhead transmission lines) are maintained as a mown lawn, the area in question is not seen to represent a bushfire threat (low bushfire hazard potential). Similarly, the lands to the east are considered to represent a low bushfire hazard potential.

2.3 Effective Slope Assessment (Verification)

2.3.1 Methodology

Slope assessment has been undertaken by way of a table top assessment utilising the contour information available upon Logan City Council's Online Mapping system. A subsequent Site Inspection was also undertaken to verify the results sourced by way of the Logan City Council's Online Mapping system.

As outlined in AS3959-2009, an assessment of the slope over a distance of 100m of the hazard direction from the site boundary was undertaken. The effective slope was then calculated under the classified vegetation. The topography of the site has been evaluated to identify both the average slope and by identifying the maximum slope present. These values help determine the level of gradient which will most significantly influence the fire behaviour of the site.

2.3.2 Effective Slope

The slope of the bushfire hazard is documented in **Table 3** below:

Direction of Hazard	Classification of Vegetation Formations AS3959-2009	Classification of Vegetation Formations CSIRO (2014)	DNRM Vegetation Mapping	Slope
North	Group – Grassland G22 (Closest Form) (Low Threat Vegetation) The area in question is poorly maintained though.	Class 12	N/A	Flat
South	Group – Grassland G21 (Closest Form) (Low Threat Vegetation)	Class 12	N/A	Flat
East	Group – Grassland G21 (Closest Form) (Low Threat Vegetation)	Class 12	N/A	Flat
West	N/A	N/A	N/A	N/A

Table 3: Site Slope Assessment

2.3.3 Significant Environmental Features

The site inspection revealed that no significant environmental features were present on site. The subject lands are effectively flat with no topographical features of any discernible nature.

2.4 Fire Weather Severity (Verification)

The Grass Fire Danger Index (GFDI) is a measure of the chance of a fire starting, its rate of spread, its intensity and the difficulty of its suppression, according to various combinations of air temperature, relative humidity, wind speed and both the long and short-term drought effects.

FDI values are very sensitive to input values, notably temperatures, humidity and wind speed. Small variances in the aforementioned factors can afford for large variances with respect to the FDI values.

For fire modelling purposes, an FDI of 40 is adopted for Queensland.

2.5 Potential Fire Intensity (Verification)

Potential Fuel Load, Maximum Landscape Slope and Fire Weather Severity mapping were combined using the simplified McArthur equation to produce Potential Fire-line Intensity mapping for the area of the subject lands.

$$\text{Potential Fuel Load (W)} \times \text{Maximum Landscape Slope (O)} \times \text{Fire Weather Severity (FFDI)} = \text{Potential Fire-line Intensity (PFI)}$$

Potential Fire-line Intensity were represented as a continuous metric spatial which in-turn were categorised into classes representing different levels of Potential Bushfire Intensity, refer **Table 4**.

Potential Bushfire Intensity Class	Potential Fire-line Intensity
Very High (potential intensity)	40,000 + kW/m
High (potential intensity)	20,000 – 40,000 kW/m
Medium (potential intensity)	4,000 – 20,000Kw/m

Table 4: Potential Bushfire Intensity Classes and Corresponding Potential Fire-line Intensity Ranges

The Potential Fire-line Intensity mapping for the area of the subject lands generally accords with the mapping afforded by Logan City Council, refer **Figure 3**.



Figure 3 – Potential Fire Intensity Spatial Metrics

(Source: Logan Planning Scheme 2015 v8.1)

2.6 Bushfire Hazard Assessment Designation (Verification)

Having undertaken an independent assessment of the subject lands per the provisions of “A new methodology for State-wide mapping of bushfire prone areas in Queensland”, we find the Logan City Council interactive mapping to be an accurate representation of the potential Fire Danger presented to the subject lands.

The Bushfire Mitigation Plan afforded within Section 3, will seek to outline the measures deemed necessary to address the perceived Fire Danger presented to the subject lands.

3. Bushfire Mitigation Measures

The Queensland State Government *State Planning Policy* (SPP) and the *Part 8 – Overlays, Section 2 – Overlay Codes, Subsection 3 Bushfire Hazard Overlay Code of the Logan Planning Scheme 2015*, have been used to determine the appropriate measures for protection from bushfire hazards across the subject lands and the immediate vicinity. Further regard has also been had to the provisions of the *Logan Planning Scheme 2015* (LPS), notably the provisions of *Part 8 Overlays Section 8.2.3 Bushfire Hazard Overlay Code*.

Requirements outlined by the SPP and the LPS include the following:

- Development avoids natural hazard areas or mitigates the risk of the natural hazard;
- Development supports, and does not unduly burden, disaster management response, or recovery capacity and capabilities;
- Development directly, indirectly and cumulatively avoids an increase in the severity of the natural hazard and the potential for damage on the site or to other properties;
- Development avoids the risk to public safety and the environment from the location of hazardous materials and the release of these materials as a result of a natural hazard; and
- Development maintains or enhances natural processes and the protective function of landforms and vegetation that can mitigate risks associated with the natural hazard.

An assessment of the proposed development against the provisions of the *Bushfire Hazard Overlay Code (LPS)* is afforded at **Appendix C**.

3.1 Location, Design and Siting of Development

The provisions of Performance Outcome PO1, PO2 and PO3 of the Bushfire Hazard Overlay Code (Table 8.2.3.3.1) of the Logan Planning Scheme 2015 (LPS) require that:

(PO1) - Development is designed to:

- (a) Minimise risk of bushfire hazard;*
- (b) Provide safe premises;*
- (c) Create efficient emergency access for fire-fighting and other emergency vehicles.*

PO2 - Development is sited and constructed to minimise the bushfire hazard and maximise the protection of life and property from bushfire.

PO3 – Reconfiguring a lot ensures that lots are designed to minimise bushfire hazard and provide safe sites for people, property and buildings.

The principal requirements to be had in respect of Performance Outcomes PO1, PO2 and PO3 limited as they are, relate to:

- Ensuring that the existing building structure (carport) is sited within an area of reduced bushfire hazard potential (BAL of 29 or less); and
- Ensuring that the existing building structure (carport) is sited within an Asset Protection Zone (APZ).

The area of the existing carport and the parking area / storage area immediately to the east of the shed are sited within an area of 'Low' Bushfire Hazard Risk (refer **Appendix D - Photographic Record**).

The only area of any perceived risk (limited as it is) relates to the vegetation present upon the adjacent property to the north (slashed grass(es)). The mechanism(s) to address the perceived risk will be addressed within Section 3.1.1 – Asset Protection Zones. Suffice it to say that the lands taking in the area of the existing carport, and the associated parking / storage area will be subject to a BAL of **Low** (refer Section 3.2.1 of this BMP).

3.1.1 Asset Protection Zones

Acceptable Outcomes

Areas of defensible space are created by firebreaks that separate the asset (dwelling house) from areas of bushfire hazard. These firebreaks are more commonly referred to as Asset Protection Zones (APZ's).

An APZ is an area surrounding an asset (dwelling house) that is managed so as to reduce the bushfire hazard to an acceptable level, so as to mitigate the perceived risk to life and property.

An APZ can include the following, but is not limited to the following:

- Maintained areas of vegetation (i.e. mown lawns);
- Discontinuous gardens, consisting of fire resistant species (species less susceptible to combustion in a bushfire setting);
- Waterway bodies (i.e. swimming pools, dams and or waterways);
- Roadways, access driveways / tracks and managed areas beside the aforementioned (i.e. verges);
- Maintained open space / parkland areas;
- Non-combustible building works (i.e. colour bond fences);
- Large un-sealed parking areas.

The presence of scattered vegetation (isolated tree(s) and or shrub(s)) within an APZ area can be seen to be acceptable provided that:

- The vegetation is not in contact with any building structures;
- The individual specimens are well spread out and in-turn do not form a continuous canopy;
- The vegetation is not seen to retain substantive quantities of dead vegetation (i.e. bark) and or deposit substantial quantities of ground fuel (i.e. bark, branches, etc.) in a short period of time notably during the fire season;
- Is located sufficient distance from any building structures so as to limit the potential for the building structure to ignite as a result of direct fire contact and or as a result of radiant heat emission.

The storage of combustible materials (i.e. fire wood, straw bales, garden mulch, timber, hydrocarbons, etc.) is not to occur within the APZ (particular immediately adjacent to any building structure).

Proposed Mitigation Measures

AS3959-2009 applies a Fire Danger Index (FDI) of 40 across the entire state of Queensland. APZ's are not mandatory under the SPP; however adequate defensible space is required for each building structure (i.e. dwelling house) affected by a medium or high bushfire hazard. Additionally, APZ distances have not been prescribed under the LPS however APZs are still a requirement under the *Bushfire Hazard Overlay Code – Performance Outcome PO3*.

The methodology to establish the appropriate setbacks in the bushfire planning guidelines (SPP) have been considered to support requirements of the LPS Bushfire Hazard Overlay Code, refer **Table 5** for required APZs.

Direction of Hazard	Classification of Vegetation Formations AS3959-2009	DNRM Vegetation Mapping	Classification of Vegetation Formations CSIRO (2014)	Slope	Required APZ (BAL-29)	APZ Provided
North	Group – Grassland G22 (Closest Form) (Low Threat Vegetation) The area in question is poorly maintained though.	N/A	Class 12	Flat	5-<8	10 (to fence line) >50 metre to nearest perceived area of hazardous vegetation.
South	Group – Grassland G21 (Closest Form) (Low Threat Vegetation)	N/A	Class 12	Flat	5-<8	>50 metre
East	Group – Grassland G21 (Closest Form) (Low Threat Vegetation)	N/A	Class 12	Flat	5-<8	>50 metre
West	N/A	N/A	N/A	Flat	5-<8	N/A (must be maintained at no less than 10 metres.

Table 5: Required APZ

Have due regard for the location of the existing carport and the potential areas of hazardous vegetation, the maximum widths of the APZ's are more than sufficient to afford for a BAL – 29 (with regard to Section 2.2.3.2 of AS3959-2009 as required by Performance Outcome PO3 of the Bushfire Hazard Overlay Code (Table 8.2.3.3.1) of the Logan Planning Scheme 2015 (LPS).

The separation distance(s) between the perceived area(s) of hazardous vegetation and the existing carport is more than adequate to cater for a BAL Classification of BAL – **LOW** (well below the minimum required standard of BAL – 29).

Whilst this is the case, there remains the issue of the vegetation (grasses) upon the adjacent lands to the north. It is noted at this time that a dwelling house is being constructed upon the lands to the north, and whilst it is assumed that the grasses will be routinely slashed / mown, that a 1.8 metre high Colour Bond fence should be constructed along the common boundary as a physical barrier to a nuisance grass fire penetrating into the area of the proposed Transport Depot (Minor).

It is had that there are no supplementary bushfire mitigation measures required in order to address the potential hazard posed by the area(s) of hazardous vegetation. There is sufficient space between the existing carport and the perceived vegetation hazard(s) (Body of the Vegetation Community to the North) to afford the appropriate APZ widths for a BAL – 12.5 once the Colour Bond Fence is in place.

3.2 Building Design and Construction

In that the development proposal does not afford for the construction of any new Building Structures, no supplementary assessment is required in respect of 'Building Design and Construction'.

3.3 Access – Evacuation Routes

With the establishment of the dwelling house afforded under development approval MCUR/191/2020, and thereafter the proposed Transport Depot, there will be a requirement for the establishment of a sealed access driveway (preferably with a 25mm minimum thickness Asphaltic Concrete (AC) Surfacing). The access driveway arrangement shall be sited within the current location albeit that the access driveway crossover, and the access driveway will require reconstruction to the standards specified herein.

The access crossover arrangement, and the associated access driveway shall be of sufficient structural capacity to convey the design vehicle. The design vehicle in this instance shall be either that of a fully loaded municipal fire engine or the vehicle with the highest axle (single or combined unit) loading had within the Client's fleet of vehicles (whichever is the higher). The sealed access driveway arrangement shall extend from the concrete access cross over to the area of the proposed Transport Depot. The access arrangement to the dwelling house afforded under development approval MCUR/191/2020 shall be taken from the sealed access driveway and shall be similarly sealed.

The parking and set down area associated with the Transport Depot shall be constructed of rigid pavement (preferably reinforced concrete).

The location of the existing access driveway arrangement is sited within an area of 'Low Bushfire Hazard' as such it represents a safe means of access and egress to and from the property for the future resident(s) of the dwelling house to be afforded under development approval MCUR/191/2020, the operators of all and any vehicles associated with the Transport Depot and or emergency personnel that may have occasion to access the subject lands.

3.3.1 Fire Trails

In this instance, the form of any future development is not of a form that can accommodate a 'Fire Trail' per say, nor is it considered warranted.

3.4 Water Supply

With the establishment of the dwelling house afforded under development approval MCUR/191/2020, and thereafter the proposed Transport Depot, there will be a requirement for the connection of the 'Use(s)' to the municipal water supply network. The municipal water supply network is designed to accommodate both domestic supply and firefighting flows in the event of either a structural house fire and or bushfire event.

This said, it is recommended that the Client is to make provision for the inclusion of a fire hose reel (30 metre nominal length) or multiple thereof, sited so as to ensure that all portions of the existing shed, the existing carport and the Heavy Vehicle Parking Area can be readily accessed as a matter of course. It is important to note that water supply lines servicing the fire hose reels are afforded a minimum of 450mm cover in order to provide adequate insulation to the water supply lines.

3.5 Gas Supply

Australian Standard AS3959-2009 *Construction of Buildings in Bushfire Prone Areas* requires all above-ground, exposed gas supply pipes are to be metal. Any reticulated or bottled gas should be installed and maintained according to the requirements of the relevant authorities and AS 1596-2002.

3.6 Landscaping

In areas that are prone to bushfire, the design and management of the landscape in the immediate vicinity of the buildings have great potential to improve the chances of survival of people and buildings.

Generally landscaping in and around a bushfire hazard should consider the following:

- Priority given to retaining species that have a low flammability;
- Priority given to retaining species which do not drop much litter in the bushfire season, and which do not drop litter that persists as ground fuel in the bush fire season;
- Priority given to retaining smooth barked species over stringy bark; and
- Create discontinuous or gaps in the vegetation to slow down or break the progress of fire towards the buildings.

The principles of landscaping for bush fire protection aim to:

- Prevent flame impingement on the building;
- Provide for a defendable space for the property protection;
- Reduce fire spread;
- Deflect and filter embers;
- Provide shelter from radiant heat; and
- Reduce wind speed.

Avoiding understorey planting and regular trimming of the lower limbs of trees also assists in reducing fire penetration into the canopy. Rainforest species (where appropriate) are preferred to species with high fine fuel and / or oil content. Trees with loose, fibrous or stringy bark should be avoided. These trees can easily ignite and encourage ground fire to spread up to, and then through the crown of trees.

In this instance, it is not envisaged that there is sufficient warrant to be overly concerned with the species of the landscape plantings to be afforded for upon the subject lands. It is recommended however, that all landscaped areas be routinely maintained in order to minimise the build-up of litter loads.

3.7 Community Infrastructure

There is no community infrastructure.

4. Ongoing Management Actions

4.1 Transport Depot – Storage Limitations, Property Maintenance, and Inspection Regime (General)

In respect of the operation of the proposed Transport Depot, the following limitations / recommendations are made:

- The proposed 'Use' (Transport Depot) is to be limited to the parking of a maximum of four (4) vehicles (Heavy Vehicles) / machines as defined under the 'Use' definition within the Logan Planning Scheme 2015 v8.1.

There is to be no servicing of vehicles, no maintenance afforded to machinery and or equipment, no refuelling of vehicles / machinery and or equipment, no storage of any product (i.e., mulch, soil, sand, gravels, etc...), no storage of waste product of any form (i.e., stumps, logs, rock, etc...), no storage of materials or product not directly related to the primary business afforded by the Client, and or no storage of incidental items other than equipment utilised directly and solely for maintenance purposes associated with the subject lands.

The storage of vehicles and machinery is strictly limited to the hardstand area associated with the Transport Depot.

- There is to be no storage of Flammable gases on the subject lands, other than that which are utilised in respect of the proposed Use(s) (i.e., Gas Bottles used for the cooking or heating of water).

The Client is to observe the provisions of *Queensland's Work Health and Safety Regulation 2011*, and where required is to undertake any action required of the Regulations

- There is to be no storage of Flammable liquids (i.e., hydrocarbon fuels) on the subject lands, other than that held within the fuel tanks of the vehicles and or machines (minimal storage) parked / stored upon the subject lands.

The Client is to observe the provisions of *Queensland's Work Health and Safety Regulation 2011*, and where required is to undertake any action required of the Regulations

- With the exception of the provisions listed above, there is to be no storage of hazardous chemicals specified within Schedule 11 of the *Queensland's Work Health and Safety Regulation 2011*, upon the subject lands.

The Client is to observe the provisions of *Queensland's Work Health and Safety Regulation 2011*, and where required is to undertake any action required of the Regulations

- Where the *Queensland Work Health and Safety Regulations 2011* require(s) an action(s) and or ongoing action(s) to be afforded for / maintained, the conduct of said action(s) is a requirement of this Management Plan.

The Client is reminded that the provisions of the *Queensland Work Health and Safety Regulations 2011*, are applicable to the proposed 'Use' (Transport Depot), and as such the provisions of same are to be complied with at all times.

In respect of the ongoing utilisation of the proposed Transport Depot and the maintenance to be afforded in respect of same, the following recommendations are made:

- Check hardstand areas, access driveways and emergency evacuation routes are free of obstacles, and in good condition ensuring that all pathways / walkways and driveway verges are routinely mown, adjacent vegetation trimmed, and any debris removed.

The Client shall ensure, at all times, that no vehicles and or machines are stored upon the area of the access driveway / access crossover, and or emergency evacuation routes.

- Check Personal Protection Equipment (PPE) required for firefighting purposes is in optimum condition no less than monthly.
- Check firefighting equipment for suppression of fires (i.e., sprinkler systems) are in optimum working condition no less than monthly.
- Check hose and hose reels are not perished, and fittings are tight and in good working order no less than monthly.
- Confirm firefighting equipment (i.e., fire extinguishers and the likes) have been inspected and tagged as fit for purpose by suitably qualified personnel no less than annually.

4.2 Proposed Dwelling House – Property Maintenance, and Inspection Regime (General)

In respect of the proposed dwelling house to be afforded under development approval (MCUR/191/2020), the Client is to observe the recommendations of the *Bushfire Mitigation Plan* submitted in respect of the then development application.

