

SHIRE OF DERBY / WEST KIMBERLEY
LOCAL INTERIM DEVELOPMENT ORDER NO.9



NOTICE OF PUBLIC ADVERTISEMENT OF A PLANNING PROPOSAL

Planning and Development Act 2005
Shire of Derby / West Kimberley

The local government has received a development application to use and/or develop land for the following purpose and public comments are invited.

Property Address: Lot 277 Great Northern Highway, St George Ranges

Proposal: 'Workforce Accommodation' and 'Tourist Development' comprising a number of new transportable buildings with 41 rooms to accommodate workers and tourists including various associated improvements including amenity and service buildings, on-site vehicle access and parking, and stormwater drainage infrastructure.

Details of the proposal are attached including various supporting documentation and plans.

Comments on the proposal are now invited and can be emailed to sdwk@sdwk.wa.gov.au or posted to the Shire's Chief Executive Officer at PO Box 94 DERBY WA 6728 by no later than **Friday 29 September 2023**.

All submissions must include the following information:

- Your name, address and contact telephone number;
- How your interests are affected; whether as a private citizen, on behalf of a company or other organisation, or as an owner or occupier of property;
- Address of property affected (if applicable); and
- Whether your submission is in support of, or objecting to the proposal and provide any arguments supporting your comments.

All submissions received may be made public at a Council meeting and included in a Council Agenda, which will be available on the Shire's website, unless a submission specifically requests otherwise.

Amanda Dexter
Chief Executive Officer
Shire of Derby / West Kimberley

6 September 2023

WESTERN



AUSTRALIA

REGISTER NUMBER 277/DP188285	
DUPLICATE EDITION 3	DATE DUPLICATE ISSUED 2/12/2021

RECORD OF CERTIFICATE OF TITLE
UNDER THE TRANSFER OF LAND ACT 1893

VOLUME 2230 FOLIO 95

The person described in the first schedule is the registered proprietor of an estate in fee simple in the land described below subject to the reservations, conditions and depth limit contained in the original grant (if a grant issued) and to the limitations, interests, encumbrances and notifications shown in the second schedule.

BGRoberts
REGISTRAR OF TITLES



LAND DESCRIPTION:

LOT 277 ON DEPOSITED PLAN 188285

REGISTERED PROPRIETOR:
(FIRST SCHEDULE)

LEEDAL PTY LTD OF 21 FORREST ROAD FITZROY CROSSING WA 6765

(T O925218) REGISTERED 1/11/2021

LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:
(SECOND SCHEDULE)

1. *K406207 NOTIFICATION CONTAINS FACTORS AFFECTING THE WITHIN LAND. LODGED 8/11/2007.

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required.
* Any entries preceded by an asterisk may not appear on the current edition of the duplicate certificate of title.
Lot as described in the land description may be a lot or location.

-----END OF CERTIFICATE OF TITLE-----

STATEMENTS:

The statements set out below are not intended to be nor should they be relied on as substitutes for inspection of the land and the relevant documents or for local government, legal, surveying or other professional advice.

SKETCH OF LAND: 2207-738 (277/DP188285)
PREVIOUS TITLE: 2207-738
PROPERTY STREET ADDRESS: LOT 277 GREAT NORTHERN HWY, ST GEORGE RANGES.
LOCAL GOVERNMENT AUTHORITY: SHIRE OF DERBY-WEST KIMBERLEY

FORM N1

WESTERN AUSTRALIA
TRANSFER OF LAND ACT 1893 AS AMENDED

NOTIFICATION UNDER SECTION 70A

DESCRIPTION OF LAND (Note 1)	EXTENT	VOLUME	FOLIO
LOT 277 ON DEPOSITED PLAN 188285	WHOLE	2230	95

REGISTERED PROPRIETOR (Note 2)

LEEDAL PTY LTD (ACN 009 224 579) of Level 34 – 36 Central Park, 152 – 158 St George's Terrace, Perth
FITZROY LODGE INVESTMENTS PTY LTD (ACN 096 002 194) of 5th Floor, Bonner House, Neptune Street, Woden, Australian
Capital Territory /
MAPIGAN PTY LTD (ACN 008 940 092) of 152 West Coast Terrace, Trigg
As Tenants in Common

LOCAL GOVERNMENT/ PUBLIC AUTHORITY (Note 3)

Water Corporation of 629 Newcastle Street, Leederville WA 6007

FACTOR AFFECTING USE OR ENJOYMENT OF LAND (Note 4)

This land is subject to an agreement that limits the volume of wastewater discharged to sewer and the water supply peak instantaneous flow. The Water Corporation will be entitled to recover additional payments from the owners at that time if the agreed wastewater volume or the water supply peak instantaneous flow is exceeded.

Water Corporation File Reference: 9006987302

Dated this

8

day of

November

20 02

LOCAL GOVERNMENT/PUBLIC AUTHORITY ATTESTATION (Note 5)

For execution refer additional page.

REGISTERED PROPRIETOR/S SIGN HERE (Note 6)

For execution refer additional page.

DEVELOPMENT APPLICATION

SECTION 4 INTERIM DEVELOPMENT CONTROL ORDER No 9

WORKFORCE ACCOMMODATION AND TOURIST DEVELOPMENT

LOT 277 GREAT NORTHERN HIGHWAY, ST GEORGE RANGES

Contact

NAME	Israel Kgosiemang
POSITION	Director
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Version History

Version	Statuses	Date
01	Original	3 August 23
02	Rev 1	21 August 23

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APPENDIX H - ASIC Company Search **APPENDIX I** - Document Notification under Section 70A K406207

1.0 Preliminary

1.1 Introduction Summary

One Planning Consult has been engaged by the proponent to seek development consent for the purpose of constructing buildings and ancillary facilities for use as workforce accommodation and tourist development pursuant to Section 4 of the Shire of Derby/West Kimberley Local Interim Development Order No.9. The subject site is Lot 277 Great Northern Highway, ST GEORGE RANGES 6728. It is noted that all proposed buildings are brand new structures. The site is 199,988m² in area and located at the corner of Great Northern Highway and Yurabi Road. The existing development over the site is known as Fitzroy River Lodge comprising caravan park, campground, and motel suits.

The proposed development takes into consideration the following planning instruments:

- Draft Shire of Derby West Kimberley Local Planning Scheme No 9
- The Shire of Derby West Kimberley Local Interim Development Control No 9.

The land is zoned Tourism with the following objectives of the land zoning:

- To promote and provide tourism opportunities.
- To provide for a variety of holiday accommodation styles and associated uses, including retail and service facilities where those facilities are provided in support of the tourist accommodation and are of an appropriate scale where they will not impact detrimentally on the surrounding or wider area.
- To allow limited residential uses where appropriate.
- To encourage the location of tourist facilities so that they may benefit from existing road services, physical service infrastructure, other tourist attractions, natural features and urban facilities.

The proposed uses are defined under subclause 6.2 (Land use terms used) of the Scheme as follows:

Workforce accommodation means premises, which may include modular or relocatable buildings, used -

- (a) primarily for the accommodation of workers engaged in construction, resource, agricultural or other industries on a temporary basis; and
- (b) for any associated catering, sporting and recreation facilities for the occupants and authorized visitors.

Tourist Development, means a building, or a group of buildings forming a complex, other than a bed and breakfast, a caravan park or holiday accommodation, used to provide -

- (a) short-term accommodation for guests; and

- (b) onsite facilities for the use of guests; and
- (c) facilities for the management of the development.

In accordance with clause 3.3 (Interpreting Zoning Table) of the Scheme, the symbol used in the zoning table for:

- Workforce accommodation is “A” meaning the use is not permitted unless the local government has exercised its discretion by granting development approval after giving notice in accordance with clause 64 of the deemed provisions.
- Tourist development is “P” meaning that the use is permitted if it complies with all relevant development standards and requirements of the Scheme.

The drawings associated with the proposed development are provided at **APPENDIX A**.

1.2 Landowner(s)

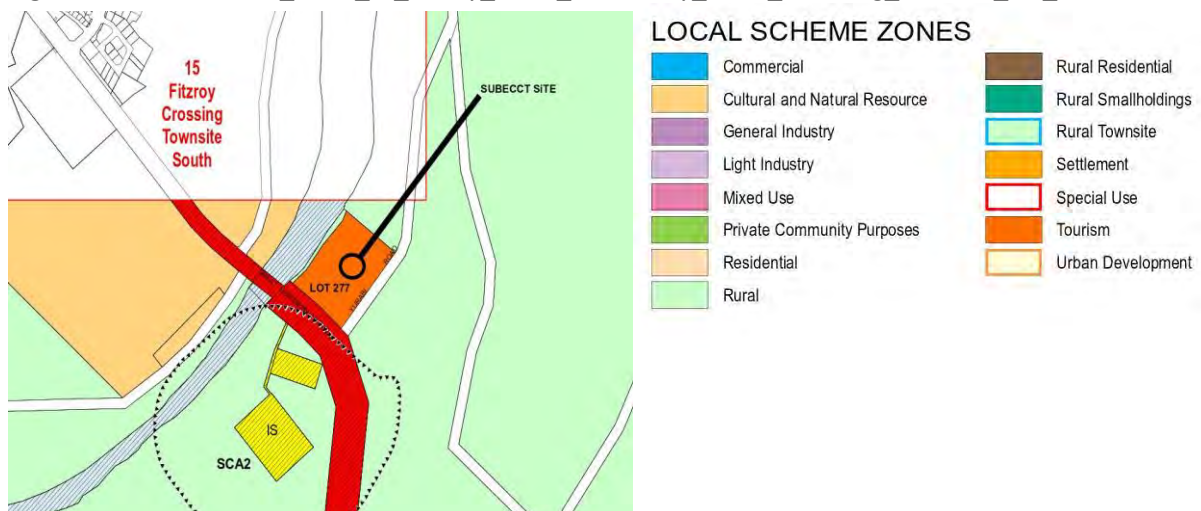
Refer to Search Certificate at **APPENDIX B** obtained at the time of preparing this application report.

1.3 Nature of the Application

Pursuant to section 4 of the Shire of Derby/West Kimberley Local Interim Development Order No.9, the application seeks planning approval for the purpose of adding new buildings to an existing tourist development for use as workforce accommodation and tourist development. The proposed land uses occur over land zoned Tourism and therefore require planning consideration under Table 3 (Zoning Table) of the Draft Shire of Derby West Kimberley Local Planning Scheme No 9 referred to as the **Scheme** throughout this report.

The Scheme defines the uses and types of development to be permitted on land within the Scheme Area. Lot 277 is identified as Tourism as per Figure 1 below (zoning map).

Figure 1: Extract- Draft_Shire_of_Derby_West_Kimberley_Local_Planning_Scheme_No_9



1.4 Parking arrangements and Layout

Schedule 1 (Parking Requirements) does not list tourist development and workforce accommodation to prescribe the car parking ratio for these land uses. A land use with similar nature of operation to proposed uses under the Scheme is “motel”. It is therefore reasonable to apply the parking requirements applicable to motel for the proposed uses.

Motel requires 1 bay for every bedroom plus 1 bay for every 25m² gross floor area of service building.

Table 1 - Parking Requirements, proposed development

PROPOSED DEVELOPMENT		
Use	Net floor area (m ²)	Parking generated
Rooms (tourist development and workforce accommodation)	41 rooms	41
Service buildings (Dining facility and laundry)	198	7.92
Total Required		48.92 (49)

The proposed development provides 51 car parks on site. The proposal provides one car parking space in ten for garden use and tree planting for visual relief in accordance with schedule 3 subclause 5 (f) of the Scheme. The car parking layout meet the minimum dimensions required under Schedule 1 (Car parking requirements). Further discussion on the car parking requirements is noted at General Development Standards and Requirements (Schedule 3), Section 5 of the report below.

2.0 Proposal

The proposed development entails the following:

- 41 rooms
- Gym room
- Laundry facility
- Recreation room
- Dining facility
- 51 car parks

The proposed uses are workforce accommodation and tourist development. The buildings will be predominantly used for workforce accommodation however it is likely that tourism development will

form part of on-going use of the buildings when required on a site developed for tourist accommodation. The drawings associated with development application are provided at **APPENDIX A** attached.

3.0 Site and Locational Attributes

3.1 Land Description

The subject site is Lot 277 Great Northern Highway, ST GEORGE RANGES 6728. The site is 199,988m² in area and located at the corner of Great Northern Highway and Yurabi Road. The site is located along the eastern part of Fitzroy River and close to Fitzroy River Bridge. The land has natural slopes of 1m to 2m across site. Due to its proximity to Fitzroy River, the land is affected by flooding during major events with the following flood levels expected:

1 in 10 AEP 109.2 m AHD

1 in 100 AEP 110.35 m AHD.

The site has a steady slope across the site as noted on the survey plan at **APPENDIX D**. The RLs for the site are 108.5 m AHD to 110 m AHD across site with length and width of approximately 600m and 350m respectively. The proposed development is located between the RLs of 108.5 m AHD and 108.5m AHD. The survey plan denotes the new and existing utilities on site including the swale drain towards northern part of the site for collection of stormwaters.

3.2 Locational Attributes

The site takes frontage to Great Northern Highway and Yurabi Road with vehicular access from both Streets. It is a strategic corner lot located across the river from the built-up area of Fitzroy. The proposed additions to an existing tourist facility provides an increased level of amenity and accommodation options for visitors to the region. The site provides visitors' accommodation hub and base for exploration of the nearby Devonian National Parks – Tunnel Creek, Windjana Gorge and Geikie Gorge.

The site is located close to the following land zones:

To the **west** and across Fitzroy River is land zoned Cultural and Natural Resource

To the **north** is land zoned Rural under the Scheme

To the **east** and across Yurabi Road is land zoned Rural under the Scheme

To the **south** and across Great Northern Highway is land zoned Rural under the Scheme

4.0 Shire of Derby/West Kimberley Local Planning Strategy

The local planning strategy is primarily an outcomes-based document that sets out the long-term planning direction for a municipality; applies State and regional planning policies; and provides a rationale for zoning and other provisions of the statutory Local Planning Scheme. The Scheme is generally aligned with the outcomes of the strategy as it identifies zoning of land within the gazetted area/boundary of the Scheme. A local planning strategy provides the relevant background and guidance for decision-making in relation to subdivision, development and zoning matters under the Local Planning Scheme.

The subject site is zoned Tourism under the Scheme. Tourism is one of the key planning issues that need to be addressed through the local planning strategy. The tourism sector is an important and growing part of the Shire's economy and community. Through the process on introducing the new Scheme balance between environmental and social impacts were considered as part of better planning and management by designating the subject site as tourist hub.

5.0 Draft Shire of Derby West Kimberley Local Planning Scheme No 9 General Development Standards and Requirements (Schedule 3)

5.1 Site with frontage to more than one street, Clause 2

(a) Where a development site has frontage to more than one street (except in the 'Residential' zone or 'Urban Development' zone with an adopted Structure Plan), the local government may: –

(i) *Designate one of the streets to be a primary street for the purpose of determining front setbacks;*

It is evident from existing access arrangement to existing development that Great Northern Highway is designated as the primary street. The proposed development will utilize an existing access from Yurabii Road.

(ii) *Require that the specified front setbacks shall apply to each road;*

There are no setback requirements noted under Schedule 4 for tourism development. None the less the proposed buildings are located more than 3m from nominated secondary street boundary.

(iii) *Permit the setback on a secondary street to be reduced to half of the specified front setback or averaged unless the site is adjacent to a State Highway, Limited Access Road, Primary Distributor Road of Local Distributor Road unless other more specific provisions in the Scheme apply; or*

The setback requirements for buildings on land zoned Tourism are not specified under Schedule 4 of the Scheme. Nonetheless the proposed buildings are located more than 3m from the nominated secondary street boundary.

- (iv) *Refuse vehicular access to one of the roads.*

There are no proposed changes to existing access arrangements to the site.

5.2 Setback Requirements, Clause 3

- (a) *Schedule 4 sets out the minimum setback requirements for land in zones within the Scheme which may be supplemented by the local government's specific requirements.*

There is no setback requirement for development over land zoned Tourism under the table to this clause.

- (b) *The local government in determining applications for any development may require such development to comply generally with the minimum setbacks required for the zone as required in Schedule 4 to ensure that the scale, nature, design, general appearance and impact of such uses is compatible with the objectives of the zone in which the development is proposed and the general purposes and aims of the Scheme.*

There is no setback requirement for development over land zoned Tourism under the table to this clause. It is however noted that development is adequately setback from respective lot boundaries.

- (c) *The site and development requirements for development within zones not referred to in Schedule 4 shall be in accordance with the local government's specific requirements in each particular case.*

There are no additional requirements that apply to this Scheme.

5.3 Car parking requirements, Clause 5

- (a) *The minimum number and dimensions of car parking spaces to be provided on a residential lot shall be in accordance with the provisions of the R-Codes.*

Not applicable for the proposed development.

- (b) *Car parking bay dimensions for other uses shall be in accordance with Schedule 1. If a use is not listed in Schedule 1 then Car parking bay dimensions shall be in accordance with Australian Standard AS2890.1.*

The proposed car parks are 5m x 2.5m perpendicular (90°) bays served by a 6m wide driveway.

- (c) *A person shall not develop or use any land or erect, use or adopt any building unless car parking spaces specified by the local government are provided and such spaces are constructed and maintained in accordance with the Scheme.*

The proposed development provides 51 car parks on site as noted and discussed above.

- (d) *The car parking spaces required under the provisions of the Scheme shall measure not less than the dimensions specified by Schedule 1.*

The proposed car parks meet the minimum dimensions specified by Schedule 1.

- (e) *All areas utilised for vehicle parking, manoeuvring, access, egress and storage are to be sealed, marked and formalised as per Australian Standard 2890.1-2004 as amended.*

The proposed car parking facility is constructed with compacted road base material for permeable parking surface which facilitates onsite drainage and infiltration to minimise risk of flooding from pooling water in an area prone to flooding.

- (f) *Where the maximum dimension of any open car parking area exceeds twenty metres in length or width, one car parking space in ten shall be used for garden and tree planting to provide visual relief and so long as the garden and tree planting areas shall be maintained in good order, those car parking spaces shall be included in calculations as car parking and not as landscaping.*

The proposal incorporates one car parking space in ten to be used for garden and tree planting to provide visual relief when viewed within the development site and the street.

- (g) *Where the owner can demonstrate to the satisfaction of the local government that there is not the demand for the number of parking spaces specified in subclauses (a) and (b), landscaping may be provided in lieu of car parking spaces not constructed and the said landscaping shall be included in the calculations as car parking but not as landscaping provided that the local government may from time to time require that the additional parking spaces be provided.*

The proposal provides 51 (49 required) car parking spaces on site in accordance with Schedule 1 for motel type land use as discussed above.

- (h) *All areas utilised for storage in the General Industry zone may be constructed to a suitable unsealed standard that permits all-weather access by two-wheel drive vehicles and that does not result in gravel, sand or other forms of earth leaving the site.*

Not applicable to this proposal.

- (i) *In the 'Commercial' zone and 'Mixed Use' zone where a developer can satisfy the local government that the maximum car parking requirement cannot be provided on the site the local government may accept a cash payment in lieu of the provision of car parking spaces but subject to the requirements of this clause*

Not applicable to this proposal.

- (j) *Where public off street parking facilities are located or are proposed to be located in the near vicinity of land or building being the subject of an application for development approval the local government may approve such application notwithstanding that the required number of car parking spaces are not to be provided on site subject to:*

The proposal provides adequate car parking spaces on site.

- (k) *Where the number of car parking spaces proposed to be provided on land or in a building the subject of an application for development approval is less than the number required to be provided pursuant to the Scheme, the local government may approve the application if it can be demonstrated that off street parking facilities in the near vicinity are available to cater for*

the requirements of the proposal and that arrangements to the satisfaction of the local government have been made to enable those facilities to be used for that purpose.

The proposal provides adequate car parking spaces on site.

- (l) *The owner or occupier of premises on which car parking spaces are provided shall ensure that the parking area is landscaped with shade trees, the car parking is laid out, drained and maintained in accordance with the approved plans relating thereto.*

The proposed car parking facility incorporate appropriate landscaping island with shade tree for relief and constructed with permeable surface to promote drainage on site. The car parking will be maintained in accordance with the approved plans forming part of the permit issued.

5.4 Development of Land Subject to Dampness or Flooding, Clause 6

- (a) *Where, in the opinion of the local government, the dampness of the site on which a building is proposed to be constructed so warrants the local government may require that one or all of the following measures shall be carried out:*
- (i) *the subsoil shall be effectively drained;*
- (ii) *the surface of the ground beneath the building shall be regraded or filled and provided with adequate outlets to prevent any accumulation of water beneath the building;*
- (iii) *the surface of the ground beneath the building shall be covered with an approved damp-resisting material.*

The site is already developed with similar type land use to the proposed additional development. The proposal will be served by an existing on-site effluent disposal system and therefore general soil capability is already proven for the site.

- (b) *A building shall not be constructed upon any land defined by the local government as being liable to flooding or inundation.*

The Fitzroy River Fitzroy Crossing Townsite Floodplain Management Strategy (2003) shows that the entire Lot is affected by flooding during major events with the following flood levels expected:

1 in 10 AEP	109.2 m AHD
1 in 100 AEP	110.35 m AHD.

The Department of Water and Environmental Regulation (DWER) has provided its comment (**APPENDIX E**) to confirm the suitability of the development proposal and the minimum required finished floor level above the highest known flood level.