4.3 Property Maintenance and Inspection Regime (General)

In considering property maintenance the following items (where applicable) should be implemented in advance of the bushfire season, prior to September (preferably in July / August) each year (as and where applicable):

- Check hose and hose reels (where applicable) are not perished and fittings are tight and in good working order;
- Check roof tiles / metal roofing, ensure any broken tiles / mortar is replaced and any dislodged roofing materials securely fastened;
- Check screens on windows and doors are in good condition without breaks or holes in flyscreen material and frames are well fitting into sills and window frames;
- Check painted surfaces are in good condition with decaying timber (dry rot) being given particular attention to prevent the lodging of embers within the gaps;
- Check roof area and roof gutters for leaf litter and debris, remove and dispose of same;
- Check access driveways and emergency evacuation routes are in good condition, ensuring that verges are routinely mown, adjacent vegetation trimmed and any debris removed;
- Check mats at points of entry to the dwelling house / building structures, are of non-combustible material or in areas of low potential exposure (sheltered from the direction of bushfire hazard and under cover);
- Ensure doors leading from the dwelling house / building structure to the outside, are fitted with draught seals and are well maintained;
- Ensure woodpiles, sheds and other combustible materials are located well away from buildings.

4.4 Vegetation Fuel Management

The lands, except for the landscaped areas, should be maintained as a mown lawn area to mitigate the potential for bushfire activity.

This said, the lands sited within 20 metres of the future dwelling house and that of the proposed Transport Depot - Minor should be maintained as a low ground fuel area (mown lawn). Where an offset of 20 metres cannot be afforded to a building structure an absolute minimum of 10 metres should be afforded. Where the APZ Zone is reduced to a width of 10 metres, a barrier (colour bond fence 1.8 metres minimum height) should be installed to the outer edge of the APZ to reduce the potential for direct flame contact, heat and ember attack to the structure sheltered from the fire front.

In this instance, it is recommended that the entire northern boundary fence with 4576-4584 Mount Lindesay Highway, NORTH MACLEAN, should be constructed / reconstructed as a 1.8 metre high colour bond fence to mitigate the potential for a grass fire to impact upon the subject lands. This said, it is noted that the building structure sited upon the adjacent allotment (4576-4584 Mount Lindesay Highway, NORTH MACLEAN), affords a further fire break in and about the area of the proposed Transport Depot - Minor.

4.4.1 Fire Break(s)

Not required in this instance.

4.4.2 Fine Fuel Loads / Grass

In this instance, the lands sited within 20 metres of the future dwelling house and that of the proposed Transport Depot - Minor should afford for the management of ground fuel loads, such as fallen leaves, twigs and barks (where applicable). The aforementioned fuel loads should be removed on a regular basis (routine mowing / general garden maintenance) from within the APZs. The most flammable fuel is dry vegetation, sticks and other debris typically less than 6mm in diameter.

Where this cannot be afforded for (i.e., adjacent the common boundary with 4576-4584 Mount Lindesay Highway, NORTH MACLEAN), provision is to be made for a 1.8 metre-high colour bond fence along the common boundary line to mitigate the potential impacts of a grass fire upon the adjacent lands to the north.

5. Local Fire Brigade

The subject lands are sited within the *Jimboomba Auxiliary Fire Station* sited at 22 Johanna Street, JIMBOOMBA. The *Jimboomba Auxiliary Fire Station* is equipped to deal with bushfires and structural house fires.

Contact can be made with the *Jimboomba Auxiliary Fire Station* on (07) 3884 8200.

It should be noted within Queensland that in the event of a significant bushfire, differing Brigade Districts may be called upon to afford fire support assistance.

In the event of a Bushfire, phone 000.

6. Improved Community Awareness

The subject lands are seen to be subject to a Low Bushfire Hazard Potential. This said, there is potential for a nuisance grass fire to impact upon the subject lands if the lands to the north are not routinely maintained. It is noted that a dwelling house is being constructed upon the lands to the north however, it would be in the interests of the property owner(s) to routinely communicate with their neighbours in respect of the maintenance of the grassed areas if same are not being routinely maintained.

It may prove appropriate for the property owner(s) to afford the neighbours a copy of the documentation had in respect of Bushfire Preparedness that can be accessed by way of the following URL Link:

<https://outdoorsqueensland.com.au/resources/fact-sheets-master/are-you-bushfire-prepared/>

Further useful information on Bushfire Preparedness and Local Rural Fire Brigades can be obtained from the *Rural Fire Service Division of the Queensland Fire and Rescue Service* by way of making contact with either:

Central Office

Level 1 Block "F" Healy Wing
Kedron Park Complex
Corner Kedron Park and Park Roads
Kedron QLD 4031
Phone 3247 8130

Ipswich Branch Office

99 Limestone Street
IPSWICH QLD 4305
Phone 3381 7122

Information on services provided and information available from the *Rural Fire Service Division of the Queensland Fire and Rescue Service* can also be accessed on website www.ruralfire.qld.gov.au.

7. Recommendations

In summary, the following recommendations have been based on the Specific Outcomes assessment criteria outlined in the *QLD Government State Planning Policy* and the *Beautesert Shire Planning Scheme 2007*:

- The bushfire mitigation measures outlined within Section 3 of this Report pertaining to the existing building structures (carport) are to be complied with, notably:
 - Provision is to be made for the construction of a 1.8 metre high Colour Bond Fence constructed along the common boundary with the property to the north.
 - In addition to the provision of the 1.8 metre high Colour Bond Fence, the lands sited within 20 metres of the outer extents of the parking / compound area / extremities of the existing shed are to be maintained as a low ground fuel area (mown lawn).

The exception being the landscaped areas which are to be routinely maintained so as to minimise the build-up of ground fuels (litter loads).

This assessment has been made based on the bushfire hazards in and around the area of the proposed development at the time of the conduct of the site inspection which in-turn has led to the production of this report.

A review of the subject lands, in light of the proposed development indicates that compliance with the above recommendations and those outlined within the body of this report, can be readily achieved.

8. Conclusion

Whilst the subject lands are seen to represent Bushfire Prone Lands for the purposes of the Logan Planning Scheme 2015, the land in question (more correctly a portion thereof) is seen to fall within a Potential Buffer Zone. This said the vegetation to the north of the proposed development is seen to represent an area of hazardous vegetation which has the potential to represent a localised 'Hot Spot' in the event of a bushfire (grass fire) if not routinely maintained by the residents of said property. It is noted, at the time of the writing of this report that the lands in question have been recently slashed.

The *Bushfire Management Plan* herein provides an assessment of the potential bushfire hazards specific to the proposed development sited at 4586-4600 Mount Lindesay Highway, NORTH MACLEAN. This Bushfire Management Plan considered the performance criteria of the Queensland Government *State Planning Policy* and the *Logan Planning Scheme 2015*, and concluded that subject to the implementation of the recommended bushfire mitigation measures the risk of harm or injury to life or damage to property is minimal.

The proper implementation of this *Bushfire Management Plan* will assist to reduce the potential risk posed to individuals, their property and third parties that may be called upon in response to a bushfire event. It is important to note however, that the proper implementation of the *Bushfire Management Plan* will not eliminate the risk posed by bushfire events. Individuals residing within bushfire prone areas should take a proactive approach to mitigating the potential impacts that may come about as a result of a bushfire event. In saying this, individuals should be mindful of their own limitations and those of their family / staff, and accordingly take appropriate actions / measures to prevent the loss of life, homes and property.

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9. References

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Queensland Department of Housing Local Government and Planning, *Bushfire Prone Areas – Siting and Design of Residential Buildings*, Queensland Department of Housing Local Government and Planning.

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Appendices

Appendix A

Contour Plan

Appendix B

Plan(s) of Development

Appendix C

Bushfire Hazard Overlay Code Assessment

Appendix D

Photographic Record

Appendix A – Locality Plan and Contour Plan(s)



Appendix A

Locality Plan

(Source: Logan Planning Scheme 2015 v8.1)



Printed: September 26, 2022

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Appendix A

Contour Plan

(Source: Logan Planning Scheme 2015 v8.1)

Appendix B – Proposed Plan(s) of Development

Material Change of Use – Transport Depot (Minor) 4586-4600 Mount Lindesay Highway, NORTH MACLEAN Lot 54 on SP180530



Locality Plan



Site Plan

<p>Everyday Engineers Planners & Surveyors ABN. 33 128 918 347 Mobile: 0432 124 461</p>	<p>4586-4600 Mount Lindesay Highway NORTH MACLEAN</p> <p>Transport Depot - Minor Cover Sheet, Locality and Site Plan November 2022</p>	<p>2022-98-Sheet 0 Rev A</p>
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SCHEDULE OF DRAWINGS		
Drawing No.	Drawing Title	Revision
2022-098 – Sheet 0 Rev A	Cover Sheet, Locality and Site Plan	A
2022-098 – Sheet 1 Rev A	Schedule of Drawings	A
2022-098 – Sheet 2 Rev A	General Layout Plan	A
2022-098 – Sheet 3 Rev A	Plan of Development – Site Master Plan (Sheet 1 of 2)	A
2022-098 – Sheet 4 Rev A	Plan of Development – Site Master Plan (Sheet 2 of 2)	A
2022-098 – Sheet 5 Rev A	Plan of Development - Site Master Plan (Detail A)	A
2022-098 – Sheet 6 Rev A	Plan of Development - Site Master Plan (Detail B)	A

<p>Everyday Engineers Planners & Surveyors ABN. 33 128 918 347 Mobile: 0432 124 461</p>	<p>4586-4600 Mount Lindesay Highway NORTH MACLEAN</p> <p>Transport Depot - Minor Schedule of Drawings November 2022</p>	<p>2022-98-Sheet 1 Rev A</p>
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Refer to Plan of Development – Site Master Plan (Sheet 1 of 2), and approved documentation pertaining to Dwelling House Development Approval MCUR/191/2020 which accompanies this application (Dwelling House documentation to be read as ‘relevant matters’ for the purposes of s45(5)(b) of the Planning Act).

Refer to Plan of Development – Site Master Plan (Sheet 2 of 2), Plan of Development – Site Master Plan (Detail A), and Plan of Development – Site Master Plan (Detail B)



GENERAL LAYOUT PLAN

*Note:
Plans of Development to be read in conjunction with Rehabilitation Plan / Landscape Concept Plan(s).*

<p>Everyday Engineers Planners & Surveyors ABN. 33 128 918 347 Mobile: 0432 124 461</p>	<p>4586-4600 Mount Lindsay Highway NORTH MACLEAN</p> <p>Transport Depot - Minor General Layout Plan November 2022</p>	<p>2022-98-Sheet 2 Rev A</p>
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Refer Plan(s) of Development, Rehabilitation Plan / Landscape Concept Plans had in respect of the approved Dwelling House

Access crossover arrangement to be constructed in accordance with Institute of Public Works Engineering Australasia Standard Drawing Number RS-049 Rev G.

Existing 1.8m High Chain Wire Fence, along property boundary fence.

Note:
 Existing access driveway arrangement to be formalized as a 7.0-metre-wide granular pavement (surface formation) with an AC Seal.
 Pavement design shall be subject to confirmation on-site by RPEQ Supervising construction of access crossover, driveway and manoeuvring area(s).



1.8m High Colour Bond Fence, along property

Existing Shed (10m x 18m) to remain.
 The Shed to not be seen to form part of the Transport Depot – Minor

<p>Everyday Engineers Planners & Surveyors ABN. 33 128 918 347 Mobile: 0432 124 461</p>	<p>4586-4600 Mount Lindesay Highway NORTH MACLEAN</p> <p>Transport Depot - Minor Plan of Development – Site Master Plan Sheet 1 of 2 November 2022</p>	<p>2022-98-Sheet 3 Rev A</p>
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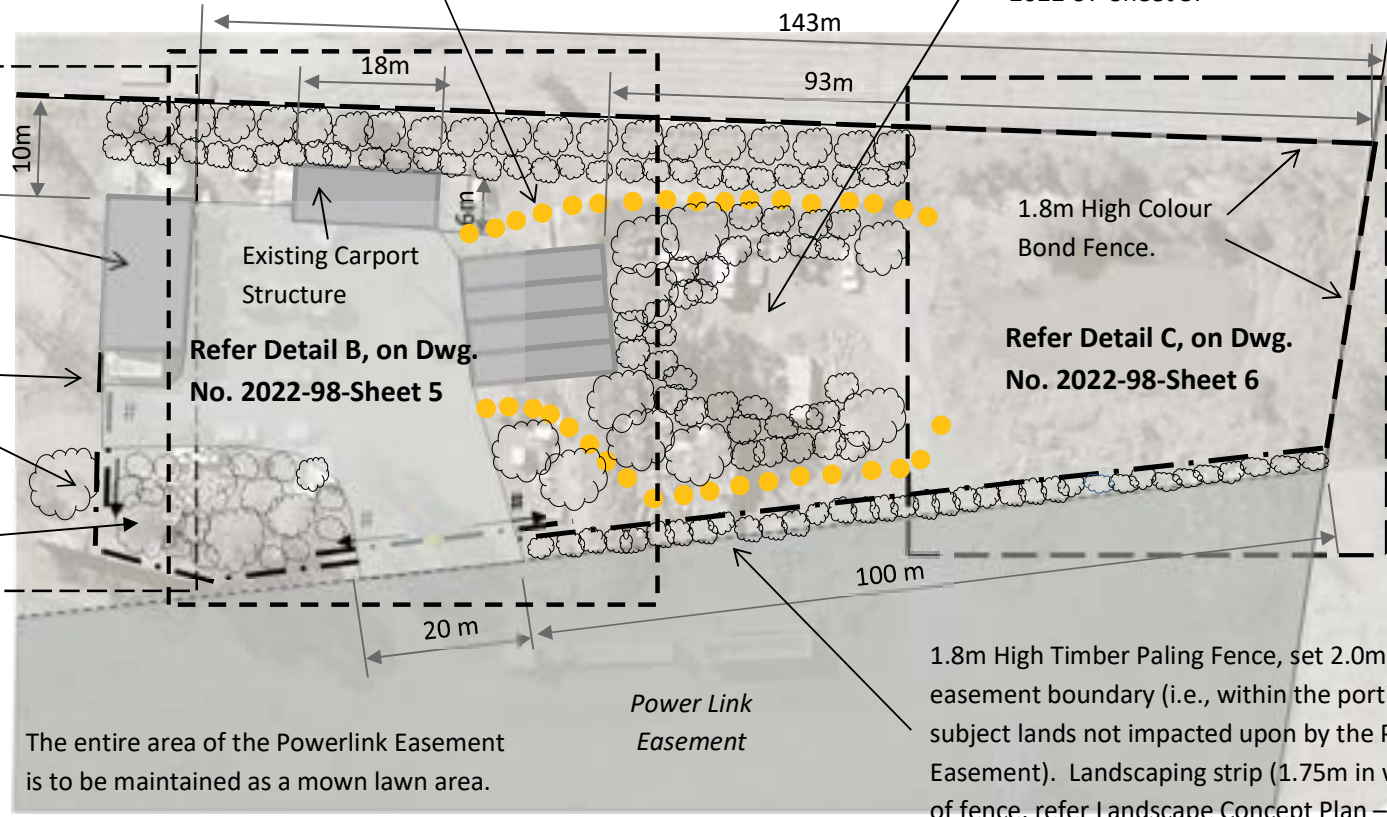
Refer Plan(s) of Development, Rehabilitation Plan / Landscape Concept Plans had in respect of the approved Dwelling House

Existing Shed to remain (Shed does not form part of 'Use').

1.8m High Timber Paling Fence set on alignment of existing shed.

Landscaping plantings, refer Landscape Concept Plan – Site Master Drawing No. 2022-97-Sheet 4.

Walking path, 1.0 metres in width, formed of crusher dust.



Landscaping plantings, refer Landscape Concept Plan – Site Master Drawing No. 2022-97-Sheet 5.

1.8m High Colour Bond Fence.

Refer Detail C, on Dwg. No. 2022-98-Sheet 6

Refer Detail B, on Dwg. No. 2022-98-Sheet 5

1.8m High Timber Paling Fence, set 2.0m from easement boundary (i.e., within the portion of the subject lands not impacted upon by the Powerlink Easement). Landscaping strip (1.75m in width) to front of fence, refer Landscape Concept Plan – Site Master Drawing No. 2022-97-Sheet 5.

The entire area of the Powerlink Easement is to be maintained as a mown lawn area.

Power Link Easement

Sliding gate panels (10.0m wide each), palings set on steel frame.

Note:

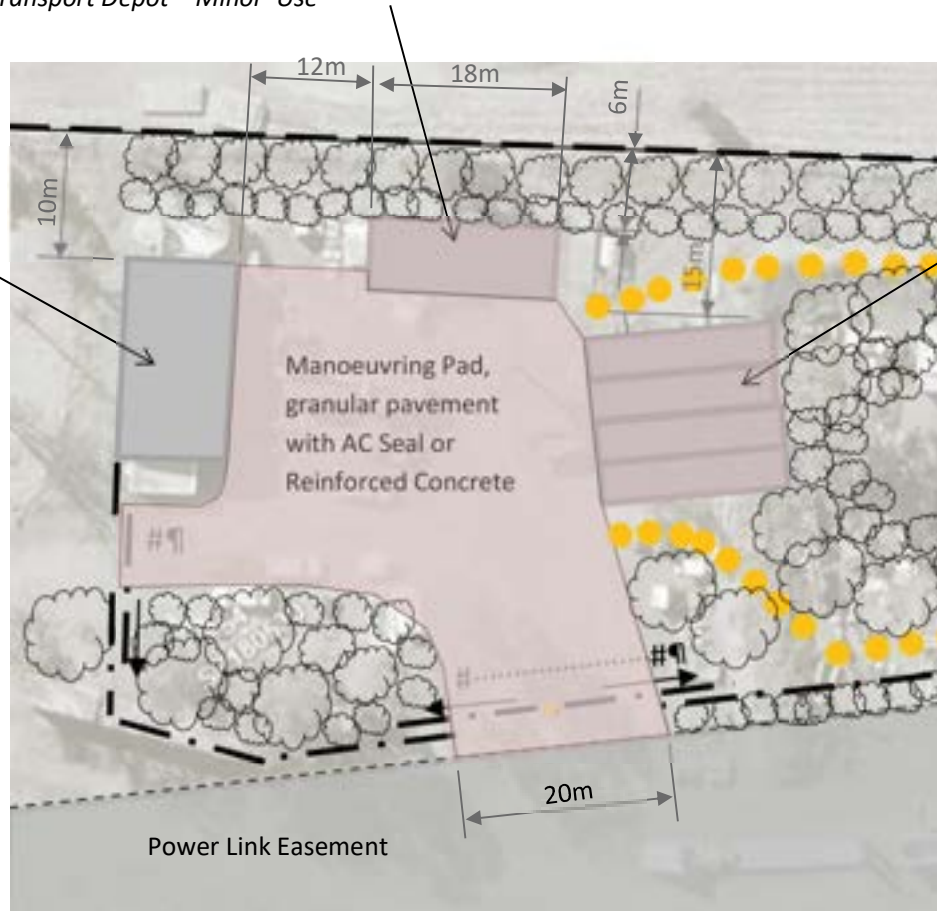
1. Heavy Vehicle Parking consists of four (4) bays measuring 20 metres long by 4 metres in width.
2. Existing Carport Structure to remain (6 Car parking spaces, plus 2 car trailer spaces (if required)).

<p>Everyday Engineers Planners & Surveyors ABN. 33 128 918 347 Mobile: 0432 124 461</p>	<p>4586-4600 Mount Lindesay Highway NORTH MACLEAN</p> <p>Transport Depot - Minor Plan of Development – Site Master Plan Sheet 2 of 2 November 2022</p>	<p>2022-98-Sheet 4 Rev A</p>
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Existing Carport Structure to remain (6 Car parking spaces, plus 2 car trailer spaces (if required)). Structure will form part of the Transport Depot – Minor ‘Use’

Existing Shed (10m x 18m) to remain.

The Shed to not seen to form part of the Transport Depot – Minor ‘Use’.



Heavy Vehicle Parking Area to accommodate a maximum of four (4) Heavy Vehicles.


Parking Bay at 15 Degree Splay to side boundary.

Reinforced Concrete pad measuring 20m depth by 16m width.

Reinforced Concrete Pad to consist of reinforced concrete (N32) pad 250mm thick slab with SL92 Mesh (two (2) layers) 60mm top and bottom cover. Ring Beam measuring 400mm width by 300mm depth with trench mesh and L11TM3, with 10mm reinforcing bar (box configuration), to four (4) sides of Pad.

Structural Details subject to confirmation.

Legend

 Transport Depot – Minor ‘Use’ Area (1,850 square in Total).

Note:

1. Heavy Vehicle Parking consists of four (4) bays measuring 20 metres long by 4 metres in width.
2. Existing Carport Structure to remain (6 Car parking spaces, plus 2 car trailer spaces (if required)).
3. Landscaping plantings, refer Landscape Concept Plan – Site Master Drawing No. 2022-97-Sheets 4 and 5.

<p>Everyday Engineers Planners & Surveyors ABN. 33 128 918 347 Mobile: 0432 124 461</p>	<p>4586-4600 Mount Lindesay Highway NORTH MACLEAN</p> <p>Transport Depot - Minor Plan of Development - Site Master Plan (Detail A) November 2022</p>	<p>2022-98-Sheet 5 Rev A</p>
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The Applicant is to afford for the removal, and relocation / disposal of all waste and or rubbish stored within the rear portion of the property. The space is to be free of all rubbish / waste / shipping containers, any temporary building structures thus in-turn affording for the rehabilitation of the subject lands.

Remove existing weed species along boundary line, and about edge of dam.

Landscaping plantings, refer Landscape Concept Plan – Site Master Drawing No. 2022-97-Sheet 5.



Walking path, 1.0 metres in width, formed of crusher dust.

Landscaping plantings, refer Landscape Concept Plan – Site Master Drawing No. 2022-97-Sheet 5.

1.8m High Colour Bond Fence.

Landscaping plantings, refer Landscape Concept Plan – Site Master Drawing No. 2022-97-Sheet 5.

Power Link Easement

1.8m High Timber Paling Fence, set 2.0m from easement boundary (i.e., within the portion of the subject lands not impacted upon by the Powerlink Easement). Landscaping strip (1.75m in width) to front of fence, refer Landscape Concept Plan – Site Master Drawing No. 2022-97-Sheet 4.

<p>Everyday Engineers Planners & Surveyors ABN. 33 128 918 347 Mobile: 0432 124 461</p>	<p>4586-4600 Mount Lindesay Highway NORTH MACLEAN</p> <p>Transport Depot - Minor Plan of Development – Site Master Plan (Detail B) November 2022</p>	<p>2022-98-Sheet 6 Rev A</p>
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**Transport Depot – Minor
Rehabilitation Plan
Landscape Concept Plan**

**Everyday Engineers
Planners & Surveyors**

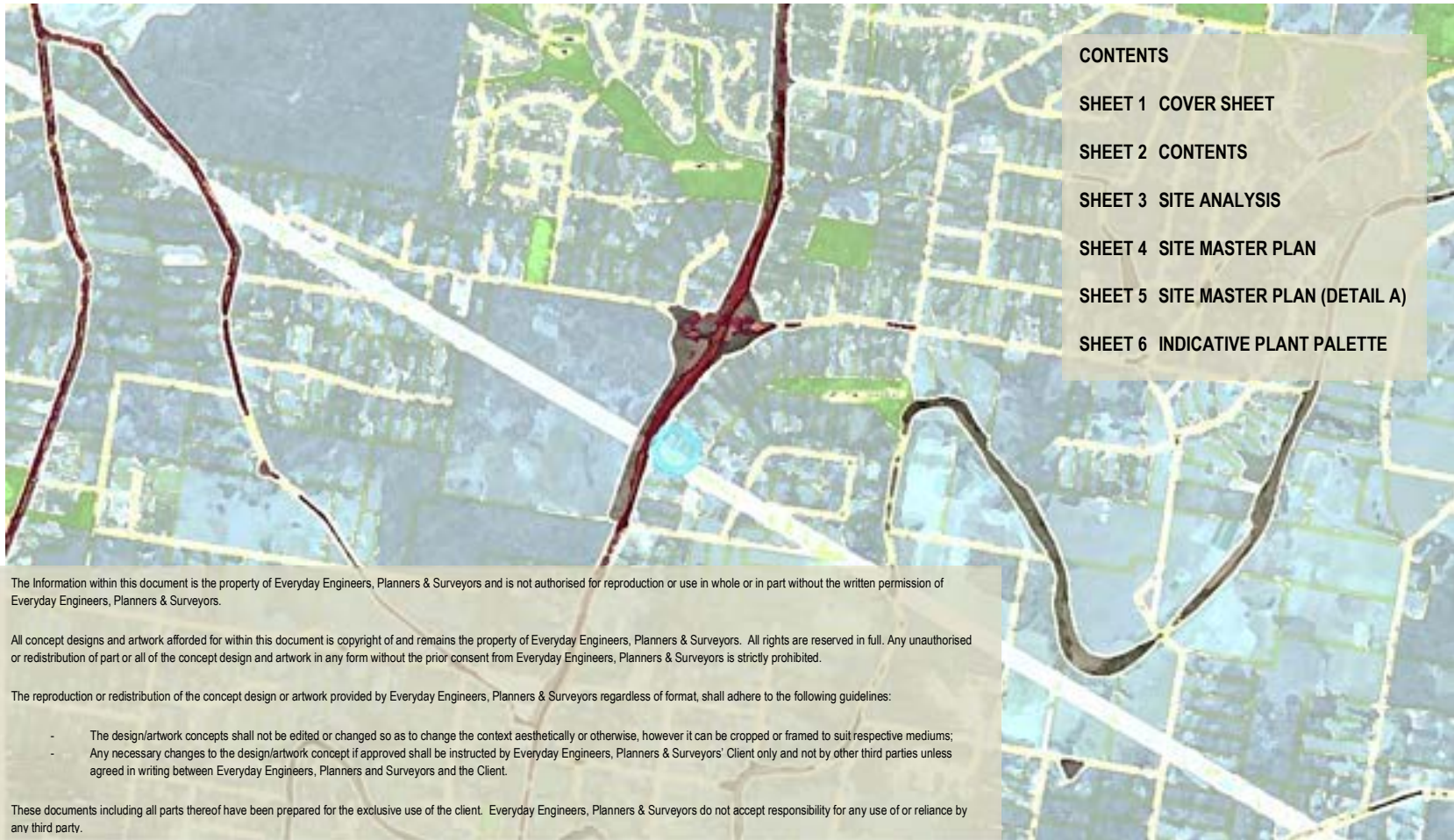
ABN. 33 128 918 347
Mobile: 0432 124 461

**4586-4600 Mount Lindesay Highway
NORTH MACLEAN**

**Transport Depot - Minor
Rehabilitation Plan**

**Landscape Concept Plan – Cover Sheet
November 2022**

2022-97-Sheet 1



CONTENTS

SHEET 1 COVER SHEET

SHEET 2 CONTENTS

SHEET 3 SITE ANALYSIS

SHEET 4 SITE MASTER PLAN

SHEET 5 SITE MASTER PLAN (DETAIL A)

SHEET 6 INDICATIVE PLANT PALETTE

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Mobile: 0432 124 461**

**4586-4600 Mount Lindesay Highway
NORTH MACLEAN**

**Transport Depot - Minor
Rehabilitation Plan
Landscape Concept Plan – Contents
November 2022**

2022-97-Sheet 2



4586-4600 Mount Lindesay Highway
North Maclean

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Mobile: 0432 124 461

**4586-4600 Mount Lindesay Highway
NORTH MACLEAN**

**Transport Depot - Minor
Rehabilitation Plan**

Landscape Concept Plan – Site Analysis
November 2022

2022-97-Sheet 3

Refer Rehabilitation Plan / Landscape Concept Plans had in respect of the approved Dwelling House

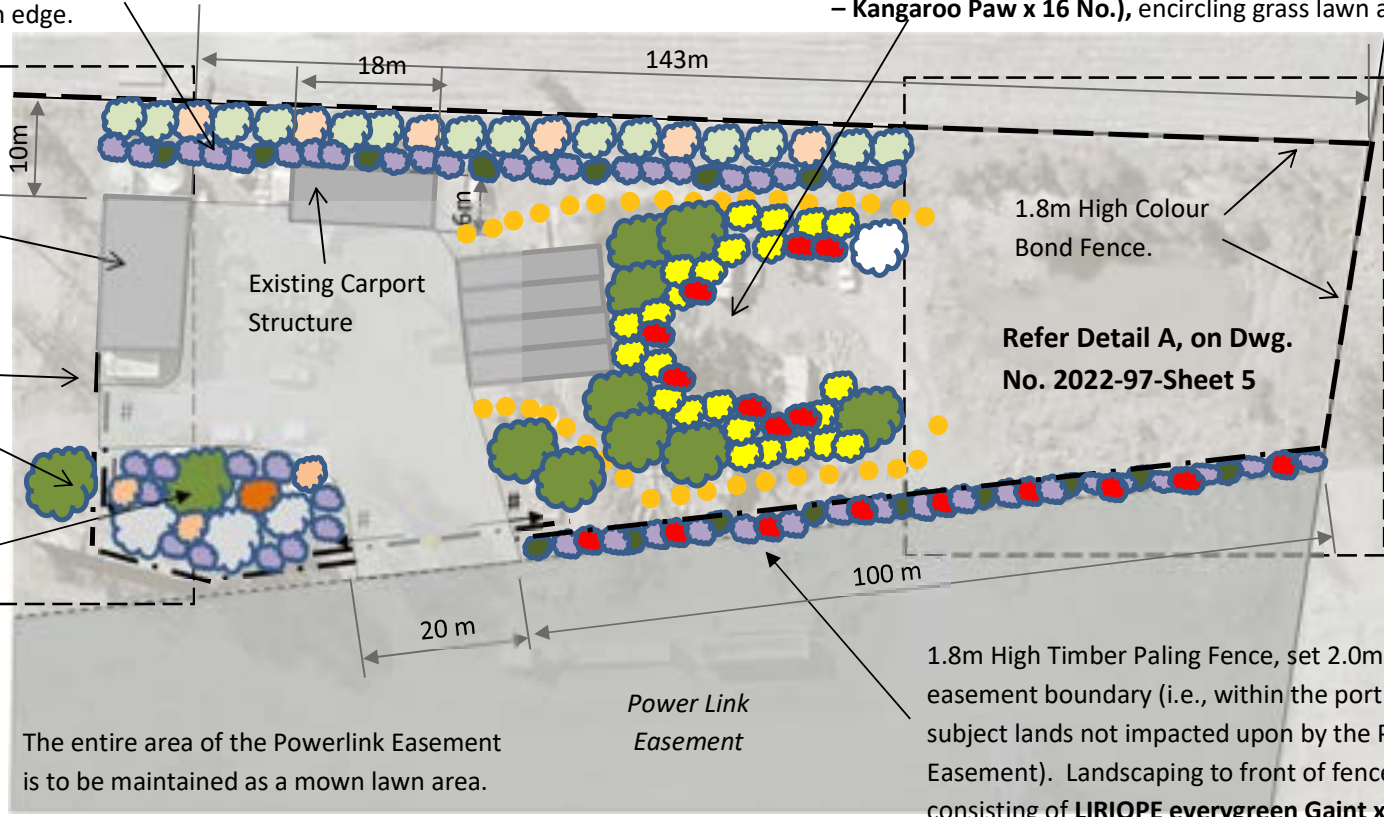
GREVILLEA baileyana x 14 No., **BANKSIA ericifolia** x 6 No. adjacent to fenceline. **LIRIOPE everygreen Gaint** x 50 No. and **LOMANDRA hystrix Tropicbelle** x 34 No. fringe to garden edge.

CORYMBIA citriodora x 9 No., Mass planting of **CHRYSOCEPHALUM apiculatum (Yellow Buttons)** x 50 No. groundcover, and **HAEMODORACEAE anigozanthos (Big Red – Kangaroo Paw)** x 16 No.), encircling grass lawn area.

Existing Shed to remain
1.8m High Timber Paling Fence set on alignment of existing shed.

CORYMBIA citriodora x 2 No., **LIRIOPE everygreen Gaint** x 20 No. fringe to existing garden, inlaid with **GREVILLA banksia** x 3 No. and **BANKSIA ericifolia** x 4 No.

Note:
1. Heavy Vehicle Parking consists of four (4) bays measuring 20 metres long by 4 metres in width.
2. Existing Carport Structure to remain (6 Car parking spaces, plus 2 car trailer spaces (if required).



The entire area of the Powerlink Easement is to be maintained as a mown lawn area.

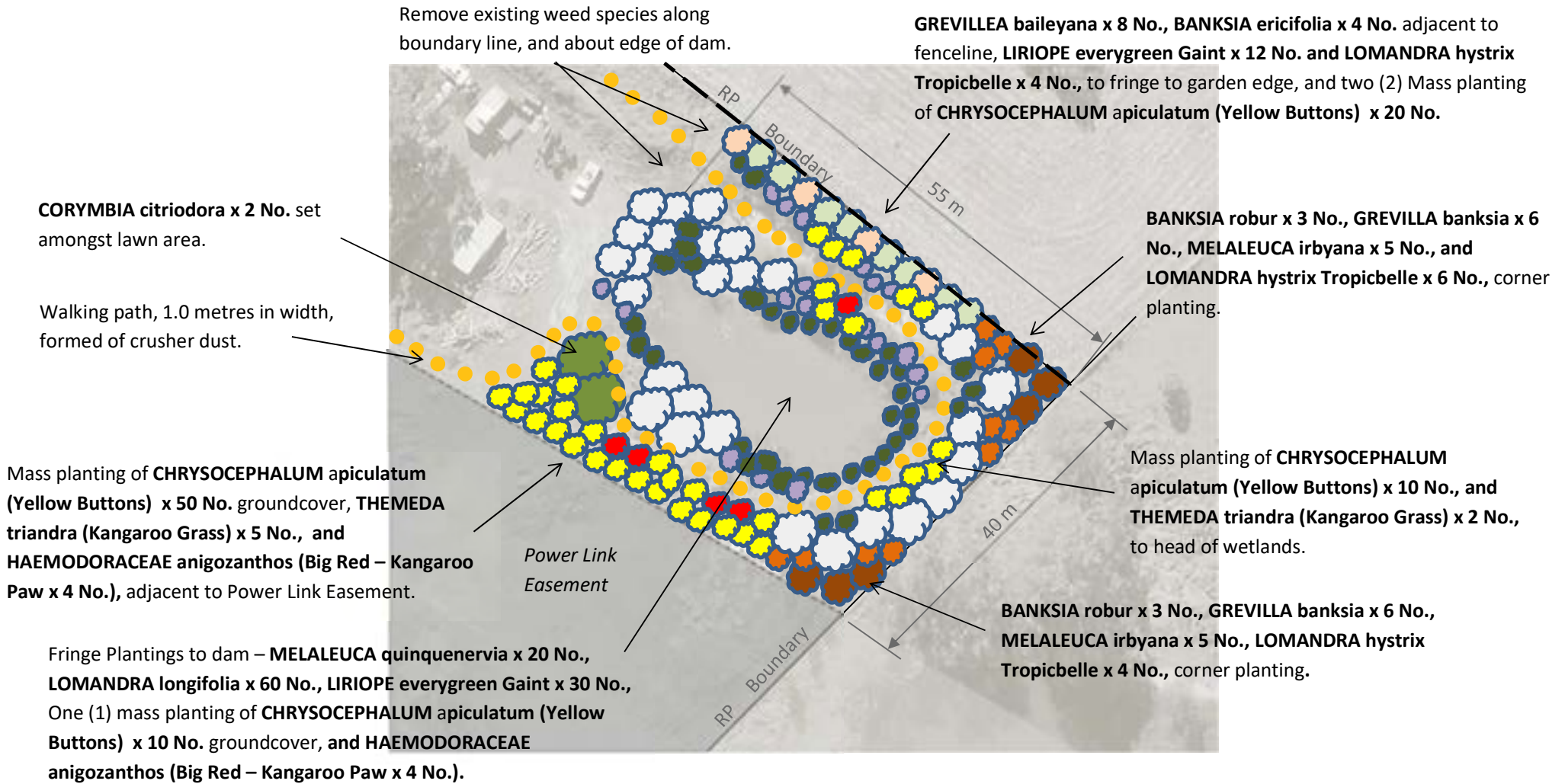
Power Link Easement

1.8m High Timber Paling Fence, set 2.0m from easement boundary (i.e., within the portion of the subject lands not impacted upon by the Powerlink Easement). Landscaping to front of fence (1.75m width consisting of **LIRIOPE everygreen Gaint** x 50 No., **LOMANDRA hystrix Tropicbelle** x 34 No, and **HAEMODORACEAE anigozanthos (Big Red – Kangaroo Paw)** x 20 No.).

Sliding gate panels (10.0m wide each), palings set on steel frame.