The proposed buildings are located between the 108.5 m AHD to 108.5 m AHD on the land. The proposed development is raised 3m above ground. A minimum habitable floor level of 1.0 metre above the relevant 1 in 100 AEP flood level (ie 111.35 m AHD) is recommended to ensure adequate

flood protection. The development proposes 111.5 m AHD for the habitable floor level which is 1.15m above the relevant 1 in 100 AEP flood level (110.35 m AHD).

5.5 Effluent Disposal, Clause 7

Where access to a reticulated sewerage disposal system is demonstrated to not be available, on-site effluent disposal facilities are to be provided to treat and dispose of any effluent generated on the site in accordance with the Government Sewerage Policy 2019.

The proposed development will be connected to the existing *reticulated sewerage disposal system* currently serving development on site.

5.6 Building Height, Clause 8

(a) *The height limit of any building that is not industrial in nature or in the Residential, Commercial or Mixed Use zones shall be limited to 9 metres.*

The maximum height of proposed buildings is approximately 6m.

(b) *The height limit of any building that is industrial in nature shall be limited to 15 metres.*

Not applicable to this proposal.

(c) *The height limit of any building that is in the Commercial or Mixed Use zones shall only be limited by plot ratio.*

(d) *The height limit in subclauses (a), (b) or (c) shall not be exceeded unless considered in accordance with clause 64 of the deemed provisions.*

The proposed development does not exceed the height limit in subclauses (a), (b) or (c).

5.7 Tourist Facilities, Clause 16

(16) *Tourist Facilities*

(a) *In this clause the tourist facilities refers to the following uses defined in this Scheme:*

- *Caravan park*
- *Holiday accommodation*
- *Holiday house*
- *Hotel*
- *Motel*
- *Park home park*

- *Serviced apartment*
- *Tourist development*

The proposed development will be predominantly used as a workforce accommodation. It is noted that the buildings will also be used as tourist development when required. The overall site has a range of existing tourist land uses comprising motel, caravan park and holiday accommodation.

- (b) *The local government may approve tourist facilities in accordance with the zoning table but only where the development, in the opinion of the local government:*
- (i) *does not adversely affect the amenity of the area;*
 - (ii) *has no significant environmental impact;*
 - (iii) *complies with all other Scheme requirements and any relevant local government policy; and*
 - (iv) *has been advertised for public comment in conformity with the advertising requirements specified in clause 64 of the deemed provisions and no significant objections have been received during the advertising period.*

The proposed development is unlikely to have an adverse effect on the amenity of the area as it is only an addition of a similar type of use to existing tourist development on the subject site. The site is uniquely located away from the built-up area of Fitzroy suburb. The development is consistent with the zoning of the land and does detract from the aim of the Scheme which is to define the uses and types of development to be permitted on land within the Scheme Area. The proposed uses will provide choice and an increased level of amenity for visitors.

The proposed development is considered to be consistent with the public's expectation of the land use in the area. The buildings are adequately setback from all boundaries.

5.8 Amenity, Clause 21

- (a) *No building shall be so constructed, finished or left unfinished that its external appearance would significantly detract from the amenity of the locality or tend to depreciate the value of adjoining property. All land and buildings shall be so used and maintained as to preserve the local amenity.*

The proposed will be completed and appropriately maintained to preserve the local amenity.

- (b) *No land, building or appliance shall be used in such a manner as to permit the escape therefrom of smoke, dust, fumes, odour, noise, glare, vibration or waste products in such quantity or extent or in such a manner as will create or be a nuisance to any inhabitant, or to traffic or persons using any land or roads in the vicinity.*

The proposed development will be carried out in a manner that limits unreasonable loss amenity to during construction and afterwards.

5.9 Boab Trees, Clause 24

To maintain and enhance the character of the Town of Derby, no person shall remove a Boab Tree from any land within the scheme area without the prior written consent of the local government. For the purpose of this Clause:

- (a) *the consent of local government shall not be unreasonably withheld and shall be issued where the tree is dead, dying or dangerous;*
- (b) *it shall be sufficient defence to show that a tree that has been removed was dead, dying or dangerous prior to its removal.*

The proposal does not require the removal of the Boab Trees on site.

6.0 Local Interim Development Control No 9

6.1 Application FOR, and grant OF, Approval, Clause 4

- (a) *No person shall carry out any development (other than permitted development as set out in paragraph 6 of this Order) on land within the scope of this Order until he/she has applied for approval from the Local Government and has received the written approval or conditional approval of the Local Government in accordance with the provisions of the Act and this Order.*

The application is seeking planning consent pursuant to this clause.

- (b) *Applications shall be made by or on behalf of the owner of the land and shall be accompanied by three copies of a plan or plans drawn to scale illustrating the proposed development and its location and indicating the type and construction or any building or works proposed.*

One Planning Consult has been engaged by the proponents to lodge a development application for proposed works in accordance with the plans provided at **APPENDIX A**.

- (c) *Applications may be referred by the Local Government to a public authority and/or a utility services provider for recommendations.*

All materials supporting the application are provided as APPENDICES to this application. Government shall be issued to the applicant together with one copy of the plan or plans.

6.2 Matters to be considered by Local Government, Clause 4A

The Local Government in considering an application for approval may have due regard to the following:

- i. *any approved Statement of Planning Policy of the Western Australian Planning Commission;*

This Scheme is to be read in conjunction with any local planning strategy for the Scheme area. The Shire of Derby/West Kimberley Local Planning Strategy enlists the relevant Planning Policies. The subject site is already zoned and developed in accordance with the intended planning outcomes which are noted under the Scheme. The proposed additions enhance maximization of land use outcomes consistent with the zone expectation and applicable policies which form part of development consideration.

ii. *any approved Environment Protection Policy under the Environmental Protection Act 1986;*

The development does not require the preparation of any environmental reports or impact statements under the Environmental Protection Act.

iii. *any other adopted or proposed planning policy or strategy that may be applicable to the area;*

The Shire of Derby/West Kimberley Local Planning Strategy is the relevant strategic document applicable to the area. The strategy acknowledges the tourism sector and its importance in growing part of the Shire's economy and community. As noted above, the land is developed in accordance with the zoning and does not detract from intended outcomes of the zoning and strategic plan for the area.

iv. *the conservation of any place on the Heritage List or Character or appearance of a Heritage Area under the Aboriginal Heritage Act 1972 and the Heritage Act 2018;*

The subject site does not appear to be listed on the Heritage List.

v. *any environmental consideration;*

The proposed development seeks to retain most of existing vegetation and minimize hard concrete surfaces through use of compacted road surface material for car park areas to encourage on site infiltration and absorption of stormwater runoff.

vi. *whether the land to which that application relates is unsuitable for the proposal by reason of it being, or likely to be, subject to flooding, tidal inundation, subsidence, landslip, bush fire or any other risk;*

The Department of Water and Environmental Regulation (DWER) has provided its comment (**APPENDIX E**) to confirm the suitability of the development proposal and the minimum required finished floor level above the highest known flood level.

The Bushfire Attack Level Assessment Report provided at **APPENDICES F1 and F2** provides advice regarding site vegetation management following the BAL assessment for the site. The determined and indicative bushfire attack levels for the site are **BAL-29** and **BAL-12.5**.

vii. *the preservation of amenity of the locality;*

The proposed development seeks to retain most of the existing vegetation, minimize hard surfaces at ground level and provide additional shade trees to the proposed car parking facility in order to preserve the amenity of the locality.

- viii. *the relationship of the proposal to development on adjoining land or on other land in the locality;*

The adjoining property is undeveloped. The subject site is, however, developed in accordance with the zoning of the land under the Scheme.

- ix. *whether the proposed means of access to and egress from the site are adequate and whether adequate provision has been made for the loading, unloading, manoeuvring and parking of vehicles;*

The existing access to and egress from the site are adequate for vehicles to maneuver and exit the site in a forward gear.

- x. *the amount of traffic likely to be generated by the proposal, particularly in relation to the capacity of the road system in the locality and the probable effect on traffic flow and safety;*

The proposed development is unlikely to have adverse impacts on traffic flow and safety in the area.

- xi. *whether adequate provision has been made for the landscaping of the land to which the application relates and whether any trees or other vegetation on the land should be preserved;*

The development proposes additional vegetation around the parking area and minimize removal of trees to accommodate the buildings. The proposal does not require removal of Boab trees.

- xii. *whether the proposal is likely to cause soil erosion or land degradation;*

The proposed development is unlikely to cause soil erosion or land degradation.

- xiii. *provision of adequate services and/or infrastructure;*

The development will be connected to existing utility services.

7.0 BAL Report and Management Plan

The BAL assessment report provided at **APPENDIX F** confirms the bushfire risk rating for the proposed development is above BAL-Low. The outcomes of the assessment raised the need for a bushfire management plan to ensure proper management of bushfire risk as identified in the assessment report.

A Management Plan, **APPENDIX G**, prepared by BPP Group Pty Ltd T/a Bushfire Prone Planning assesses the development's ability to acceptably mitigate bushfire risk through application of required and/or additional bushfire protection measures. The Plan entails the creation of responsibilities to implement and maintain protection measures. An outline of the Landowner/ Occupier Responsibilities (Ongoing Management) is noted at section 6.2 (pg. 39) of the Management Plan. Section 6.3 of the Plan highlights the Local Government Responsibilities (Ongoing Management) to monitor landowner compliance. It is landowner's intention to implement all recommendations contained in the Bushfire Management Plan.

8.0 Conclusion

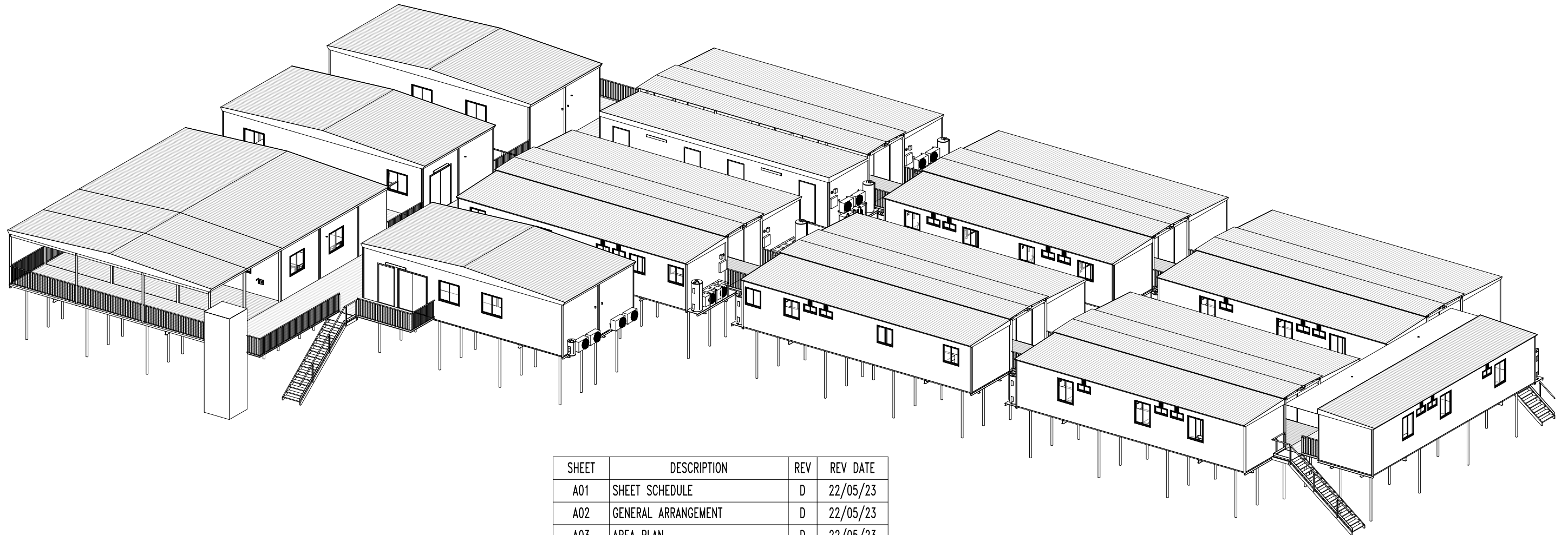
Overall, the development largely meets the intent of land zoning which is to promote tourism opportunities and provide for a variety of holiday accommodation styles and associated uses. The proposal is generally consistent with the requirements of the Scheme and outgoing Interim Development Control No 9.



Israel Kgosiemang
One Planning Consultant

21 August 2023

LEEDAL 50 PERSON FACILITY FITZROY RIVER



SHEET	DESCRIPTION	REV	REV DATE
A01	SHEET SCHEDULE	D	22/05/23
A02	GENERAL ARRANGEMENT	D	22/05/23
A03	AREA PLAN	D	22/05/23
A04	FIRE SYSTEM PLAN	D	22/05/23
A04.1	ACCOMODATION FIRE MODULE	D	22/05/23
A05	4 SINGLE ACCOMODATION	C	8/05/23
A06	3 DOUBLE ACCOMODATION	C	8/05/23
A07	ACCESSIBLE & STANDARD DOUBLE	C	8/05/23
A08	LAUNDRY	B	4/05/23
A09	RECREATION ROOM	B	4/05/23
A10	GYM	B	4/05/23
A11	MESS COMPLEX	B	4/05/23
A11.1	MESS COMPLEX SECTIONS	B	4/05/23
A12	MESS OUTDOOR DINING	B	4/05/23
A12.1	MESS OUTDOOR SECTIONS	B	4/05/23

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REV	DATE	BY	DESCRIPTION
D	22/05/23	NP	ISSUED FOR REVIEW 75%
C	8/05/23	SW	ISSUED FOR REVIEW 50%-1 (DOUBLE ROOMS ADDED)
B	4/05/23	SW	ISSUED FOR REVIEW 50%

GENERAL NOTES:

CUSTOMER APPROVED:

CUSTOMER NAME:

DATE:

DRAWN BY:

SW

CHECKED (PO):

RH

CHECKED (PM):

GW

STAMPER:

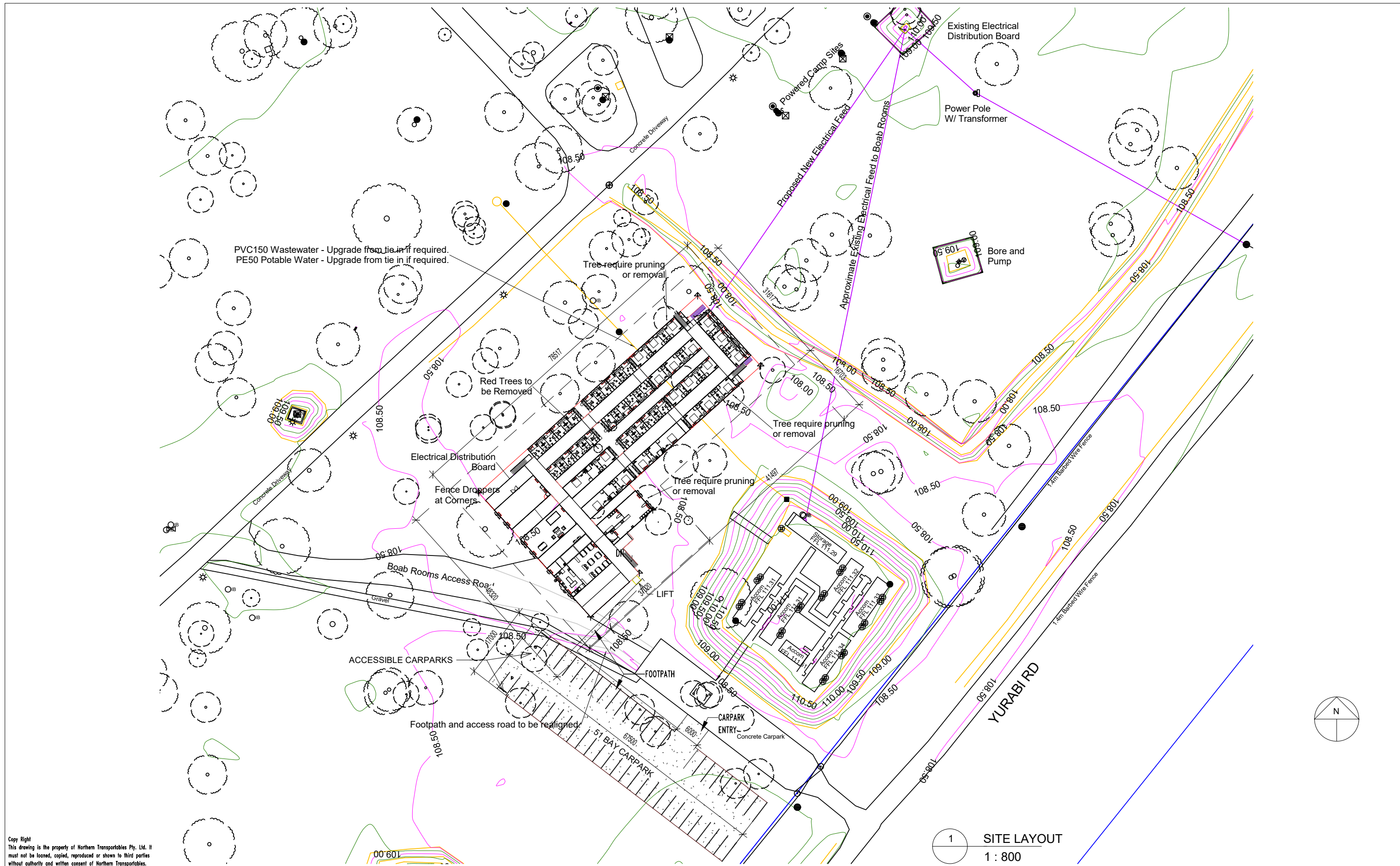
RH



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LEEDAL CAMP		SHEET:	SCALE:	REVISION:
SHEET SCHEDULE		A01		D
DRAWING NUMBER:	NTD21-MMDD1			

22/05/2023 5:10:41 PM



1 SITE LAYOUT
1 : 800

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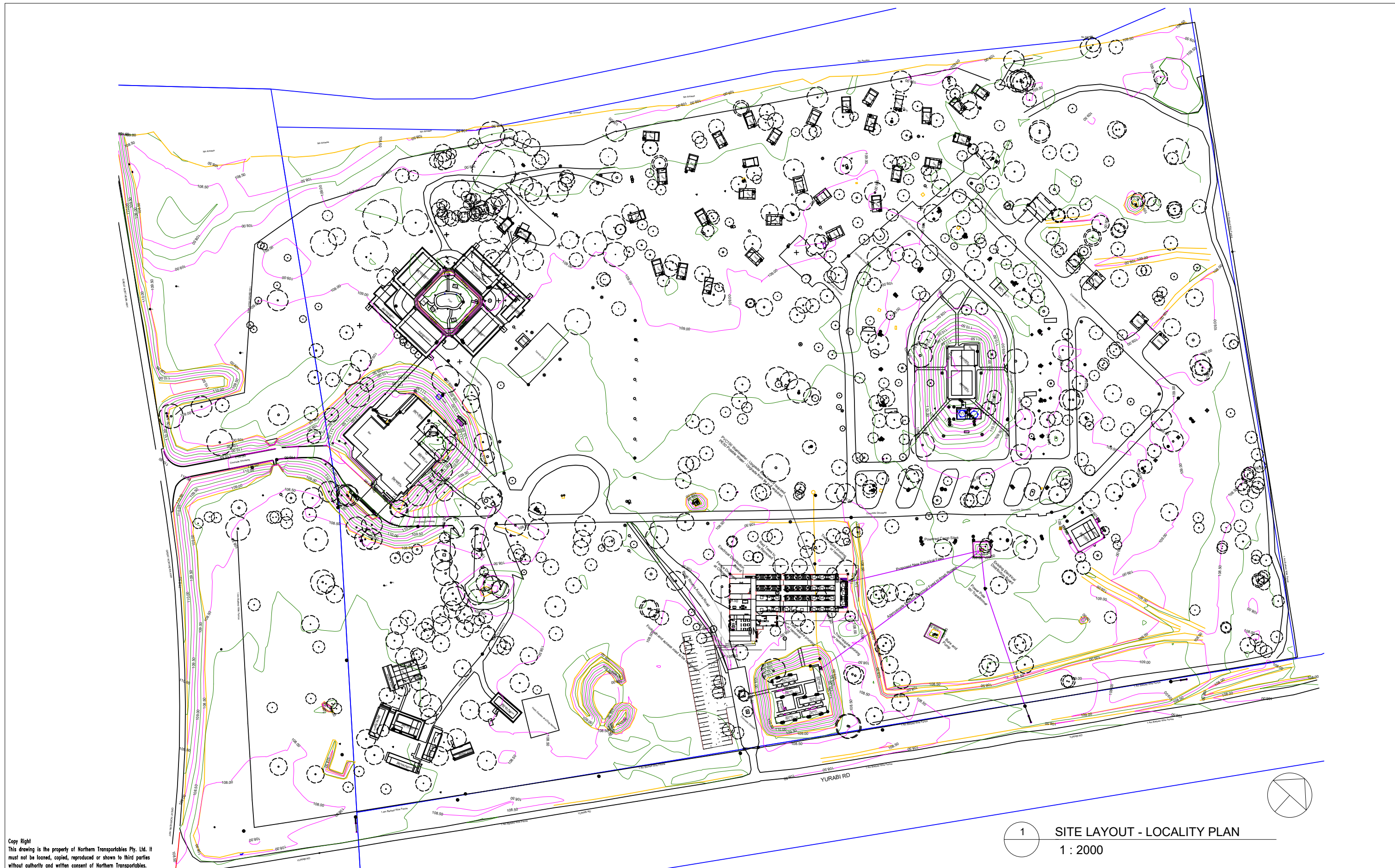
STAMPER:

RH



LEEDAL CAMP		SHEET:	SCALE:	REVISION:
SITE LAYOUT		A18	1 : 800	
DRAWING NUMBER:		NTD21-MMDD1		

25/07/2023 1:36:48 PM



1 SITE LAYOUT - LOCALITY PLAN
1 : 2000

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GENERAL NOTES:

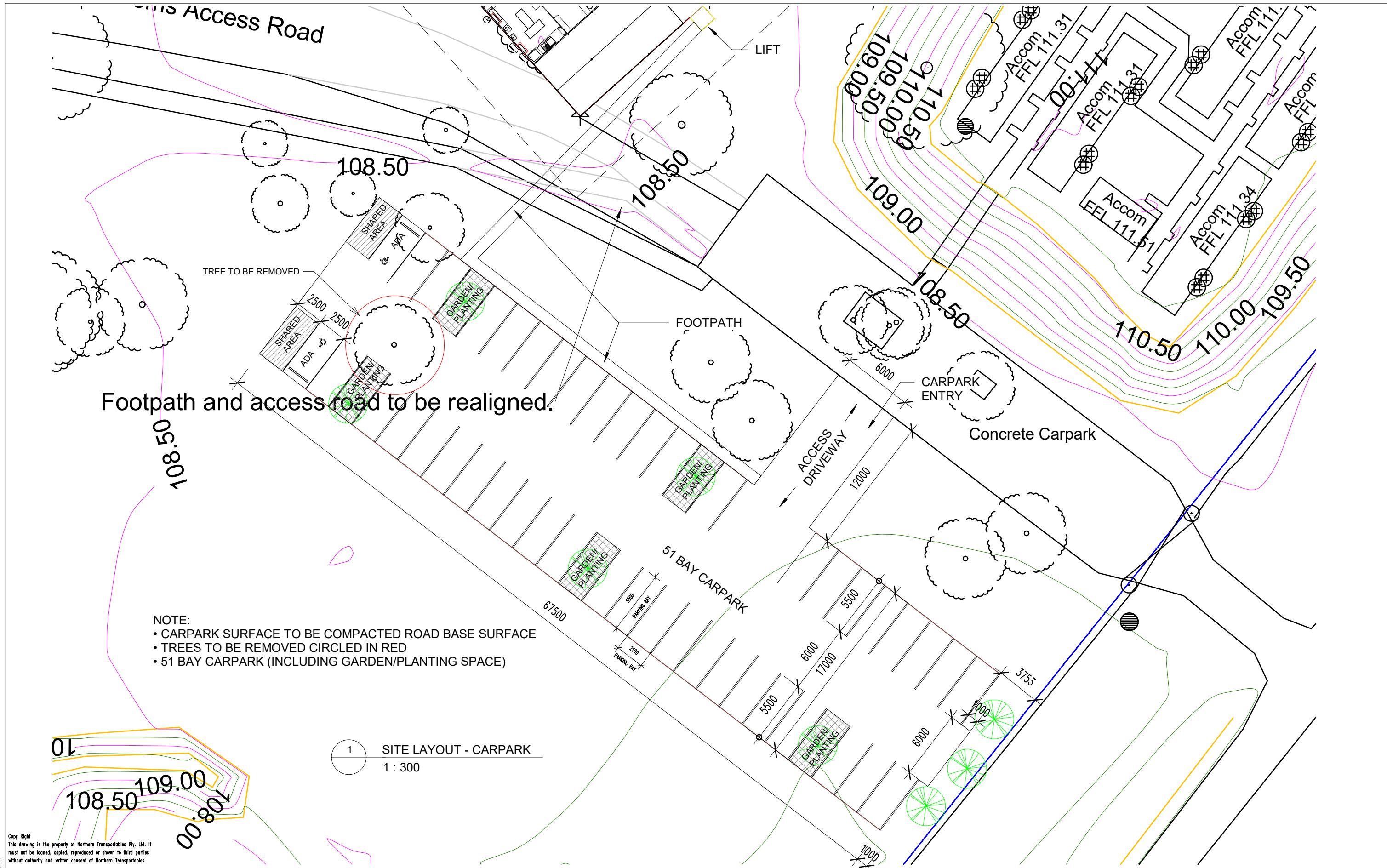
CUSTOMER APPROVED:
CUSTOMER NAME:
DATE:

DRAWN BY:
SW
CHECKED (PO):
RH
CHECKED (PM):
GW
STAMPER:
RH



LEEDAL CAMP
SITE LAYOUT - LOCALITY PLAN
DRAWING NUMBER: NTD21-MMDD1
SHEET: A19
SCALE: 1 : 2000
REVISION:

25/07/2023 1:37:13 PM



Footpath and access road to be realigned.

- NOTE:
- CARPARK SURFACE TO BE COMPACTED ROAD BASE SURFACE
 - TREES TO BE REMOVED CIRCLED IN RED
 - 51 BAY CARPARK (INCLUDING GARDEN/PLANTING SPACE)

1 SITE LAYOUT - CARPARK
1 : 300

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REV	DATE	BY	DESCRIPTION

GENERAL NOTES:

CUSTOMER APPROVED:

CUSTOMER NAME:

DATE:

DRAWN BY:

SW

CHECKED (PM):

GW

CHECKED (PO):

RH

STAMPER:

RH



LEEDAL CAMP

SITE LAYOUT - CARPARK

DRAWING NUMBER: NTD21-MMDD1

SHEET: A20

SCALE: 1 : 300

REVISION:

27/07/2023 12:11:02 PM



1 GENERAL ARRANGEMENT - 50 PERSON
A04.1 1 : 300

22/05/2023 5:11:06 PM

REV	DATE	BY	DESCRIPTION
D	22/05/23	NP	ISSUED FOR REVIEW 75%
C	8/05/23	SW	ISSUED FOR REVIEW 50%-1 (DOUBLE ROOMS ADDED)
B	4/05/23	SW	ISSUED FOR REVIEW 50%
A	15/02/23	SW	ISSUED FOR REVIEW 30%

GENERAL NOTES:

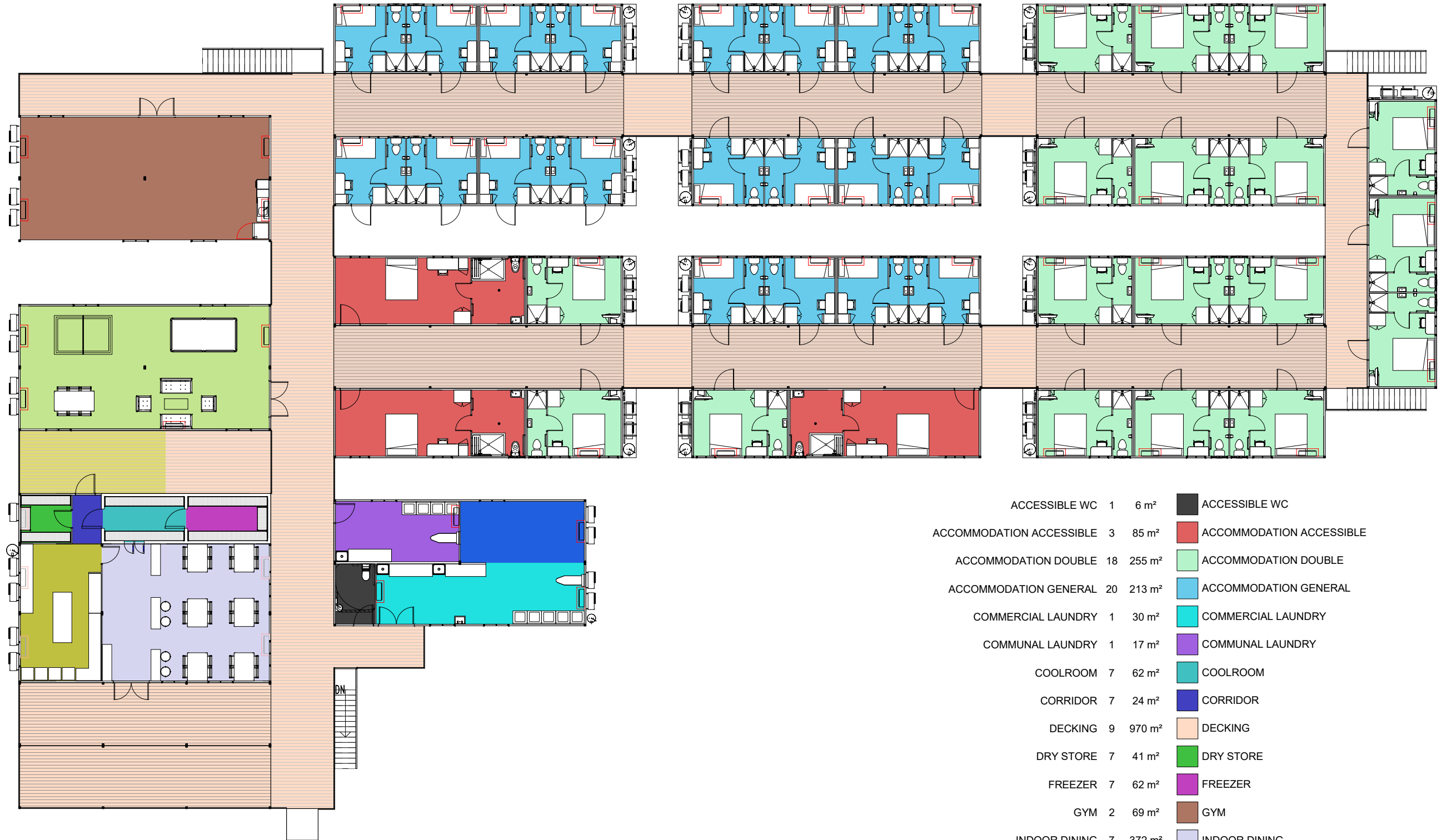
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SW	GW
CHECKED (PO):	STAMPER:
RH	RH



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LEEDAL CAMP	
GENERAL ARRANGEMENT	
DRAWING NUMBER:	NTD21-MMDD1
SHEET:	A02
SCALE:	1 : 300
REVISION:	D



ACCESSIBLE WC	1	6 m ²	ACCESSIBLE WC
ACCOMMODATION ACCESSIBLE	3	85 m ²	ACCOMMODATION ACCESSIBLE
ACCOMMODATION DOUBLE	18	255 m ²	ACCOMMODATION DOUBLE
ACCOMMODATION GENERAL	20	213 m ²	ACCOMMODATION GENERAL
COMMERCIAL LAUNDRY	1	30 m ²	COMMERCIAL LAUNDRY
COMMUNAL LAUNDRY	1	17 m ²	COMMUNAL LAUNDRY
COOLROOM	7	62 m ²	COOLROOM
CORRIDOR	7	24 m ²	CORRIDOR
DECKING	9	970 m ²	DECKING
DRY STORE	7	41 m ²	DRY STORE
FREEZER	7	62 m ²	FREEZER
GYM	2	69 m ²	GYM
INDOOR DINING	7	372 m ²	INDOOR DINING
KITCHEN	7	180 m ²	KITCHEN
LOADING DOCK	1	21 m ²	LOADING DOCK
RECREATION ROOM	1	69 m ²	RECREATION ROOM
STORE ROOM	1	18 m ²	STORE ROOM

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REV	DATE	BY	DESCRIPTION
D	22/05/23	NP	ISSUED FOR REVIEW 75%
C	8/05/23	SW	ISSUED FOR REVIEW 50%-1 (DOUBLE ROOMS ADDED)
B	4/05/23	SW	ISSUED FOR REVIEW 50%
A	15/02/23	SW	ISSUED FOR REVIEW 30%

GENERAL NOTES:
1. BUILDING TO SIT ON 150mm PADS
2. NO VERANDAH AS REGION A4

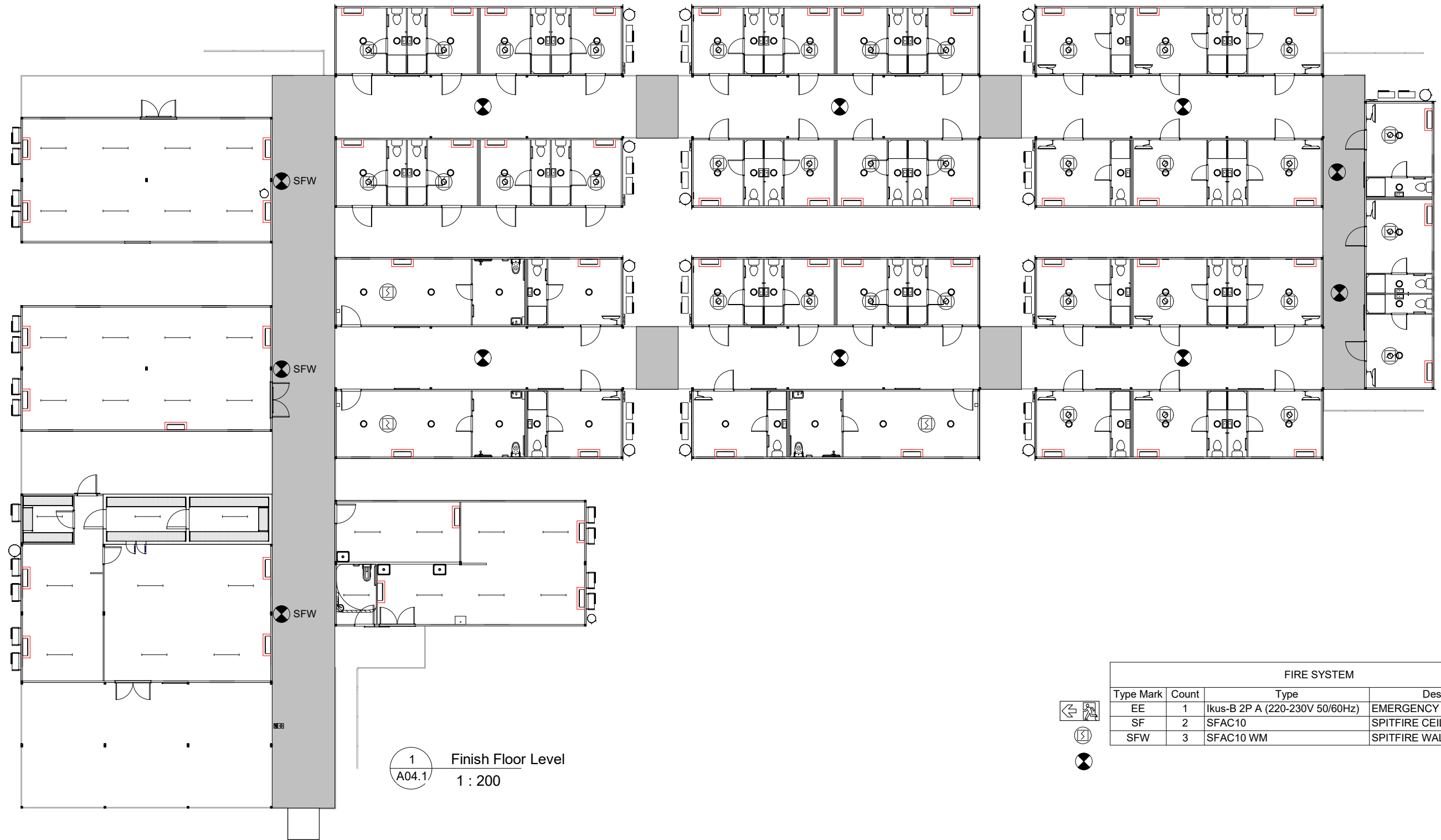
CUSTOMER APPROVED:
CUSTOMER NAME:
DATE:

DRAWN BY:	CHECKED (PM):
SW	GW
CHECKED (PO):	STAMPER:
RH	RH



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LEEDAL CAMP	
AREA PLAN	
DRAWING NUMBER:	NTD21-MMDD1
SHEET:	A03
SCALE:	1 : 200
REVISION:	D



FIRE SYSTEM			
Type Mark	Count	Type	Description
EE	1	Ikus-B 2P A (220-230V 50/60Hz)	EMERGENCY EXIT LIGHTING
SF	2	SFAC10	SPITFIRE CEILING MOUNT
SFW	3	SFAC10 WM	SPITFIRE WALL MOUNT

1
A04.1
Finish Floor Level
1 : 200

22/05/2023 5:11:49 PM

REV	DATE	BY	DESCRIPTION
D	22/05/23	NP	ISSUED FOR REVIEW 75%
C	8/05/23	SW	ISSUED FOR REVIEW 50%-1 (DOUBLE ROOMS ADDED)
B	4/05/23	SW	ISSUED FOR REVIEW 50%

GENERAL NOTES:

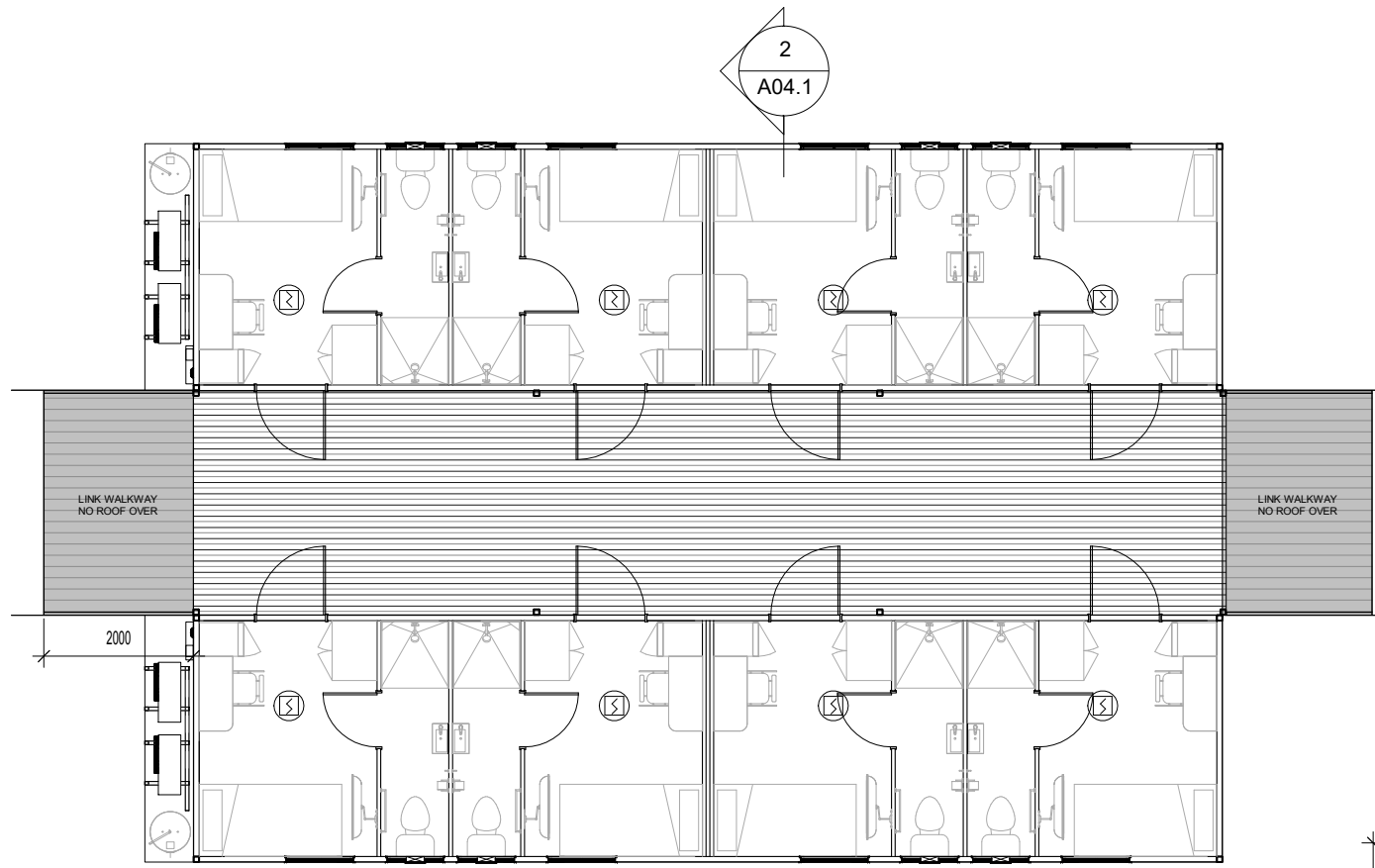
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SW	GW
CHECKED (PO):	STAMPER:
RH	RH

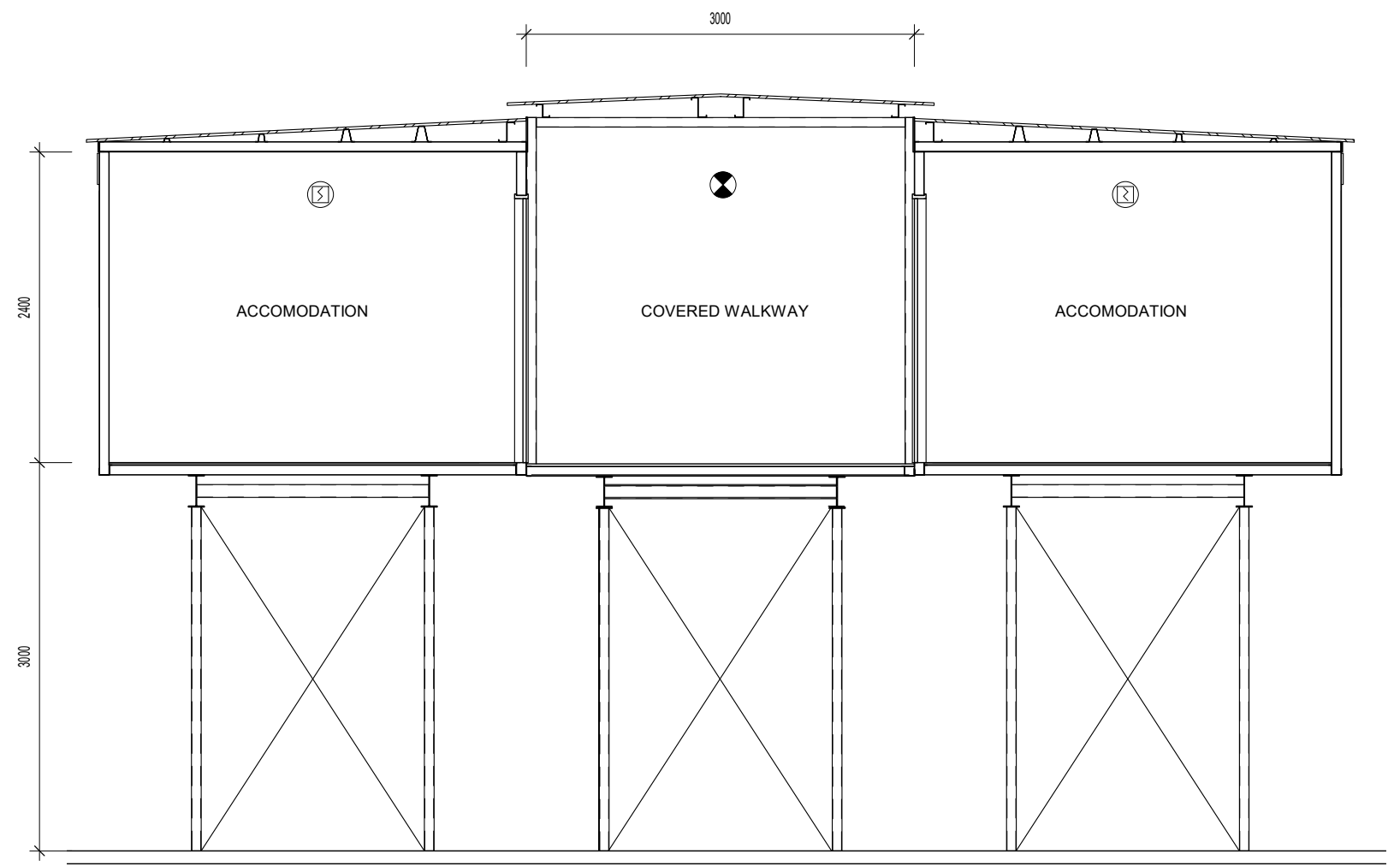


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LEEDAL CAMP		SHEET:	SCALE:	REVISION:
FIRE SYSTEM PLAN		A04	As indicated	D
DRAWING NUMBER:		NTD21-MMDD1		



1 ACCOMMODATION FIRE MODULE
A04.1 1 : 100



2 ACCOM FIRE MODULE SECTION
A04.1 1 : 50

22/05/2023 5:11:54 PM

REV	DATE	BY	DESCRIPTION
D	22/05/23	NP	ISSUED FOR REVIEW 75%
C	8/05/23	SW	ISSUED FOR REVIEW 50%-1 (DOUBLE ROOMS ADDED)
B	4/05/23	SW	ISSUED FOR REVIEW 50%

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SW	GW
CHECKED (PO):	STAMPER:
RH	RH



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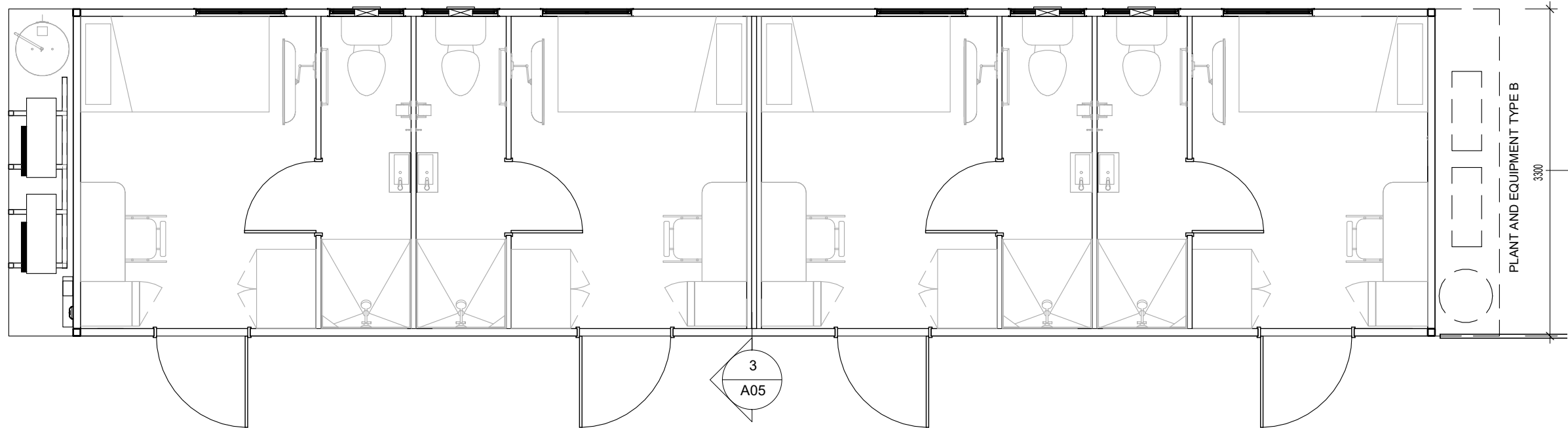
LEEDAL CAMP		
ACCOMMODATION FIRE MODULE		
DRAWING NUMBER:	SHEET:	REVISION:
NTD21-MMDD1	A04.1	D
SCALE:	As indicated	

14400

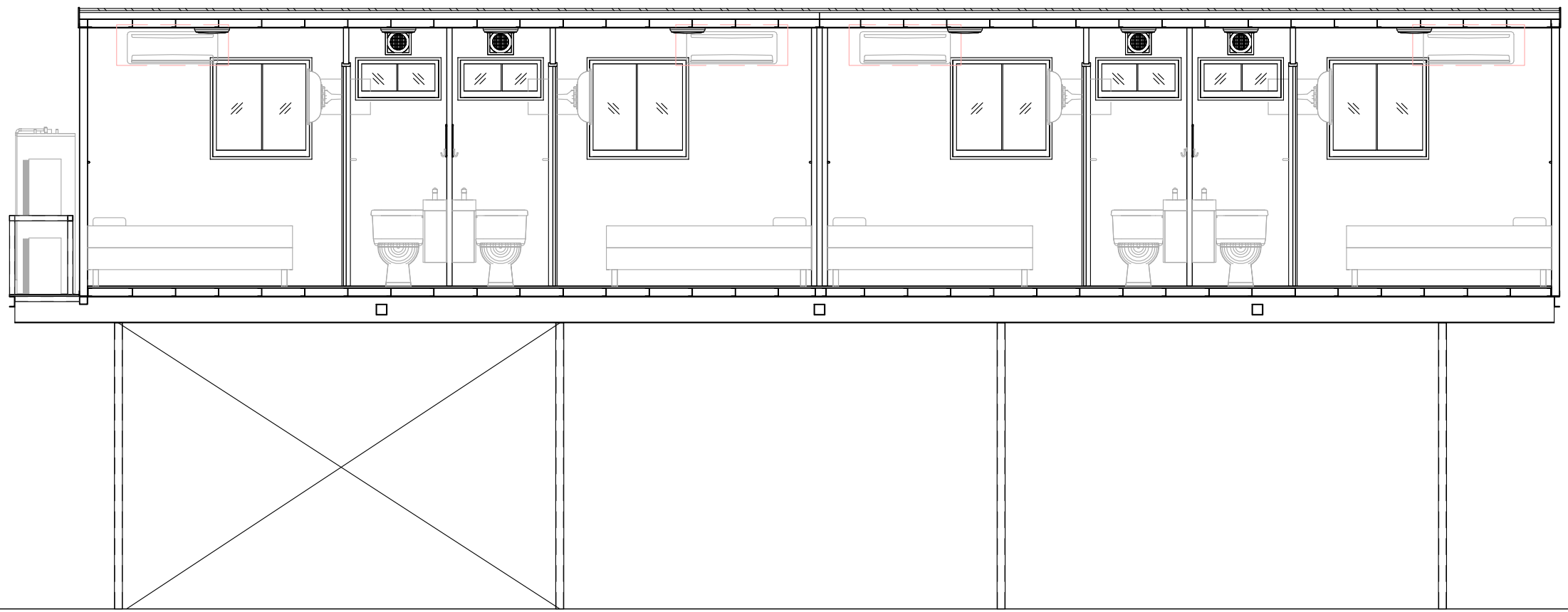
PLANT AND EQUIPMENT TYPE A

PLANT AND EQUIPMENT TYPE B

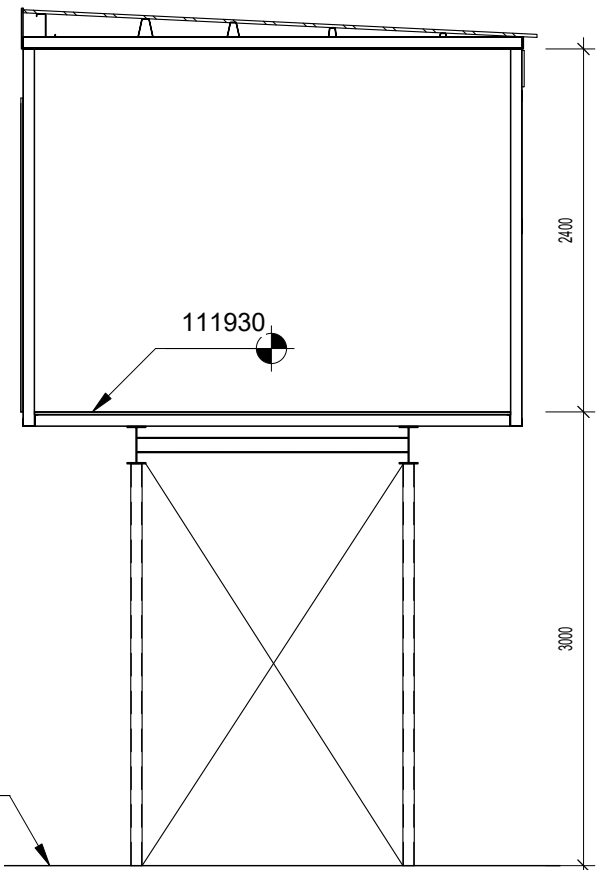
3300



1 4 ACCOMMODATION FLOOR PLAN
A04.1 1 : 50



2 LONGITUDINAL SECTION
A05 1 : 50



3 TRANSVERSE SECTION
A05 1 : 50

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REV	DATE	BY	DESCRIPTION
C	8/05/23	SW	ISSUED FOR REVIEW 50%-1 (DOUBLE ROOMS ADDED)
B	4/05/23	SW	ISSUED FOR REVIEW 50%

GENERAL NOTES:

CUSTOMER APPROVED:

CUSTOMER NAME:

DATE:

DRAWN BY: SW

CHECKED (PM): GW

CHECKED (PO): RH

STAMPER: RH



LEEDAL CAMP

4 SINGLE ACCOMODATION

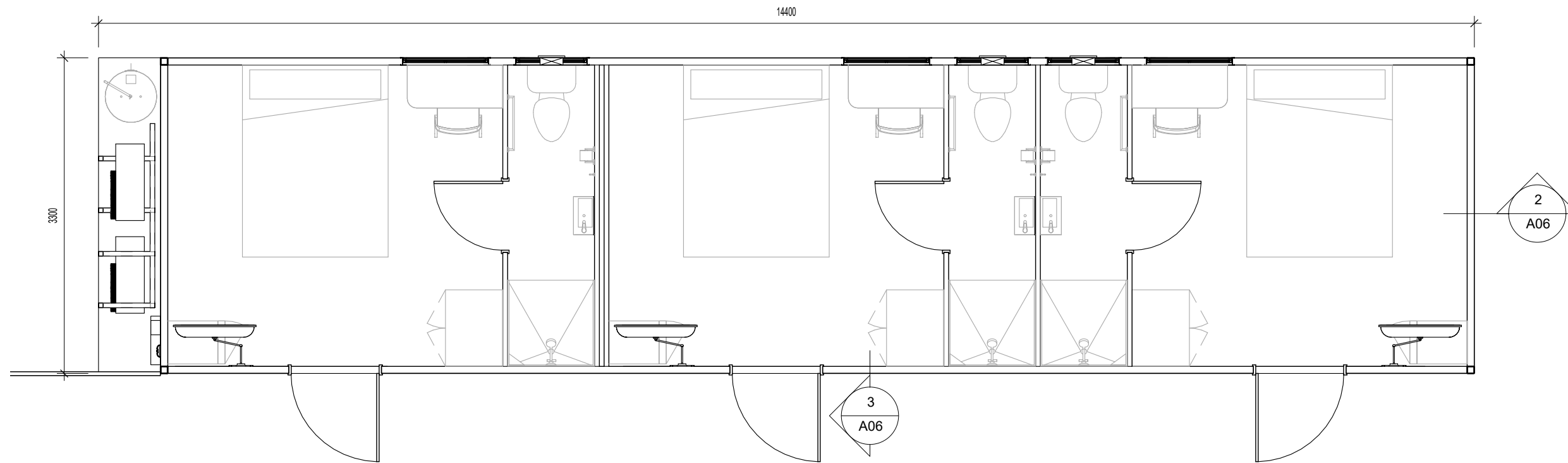
DRAWING NUMBER: NTD21-MMDD1

SHEET: A05

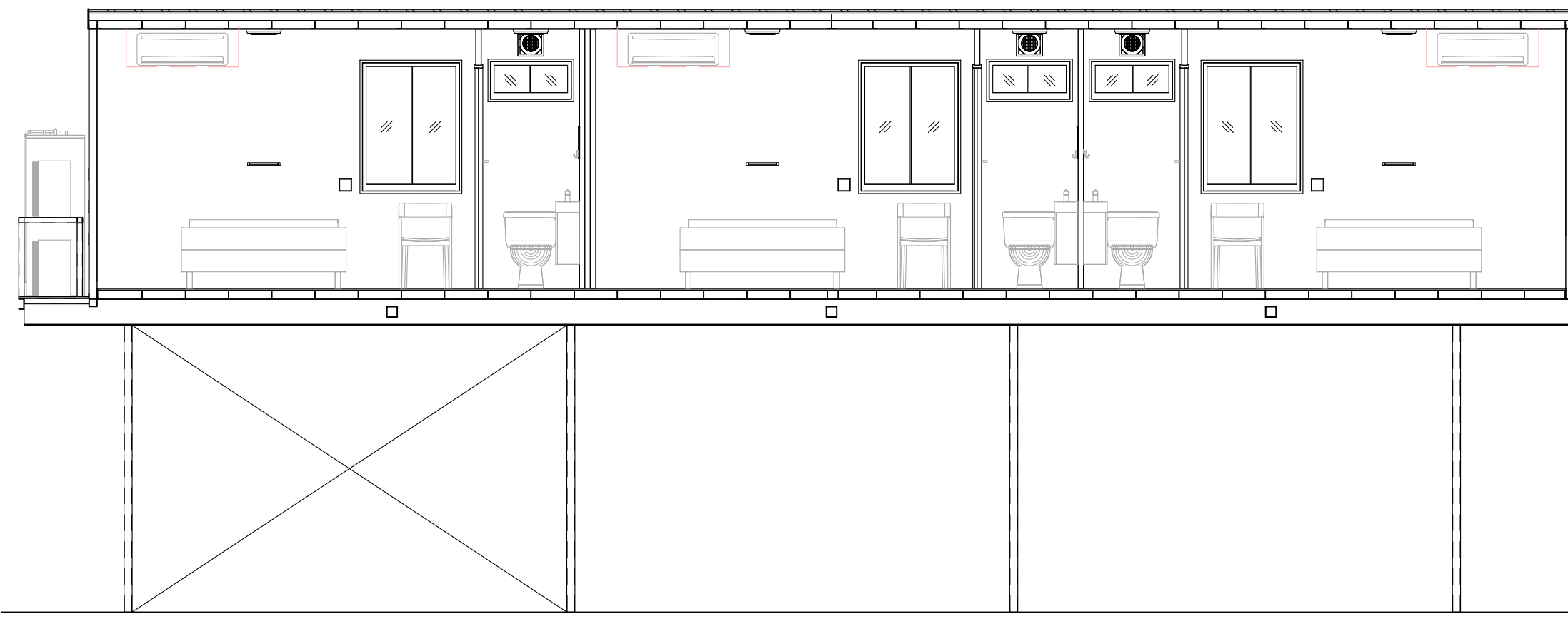
SCALE: 1 : 50

REVISION: C

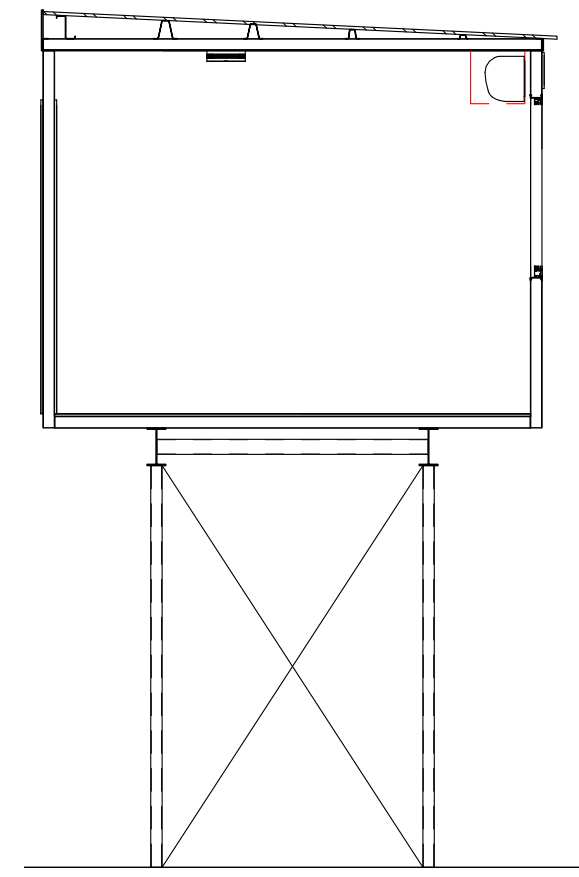
22/05/2023 5:11:59 PM



1 3 DOUBLE ACCOMMODATION FLOOR PLAN
1 : 50



2 DOUBLE ACCOM LONGITUDINAL SECTION
A06 1 : 50



3 DOUBLE ACCOM TRANSVERSE SECTION1
A06 1 : 50

22/05/2023 5:12:03 PM

REV	DATE	BY	DESCRIPTION
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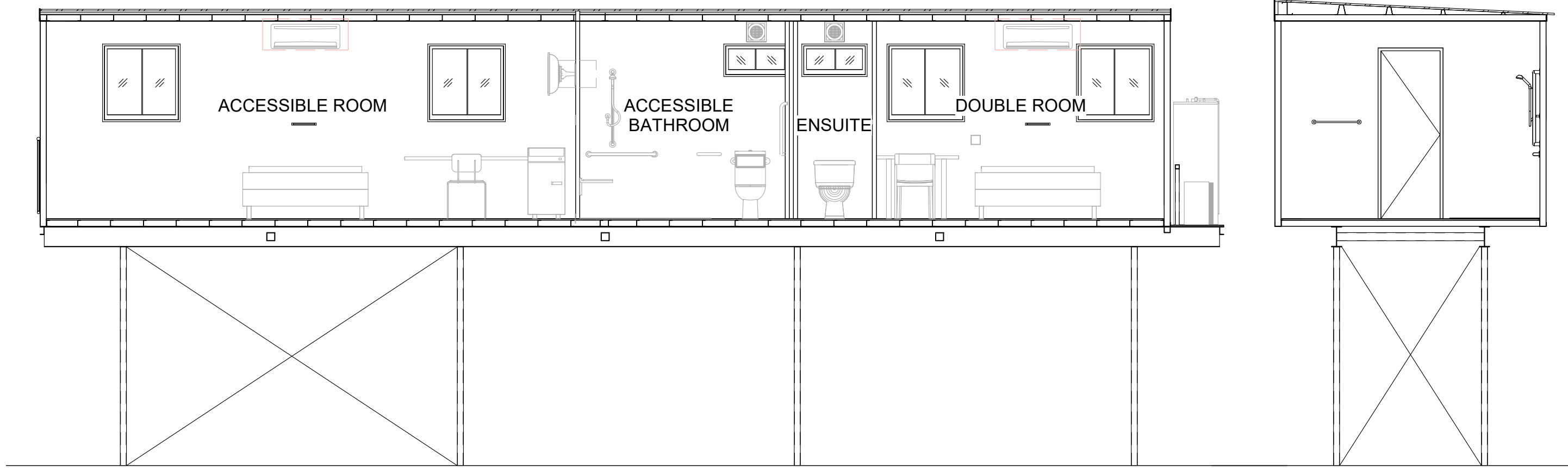
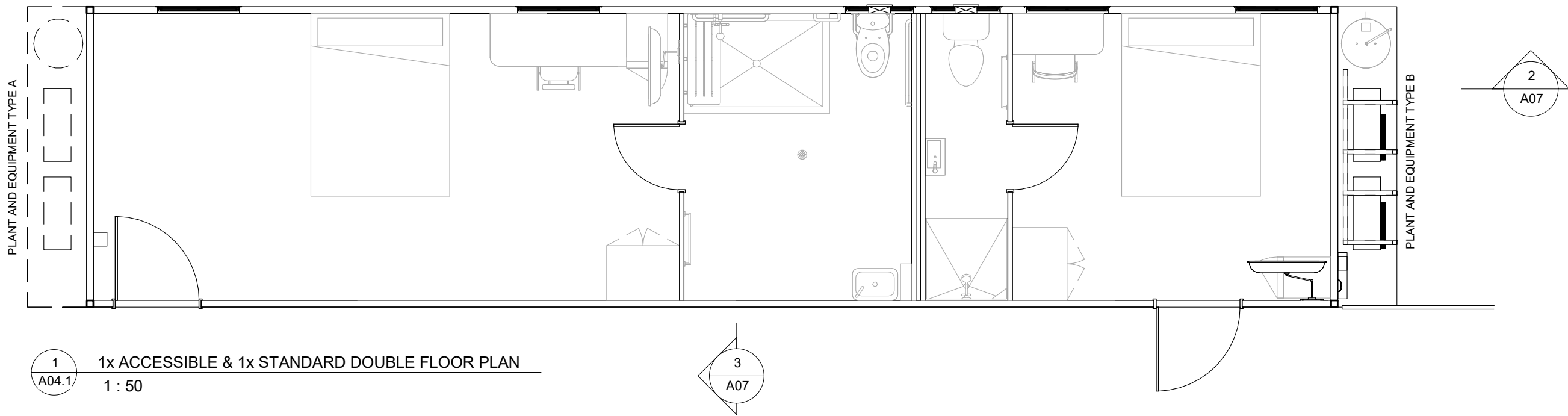
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SW	GW
CHECKED (PO):	STAMPER:
RH	RH