Refer Detail A, on Dwg. No. 2022-97-Sheet 5

<p>Everyday Engineers Planners & Surveyors ABN. 33 128 918 347 Mobile: 0432 124 461</p>	<p>4586-4600 Mount Lindesay Highway NORTH MACLEAN</p> <p>Transport Depot - Minor Rehabilitation Plan Landscape Concept Plan – Site Master Plan November 2022</p>	<p>2022-97-Sheet 4</p>
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<p>Everyday Engineers Planners & Surveyors ABN. 33 128 918 347 Mobile: 0432 124 461</p>	<p>4586-4600 Mount Lindesay Highway NORTH MACLEAN</p> <p>Transport Depot - Minor Rehabilitation Plan Landscape Concept Plan – Site Master Plan (Detail A) November 2022</p>	<p>2022-97-Sheet 5</p>
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1. GREVILLEA robusta
2. GREVILLEA banksia
3. GREVILLEA baileyana
4. BANKSIA intergrifolia
5. BANKSIA robur
6. BANKSIA ericifolia
7. LIRIOPE everygreen gaint
8. LOMANDRA hystrix Tropicbelle
9. CUPANIOPSIS anacardioides
10. CORYMBIA citriodora
11. CHRYSOCEPHALUM apiculatum
12. HAEMODORACEAE anigozanthos
13. MELALEUCA irbyana
14. MELALEUCA quinquenervia
15. LOMANDRA longifolia
16. THEMEDA triandra

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**4586-4600 Mount Lindesay Highway
NORTH MACLEAN**

**Transport Depot - Minor
Rehabilitation Plan**

Landscape Concept Plan – Indicative Plant Palette
November 2022

2022-97-Sheet 6

SITE PLAN

4586 Mt Lindesay H'Way



APPROVED PLANS

DYNAMIC BUILDING APPROVALS REF: 0597/21

DATE OF APPROVAL: 29/10/2021

DESCRIPTION OF WORK: **Class 10a Carport**

Roofwater Drainage

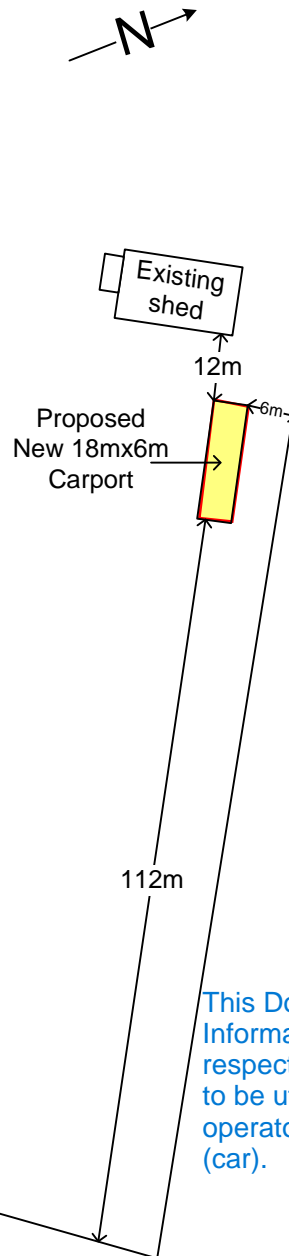
All roofwater shall be conveyed to the kerb and channel or inter-allotment drainage system in accordance with the local Council's stormwater policy and the NCC Volume Two.

Use of the Outbuilding is limited to Domestic Use (Class 10a) only and is not to be used for commercial, industrial or habitable purposes

COUNCIL'S BWAP APPROVAL:

This Building work is subject to a Building Works Assessable Against the Planning Scheme (BWAP) approval by Council (relaxation of boundary clearances, site coverage, and/or roofed area). The new work must strictly comply with Council's relaxation approval and conditions. See attached Approval and Conditions.

Reference No: **BWAP/126/2021**



This Documentation is submitted for Information Purposes Only, notably in respect of the existing Carport that is to be utilised by Heavy Vehicle operators to park their private vehicle (car).

Note! The Site Plan above is not necessarily drawn to scale refer to registered plan for exact property dimensions.



UNIT 8/178 SIGANTO DRIVE
HELENSVALE 4212
PHONE: 5511 9115
FAX:

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PROPOSED: Standard Carport
FOR: Mark & Linda Vary
SITE ADDRESS: LOT: 54 RP:SP180530
4586 Mount Lindesay Highway
North Maclean
HOME : 0418 718 019 **WORK:**
APPROVAL BY: Dynamic Building
AUTHORITY: Logan

REPRESENTATIVE : Lyndel Gatt
DATE : 15, Jun,

DIGGING
Unknown
OBSTRUCTIONS
Unknown
STORMWATER
Connected By Client At A Later Date
SITE CLEANUP
Erector To Remove Rubbish (extra Charged)

JOB NUMBER 14076

GENERAL NOTES

- G01 The design and details shown on these drawings are applicable to this project only and may not be reproduced in whole or in part or used for any other project or purpose without the written permission of Quotec Pty. Ltd with whom the copyright resides.
- G02 These drawings shall be read in conjunction with all architectural drawings, other consultants' drawings, specifications and such other written instructions as may be issued during the course of the contract. Any discrepancy shall be referred to the engineer before proceeding with the work.
- G03 All materials and workmanship shall be in accordance with the relevant and current ssa codes and with authorities except where varied by the project specifications.
- G04 All dimensions shown shall be verified by the builder on site. Engineer's drawings shall not be scaled for dimensions.
- G05 Unless noted otherwise all levels are in meters and all dimensions are in millimetres.
- G06 Construction methods and safety maintenance during construction is the responsibility of the contractor(s). Where any structural element presents difficulties pertaining to construction or safety, the authorized entity must be notified prior to the commencement of work.
- G07 The structure must be maintained in a stable condition and no part must be overloaded during construction. Temporary bracing must be designed and provided by the contractor(s) to keep the building works and excavations stable at all times.
- G08 Neither snow loading or earthquake loading has been taken into account.
- G09 Quotec Pty. Ltd reserves the right to alter specifications and designs as it may see fit without prior notification or penalty.
- G10 All dimensions, width, height, lengths and openings are nominal and not absolute. It is the user's responsibility to satisfy themselves of any dimensions.
- G11 Where the purlin of a building exceeds 1200 centre, then the roof is to be considered as non-trafficable.

FOUNDATION NOTES

- F01 Footing & slab have been designed assuming stable site with an allowable bearing capacity of 100kpa, subgrade CBR15, Class "S" relatively
- F02 The owner is advised to obtain a geotechnical report if no existing site foundation report (to confirm F01).
- F03 Footings shall be located centrally under walls and columns unless noted otherwise.
- F04 All footings to be founded minimum 400 into natural ground. Do not found footings in uncontrolled fill
- F05 Engineer to be contacted if foundation conditions vary from that indicated in F01.

STEELWORK NOTES

- S01 All workmanship and material shall be in accordance with AS4100 and AS1554 except where varied by the contract documents.
- S02 Bolting categories are identified on the structural drawings in the following manner:

Bolt category comments: 4.6/s commercial bolts of grade 4.6 to as1111 snug tightened 8.8/s high strength structural bolts of grade 8.8 to as1252 snug tightened
- S03 Unless noted otherwise all footing bolts shall be m16 category 8.8/s. M12 bolts for C100, C150, C200, and C250 sections, m16 bolts for C300 and C350 sections. No connection shall have less than 2 bolts. All holes shall be 2mm larger than the bolt diameter unless noted otherwise.
- S04 All galvanizing of structural steelwork shall be to AS4680. The continuous average zinc coating mass shall be 600g/m² (550g/m² minimum) provide seal plates to the ends of all hollow sections, with 'breather' holes if members are to be hot dip galvanized. All metal cladding should comply with AS1397-2001 g550, AZ150 (550 mpa minimum yield stress, 150g/m² minimum) coating mass.
- S05 Steelwork intended to be concrete encased shall be unpainted. Encasing concrete shall be grade N25 unless noted otherwise providing a cover adequate to suit fire rating or exposure conditions. Concrete encasement shall be centrally reinforced with 5mm wire to AS4617 or 6mm structural grade bars to AS4617 at 150mm pitch.

S06 Unless noted otherwise, all steel shall be of the following grade in accordance with the relevant Australian standard.

Type of steel	GRADE
Universal beams and columns, parallel flange Channels, large angles to AS/NZS3679.1	300 PLUS
Flats, small angles, taper flange beams and columns To AS/NZS3679.1	250
Welded sections to as/nz3679.2	300
Hot rolled plates, floor plates and slabs to AS/NZS3678	250
Hollow sections to as1163 - circular sections less than 165mm outside diameter - sections other than The above	C250 C350
Cold form to AS4600	G450
Apex & knee plates	G450

CONCRETE NOTES

- C01 All workmanship and materials shall be in accordance with AS3600 current edition with amendments, except where varied by the contract documents.
- C02 No admixtures shall be used in concrete unless approved in writing.
- C03 All reinforcements shall be firmly supported on mild steel plastic tipped chairs, plastic chairs or concrete chairs at not greater than 1 metre centres both ways. Bars shall be tied at alternate intersections.
- C04 Concrete quality

The characteristic compressive strength and slump of the concrete must not be less than the value stated below.

Element	F _C MPa (28 Days)	Slump (mm)	Aggregate Size (mm)
Slabs	25 Mn	80 Max	20

Project control testing shall be carried out in accordance with AS3600.

- C05 Concrete sizes shown do not include thicknesses of applied finishes.
- C06 No holes, chases or embedment of pipes other than those shown on the structural drawings shall be made in concrete members without the prior written approval of the engineer.
- C07 Construction joints where indicated shall be located to the approval of the engineer.
- C08 The finished concrete shall be a dense homogeneous mass, completely filling the formwork thoroughly imbedding the reinforcement and free of air pockets. All concrete including slabs on ground and footings shall be compacted with mechanical vibrators.
- C09 Curing of all concrete is to be achieved by keeping surfaces continuously wet for a period of three days, and prevention of loss of moisture for a total of 7 days followed by a gradual drying out. Approved sprayed on curing compounds may be used where no floor finishes are proposed. Polythene sheeting or wet hessian may be used if protected from wind and traffic.
- C10 The engineer shall be given 48 hours' notice for reinforcement inspection if required and concrete shall not be delivered until final approval obtained.
- C11 Conduits, pipes etc., shall only be located in the middle one third of slab depth and spaced at not less than 4 diameters.
- C12 Reinforcement symbols:

N denotes normal ductility grade to as1302 grade, grade 410 mpa or greater

R denotes grade 230 r hot rolled plain bars to AS1302.

Si denotes hard-drawn deformed reinforced fabric to AS1304.
- C13 Reinforcement is represented diagrammatically and not necessarily in true projection.
- C14 Welding or heating of reinforcement shall not be permitted unless shown on the structural drawings or approved by the engineer.
- C15 Slab fabric shall be lapped 2 transverse wires plus 50mm.

- C16 Trench mesh shall be spliced, where necessary, by a minimum lap of 500mm.
- C17 The lap length of bar splices shall be not less than 500mm or 25 bar diameters.
- C18 Clear concrete cover to reinforcement for durability shall be as follows unless shown otherwise.

Exposure	Concrete cover
Cast against ground	60mm
External exposed surface	60mm
Internal exposed surface	40mm

For Site Classification: Class A, S & M

CONCRETE:

All concrete work to be carried out in accordance with AS3600 & AS2870. For more than 2.5kPa live load and heavy goods vehicle then special slab design is required. Provide construction joints for every slab pane length is more than 1.5 * width. Concrete strength of minimum 25 MP at 28 days in slab is required. Cover to reinforcements to be minimum of 30mm from top slab & 65mm for footings. All reinforcements shall conform with AS4671- 2001. Care should be taken to ensure that bolts are anchored below without shifting any reinforcement fabric or bars.

For slab on ground, all topsoil and upper layer containing organic material to be removed and slab place on max. 300 of approved filling medium.

Prior to construction, a suitably qualified person is to assess site and soil conditions (i.e. reactive soils, landslide, flood) Refer to Design Engineer.

PROPRIETARY AND CONFIDENTIAL

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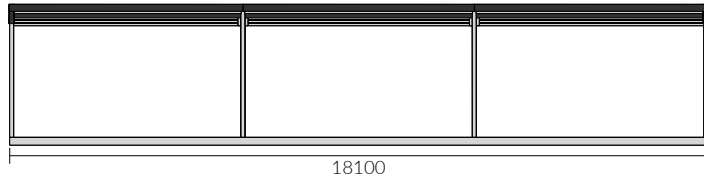
Project 6m (w) x 18.1m (l) x 3.1m (h) Skillion Carport
 Client Vary
 Site Address 4586-4600 MOUNT LINDESAY HIGHWAY NORTH MACLEAN QLD 4280



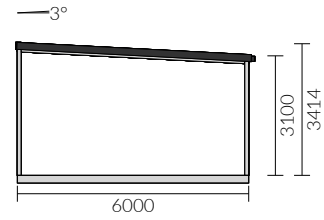
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26 Oct 2021
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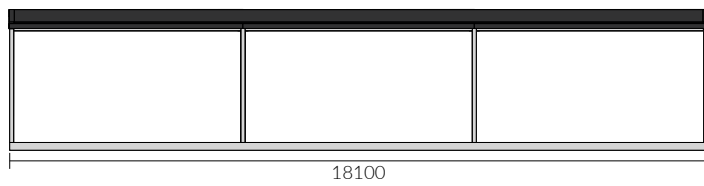
LEFT ELEVATION



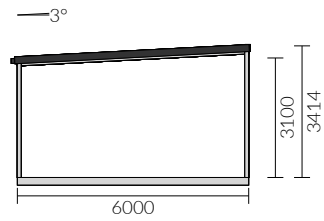
FRONT ELEVATION



RIGHT ELEVATION



BACK ELEVATION



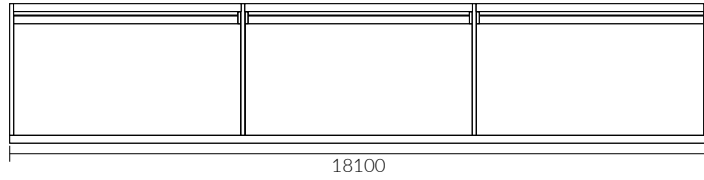
Project 6m (w) x 18.1m (l) x 3.1m (h) Skillion Carport
Client Vary
Site Address 4586-4600 MOUNT LINDESAY HIGHWAY NORTH MACLEAN QLD 4280

Drawings by Quotec System Pty Ltd. All work to be in accordance with accompanying engineer's details.

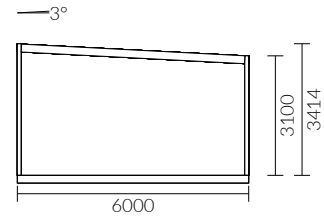


Job# 13012_VARY
Date 26 Oct 2021
Page 2 of 23

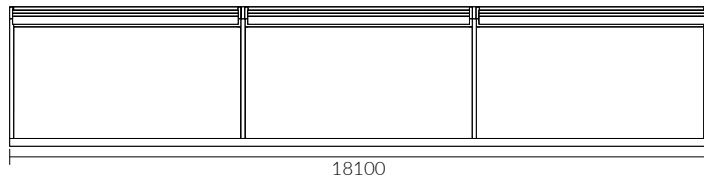
FRAME LEFT ELEVATION



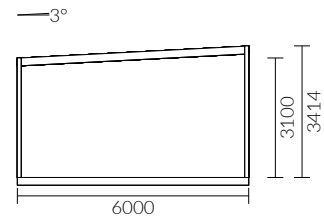
FRAME FRONT ELEVATION



FRAME RIGHT ELEVATION



FRAME BACK ELEVATION



Project 6m (w) x 18.1m (l) x 3.1m (h) Skillion Carport
Client Vary
Site Address 4586-4600 MOUNT LINDESAY HIGHWAY NORTH MACLEAN QLD 4280

Drawings by Quotec System Pty Ltd. All work to be in accordance with accompanying engineer's details.

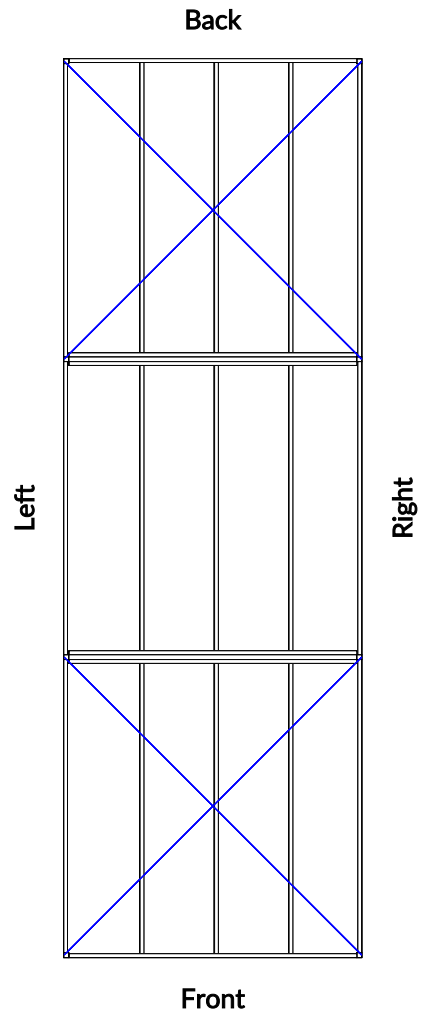


Job# 13012_VARY
Date 26 Oct 2021
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BRACING

Bracing

Roof
Strap Bracing 30x0.8 Galv G2 Z275 (no holes)



Project 6m (w) x 18.1m (l) x 3.1m (h) Skillion Carport
Client Vary
Site Address 4586-4600 MOUNT LINDESAY HIGHWAY NORTH MACLEAN QLD 4280

Drawings by Quotec System Pty Ltd. All work to be in accordance with accompanying engineer's details.