LEEDAL CAMP			
3 DOUBLE ACCOMODATION			
DRAWING NUMBER:	SHEET:	SCALE:	REVISION:
NTD21-MMDD1	A06	1 : 50	C



2
A07 1x ACCESSIBLE & 1x STANDARD DOUBLE SECTION
1 : 50

3
A07 1x ACCESSIBLE & 1x STANDARD DOUBLE SECTION 1
1 : 50

22/05/2023 5:12:07 PM

REV	DATE	BY	DESCRIPTION
C	8/05/23	SW	ISSUED FOR REVIEW 50%-1 (DOUBLE ROOMS ADDED)
B	4/05/23	SW	ISSUED FOR REVIEW 50%

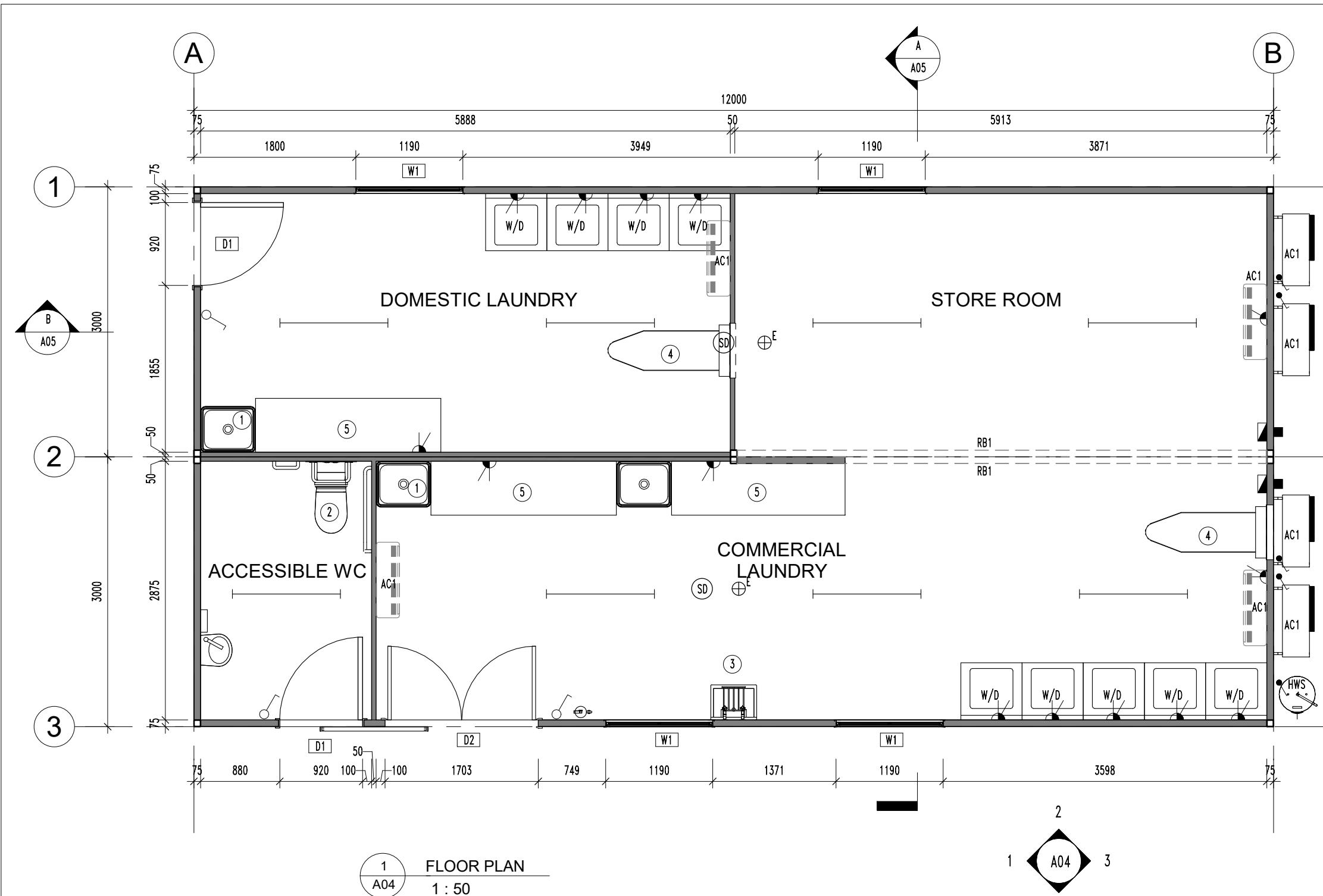
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CHECKED (PO):	STAMPER:
RH	RH

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LEEDAL CAMP			
ACCESSIBLE & STANDARD DOUBLE			
DRAWING NUMBER:	SHEET:	SCALE:	REVISION:
NTD21-MMDD1	A07	1 : 50	C



1 FLOOR PLAN
A04 1 : 50

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BUILDING INFORMATION	
SERIAL NUMBER	DS2099
CEILING HEIGHT	2400mm
BUILDING HEIGHT	3334mm + FOOTING
DESTINATION	TBA

ENGINEERING INFORMATION	
DESIGN WIND SPEED	Region A, I.L. 2
LIFTING CAPACITY	8.0t
DISTRIBUTED FLOOR LOAD	1.5 Kpa
CONCENTRATED FLOOR LOAD	2.5 KN



FLOOR TYPE	17mm T&G CD Ply
EXTERNAL WALL	75mm EPS Panel
INTERNAL WALL	50mm EPS Panel
CLADDING	-
ROOF SHEETING	Trimdek Zincalume
FLASHING COLOR	-
ROOF INSULATION	R3.2 Etherm
ROOF PITCH	3 Degrees
CEILING LINING	3mm Composite Panel
VINYL TYPE	Commercial Vinyl
VINYL COLOR	-
T & B VINYL TYPE	N/A
T & B VINYL COLOR	N/A

SYMBOL/LEGEND	
(SD) SMOKE DETECTOR BATTERY BACKUP/HARD WIRED	(E) EMERGENCY LIGHT-SPITFIRE LED BATTERY BACKUP/HARD WIRED
(EXIT) EMERGENCY EXIT LED SIGN BATTERY BACK UP / HARD WIRED	(D) DOUBLE DATA POINT Ø1200 HIGH - CAT 6 CABLING
SWITCHED OUTLET 10A DOUBLE MOUNTING HEIGHT AS INDICATED 300mm ABOVE FFL UNLESS NOTED	(DB) DISTRIBUTION BOARD
(S) SINGLE LIGHT SWITCH	(DBE) DISTRIBUTION BOARD EXTERNAL POINT OF ATTACHMENT
SWITCHED OUTLET 10A SINGLE MOUNTING HEIGHT AS INDICATED 300mm ABOVE FFL UNLESS NOTED	(PE) POINT OF ENTRY OF WATER
(EF) EXHAUST FAN	(EBL) EXTERNAL BUNKER LIGHT
(TP) TV POINT MOUNTING HEIGHT AS INDICATED 300mm ABOVE FFL UNLESS NOTED	(EFL) EXTERNAL FLOURESCENT LIGHT
(TV) TV EXTERNAL JUNCTION BOX FOR AERIAL CONNECTION	(L) 2x36W FLUORESCENT LIGHT FITTING C/W DIFFUSER
(EWS) EXTERNAL WEATHERPROOF DOUBLE SOCKET OUTLET MOUNTING HEIGHT AS INDICATED 300mm ABOVE FFL UNLESS NOTED	(SLS) SINGLE LIGHT SWITCH

REVISION/AMENDMENT	
B	19/05/23 NP ISSUED FOR REVIEW 75%
A	4/05/23 NP ISSUED FOR REVIEW 50%

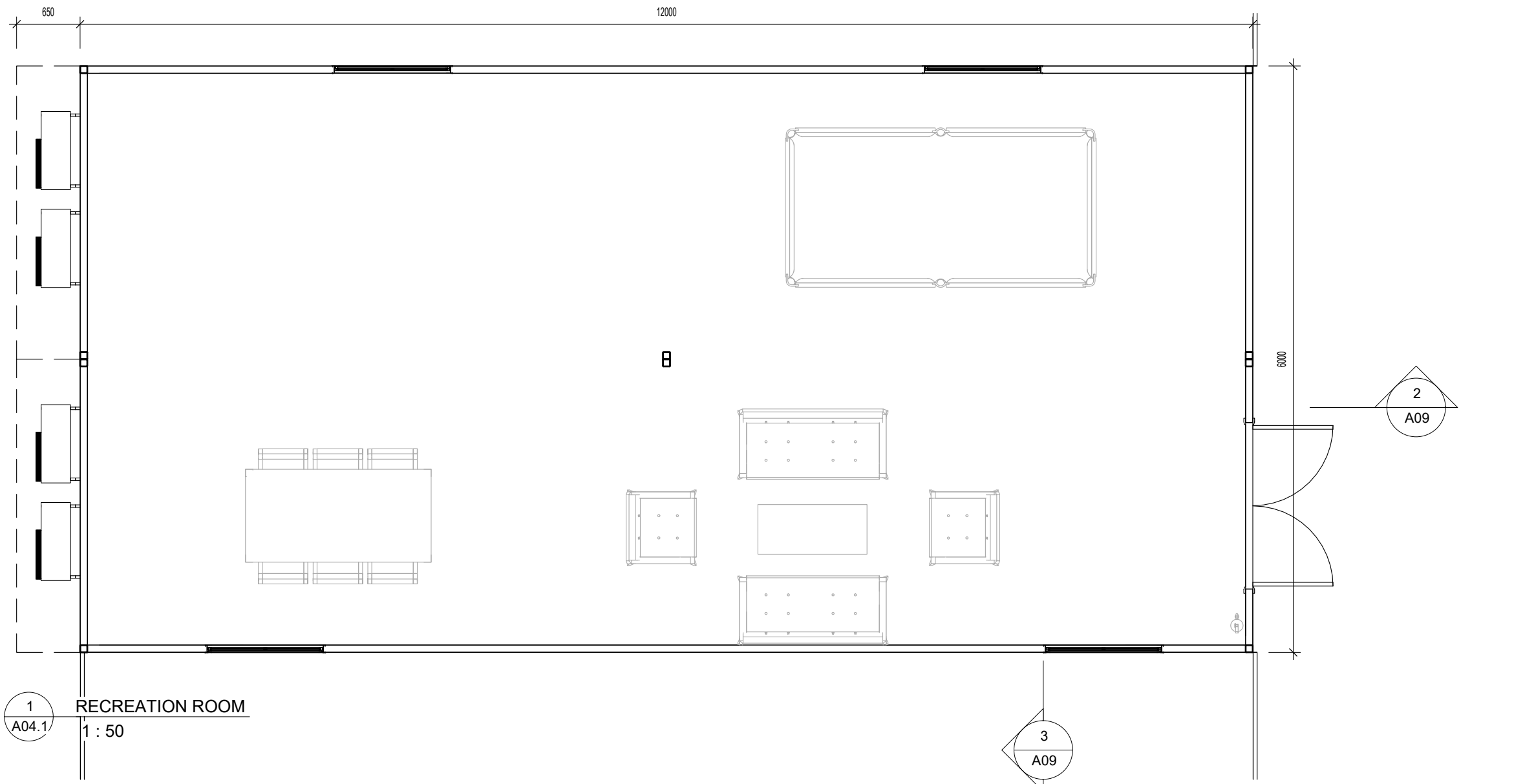
GENERAL NOTES	
CUSTOMER APPROVED:	
CUSTOMER NAME:	
DATE:	

ELEC/HYDRO/FURNISHING SCHEDULE		
TAG	QTY	DESCRIPTION
1	3	45L SS LAUNDRY TROUGH, HOT & COLD TAPS, WALL MOUNTED ON GALLOWES BRACKETS
2	1	ACCESSBILE TOILET+GRABRAIL +BASIN
3	1	SINK, CLEANERS w/HINGED GRATE (HOT & COLD TAPS) & STAINLESS STEEL SPLASHBACK
4	1	FOLD AWAY IRONING STATION COMPLETE WITH HARD WIRED IRON
5	3	2060x600 WIDE BENCHTOPS ON 25x25 SHS FRAMES
AC1	4	SPLIT SYSTEM AIRCONDITIONER OUTDOOR UNIT
HWS	1	25 LTR ELEC. HWS-UNDER BENCH
W/D	9	COMMERCIAL GRADE WASHING MACHINE - MAYTAG (MAT20MN)

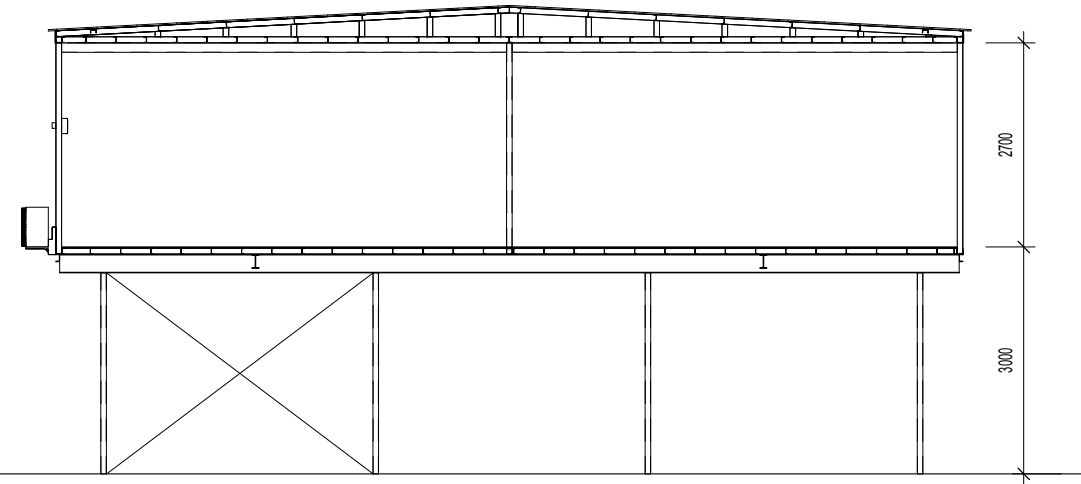
DOOR/WINDOW SCHEDULE					
TAG	QTY	HEIGHT	WIDTH	DETAILS	
D1	2	2040	920	METAL CLAD DOOR, POWDER COATED FRAME,3x100mm HINGES	
D2	1	2040	820	METAL CALD DOUBLE DOOR cw VIEWING WINDOW, POWDER COATED FRAME,3x100mm HINGES	
W1	4	1050	1190	BLACK POWDER COATED ALUMINIUM FRAME, FLY SCREENS, GREY GLASS	

PRO796-FITZROY RIVER LODGE			
DS2099 - 12x6m Laundry			
FLOOR PLAN			
CHECKED (PO): RH	CHECKED (PM): -		
DRAWN BY: NP	DRAWN DATE:	STAMPED BY: -	STAMPED DATE:
DRAWING NUMBER: NTD23-05173	SHEET: A03	REVISION: B	

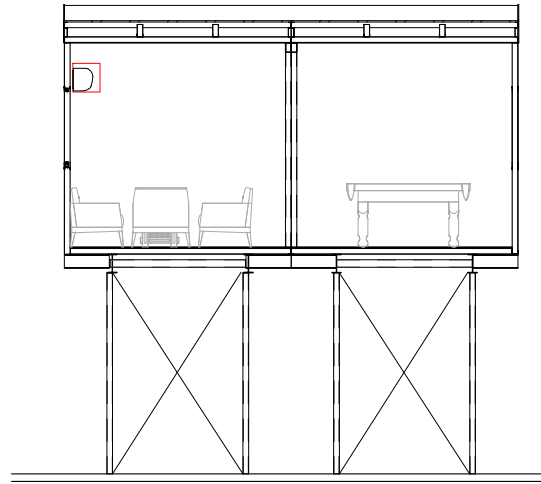
19/05/2023 2:05:08 PM



1 RECREATION ROOM
1 : 50



2 REC ROOM LONGITUDINAL SECTION
1 : 100



3 REC ROOM TRANSVERSE SECTION
1 : 100

22/05/2023 5:12:15 PM

REV	DATE	BY	DESCRIPTION
B	4/05/23	SW	ISSUED FOR REVIEW 50%

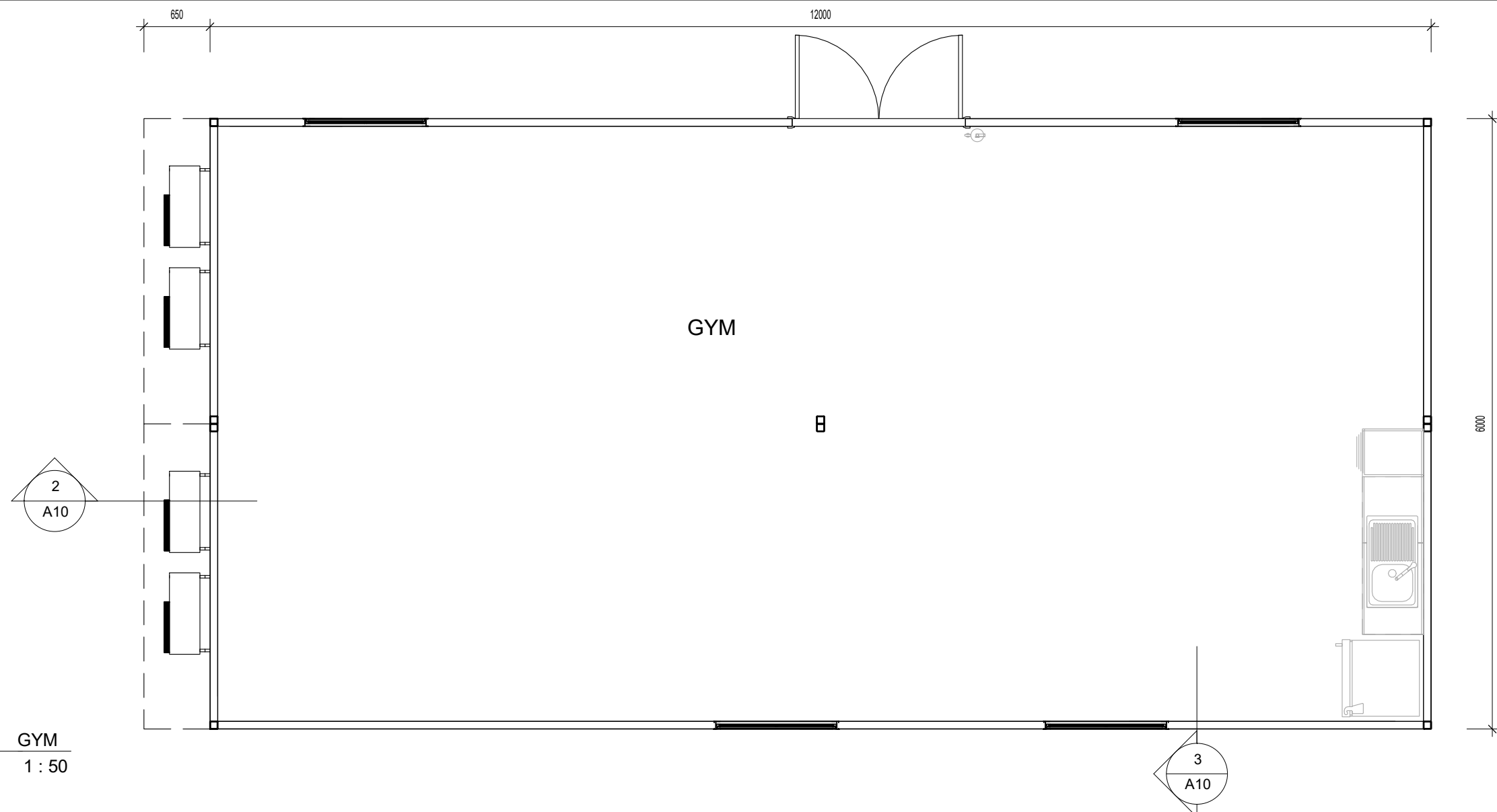
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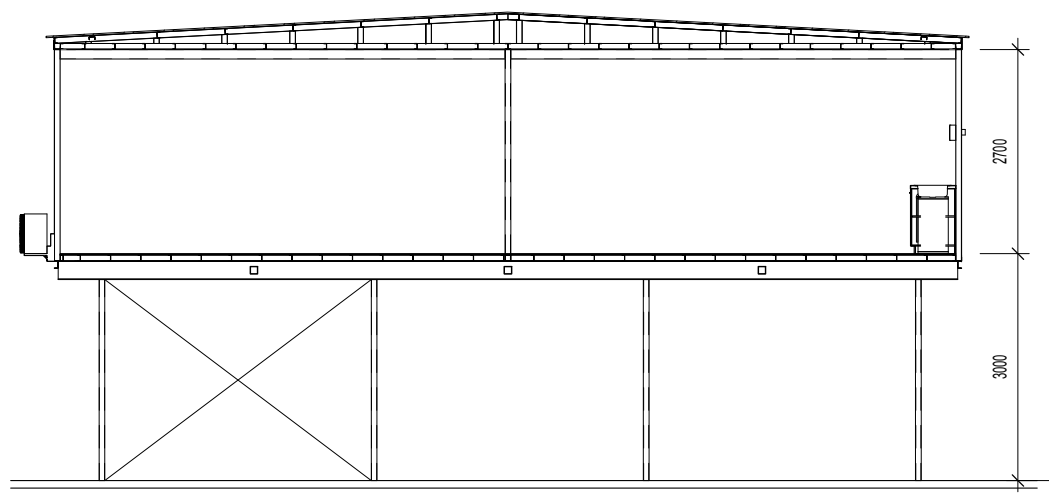
DRAWN BY: SW	CHECKED (PM): GW
CHECKED (PO): RH	STAMPER: RH



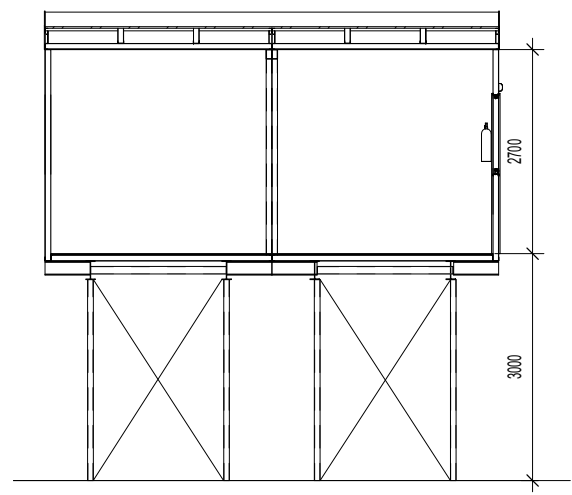
LEEDAL CAMP		RECREATION ROOM	
DRAWING NUMBER:	NTD21-MMDD1	SHEET:	A09
SCALE:	As indicated	REVISION:	B



1 GYM
A04.1 1 : 50



2 GYM LONGITUDINAL SECTION
A10 1 : 100



3 GYM TRANSVERSE SECTION
A10 1 : 100

22/05/2023 5:12:19 PM

REV	DATE	BY	DESCRIPTION
B	4/05/23	SW	ISSUED FOR REVIEW 50%

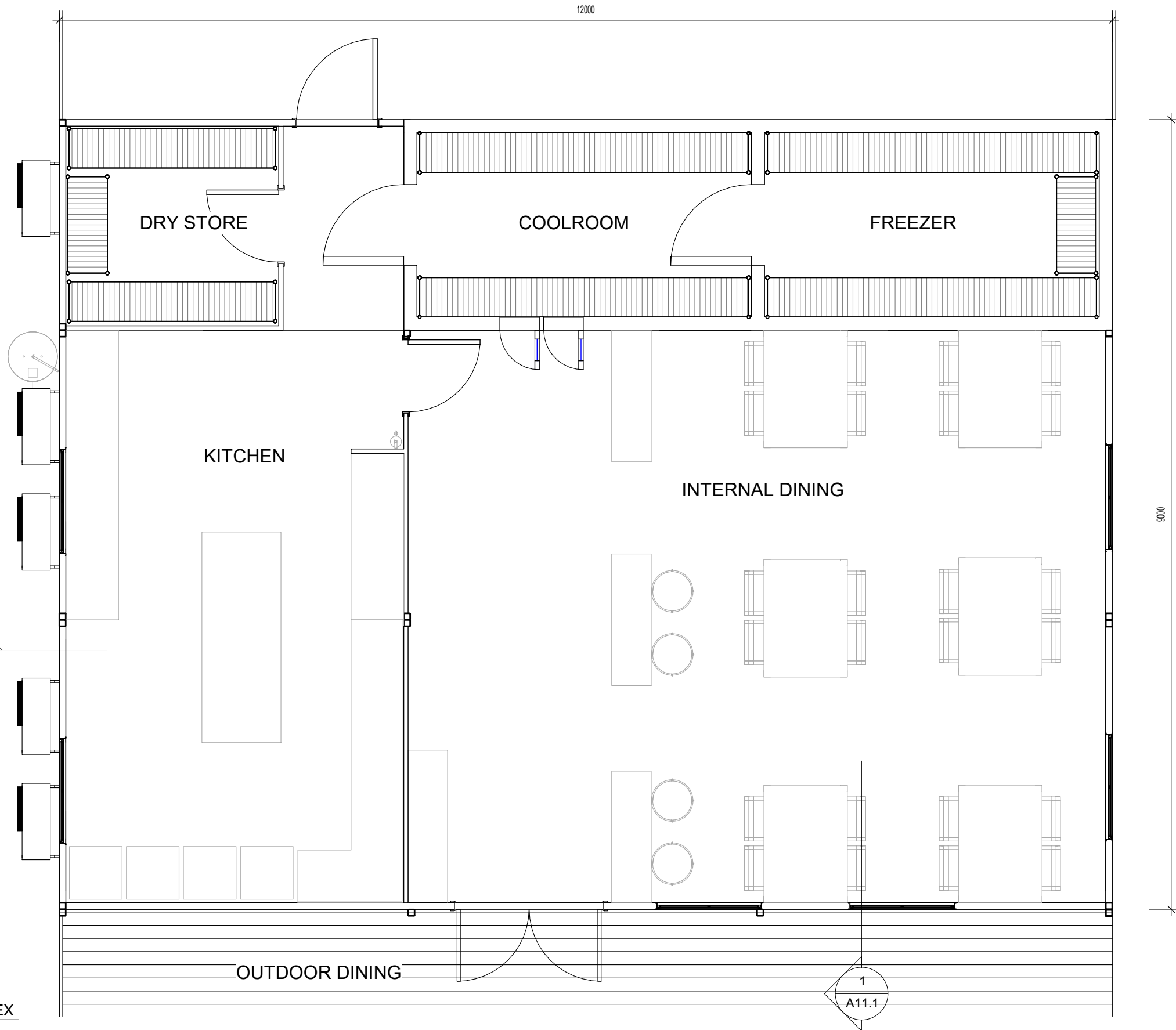
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SW	GW
CHECKED (PO):	STAMPER:
RH	RH

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LEEDAL CAMP		SHEET:	SCALE:	REVISION:
GYM		A10	As indicated	B
DRAWING NUMBER:		NTD21-MMDD1		



1 MESS COMPLEX
A04.1 1 : 50

22/05/2023 5:12:20 PM

REV	DATE	BY	DESCRIPTION
B	4/05/23	SW	ISSUED FOR REVIEW 50%

GENERAL NOTES:

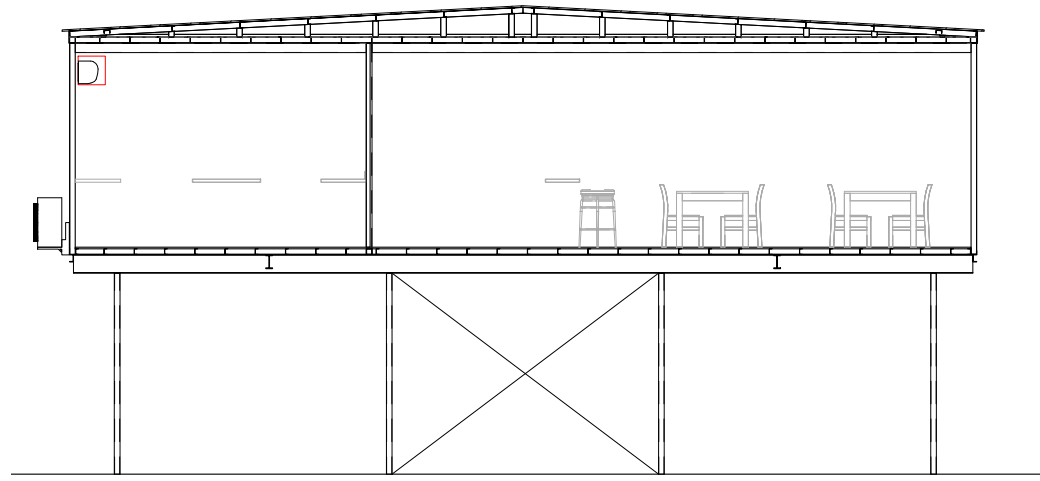
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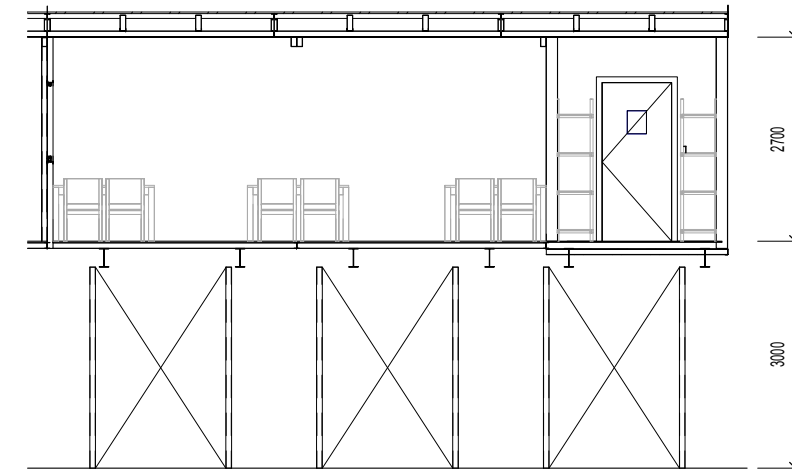


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LEEDAL CAMP		SHEET:	SCALE:	REVISION:
MESS COMPLEX		A11	1 : 50	B
DRAWING NUMBER:				
NTD21-MMDD1				



2
A11 MESS LONGITUDINAL SECTION
1 : 100



1
A11 MES TRANSVERSE SECTION
1 : 100

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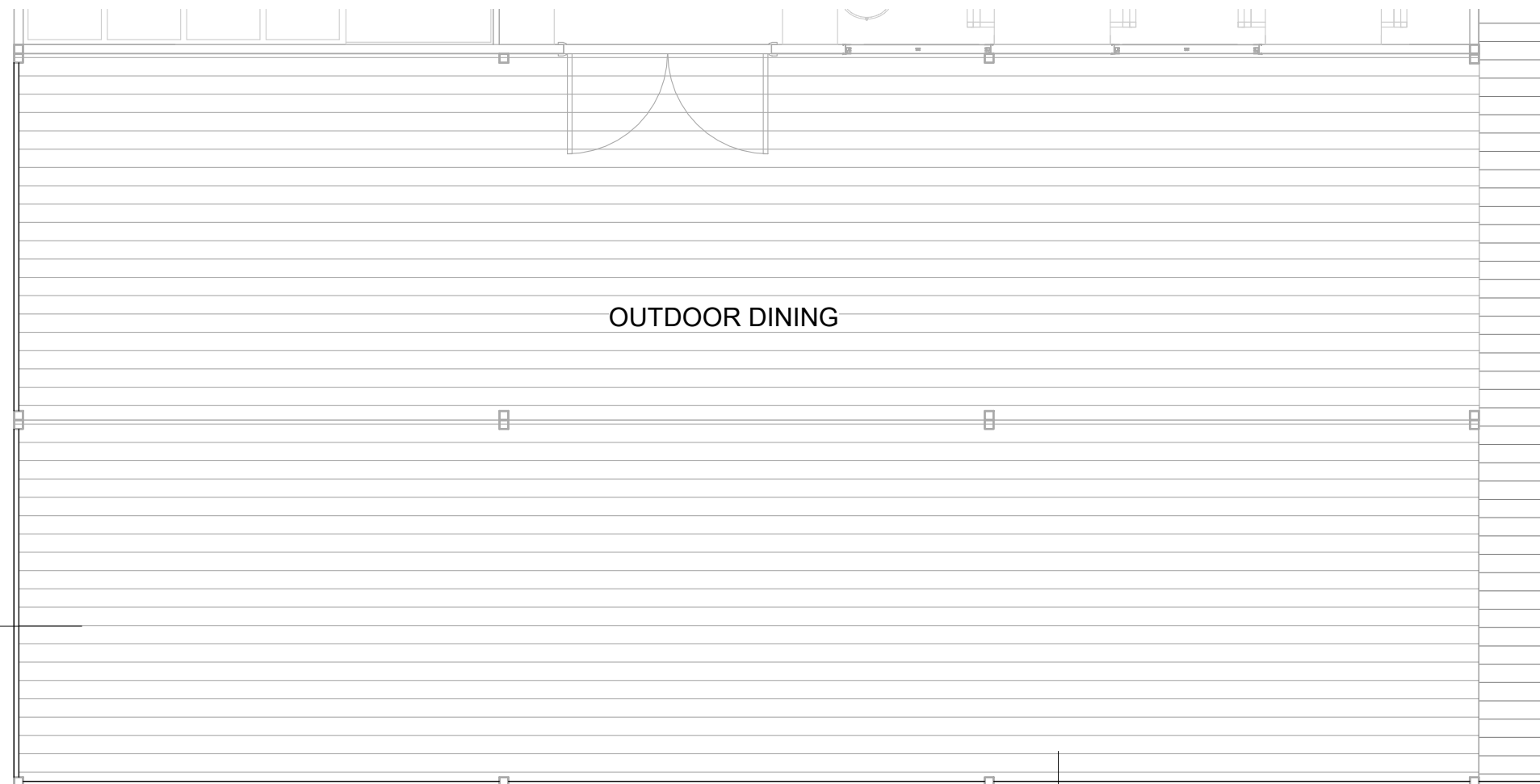
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STAMPER:
RH



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DRAWING NUMBER:				
NTD21-MMDD1				



1
A12.1

2
A12.1

1
A04.1

MESS OUTDOOR DINING
1 : 50

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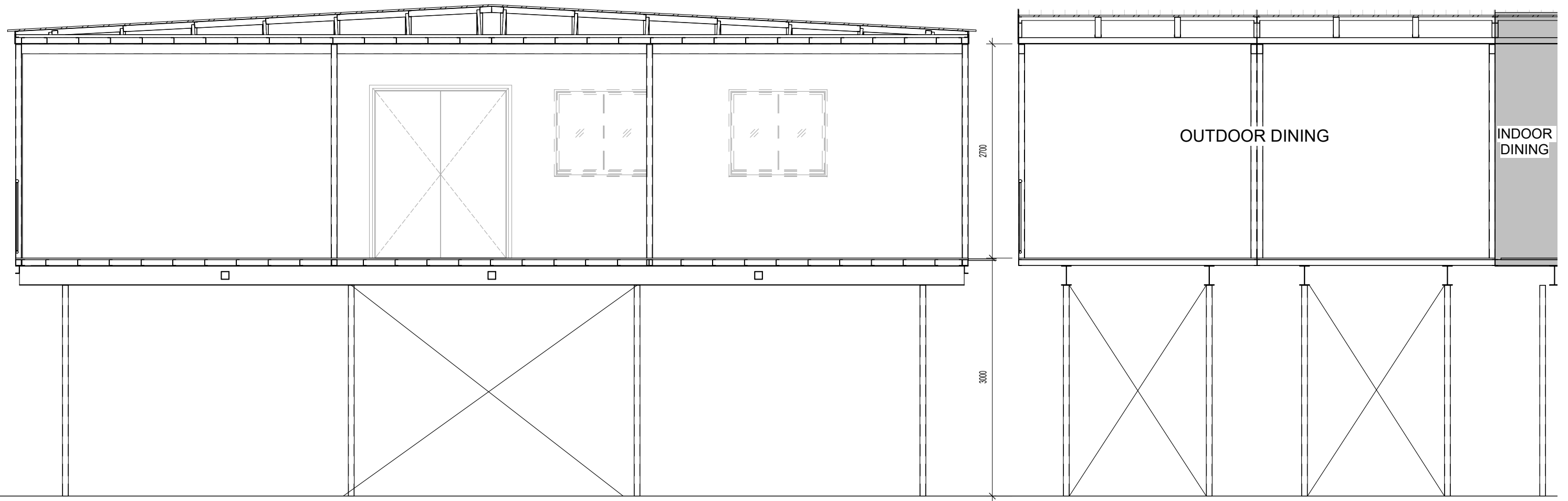
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LEEDAL CAMP		SHEET:	SCALE:	REVISION:
MESS OUTDOOR DINING		A12	1 : 50	B
DRAWING NUMBER:				
NTD21-MMDD1				



1
A12 **OUTDOOR DINING LONGITUDINAL SECTION**
1 : 50

2
A12 **OUTDOOR DINING TRANSVERSE SECTION**
1 : 50

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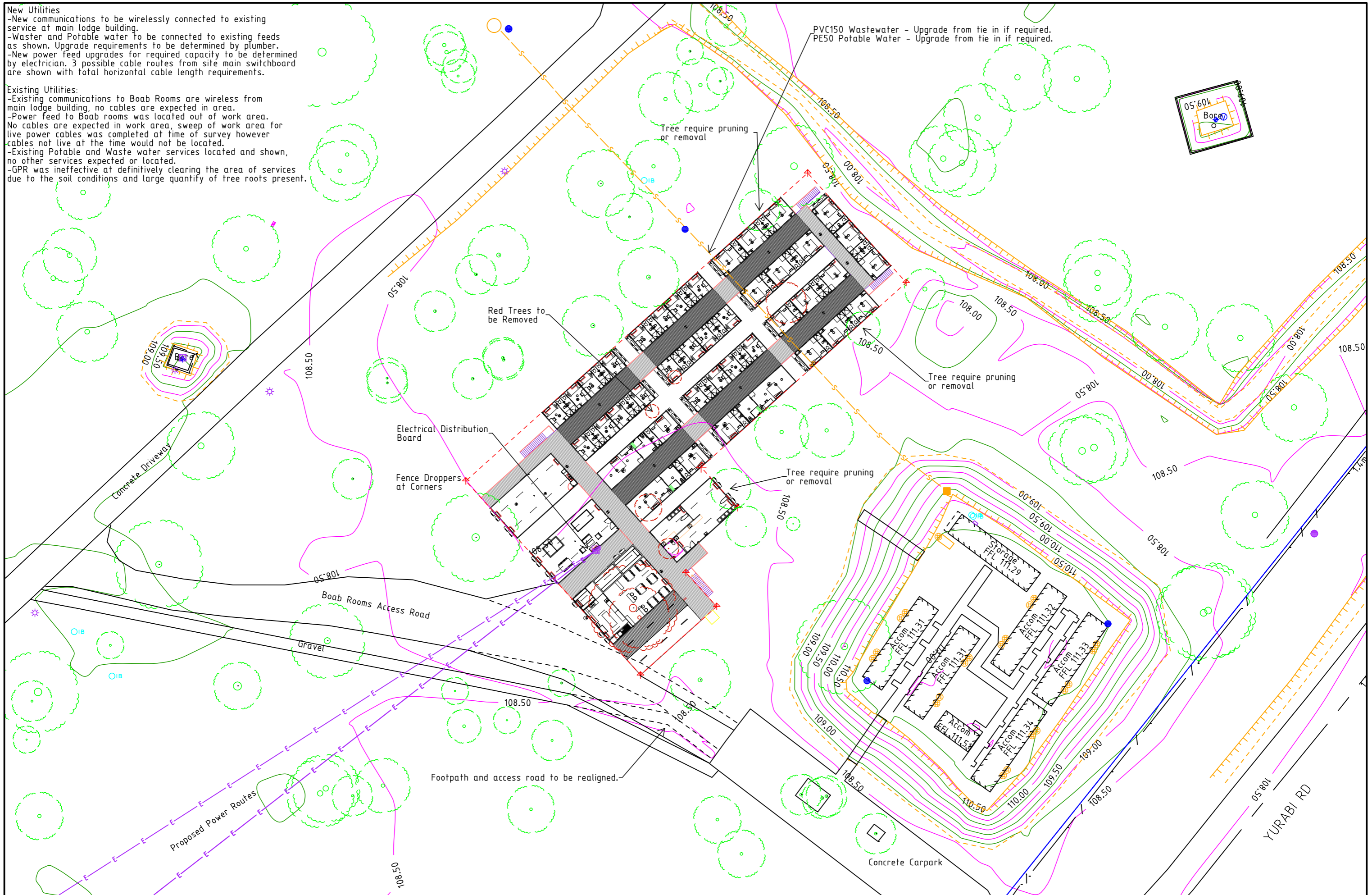
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SW	GW
CHECKED (PO):	STAMPER:
RH	RH



LEEDAL CAMP		SHEET:		SCALE:		REVISION:	
MESS OUTDOOR SECTIONS		A12.1		1 : 50		B	
DRAWING NUMBER:		NTD21-MMDD1					

New Utilities
 -New communications to be wirelessly connected to existing service at main lodge building.
 -Waster and Potable water to be connected to existing feeds as shown. Upgrade requirements to be determined by plumber.
 -New power feed upgrades for required capacity to be determined by electrician. 3 possible cable routes from site main switchboard are shown with total horizontal cable length requirements.