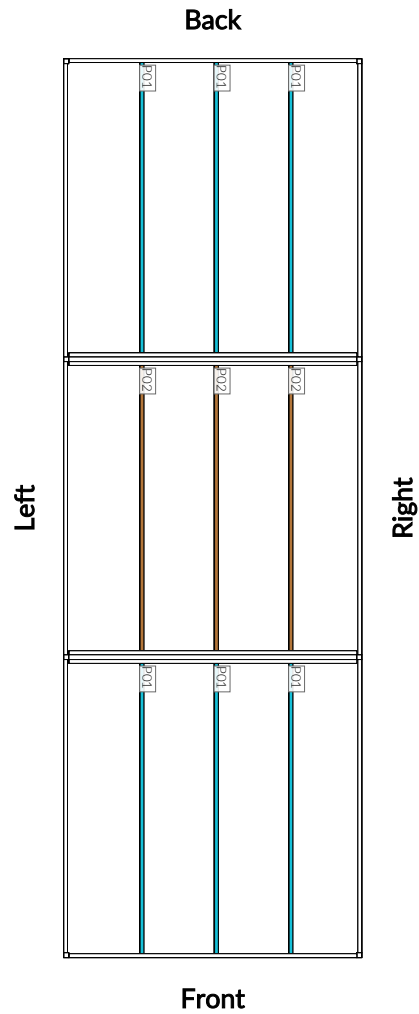


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PURLINS

Frame Items

■ P01	6x	C Section 203 x 76 x 1.5
■ P02	3x	C Section 203 x 76 x 1.5



Project 6m (w) x 18.1m (l) x 3.1m (h) Skillion Carport
Client Vary
Site Address 4586-4600 MOUNT LINDESAY HIGHWAY NORTH MACLEAN QLD 4280

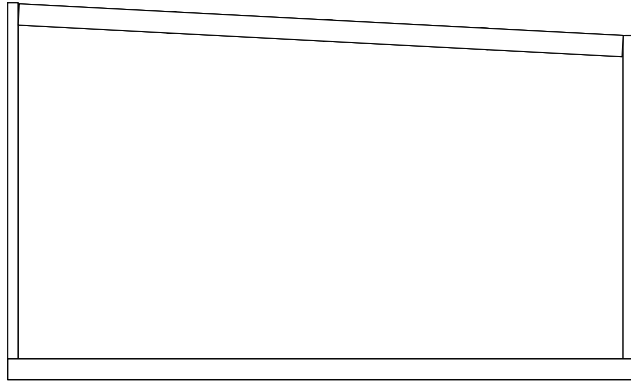
Drawings by Quotec System Pty Ltd. All work to be in accordance with accompanying engineer's details.



Job# 13012_VARY
Date 26 Oct 2021
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MAIN FRAME 1 ELEVATION

Viewed from front of building.



Project 6m (w) x 18.1m (l) x 3.1m (h) Skillion Carport
Client Vary
Site Address 4586-4600 MOUNT LINDESAY HIGHWAY NORTH MACLEAN QLD 4280

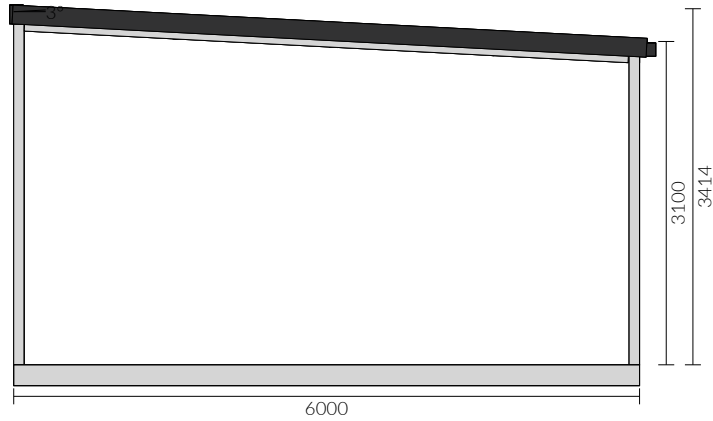
Drawings by Quotec System Pty Ltd. All work to be in accordance with accompanying engineer's details.



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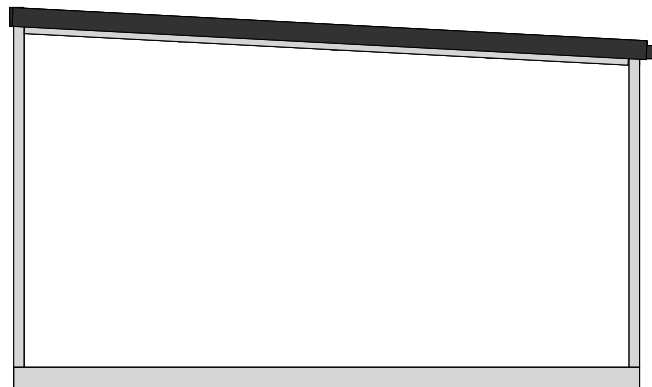
MAIN FRAME 1 ELEVATION WITH CLADDING

Viewed from front of building.



MAIN FRAME 1 ELEVATION CLAD SHEETS

Viewed from front of building.



Project 6m (w) x 18.1m (l) x 3.1m (h) Skillion Carport
Client Vary
Site Address 4586-4600 MOUNT LINDESAY HIGHWAY NORTH MACLEAN QLD 4280

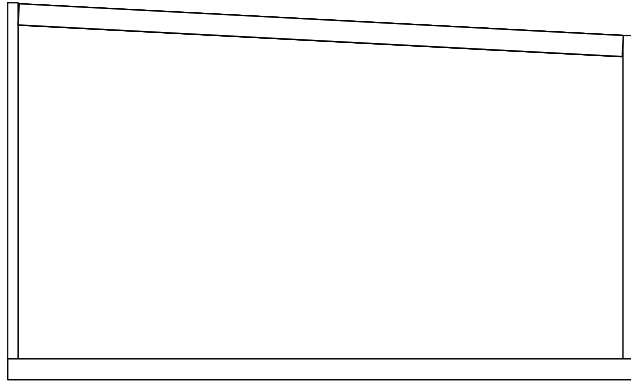
Drawings by Quotec System Pty Ltd. All work to be in accordance with accompanying engineer's details.



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MAIN FRAME 2 ELEVATION

Viewed from front of building.



Project 6m (w) x 18.1m (l) x 3.1m (h) Skillion Carport
Client Vary
Site Address 4586-4600 MOUNT LINDESAY HIGHWAY NORTH MACLEAN QLD 4280

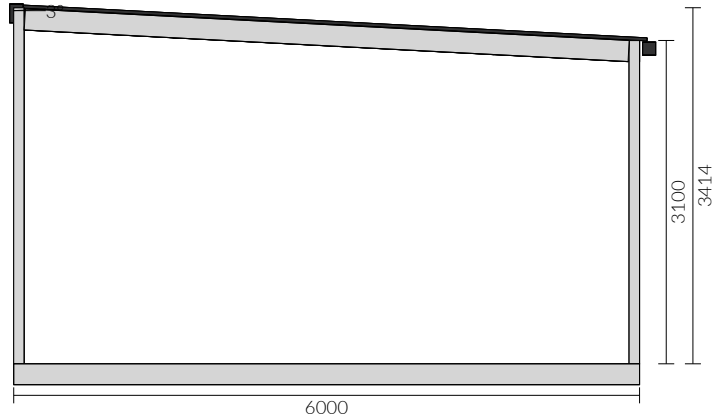
Drawings by Quotec System Pty Ltd. All work to be in accordance with accompanying engineer's details.



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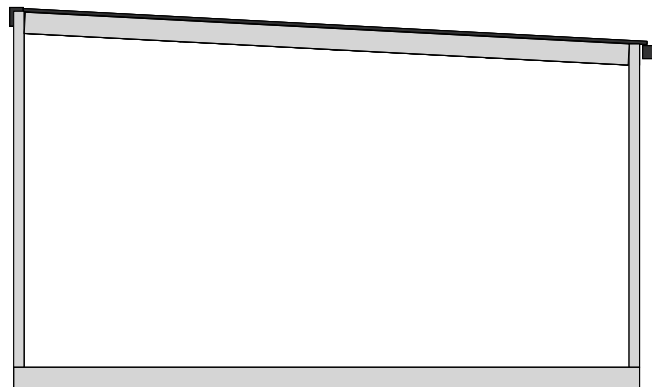
MAIN FRAME 2 ELEVATION WITH CLADDING

Viewed from front of building.



MAIN FRAME 2 ELEVATION CLAD SHEETS

Viewed from front of building.



Project 6m (w) x 18.1m (l) x 3.1m (h) Skillion Carport
Client Vary
Site Address 4586-4600 MOUNT LINDESAY HIGHWAY NORTH MACLEAN QLD 4280

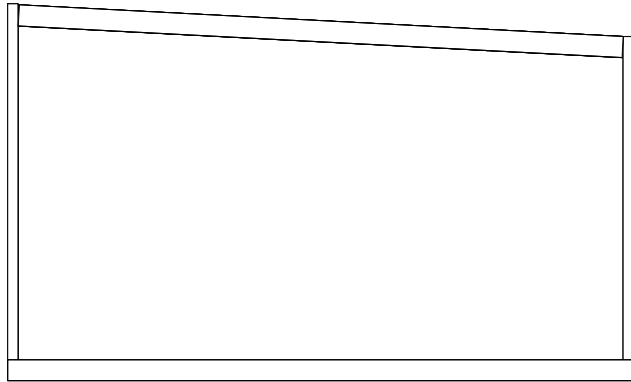
Drawings by Quotec System Pty Ltd. All work to be in accordance with accompanying engineer's details.



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MAIN FRAME 3 ELEVATION

Viewed from front of building.



Project 6m (w) x 18.1m (l) x 3.1m (h) Skillion Carport
Client Vary
Site Address 4586-4600 MOUNT LINDESAY HIGHWAY NORTH MACLEAN QLD 4280

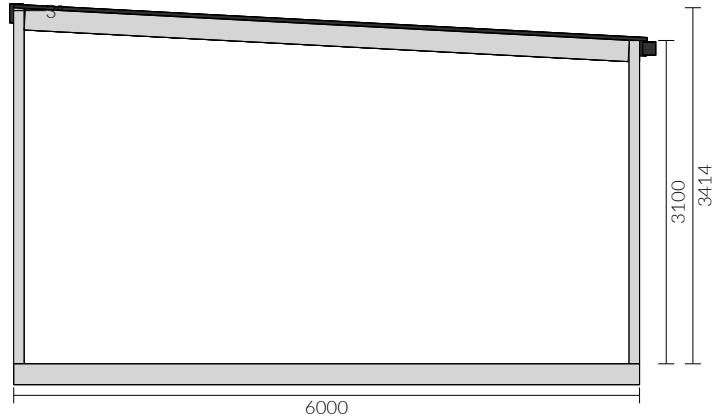
Drawings by Quotec System Pty Ltd. All work to be in accordance with accompanying engineer's details.



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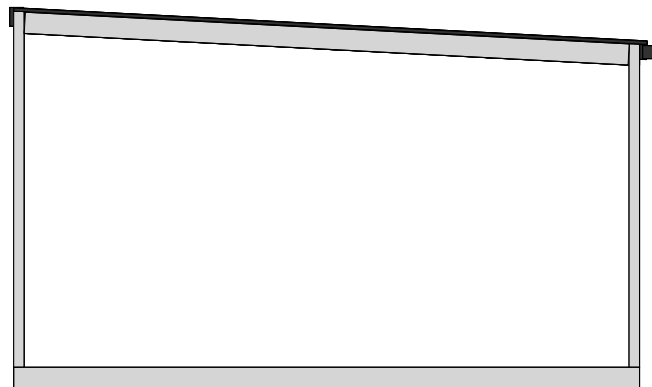
MAIN FRAME 3 ELEVATION WITH CLADDING

Viewed from front of building.



MAIN FRAME 3 ELEVATION CLAD SHEETS

Viewed from front of building.



Project 6m (w) x 18.1m (l) x 3.1m (h) Skillion Carport
Client Vary
Site Address 4586-4600 MOUNT LINDESAY HIGHWAY NORTH MACLEAN QLD 4280

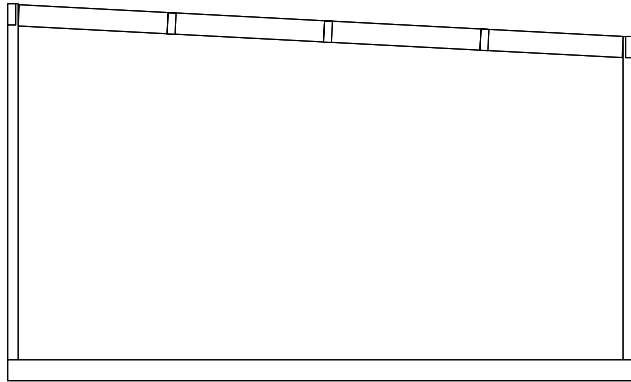
Drawings by Quotec System Pty Ltd. All work to be in accordance with accompanying engineer's details.



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Date 26 Oct 2021
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MAIN FRAME 4 ELEVATION

Viewed from front of building.



Project 6m (w) x 18.1m (l) x 3.1m (h) Skillion Carport
Client Vary
Site Address 4586-4600 MOUNT LINDESAY HIGHWAY NORTH MACLEAN QLD 4280

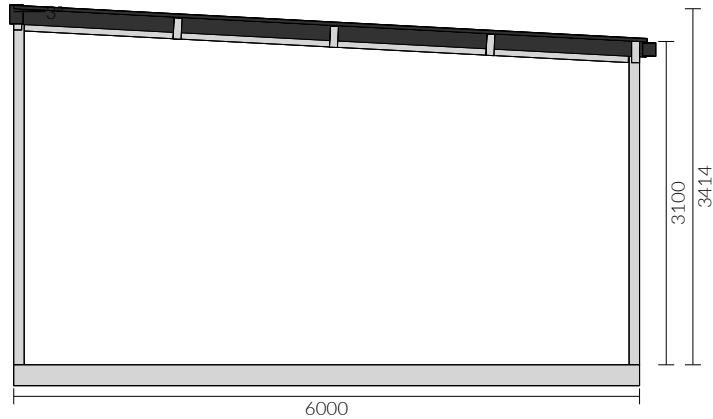
Drawings by Quotec System Pty Ltd. All work to be in accordance with accompanying engineer's details.



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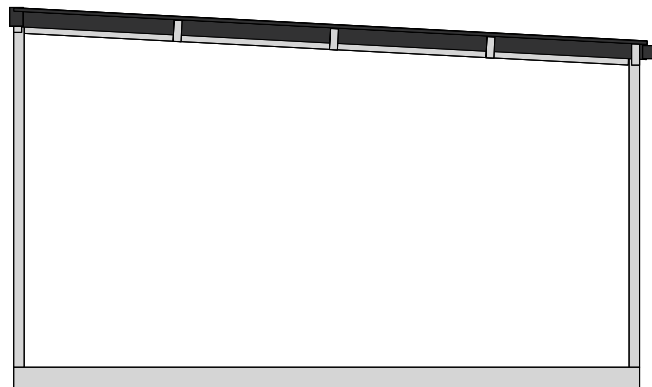
MAIN FRAME 4 ELEVATION WITH CLADDING

Viewed from front of building.



MAIN FRAME 4 ELEVATION CLAD SHEETS

Viewed from front of building.



Project 6m (w) x 18.1m (l) x 3.1m (h) Skillion Carport
Client Vary
Site Address 4586-4600 MOUNT LINDESAY HIGHWAY NORTH MACLEAN QLD 4280

Drawings by Quotec System Pty Ltd. All work to be in accordance with accompanying engineer's details.



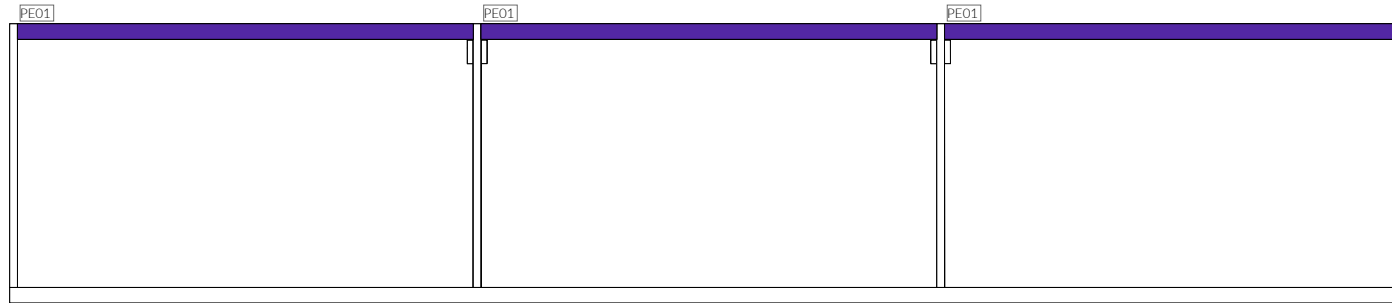
Job# 13012_VARY
Date 26 Oct 2021
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LEFT SIDE MAIN BUILDING FRAME ELEVATION

Viewed from left of building.

Frame Items

PE01 3x C Section 203 x 76 x 1.5



Project 6m (w) x 18.1m (l) x 3.1m (h) Skillion Carport
Client Vary
Site Address 4586-4600 MOUNT LINDESAY HIGHWAY NORTH MACLEAN QLD 4280

Drawings by Quotec System Pty Ltd. All work to be in accordance with accompanying engineer's details.



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LEFT SIDE MAIN BUILDING ELEVATION WITH CLADDING

Viewed from left of building.



LEFT SIDE MAIN BUILDING ELEVATION CLAD SHEETS

Viewed from front of building.



Project 6m (w) x 18.1m (l) x 3.1m (h) Skillion Carport
Client Vary
Site Address 4586-4600 MOUNT LINDESAY HIGHWAY NORTH MACLEAN QLD 4280

Drawings by Quotec System Pty Ltd. All work to be in accordance with accompanying engineer's details.



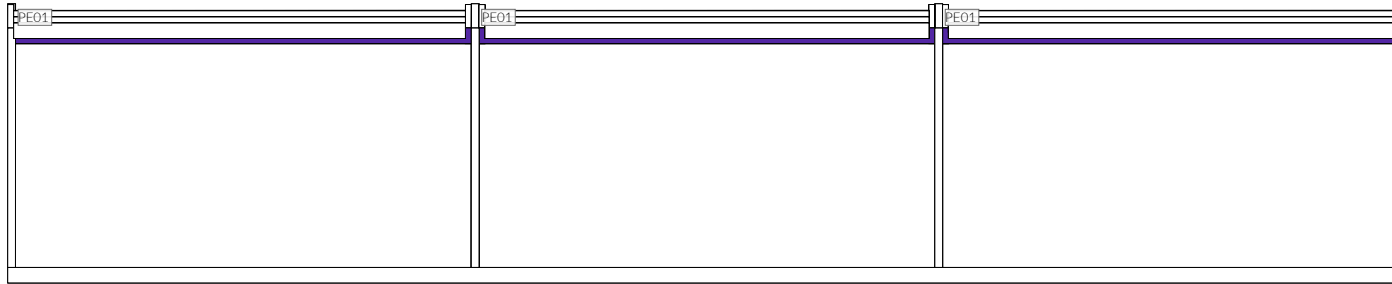
Job# 13012_VARY
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RIGHT SIDE MAIN BUILDING FRAME ELEVATION

Viewed from right of building.

Frame Items

PE01 3x C Section 203 x 76 x 1.5



Project 6m (w) x 18.1m (l) x 3.1m (h) Skillion Carport
Client Vary
Site Address 4586-4600 MOUNT LINDESAY HIGHWAY NORTH MACLEAN QLD 4280

Drawings by Quotec System Pty Ltd. All work to be in accordance with accompanying engineer's details.



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RIGHT SIDE MAIN BUILDING ELEVATION WITH CLADDING

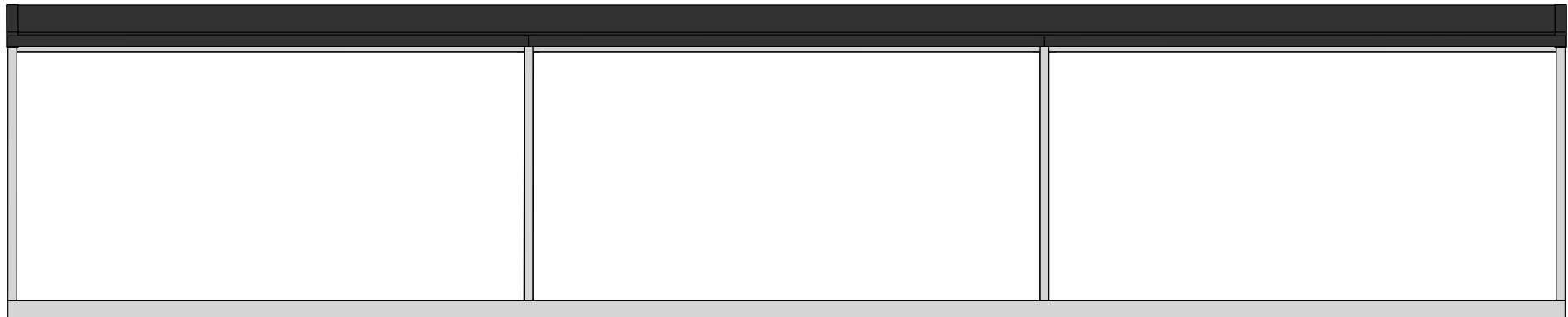
Viewed from right of building.



18100

RIGHT SIDE MAIN BUILDING ELEVATION CLAD SHEETS

Viewed from front of building.



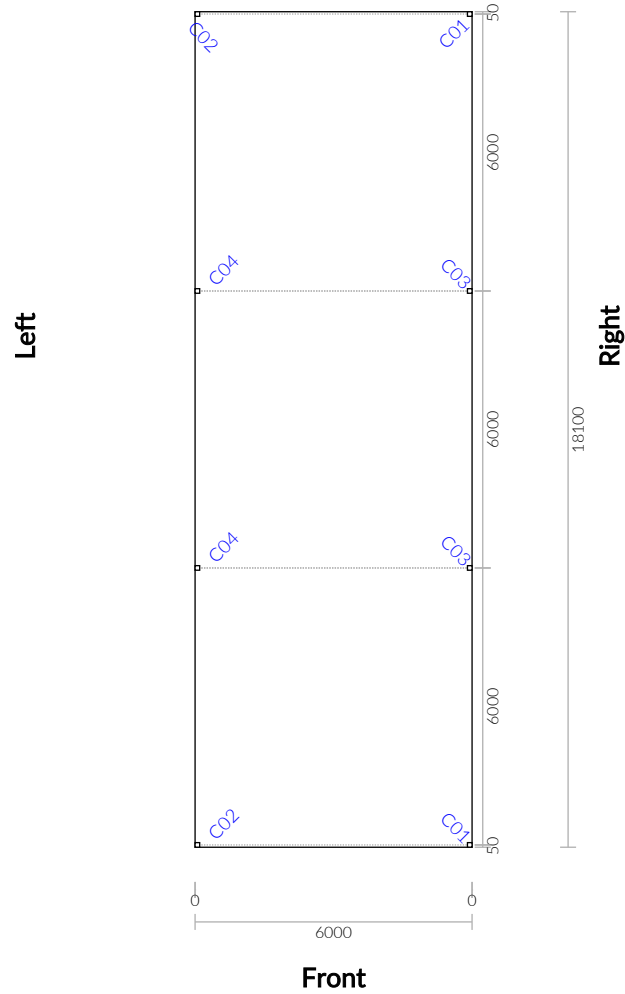
Project 6m (w) x 18.1m (l) x 3.1m (h) Skillion Carport
Client Vary
Site Address 4586-4600 MOUNT LINDESAY HIGHWAY NORTH MACLEAN QLD 4280

Drawings by Quotec System Pty Ltd. All work to be in accordance with accompanying engineer's details.



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PLAN



Major Frame

C01	Column	SHS100100305	3100mm	Rafter	C20019	5797mm
C02	Column	SHS100100305	3414mm	Rafter	C20019	5797mm
C03	Column	SHS100100305	3100mm	Rafter	C20019	5797mm
C04	Column	SHS100100305	3414mm	Rafter	C20019	5797mm

Miscellaneous Framing

Perimeter Beam	C Section 203 x 76 x 1.5.
Purlin	C Section 203 x 76 x 1.5. Max Spacing 2000



Project 6m (w) x 18.1m (l) x 3.1m (h) Skillion Carport
Client Vary
Site Address 4586-4600 MOUNT LINDESAY HIGHWAY NORTH MACLEAN QLD 4280

Drawings by Quotec System Pty Ltd. All work to be in accordance with accompanying engineer's details.



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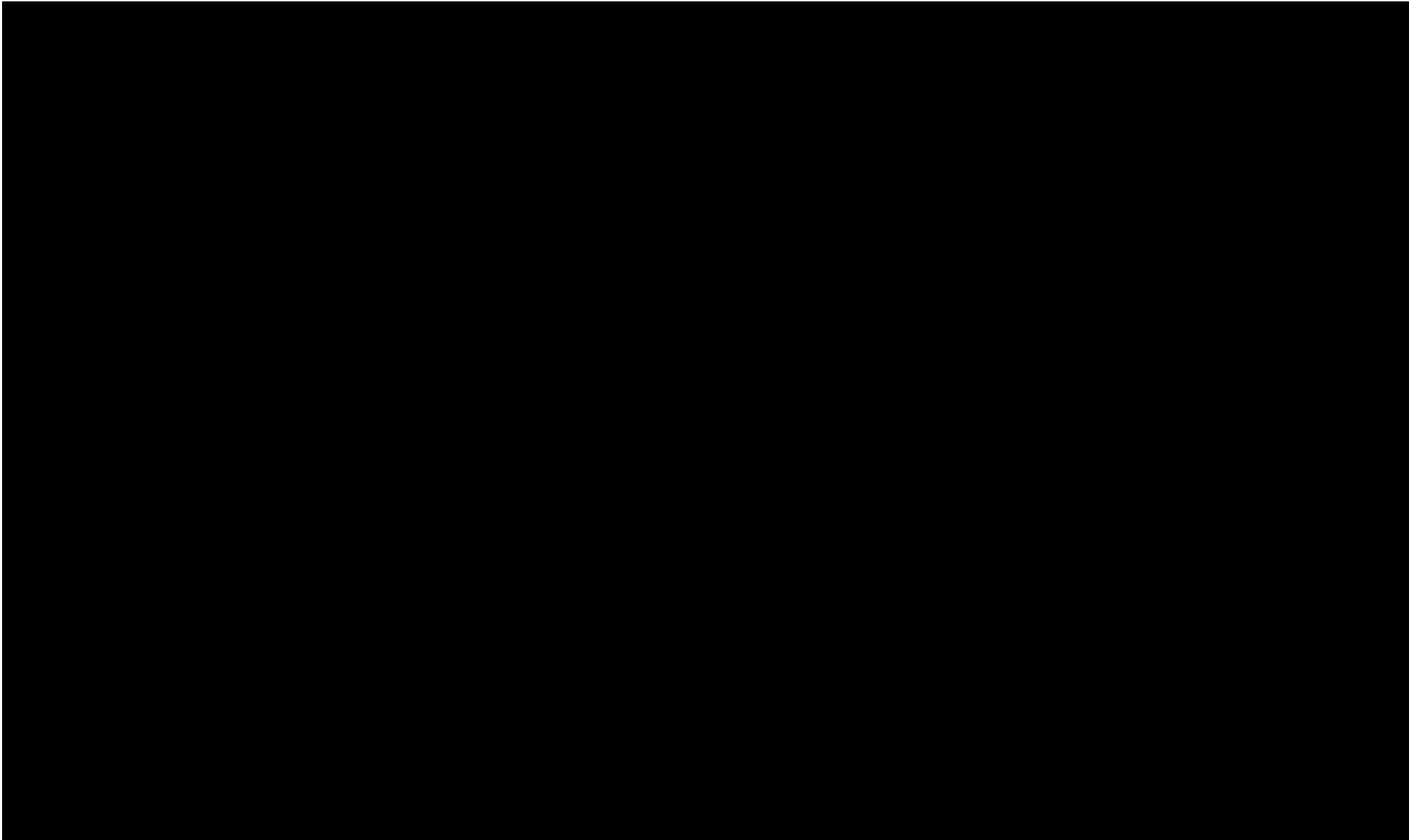


Project 6m (w) x 18.1m (l) x 3.1m (h) Skillion Carport
Client Vary
Site Address 4586-4600 MOUNT LINDESAY HIGHWAY NORTH MACLEAN QLD 4280

Drawings by Quotec System Pty Ltd. All work to be in accordance with accompanying engineer's details.



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Project 6m (w) x 18.1m (l) x 3.1m (h) Skillion Carport
Client Vary
Site Address 4586-4600 MOUNT LINDESAY HIGHWAY NORTH MACLEAN QLD 4280

Drawings by Quotec System Pty Ltd. All work to be in accordance with accompanying engineer's details.



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Date 26 Oct 2021
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Site Details

Site Address 4586-4600 MOUNT LINDESAY HIGHWAY NORTH MACLEAN QLD 4280
Lot/RP 54/SP180530 LOGAN CITY
Latitude -27.764004,153.020158
Elevation 27.00m
Region B
Ultimate VR 57m
Summary AS/NZS 1170 ARI:500YEARS
Height:10m Critical Direction:NORTH
Md:0.95 TC:2.0000 Mz,cat:1.0000 Ms:1.0000
Mh:1.0000 Mlee:1.0000 Mel:1.0000 Mt:1.0000
Wind Speed 54.15m/s



Project 6m (w) x 18.1m (l) x 3.1m (h) Skillion Carport
Client Vary
Site Address 4586-4600 MOUNT LINDESAY HIGHWAY NORTH MACLEAN QLD 4280

Drawings by Quotec System Pty Ltd. All work to be in accordance with accompanying engineer's details.



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Compliance certificate for building design or specification



This form is to be used by an appointed competent person for the purposes of section 10 of the *Building Act 1975* and sections 73 and 77 of the *Building Regulation 2021* (Design-specification certificate) stating that an aspect of building work or specification will, if installed or carried out as stated in this form, comply with the building assessment provisions.

Additional explanatory information is included in the Appendix at the end of this form.

1. Property description

This section need only be completed if details of street address and property description are applicable.

E.g. in the case of (standard/generic) pool design/shell manufacture and/or patio and carport systems this section may not be applicable.

The description must identify all land the subject of the application.

The lot and plan details (e.g. SP/RP) are shown on title documents or a rates notice.

If the plan is not registered by title, provide previous lot and plan details.

Street address	4586-4600 MOUNT LINDESAY HIGHWAY		
	Suburb/locality	NORTH MACLEAN	
State	QLD	Postcode	4280
Lot and plan details (<i>attach list if necessary</i>)			
54/SP180530			
Local government area the land is situated in			
LOGAN CITY			

2. Description of aspect/s certified

Clearly describe the extent of work covered by this certificate, e.g. all structural aspects of the steel roof beams.

Structural Engineers details for Carport Skillion 6m (w) x 18.1m (l) x 3.1m (h)

Graeme Moulston & Associates Engineering Pty Ltd, Practising Structural Design Engineer hereby confirm that the design by Quotec Pty Ltd as noted in Section 4 herein have been checked by me and are in accordance with the basis of certification as per Section 3. The pre-engineered steel building is manufactured from high tensile steel 450MPa yield strength. The building comprises of cold formed thin walled Galvanized C Section, bonded and screwed at connections. The building is clad in zincalume or colorbond metal cladding and constructed on a slab or footing. Subject to Approved Final Shop Drawings and subject to Final Connection Frame Details

Building Class 10a, Import Lvl 2, Terrain Cat(T2), Wind Class(B)=57m/s



3. Basis of certification

Detail the basis for giving the certificate and the extent to which tests, specifications, rules, standards, codes of practice and other publications were relied upon.

Compliance: I, Graeme Moulston of Graeme Moulston & Associates Engineering Pty Ltd, certify that the subject Proposed Shed / Garage, as described above has been designed in accordance with the project specifications and complies with the provisions of the Building Code of Australia (BCA) including the current relevant codes and standards referred to therein as listed below.

AS/NZS: 1170.0: 2002 Supp 1 Amdts 1, 3 & 4 (R2016) Structural Design Actions - General Principles

AS/NZS: 1170.1: 2002 Supp 1 Amdts 1 & 2 (R2016) Structural Design Actions - (Permanent Imposed & Other Actions)

AS/NZS: 1170.2: 2 2011 Amdts 4 & 5 (R2016) Structural Design Actions - Wind Actions

AS/NZS: 1170.4: 2007 Amdts 2 (R2018) Structural Design Actions - Earthquake Actions in Aus

AS/NZS: 1554.1: 2014 Amdts 2 2017 Structural Steel Welding, Welding of Steel Structures

AS/NZS: 2312.1: 2014 (Or Similar being a Corrosion Protection) Protection of Structural Steel against Corrosion, by use of Protective Coating–Paint Coating

AS/NZS: 4600: 2018 Cold Formed Steel Structures

AS/NZS: 4671: 2001 Steel Reinforcement Material

AS: 4055: 2021 Wind Loads for Housing

AS: 4100: 2020 Steel Structures

AS: 3600: 2018 Concrete

4. Reference documentation

Clearly identify any relevant documentation, e.g. numbered structural engineering plans.

Drawings by: Quotec Systems Pty Ltd, Suite 5, Level 1, 49 Sherwood Road, Toowong QLD 4066

Drawings being: Architectural Drawings, Engineers Drawings, Pier Drawings

Drawing No: Page1 to 20

Project No: 13012_VARY

Certified by: *Graeme Moulston & Associates Engineering Pty Ltd*

Job No. Q21-13012

Reference Documents:

Site Map

CSIRO Foundation Maintenance & Footing Performance – A Homeowner's Guide

5. Building certifier reference number and building development approval number

Building certifier reference number	Building development application number (if available)
-------------------------------------	--

6. Appointed competent person details

Under Part 6 of the Building Regulation a person must be assessed as a competent for the type of work (design-specification) by the relevant building certifier.

Name (in full)	Graeme Moulston FIEAust CPEng NER APEC Engineer IntPE (Aus)
Company name (if applicable)	Graeme Moulston & Associates Engineering P/L
Contact person	Graeme Moulston
Business phone number	07 55 306 214



Email address	info@gcma.com.au		
Postal address	PO Box 213		
		Suburb/locality	Mudgeeraba
State	QLD	Postcode	4213
Licence class or registration type (if applicable)			
Licence or registration number (if applicable)	CPEng 5590 - RPEQ 4431		

9. Signature of appointed competent person

This certificate must be signed by the individual assessed and appointed by the building certifier as competent to give design-specification help.

Signature		Date	27/10/2021
-----------	---	------	------------

LOCAL GOVERNMENT USE ONLY

Date received	Click or tap to enter a date.	Reference number/s	
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Appendix – explanatory information

IMPORTANT NOTE: it is an offence for a competent person to give a building certifier a document, including this form, that the person knows or reasonably suspects, is false or misleading.

Who can complete this certificate? (sections 10 of the *Building Act 1975* (Building Act) and 73 of Building Regulation 2021 (BR 2021))

A building certifier can accept from a competent person (design – specifications) a certificate stating that the competent person has assessed the building design or specification for the aspect of building work, and it will, if installed or carried out under the certificate, comply with the building assessment provisions, including any relevant standards and codes.

Schedule 10 of the BR 2021 defines *building design or specification* as any material, system, method of building or other thing related to the design of or specifications for building work.

For a competent person to meet the regulation requirements (section 77 of the BR 2021) they must substantially complete all sections of this form, including information, such as the design of a particular material, system, method of building or that a building element complies with the Building Code of Australia or a provision of the Queensland Development Code. It is also important that the details of the relevant reference documents are included, for example, the applicable Australian Standards or other technical provisions that may be applicable to the subject work.

What is the purpose of this form? (section 10 of the *Building Act 1975*)

The information in this form informs the building certifier's decision making when they are assessing a building development application and issuing the building development approval for the building work the subject of the certificate (form).

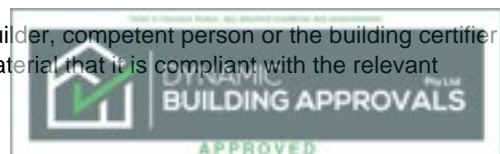
When is this form not required?

The assessment of some building applications will be entirely within the expertise of the relevant building certifier and therefore they may not seek the help of a competent person. In these instances, this form is not required.

Is a manufacturer or supplier required under the BR 2021 to complete and sign this Form 15, if requested?

No. A manufacturer or supplier of building materials is not required to complete and give this form or any aspect and inspection certificates if requested by a construction contractor, builder, appointed competent person, or a building certifier.

However, a manufacturer or supplier may give the construction contractor, builder, competent person or the building certifier evidence of suitability such as a manufacturers statement for an aspect or material that it is compliant with the relevant reference documents in the BCA i.e. the applicable Australian Standard/s.



What if there is not enough space for all the supporting material/documents?

Items 2, 3 and 4 requires the competent person to clearly identify the extent of the assessment that was undertaken for aspect/s of work identified in this form.

For instance, there is provision for material such as specifications, standards, codes or other relevant publications to be referenced in the form. However, if the space in the form is not sufficient to accommodate all of this material, you can create and refer to additional material in an addendum or attachment to the form.

The form is also available in a Microsoft Word version, that you can download and edit to include additional material in the relevant parts of the form. **Note:** that editing the form in the Microsoft Word version may cause the relevant boxes to expand and increase the length of the document. This is acceptable and does not change the approved form, provided the section text (description on the left-hand side of the page) is not altered.

Appointed competent person (design or specification) – (sections 34 and 36 of the BR 2021)

A building certifier must assess and decide to appoint an individual as a competent person before they can, as a competent person, give design-specification help. The building certifier is required to keep detailed records about what was considered when appointing a competent person.

A building certifier must be satisfied that an individual is competent to give the type of inspection help having regard to the individual's experience, qualifications and skills and if required by law to hold a licence or registration, that the individual is appropriately registered or licensed.