Existing Utilities:
 -Existing communications to Boab Rooms are wireless from main lodge building, no cables are expected in area.
 -Power feed to Boab rooms was located out of work area. No cables are expected in work area, sweep of work area for live power cables was completed at time of survey however cables not live at the time would not be located.
 -Existing Potable and Waste water services located and shown, no other services expected or located.
 -GPR was ineffective at definitively clearing the area of services due to the soil conditions and large quantity of tree roots present.



0422 657 023
 Jake@kimberleysurveying.com.au
 kimberleysurveying.com.au
 PO Box 2017, Kununurra WA 6743
 ABN 34 654362053 ACN 654362053

The boundaries shown on this plan are from the Landgate cadastral database. This drawing does not guarantee the accuracy of this data. It is recommended that boundaries should be re-established prior to any works on or near existing boundaries. The contents of this drawing are current as of the survey date stated. Unless otherwise stated, underground utility locations have been calculated from DBYD information and/or surface indicators. The accuracy of this information is not guaranteed. Underground utility locations should be verified prior to any excavation.



Scale: 1:500 @A3
 For true scale plotting, print on A3 with no page scaling.

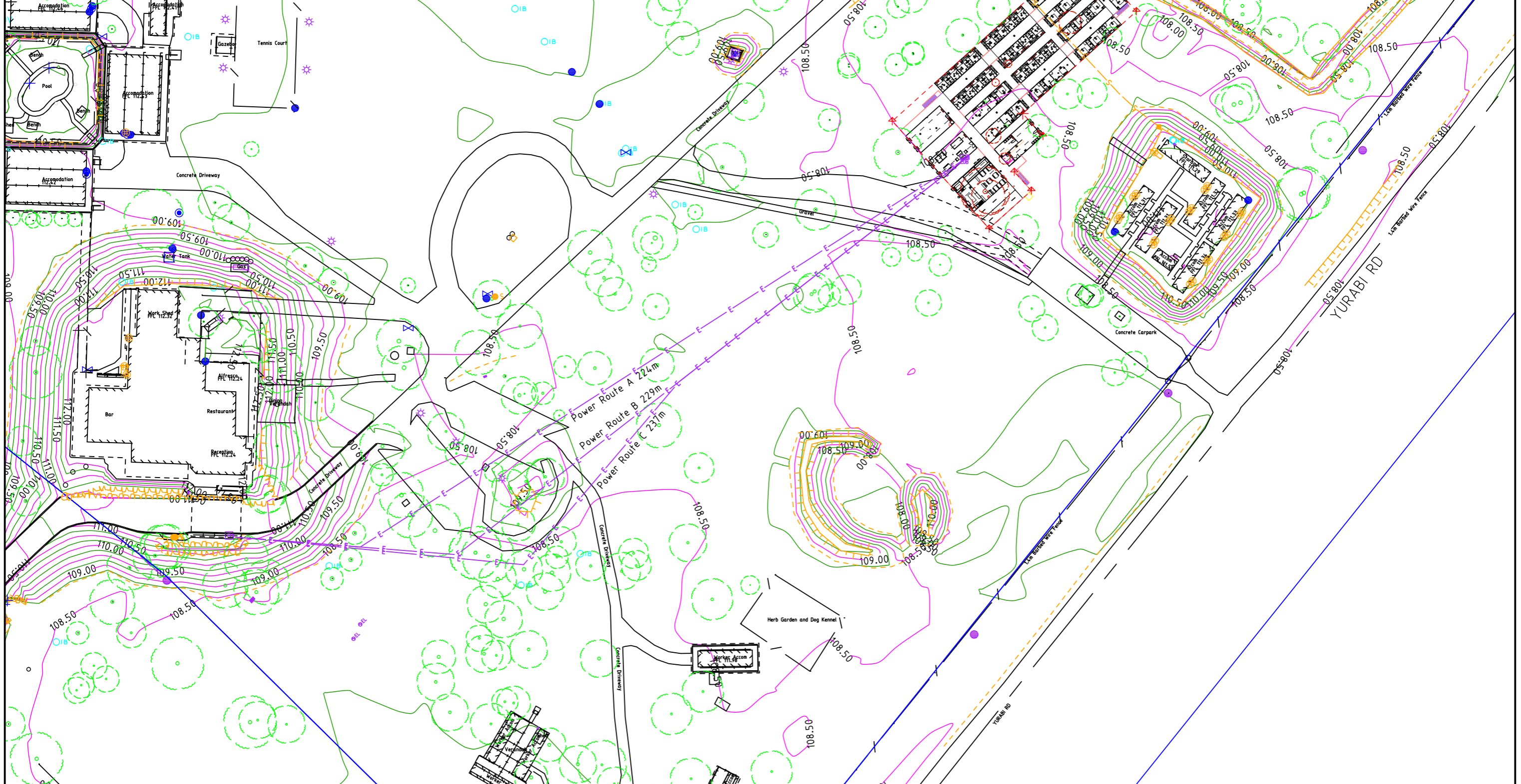
Survey Date: 21/06/2023
 Drawn Date: 30/06/2023
 Surveyor: JS
 H Datum: MGA2020Z51
 V Datum: AHD

Fitzroy Crossing Lodge - New Camp
 Site Layout
 Client: Northern Transportables

23027	01	A	1
Job No.	Drawing No.	Revision	Sheet

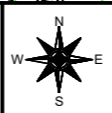
New Utilities
 -New communications to be wirelessly connected to existing service at main lodge building.
 -Waster and Potable water to be connected to existing feeds as shown. Upgrade requirements to be determined by plumber.
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 -Existing Potable and Waste water services located and shown, no other services expected or located.
 -GPR was ineffective at definitively clearing the area of services due to the soil conditions and large quantity of tree roots present.



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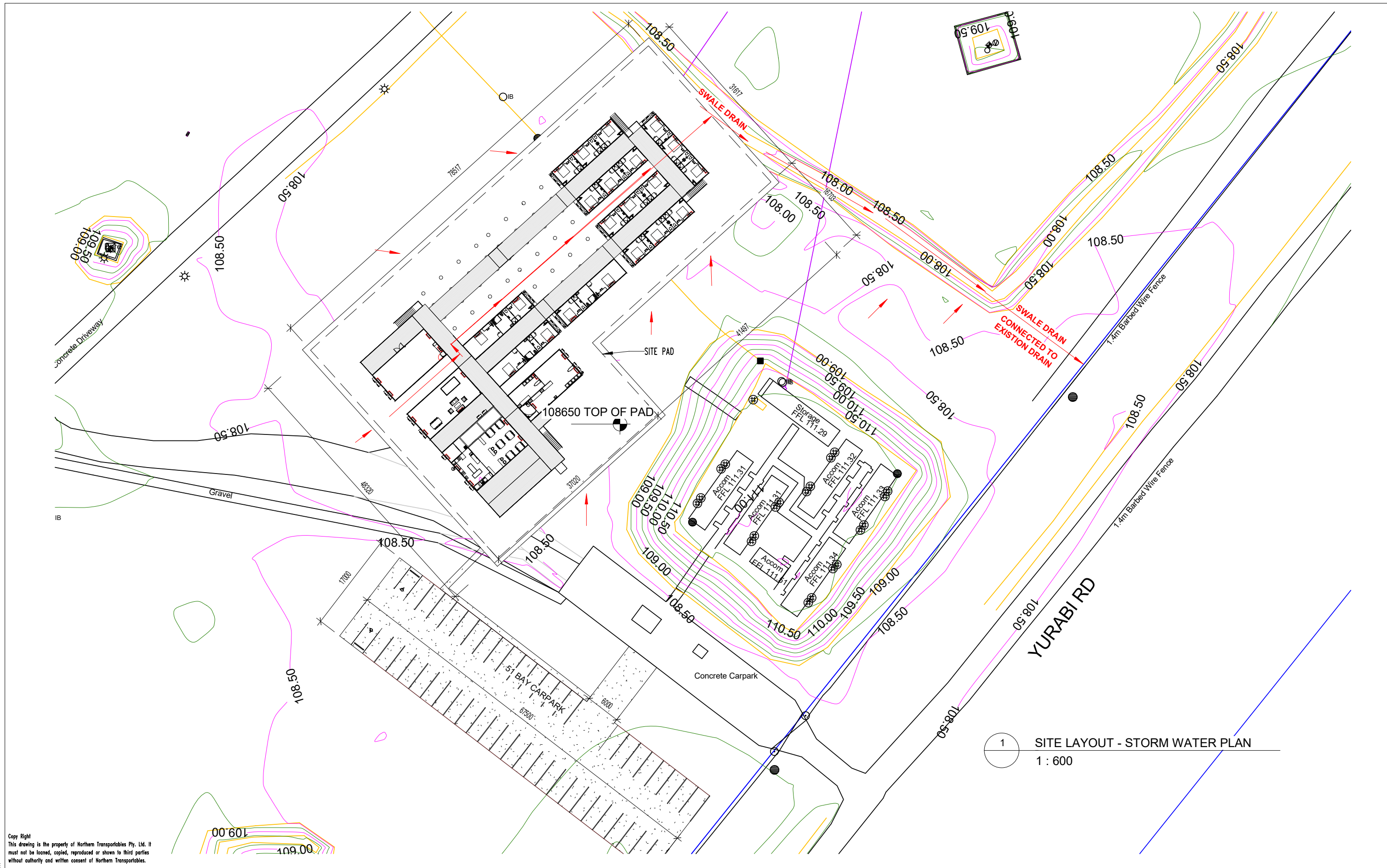


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Survey Date: 21/06/2023
 Drawn Date: 30/06/2023
 Surveyor: JS
 H Datum: MGA2020Z51
 V Datum: AHD

Fitzroy Crossing Lodge - New Camp
Site Layout
 Client: Northern Transportables

23027	01	A	2
Job No.	Drawing No.	Revision	Sheet



1 SITE LAYOUT - STORM WATER PLAN
1 : 600

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CUSTOMER NAME:
DATE:

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GW
CHECKED (PO):
RH
STAMPER:
RH



LEEDAL CAMP
SITE LAYOUT - STORM WATER PLAN
DRAWING NUMBER: NTD21-MMDD1
SHEET: A21
SCALE: 1 : 600
REVISION:

26/07/2023 1:38:47 PM

From: Simon Rodgers <simon.rodgers@dwer.wa.gov.au>
Sent: Friday, 30 June 2023 4:48 PM
To: israel.k@oneplanningconsult.com.au
Cc: North West Landuse; Rory Hunter; Flood
Subject: Floodplain mangement advice - Lot 277 Great Northern Highway, ST GEORGE RANGES 6728 - Israel K - 30062023
Attachments: Cross-section - FFL.pdf; 13737_1_1_B.pdf; FPM Fitzroy Crossing Lot 277 Great Northern Hwy ST GEORGE RANGES.pdf

Hi Israel

The Department of Water and Environmental Regulation provides advice and recommends guidelines for development on floodplains with the object of managing flood risk and damage.

The Fitzroy River Fitzroy Crossing Townsite Floodplain Management Strategy (2003) shows that the entire Lot is affected by flooding during major events with the following flood levels expected:

1 in 10 AEP	109.2 m AHD
1 in 100 AEP	110.35 m AHD.

A major flood occurred in January 2023 and the peak level at Lot 277 was surveyed at 111.0 m AHD. The January 2023 event was larger than the expected 1 in 100 AEP event and depth mapping for the January 2023 event is attached.

Based on our floodplain management strategy for the area, proposed development is considered acceptable with respect to major flooding. However, a minimum habitable floor level of 1.0 metre above the relevant 1 in 100 AEP flood level (ie 111.35 m AHD) is recommended to ensure adequate flood protection.

It should be noted that this advice is related to major flooding only and other planning issues such as local stormwater drainage and environmental and ecological considerations may also need to be addressed.

Regards,

[Simon Rodgers](#)
Supervising Engineer
Surface Water Assessment and Flood Risk Science

[Department of Water and Environmental Regulation](#)
Prime House, 8 Davidson Terrace, JOONDALUP WA 6027
Locked Bag 10, Joondalup DC, WA 6919
T: (08) 6364 6923 M: 0429 080 517
E: simon.rodgers@dwer.wa.gov.au | www.dwer.wa.gov.au

From: Flood <flood@dwer.wa.gov.au>
Sent: Thursday, June 29, 2023 3:58 PM
To: Simon Rodgers <simon.rodgers@dwer.wa.gov.au>
Subject: FW: Lot 277 Great Northern Highway, ST GEORGE RANGES 6728 - Query Flood Level



Bushfire Attack Level Assessment Report



Address / Location: Lot 277 Great Northern Highway, St George Ranges

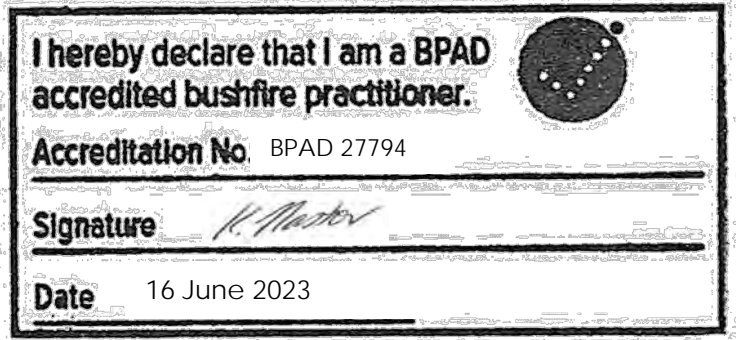
Shire of Derby-West Kimberley

Report Date: 16 June 2023

Job Reference No:
230074

COMPANY AND BUSHFIRE CONSULTANT DETAILS

BPP GROUP PTY LTD
 T/A BUSHFIRE PRONE PLANNING
 ACN: 39 166 551 784 | ABN: 39 166 551 784
 LEVEL 1, 159-161 JAMES STREET
 GUILDFORD WA 6055
 PO BOX 388
 GUILDFORD WA 6935
 08 6477 1144 | admin@bushfireprone.com.au



Authorised Practitioner Stamp

Author: Sarina Gorman (BPAD Level 2 No. 42204)

Reviewed: Kathy Nastov (BPAD Level 3 No. 27794)

ASSESSMENT AND REPORT DETAILS

Version	Details	Site Assessment Date	Report Date
1.0	Original	20 February 2023	16 June 2023
-	-		

Report Preparation: This report has been prepared by an accredited BPAD practitioner using the simplified BAL determination procedure (Method 1) as detailed in section 2 of AS 3959:2018.

Warranty of the Accrediting Body: FPA Australia makes no warranties as to the accuracy of the information provided in the report. All enquiries related to the information and conclusions presented in this report must be made to the BPAD Accredited Practitioner.

Period of Validity: Reliance on the assessment and determination of the Bushfire Attack Level contained in this report should not extend beyond a period of 12 months from the date of issue of the report. If this report was issued more than 12 months ago, it is recommended that the validity of the determination be confirmed with the accredited practitioner and where required an updated report and/or BAL certificate issued.

Limitations: The protection measures that will be implemented based on information presented in this report are minimum requirements and they do not guarantee that buildings or infrastructure will not be damaged in a bushfire, persons injured, or fatalities occur either on the subject site or off the site while evacuating.

This is substantially due to the unpredictable nature and behaviour of fire and fire weather conditions. Additionally, the correct implementation of the required protection measures (including bushfire resistant construction) and any other required or recommended measures, will depend upon, among other things, the ongoing actions of the landowners and/or operators over which Bushfire Prone Planning has no control.

All surveys, forecasts, projections and recommendations made in this report associated with the proposed development or use are made in good faith based on information available to Bushfire Prone Planning at the time. All maps included herein are indicative in nature and are not to be used for accurate calculations.

Notwithstanding anything contained therein, Bushfire Prone Planning will not, except as the law may require, be liable for any loss or other consequences whether or not due to the negligence of their consultants, their servants or agents, arising out of the services provided by their consultants.

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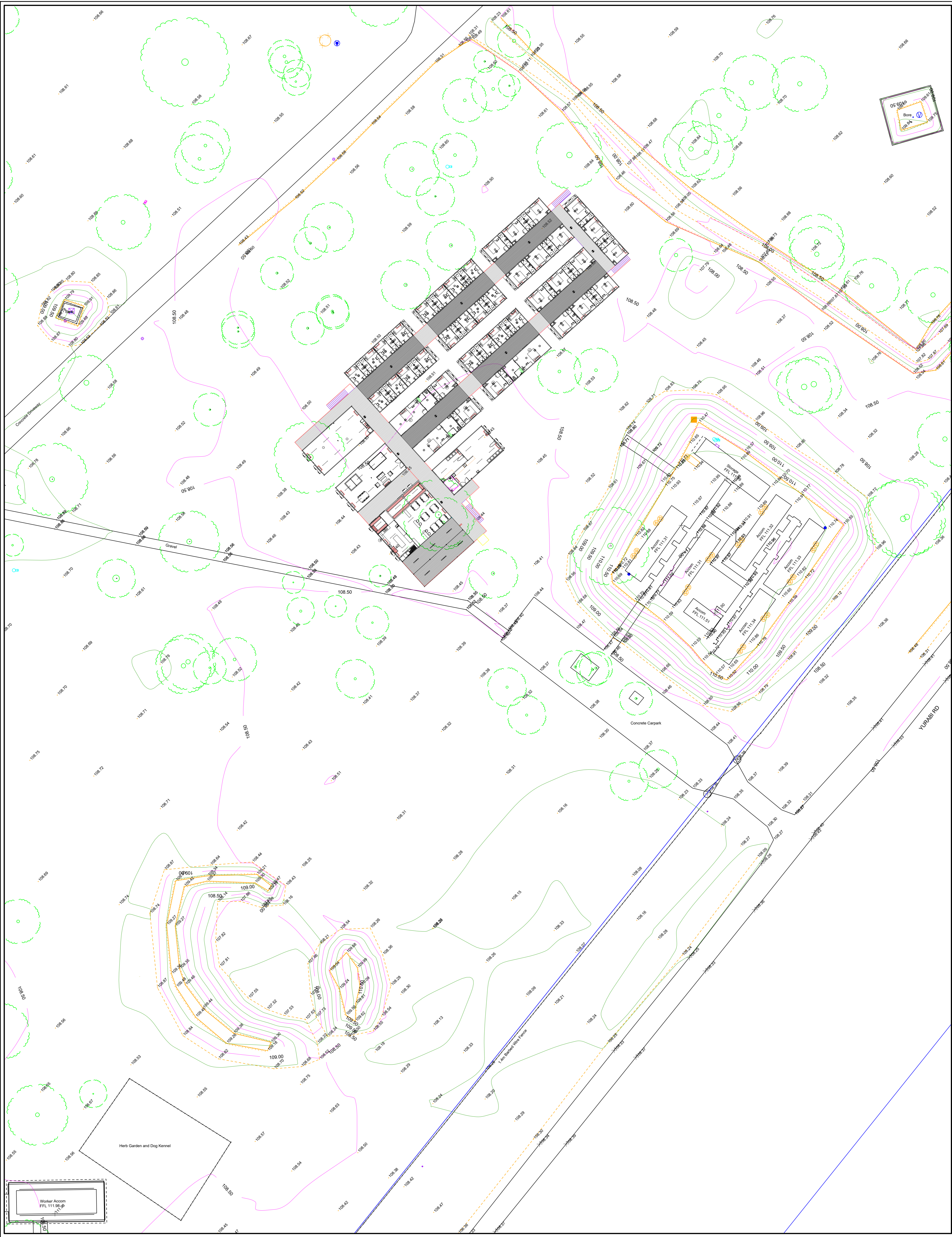
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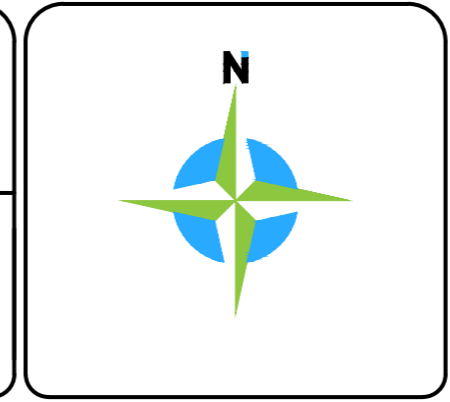
1 PROPOSED BUILDING WORKS OR USE

Planning Stage:	Building Application - submitted via Planning and Development
Subject lot/site total area:	19.9988 hectares
Primary Building Work and/or Use	Construction of a habitable building other than a single house or ancillary dwelling
Associated Building	N/A
Main Class of Building - Building Code of Australia (NCC)	Class 1
Description of the proposed development/use:	
Proposed Transportables	



Rev.	Description	Drawn	Date	Checked
A	INITIAL RELEASE	RMA	31/10/22	BGI


 Surveyor: RMA
 Survey Date: 22/10/22
 File: S:\1
 FILES Software: -



FITZROY RIVER LODGE
DETAIL SURVEY
 CLIENTENGAWA

The contents of this plan are current and correct as of the date stated within the revision panel. All consultants and persons wishing to utilise this data should satisfy themselves of this plans currency by contacting MNG.