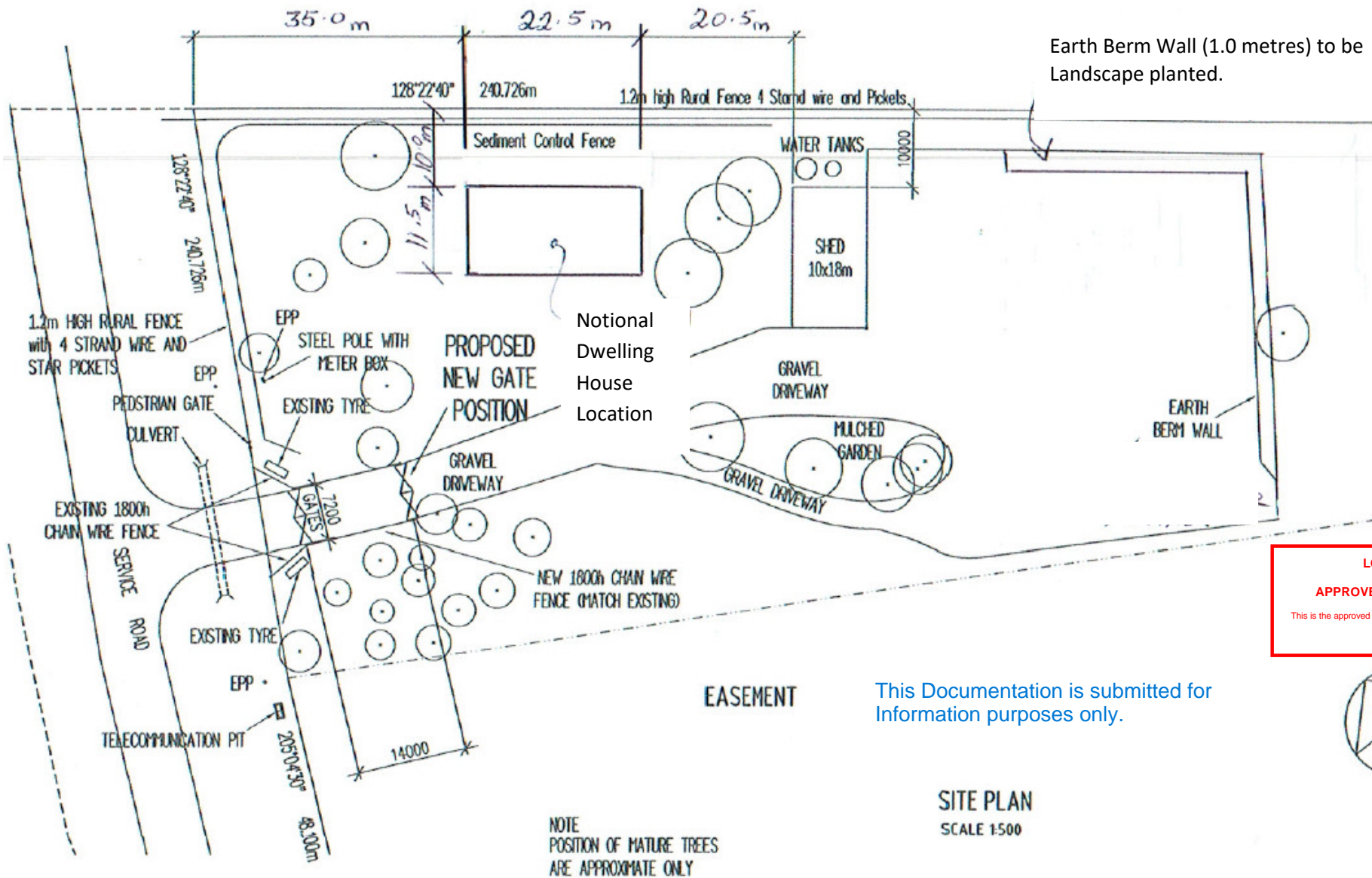
An individual is appointed as competent to give design-specification help on or from a particular day. The building certifier can also decide an individual is a competent person (design-specification) and a competent person (inspection) at the same time or for the same systems or components of the work.

For further information about assessment of someone as a competent person refer to the **Guideline for the assessment of competent persons.**

PRIVACY NOTICE

The Department of Energy and Public Works is collecting personal information as required under the *Building Act 1975*. This information may be stored by the Department, and will be used for administration, compliance, statistical research and evaluation of building laws. Your personal information will be disclosed to other government agencies, local government authorities and third parties for purposes relating to administering and monitoring compliance with the *Building Act 1975*. Personal information will otherwise only be disclosed to third parties with your consent or unless authorised or required by law.





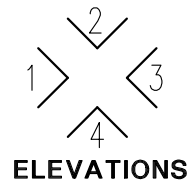
Earth Berm Wall (1.0 metres) to be Landscape planted.

LOGAN CITY COUNCIL
APPROVED PLAN OF DEVELOPMENT
This is the approved plan of development for Development Application
MCUR/191/2020

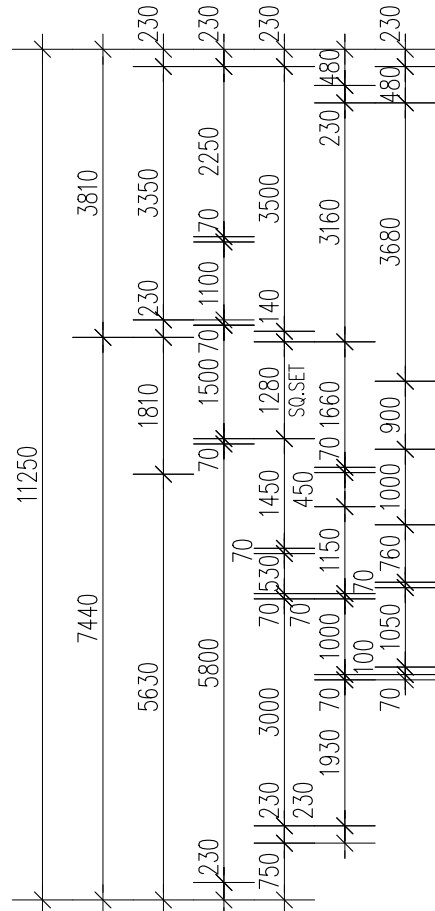
Sheet 1 of 3



Notes	Designed RDG	Everyday Engineers Planners & Surveyors ABN. 33 128 918 347 Mobile: 0432 124 461			Plan of Development 4586-4600 Mount Lindesay Highway NORTH MACLEAN	SCALE: NTS
	Drawn RDG					SHEET No.: 1 of 1
	Checked RDG					Drg. No.:
						152/2019/01
			A	19.08.20	Original Issue	
			No.	Date	Revision	A



ELEVATIONS



11250

7440

5630

5800

3000

1930

1000

1050

1000

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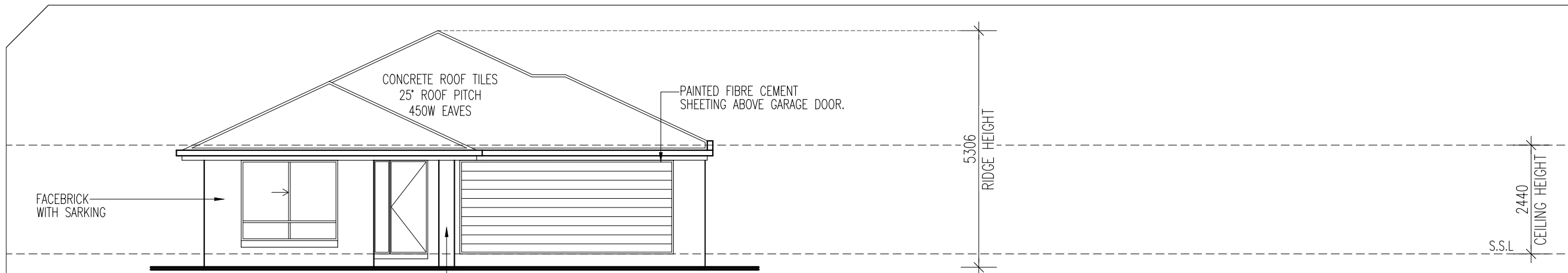
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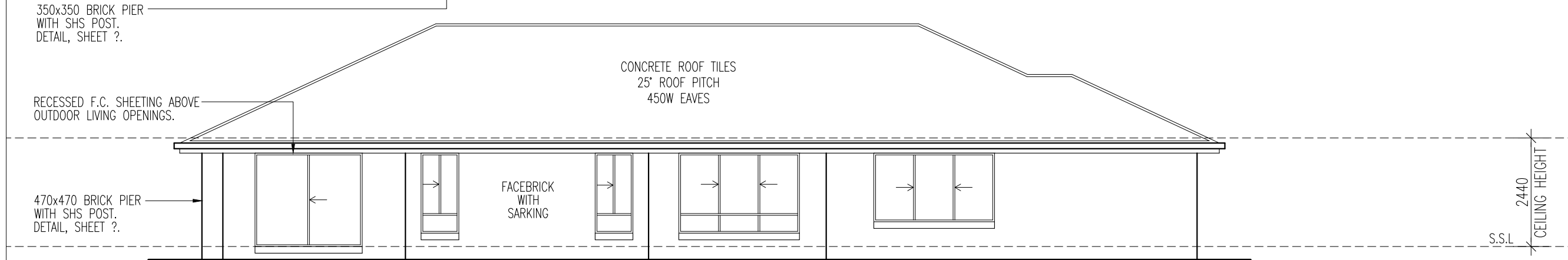
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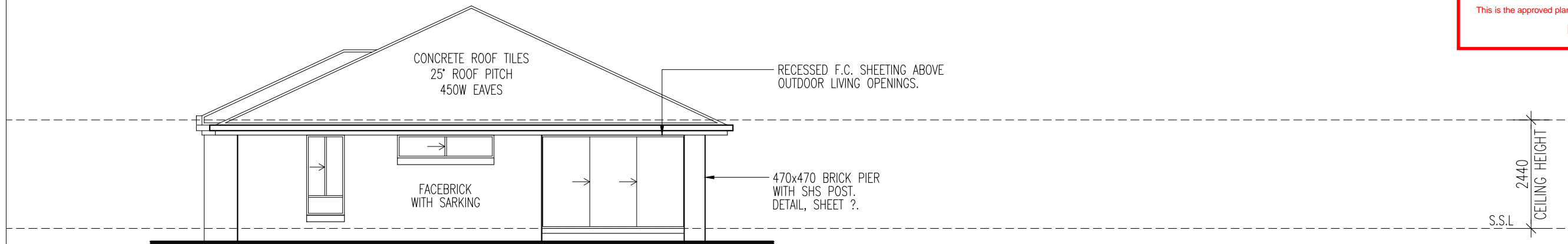
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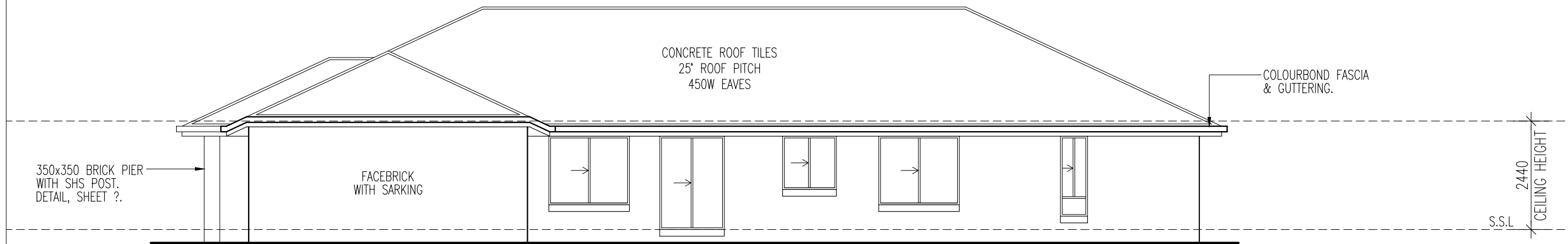
ELEVATION 1.



ELEVATION 2.



ELEVATION 3.



ELEVATION 4.

IMPORTANT NOTICE:
ALL WINDOWS TO FLOOR LEVELS WHICH ARE 2m OR MORE ABOVE THE SURFACE BENEATH MUST HAVE A BARRIER AT A HEIGHT NO LESS THAN 865mm AND THE OPENING PANEL ABOVE BE RESTRICTED TO A MAXIMUM OF 125mm OR HAVE A BARRIER WHICH CAN RESIST A MINIMUM OF 250N OF OUTWARD HORIZONTAL ACTION.

IMPORTANT NOTICE:
THERE ARE NO ATYPICAL DESIGN FEATURES IN THIS CONSTRUCTION THAT PRESENT UNUSUAL WORKPLACE, HEALTH & SAFETY ISSUES IN THE CONSTRUCTION, MAINTENANCE, USE OR DEMOLITION OF THIS STRUCTURE.

NOOSAVILLE 25 DESIGNER FACADE

LOGAN CITY COUNCIL
APPROVED PLAN OF DEVELOPMENT
This is the approved plan of development for Development Application
MCUR/191/2020

Sheet 3 of 3

CORAL HOMES
QBCC 50792/1014053
OFT 62084C

DRAWING
ELEVATIONS

SCALE: 1:100 REV.1:17.10.19-DCR

SHEET 2

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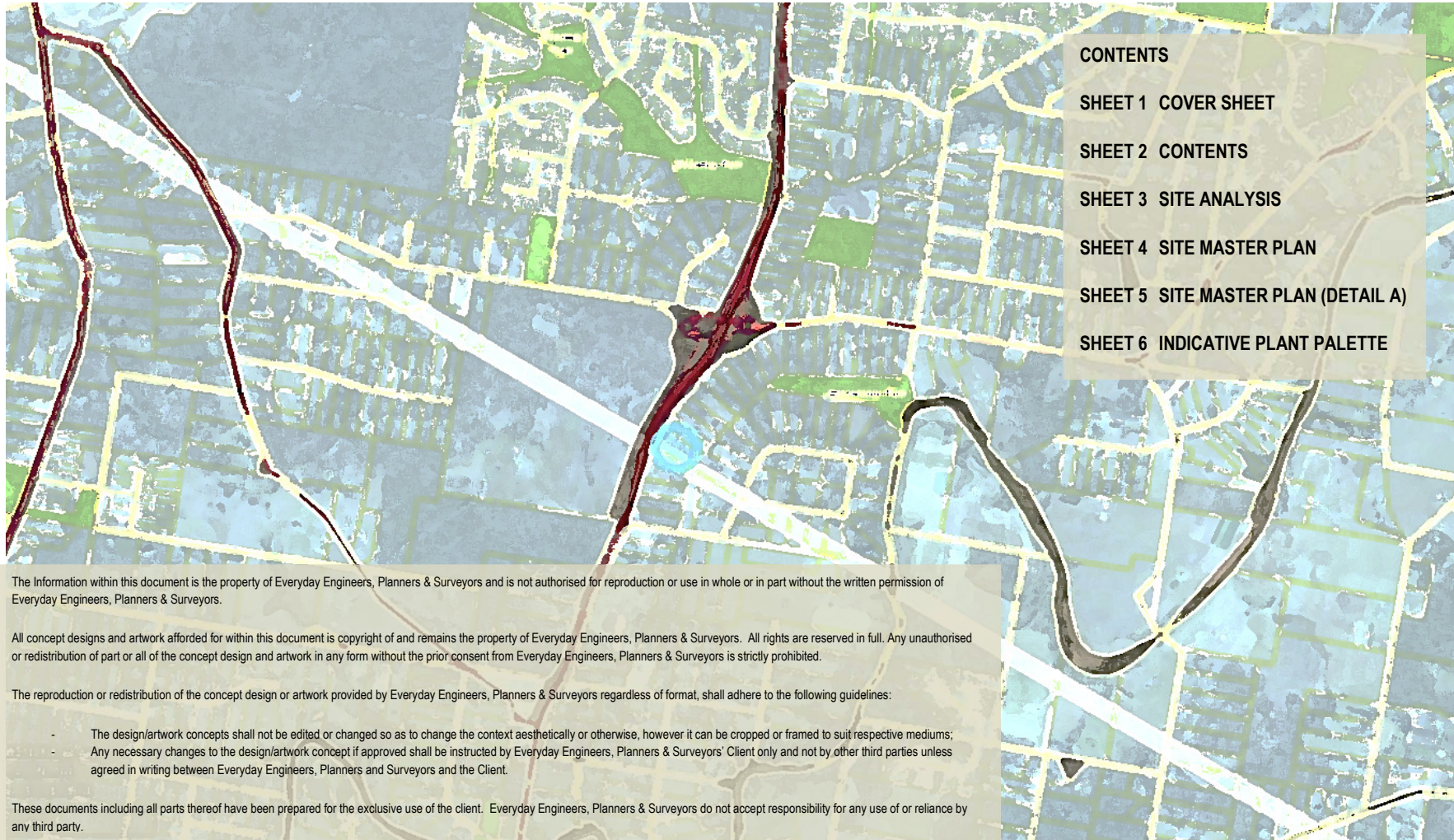
Rehabilitation Plan Landscape Concept Plan

**Everyday Engineers
Planners & Surveyors**
ABN. 33 128 918 347
Mobile: 0432 124 461

**4586-4600 Mount Lindesay Highway
NORTH MACLEAN**

Rehabilitation Plan
Landscape Concept Plan – Cover Sheet
August 2020

2020-63 Sheet 1



CONTENTS

- SHEET 1 COVER SHEET**
- SHEET 2 CONTENTS**
- SHEET 3 SITE ANALYSIS**
- SHEET 4 SITE MASTER PLAN**
- SHEET 5 SITE MASTER PLAN (DETAIL A)**
- SHEET 6 INDICATIVE PLANT PALETTE**

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NORTH MACLEAN**

Rehabilitation Plan
Landscape Concept Plan – Contents
August 2020

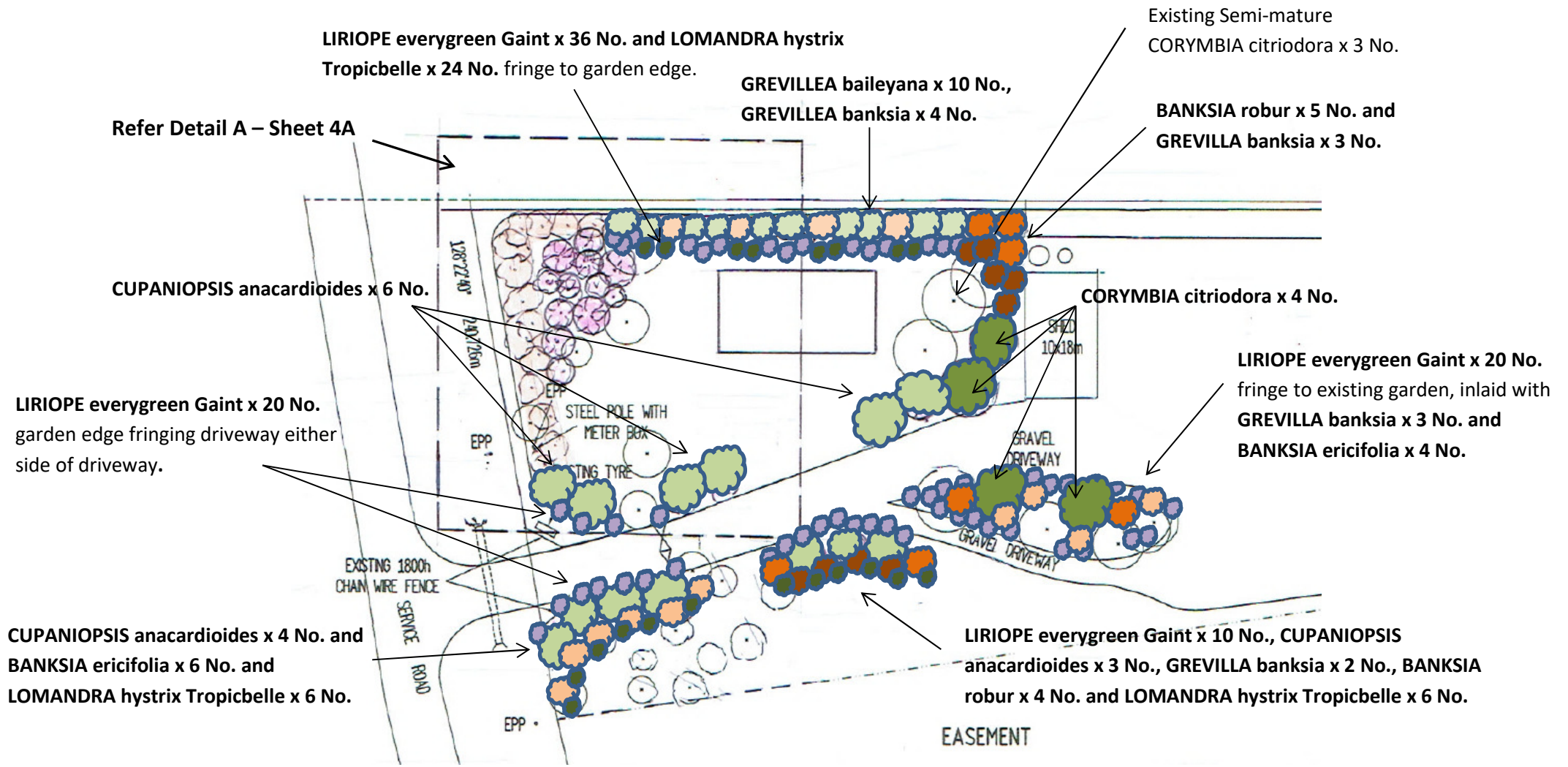


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**4586-4600 Mount Lindsay Highway
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Rehabilitation Plan
Landscape Concept Plan – Site Analysis
August 2020

2020-63 Sheet 3



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NORTH MACLEAN**

Rehabilitation Plan
Landscape Concept Plan – Site Master Plan
August 2020

LIRIOPE everygreen Gaint x 36 No. and LOMANDRA hystrix
Tropicbelle x 24 No. fringe to garden edge.

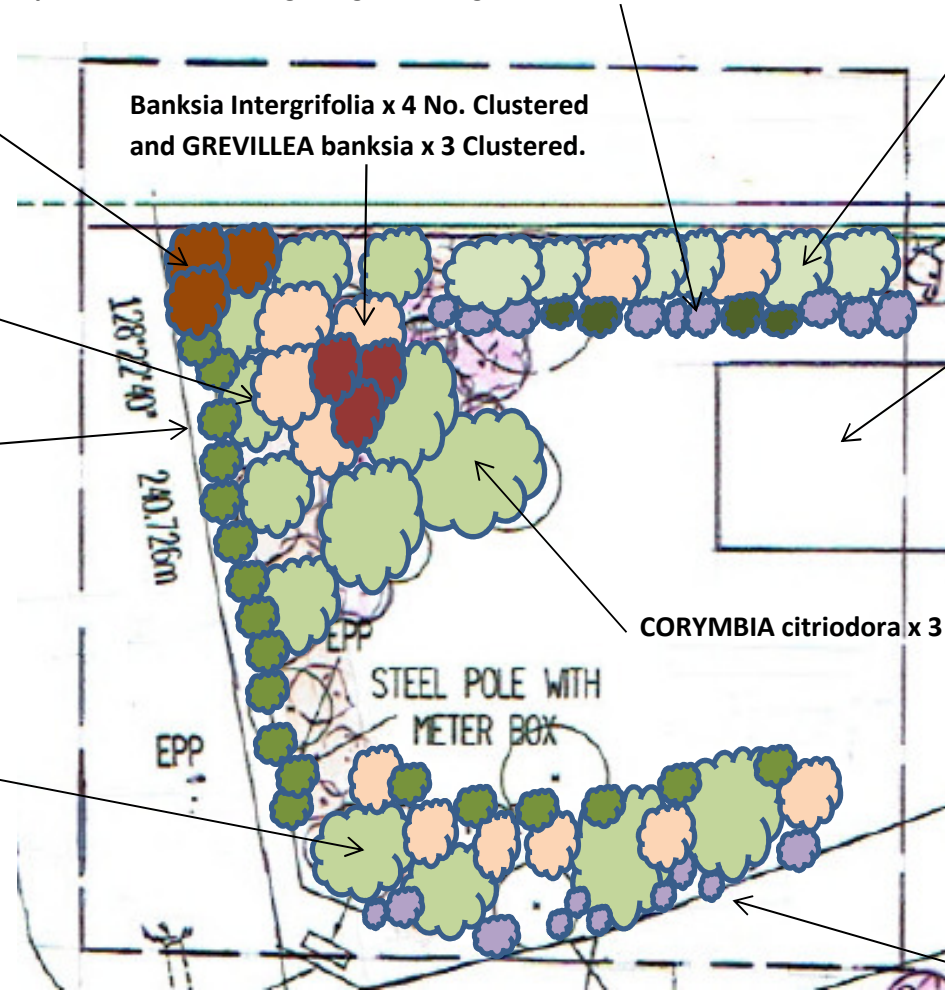
GREVILLEA baileyana x 10 No.,
GREVILLEA banksia x 4 No.

GREVILLEA robusta x 3 No. set
in corner of property

CUPANIOPSIS anacardioides X 6 No.
set upon 1.0 metre high landscaped
mound.

LOMANDRA hystrix Tropicbelle x 40 No.
to frontage of landscape mound

CUPANIOPSIS anacardioides x 4 No. and
BANKSIA ericifolia x 6 No. and
LOMANDRA hystrix Tropicbelle x 6 No.



Banksia Intergrifolia x 4 No. Clustered
and GREVILLEA banksia x 3 Clustered.

CORYMBIA citriodora x 3 No.

Proposed Dwelling House

LIRIOPE everygreen Gaint x 20 No.
garden edge fringing driveway either
side of driveway.

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NORTH MACLEAN

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Rehabilitation Plan
Landscape Concept Plan – Site Master Plan (Detail A)
August 2020

2020-63 Sheet 5



1. GREVILLEA robusta
2. GREVILLEA banksia
3. GREVILLEA baileyana
4. BANKSIA intergrifolia
5. BANKSIA robur
6. BANKSIA ericifolia
7. LIRIOPE evergreen gaint
8. LOMANDRA hystrix Tropicbelle
9. CUPANIOPSIS anacardioides
10. CORYMBIA citriodora

**4586-4600 Mount Lindesay Highway
NORTH MACLEAN**

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Mobile: 0432 124 461

Rehabilitation Plan
Landscape Concept Plan – Indicative Plant Palette
August 2020

2020-63 Sheet 6

Appendix C – Bushfire Hazard Area Overlay Code

Bushfire Hazard Area Overlay Code

Table 8.2.3.3.1–Bushfire hazard overlay code: accepted development (subject to requirements) and assessable development

Performance outcomes	Acceptable outcomes	Comments
For accepted development (subject to requirements) and assessable development		
Location, design and siting of development		
<p>PO1 Development is designed to:</p> <ul style="list-style-type: none"> (a) minimise risk of bushfire hazard; (b) provide safe premises; (c) create efficient emergency access for fire-fighting and other emergency vehicles. <p>Editor's note—<i>Planning scheme policy 6–Management of bushfire hazard provides guidelines on how to achieve this outcome.</i></p>	<p>AO1 Development:</p> <ul style="list-style-type: none"> (a) does not increase the number of persons living in, or lots in, the Bushfire hazard area identified on Bushfire hazard overlay map–OM–03.00; or (b) is on a site that a bushfire hazard assessment prepared in accordance with the methodology in planning scheme policy 6–Management of bushfire hazard determines is of low bushfire hazard. 	<p>The lands the subject of the development application are seen to be sited within a Bushfire Hazard Risk Area, the lands in question are sited within a 'Low' Bushfire Hazard Area although a portion of the lands are seen to be sited within a Bushfire Hazard Buffer Area.</p> <p>The form of the development application does not afford for an increase in the number of persons living in, or lots in, the Bushfire Hazard Area identified on Bushfire Overlay Map OM-03.00. The form of the development will however see individuals potential working (PARKING A Heavy Vehicle) within an area seen to represent a potential Bushfire Impact Buffer.</p> <p>The Applicant has afforded for the preparation of a Bushfire Mitigation Plan (BMP), which affords various mitigation strategies to minimise the potential impacts of bushfire activity associated with the hazardous vegetation sited within the lands to the north of the subject lands.</p> <p>Performance Outcome PO1 is achieved.</p>

Performance outcomes	Acceptable outcomes	Comments
For accepted development (subject to requirements) and assessable development		
Location, design and siting of development		
<p>PO2 Development is sited and constructed to minimise the bushfire hazard and maximise the protection of life and property from bushfire.</p> <p><i>Editor's Note - Planning scheme policy 6—Management of bushfire hazard contains guidance on the preparation of bushfire management plans.</i></p>	<p>AO2 Development is located and constructed:</p> <p>(a) where there is no bushfire management plan approved by an existing development approval:</p> <ul style="list-style-type: none"> (i) such that the bushfire attack level is less than or equal to BAL-29; (ii) away from the most likely direction of a fire front; (iii) so that elements of the development least susceptible to fire are sited closest to the bushfire hazard; (iv) such that asset protection zones are sited on land with a slope less than 18 degrees; (v) such that asset protection zones are entirely within the boundaries of the private property of the development site; or <p>(b) where an approved bushfire management plan directs development to be located.</p> <p><i>Editor's note—BAL = Bushfire attack level is the radiant heat flux a building will experience during a bushfire and is a measure of heat energy impacting on a surface expressed as kW/m². BAL is calculated from the following factors; vegetation type, fuel loads, distance to vegetation, Forest Fire danger Index (FDI), flame length, fire behaviour/intensity and slope. BAL is used to determine the required construction level of a building and the size of asset protection zones (inner and outer radiation zones). Further information on calculating the BAL can be obtained from AS3959–2009.</i></p> <p><i>Editor's note—' Asset protection zones are not located on</i></p>	<p>The Applicant in undertaking the preparation of the development application, has achieved compliance with Acceptable Outcomes (a) (i) through (v) inclusive.</p> <p>The Applicant has also afforded for the preparation of a Bushfire Mitigation Plan (BMP), which affords various mitigation strategies to minimise the potential impacts of bushfire activity associated with the hazardous vegetation sited within the lands to the north of the subject lands.</p> <p>Performance Outcome PO2 is achieved.</p>

Performance outcomes	Acceptable outcomes	Comments
	<i>slopes greater than 18 degrees to ensure maintenance is practical, soil stability is not compromised and the potential for crown/canopy fires is reduced.</i>	
<p>PO3 Reconfiguring a lot ensures that lots are designed to minimise bushfire hazard and provide safe sites for people, property and buildings.</p>	<p>AO3 Lots: (a) are suitable for people, property and buildings by: (i) having a bushfire attack level less than or equal to BAL-29; or (ii) containing a development envelope area that has a bushfire attack level less than or equal to BAL-29; (b) provide asset protection zones that: (i) are located on land with a slope less than 18 degrees; (ii) are located on the same lot.</p>	<p>Not Applicable</p> <p>The proposed development does not afford for the reconfiguration of the subject lands.</p> <p>Performance Outcome PO3 is not applicable to this application.</p>
Vehicular access and fire maintenance trails		
<p>PO4 Access for fire management and evacuation is provided by access that:</p> <ul style="list-style-type: none"> (a) separates premises from adjoining vegetation; (b) is safely accessible by fire fighting vehicles; (c) has regular vehicular access points for bushfire management, response and evacuation; (d) has regular vehicle passing and turning areas for bushfire management, response and evacuation; (e) allows access at all times for fire fighting vehicles; (f) allows for maintenance, burning off and bushfire response; (g) has vehicular links to an alternative through road; 	<p>AO4 Access for fire management and evacuation is provided by vehicular access in the form of a perimeter road:</p> <ul style="list-style-type: none"> (a) with a minimum reserve width of 20 metres; (b) located between the premises and adjoining vegetation; (c) with a maximum gradient of 12.5 percent; (d) constructed to otherwise comply with section 3.4–Movement infrastructure standards of planning scheme policy 5–Infrastructure; (e) that has a layout that does not include a cul-de-sac. 	<p>The proposed development will see access afforded by way of the frontage roadway (Mount Lindesay Highway Service Road). The access driveway leading to the principal work area is sited within a 'safe haven area'; with ready access afforded to either the frontage roadway or the central core of the allotment which itself represents a safe haven area.</p> <p>Performance Outcome PO4 is achieved.</p>

Performance outcomes	Acceptable outcomes	Comments
<p>(h) is readily maintained.</p> <p>Editor's Note - Planning scheme policy 6– Management of bushfire hazard provides details on alternative solutions for providing fire management access and evacuation</p>		
Water supply		
<p>PO5 Development has access to adequate water supply for fire fighting purposes.</p>	<p>AO5 Development:</p> <p>(a) is connected to a reticulated water supply scheme that has sufficient flow and pressure characteristics for fire fighting purposes at all times with a minimum pressure and flow of 10 litres per second at 200kPa; or</p> <p>(b) has an on-site water storage in accordance with Table 8.2.3.3.2 – Water storage for fire fighting, dedicated or retained for fire fighting purposes that is made of fire resistant materials and is:</p> <p>(i) a separate tank; or</p> <p>(ii) a reserve section in the bottom part of the main water supply tank.</p> <p><i>Editor's Note - The requirement in AO5 is:</i></p> <ul style="list-style-type: none"> - <i>in addition to the requirement for potable water supply/storage in AO2 in Table 9.4.3.3.1–Infrastructure code: accepted development (subject to requirements) and assessable development.;</i> - <i>reflected in AO5 in Table 9.4.3.3.1–Infrastructure code: accepted development (subject to requirements) and assessable development.</i> 	<p>The proposed development is sited within an area serviced by way of an 'On-demand' water supply system.</p> <p>The water supply system was initial designed to meet the parameters of AO13(a).</p> <p>The Applicant submits that the existing infrastructure provisions are adequate to service the proposed development.</p> <p>Performance Outcome PO5 is achieved.</p>

Performance outcomes	Acceptable outcomes	Comments
For assessable development		
Community infrastructure		
<p>PO6 Community infrastructure is not located in a bushfire hazard area or is able to function effectively during and immediately after a bushfire event.</p>	<p>A06 Community infrastructure is: (a) not located in a Bushfire hazard area identified on Bushfire hazard overlay map—OM—03.00; or (b) located to ensure that: (i) the core services provided by the community infrastructure is able to function effectively during bushfire events; (ii) access to the community infrastructure is not compromised by bushfire events; (iii) the safe storage of valuable records, public records and items of cultural or historic significance is able to be maintained during a bushfire event.</p>	<p>The proposed development does not afford for the creation of community infrastructure, thus it is had that Performance Outcome PO6 is not applicable in this instance.</p> <p>Performance Outcome PO6 is not applicable to this application.</p>
Hazardous materials		
<p>PO7 Public safety and the environment are not adversely affected by the adverse impacts of bushfire on hazardous materials including fuels, explosives and flammable chemicals manufactured or stored in bulk on premises.</p>	<p>A07 Hazardous materials: (a) storage is in compliance with AS1940—The storage and handling of flammable and combustible liquids; (b) manufacturing does not occur in a Bushfire hazard area on Bushfire hazard overlay map—OM—03.00.</p>	<p>The Applicant submits that the proposed development does not afford for hazardous materials including fuels, explosives and flammable chemicals to be manufactured and or stored in bulk upon the subject lands.</p> <p>Council is referred to the Operational Management Plan prepared in respect of the Development Application.</p> <p>Performance Outcome PO7 is achieved.</p>

Table 8.2.3.3.2–Water storage for fire fighting

Column 1 Lot size / use type	Column 2 Water requirement
For each residential lot:	
(a) less than 1,000m ²	5,000 litres
(b) between 1,000m ² and less than 1 hectare	10,000 litres
(c) greater than 1 hectare	20,000 litres
Multiple dwelling	5,000 litres per dwelling up to a maximum of 20,000 litres
A use other than Multiple dwelling	5,000 litres or the prevailing rural fire brigade standard

Appendix D – Photographic Record

Photographic Record of Site Inspection

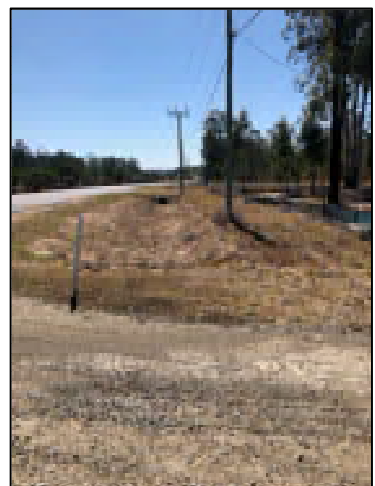
4586-4600 Mount Lindesay Highway, NORTH MACLEAN



Property Frontage looking South



Access Driveway leading into the Property



Property Frontage looking North



Vegetation along the common boundary with the property to the North



Vegetation along the common boundary with the property to the North



Vegetation about the existing Shed



Vegetation to the Northern Boundary (Since Slashed / Brushcut both sides of the common boundary)



Vegetation to Eastern Boundary



Vegetation to Eastern Boundary



Vegetation to Southern Boundary



Vegetation to Southern Boundary



Vegetation beneath transmission Lines passing through the property



Vegetation beneath transmission Lines passing through the property