2 INFORMATION FOR LOCAL GOVERNMENT BUILDING SERVICES (& THE LANDOWNER)

BUSHFIRE ATTACK LEVELS (BAL) - UNDERSTANDING THE RESULTS

The potential transfer (flux/flow) of radiant heat from the bushfire to a receiving object is measured in kW/m². The AS 3959:2018 BAL determination methodology establishes the ranges of radiant heat flux that correspond to each bushfire attack level. These are identified as BAL-LOW, BAL-12.5, BAL-19, BAL-29, BAL-40 and BAL-FZ.

The bushfire performance requirements for certain classes of buildings are established by the Building Code of Australia (Vol. 1 & 2 of the NCC). The BAL will establish the bushfire resistant construction requirements that are to apply in accordance with AS 3959:2018 - *Construction of buildings in bushfire prone areas* and the NASH Standard – *Steel framed construction in bushfire areas (NS 300 2021)*, whose solutions are deemed to satisfy the NCC bushfire performance requirements.

DETERMINED BAL RATINGS

A BAL Certificate can be issued for a determined BAL. A BAL can only be classed as 'determined' for an existing or future building/structure when:

1. It's final design and position on the lot are known and the stated separation distance from classified bushfire prone vegetation exists and can justifiably be expected to remain in perpetuity; or
2. It will always remain subject to the same BAL regardless of its design or position on the lot after accounting for any regulatory or enforceable building setbacks from lot boundaries as relevant and necessary (e.g., R-codes, restrictive covenants, defined building envelopes) or the retention of any existing classified vegetation either onsite or offsite.

INDICATIVE BAL RATINGS

A BAL Certificate cannot be issued for an indicative BAL. A BAL will be classed as 'indicative' for an existing or future building/structure when the required conditions to derive a determined BAL are not met.

This class of BAL rating indicates what BAL(s) could be achieved and the conditions that need to be met are stated.

Converting the indicative BAL into a determined BAL is conditional upon the currently unconfirmed variable(s) being confirmed by a subsequent assessment and evidential documentation. These variables will include the future building(s) location(s) being established (or changed) and/or classified vegetation being modified or removed to establish the necessary vegetation separation distance. This may also be dependent on receiving approval from the relevant authority for that modification/removal.

2.1 BAL Assessment Summary (Table Format)

2.1.1 BAL Determination Method(s) Applied and the Location of Detailed Data and Results

Procedure Method (AS 3959:2018)	Applied to the BAL Assessment	Location of the Site Assessment Data			Location of the Results
		Site Assessment Map	Calculation Input Variables		Assessed Bushfire Attack Levels and/or Radiant Heat Levels
			Summary Data	Detailed Data with Explanatory and Supporting Information	
Method 1 (Simplified)	Yes	Figure 2	Table 1	Appendix A1	Section 2.1.2
Method 2 (Detailed)	No	N/A	N/A	Appendix A2	N/A

2.1.2 BAL Results

ASSESSMENT RESULT - THE BUSHFIRE ATTACK LEVEL (BAL)			
<p>The Bushfire Attack Level (the highest assessed BAL) for the site (being the part of the allotment of land on which a building stands or is to be erected) / proposed development, has been determined in accordance with AS 3959:2018 clause 2.2.6 for the Method 1 procedure and/or AS 3959:2018 Appendix B for the Method 2 procedure (as relevant). The applicable site data applied to calculations is presented in the next section of this report.</p>			
Proposed Development	Transportables	DETERMINED BUSHFIRE ATTACK LEVEL	BAL-29
Proposed Development	Transportables	INDICATIVE BUSHFIRE ATTACK LEVEL	BAL-12.5

2.1.3 Identification of Shielded Elevations


IDENTIFICATION OF SHIELDED ELEVATION(S) – REDUCTION IN CONSTRUCTION REQUIREMENTS		
<p>In accordance with AS 3959:2018 Clause 3.5, where an elevation is not exposed to the source of bushfire attack, the construction requirements for that elevation can reduce to the next lower BAL, but not below BAL-12.5. This shall apply to all elements of the wall, including openings, but shall not apply to subfloors or roofs.</p> <p>When applicable, the shielded elevation(s) are identified on the site plan when practical, otherwise a separate diagram is provided as an addendum.</p>		
Proposed Building Works	Transportables	The shielding provisions cannot be applied.

Figure 2

Site Assessment Map

Lot 277 on Plan / Diagram: P188285
 Great Northern Highway
 St George Ranges
 Shire of Derby-West Kimberley

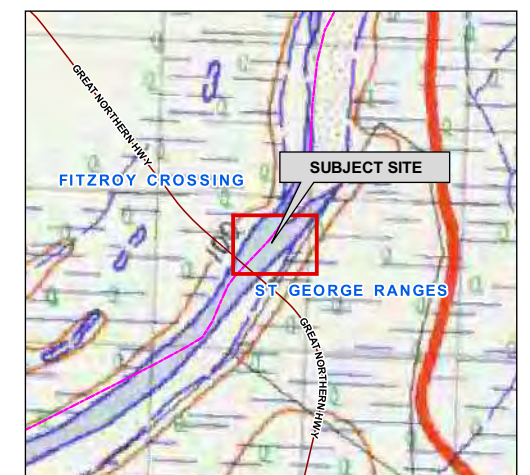
----- LEGEND -----

-  Photos
-  Elevation (m)
-  Distance
-  Subject Site
- Proposal**
-  Transportable
- Assessment Area**
-  150m Buffer
- Classified Vegetation**
-  Class B - Woodland
-  Exclusion 2.2.3.2



Metres

----- LOCALITY -----



AERIAL IMAGERY: Landgate/SLIP



Coordinate System: GDA 1994 MGA Zone 50
 Projection: Universal Transverse Mercator Units: Metre
 Map by: Sarina Gorman 14-06-2023
 SCALE (A3): 1 : 3500



2.1.5 Site Assessment Data

Table 1: Summary of applied calculation input variables applied to deriving the BAL rating for the identified exposed element (the relevant building/structure).

DATA APPLIED TO THE DERIVATION OF THE BUSHFIRE ATTACK LEVELS (BAL) ¹							
BAL Determination Method	METHOD 1 - AS 3959:2018 CLAUSE 2.2 - SIMPLIFIED PROCEDURE				Applied Fire Danger Index		FDI 80
The Receiver of Radiant Heat Relevant Building(s) / Structure(s)	Vegetation Classification		Effective Slope		Separation Distance		Bushfire Attack Level (AS 3959:2018 Table 2.5)
			Measured	Applied Range	Minimum Allowed Building Setback from Lot Boundary ²	Total	
Transportables	1	(B) Woodland	flat 0	Upslope or flat 0		15	BAL-29
	2	(B) Woodland	flat 0	Upslope or flat 0		59	BAL-12.5
	3	Excluded cl 2.2.3.2(e & f)	N/A	N/A		N/A	BAL-LOW
	Determined Bushfire Attack Level						
¹ All data and information supporting the determination of the classifications and values stated in this table and any associated justification, is presented in Appendix A. ² This is the minimum building setback (i.e., the distance from a proposed building to the lot boundary) that is established by either the applicable R-code setback or another mechanism (e.g., restricted covenant), that is to apply to the proposed building/structure on the relevant lot. It is identified as a fixed component of the total separation distance from vegetation when its application is important to be identified because it establishes the closest distance to the lot boundary that a building/structure can legally exist. In other words, it identifies the part of the lot on which development cannot occur. When it is not critical for this distance to be identified, just the total separation distance is stated.							

2.2 Provision of a Conditional Bushfire Attack Level

CONDITIONS TO BE MET

The assessments conducted to produce this report have determined it is possible to achieve a lower Bushfire Attack Level for the proposed development/use. The conditions to be met are:

1. The identified areas(s) of classified vegetation are modified to enable justifiable reclassification to a lower threat classification;
2. Establish increased separation distances between the subject building works and identified areas of classified vegetation by either changing the design or location on the lot of any proposed building works and/or modification/removal of existing bushfire prone vegetation;
3. Ensure the APZ is established within the boundaries of the lot on which the proposed building works or use is situated. It can only include land outside the lot where that land is non-vegetated and/or any existing vegetation is low threat, or managed in a minimal fuel condition and it can be justified that it will be maintained in this state in perpetuity; and
4. Where native vegetation modification/removal is required, that environmental approval from the local government (or other relevant authority) has been received prior to modifying / removing native vegetation.

THE PROCESS AND INFORMATION PROVIDED BY BUSHFIRE PRONE PLANNING (BPP)

1. When modification/removal of native vegetation is required, BPP will not provide a conditional BAL lower than BAL-29. A lower BAL requires a larger APZ for which approval should be sought from the local government. An exception to this approach may exist if a justification statement identifies that the native vegetation to be modified/removed is minor;
2. When modification/removal of non- native vegetation is proposed, BPP will state the lowest BAL that can be achieved. Due consideration is given to the resultant APZ size and how realistic it will be to maintain; and
3. Once the required conditions are met, a compliance report will be produced, and the BAL Certificate can be issued. If vegetation is modified/removed, a site re-visit will be required to confirm the achievement of the vegetation separation distances or any change to the classification of vegetation.













MINIMUM VEGETATION SEPARATION DISTANCES REQUIRED TO ACHIEVE THE CONDITIONAL BAL						
The Receiver of Radiant Heat Relevant Building(s)/Structure(s)	Vegetation Classification		Conditional Bushfire Attack Level	Vegetation Separation Distance		
	Area	Class		Required (m)	Current (m)	Minimum Additional Required (m)
Transportables	1	(B) Woodland	BAL-29	14	15	N/A
	1	(B) Woodland	BAL-12.5	29	15	14
	2	(B) Woodland	BAL-29	14	59	N/A
	2	(B) Woodland	BAL-12.5	29	59	N/A
	3	Excluded, clauses 2.2.3.2 (e) & (f)	N/A	N/A	N/A	N/A
Comments: Vegetation works required include but are not limited to the under- pruning of trees to two (2) metres in height (where retained), the removal of dead flammable materials (i.e. - felled branches, sticks and twigs) and the slashing of grasses to heights no greater than 50mm in accordance with the Shire of Derby/West Kimberley Fire break and Fuel Hazard Reduction Notice.						

Figure 3

Site Assessment Map - (Incorporating APZ)

Lot 277 on Plan / Diagram: P188285
Great Northern Highway
St George Ranges
Shire of Derby-West Kimberley

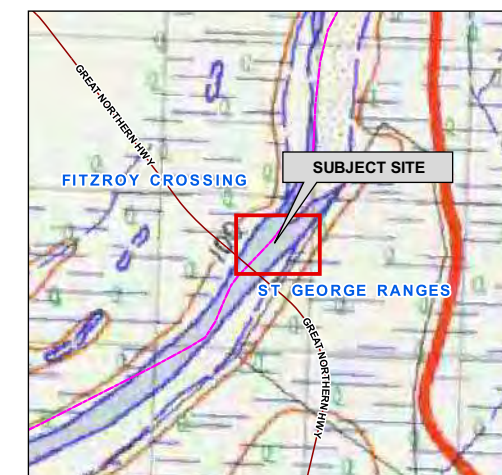
----- LEGEND -----

-  Elevation (m)
-  Subject Site
- Proposal**
-  Transportable
- Asset Protection Zone**
-  APZ - BAL-29
-  APZ Distance (m)
-  APZ - BAL-12.5
-  APZ Distance (m)
-  APZ - LGA Requirements
-  APZ Distance (m)
- Assessment Area**
-  150m Buffer
- Classified Vegetation**
-  Class B - Woodland
-  Exclusion 2.2.3.2



Metres

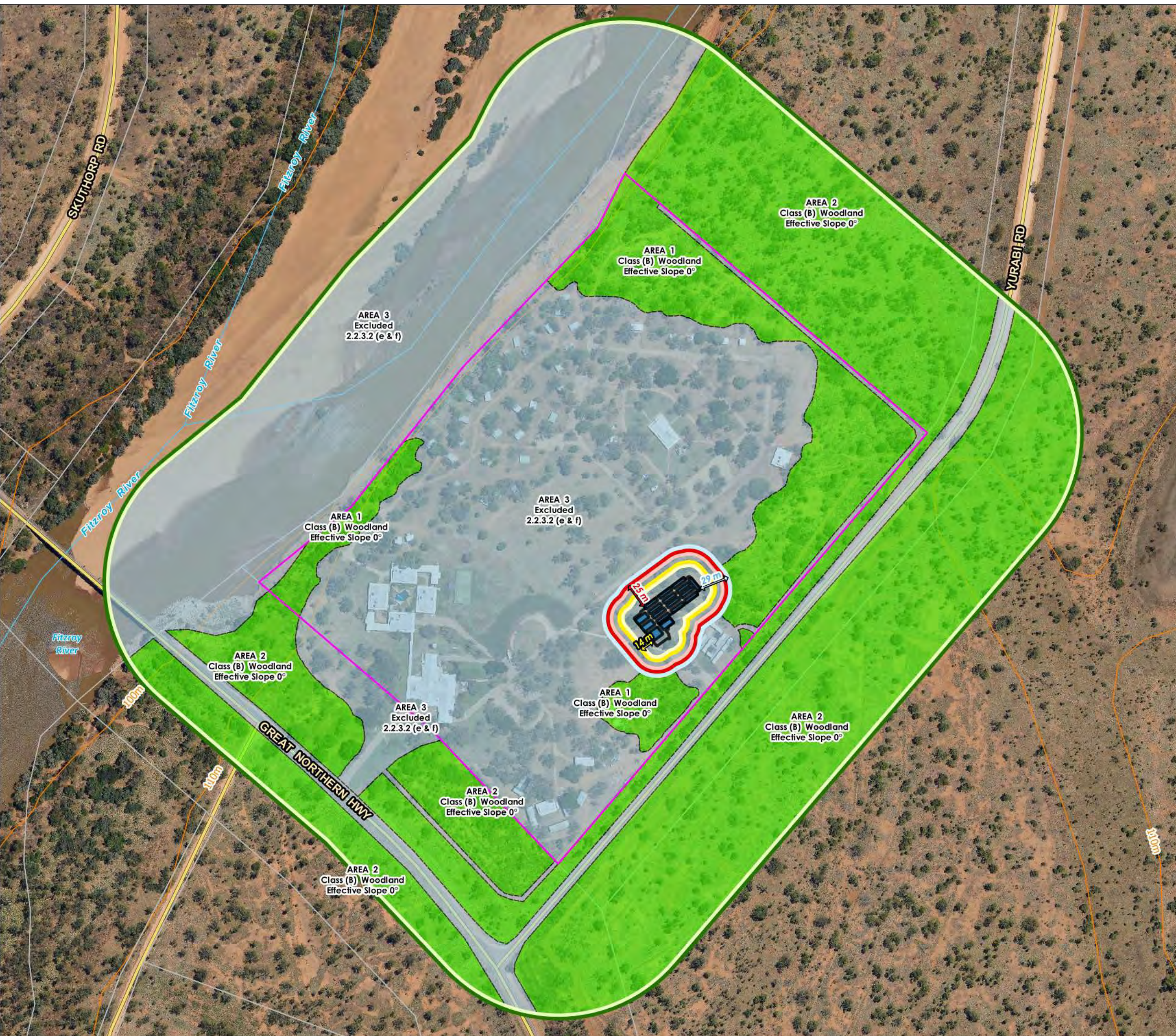
----- LOCALITY -----



AERIAL IMAGERY: Landgate/SLIP



Coordinate System: GDA 1994 MGA Zone 50
Projection: Universal Transverse Mercator Units: Metre
Map by: Sarina Gorman 14-06-2023
SCALE (A3): 1 : 3500



APPENDIX A: BAL ASSESSMENT DATA (DETAILED) AND SUPPORTING INFORMATION

A1: Assessed Site Inputs Common to the Method 1 and Method 2 Procedures

A1.1: FIRE DANGER INDICES (FDI/ FDI/GFDI)

When using Method 1 the relevant FDI value required to be applied for each state and region is established by AS 3959:2018, Table 2.1. Each FDI value applied in Tables 2.4 – 2.7 represents both the Forest Fire Danger Index (FFDI) and a deemed equivalent for the Grassland Fire Danger Index (GFDI), as per Table B2 in Appendix B. When using Method 2, the relevant FFDI and GFDI are applied.

The values may be able to be refined within a jurisdiction, where sufficient climatological data is available and in consultation with the relevant authority.

Relevant Jurisdiction:	WA	Region:	Whole State	Method 1	Applied FDI:	80
				Method 2	Applied FFDI:	N/A
					Applied GFDI:	N/A

A1.2: VEGETATION ASSESSMENT AND CLASSIFICATION

Vegetation Types and Classification

In accordance with AS 3959:2018 clauses 2.2.3 and C2.2.3.1, all vegetation types within 100 metres of the 'site' (defined as "the part of the allotment of land on which a building stands or is to be erected"), are identified and classified. Any vegetation more than 100 metres from the site that has influenced the classification of vegetation within 100 metres of the site, is identified and noted. The maximum excess distance is established by AS 3959: 2018 cl 2.2.3.2 and is an additional 100 metres.

Classification is also guided by the Visual Guide for Bushfire Risk Assessment in WA (WA Department of Planning February 2016) and any relevant FPA Australia practice notes.

Modified Vegetation

The vegetation types have been assessed as they will be in their natural mature states, rather than what might be observed on the day. Vegetation destroyed or damaged by a bushfire or other natural disaster has been assessed on its expected re-generated mature state. Modified areas of vegetation can be excluded from classification if they consist of low threat vegetation or vegetation managed in a minimal fuel condition, satisfying AS 3959:2018 s2.2.3.2(f), and there is sufficient justification to reasonable expect that this modified state will exist in perpetuity.

The Influence of Ground Slope

Where significant variation in effective slope exists under a consistent vegetation type, these will be delineated as separate vegetation areas to account for the difference in potential bushfire behaviour, in accordance with AS 3959:2018 clauses 2.2.5 and C2.2.5.





THE INFLUENCE OF VEGETATION GREATER THAN 100 METRES FROM THE SUBJECT SITE

Vegetation area(s) within 100m of the site whose classification has been influenced by the existence of bushfire prone vegetation from 100m – 200m from the site:

None




Assessment Statement:

No vegetation types exist close enough, or to a sufficient extent, within the relevant area to influence classification of vegetation within 100 metres of the subject site.

VEGETATION AREA 1							
Classification	B. WOODLAND						
Types Identified	Woodland B-05	Woodland B-07	Closed tussock grassland G-21				
Exclusion Clause	N/A						
Effective Slope	Measured	flat 0 degrees	Applied Range (Method 1)	Upslope or flat 0 degrees			
Foliage Cover (all layers)	10-30%	Shrub/Heath Height	N/A	Tree Height	Up to 30m		
Description/Justification:	Woodland Dominant Area - Eucalypt dominant area. Understorey consists of primarily low grasses. Occasional open areas between canopies.						
Post Development Assumptions:	<p>Refer to Figure 3 contained within this Report - It is anticipated that sections of Area 1 within the boundaries of the subject site will have some form of modification as a result of Asset Protection Zone (APZ) implementation.</p> <p>Note – The removal or modification to native vegetation is subject to any applicable Environmental Survey and subsequent approval by the relevant decision maker.</p>						
							
PHOTO ID: 1		PHOTO ID: 2					
							
PHOTO ID: 3		PHOTO ID: 4					

VEGETATION AREA 1						
Classification	B. WOODLAND					
Types Identified	Woodland B-05	Woodland B-07	Closed tussock grassland G-21			
Exclusion Clause	N/A					
Effective Slope	Measured	flat 0 degrees	Applied Range (Method 1)	Upslope or flat 0 degrees		
Foliage Cover (all layers)	10-30%	Shrub/Heath Height	N/A	Tree Height	Up to 30m	
Description/Justification:	As Above.					
Post Development Assumptions:	As Above.					
						
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VEGETATION AREA 2						
Classification	B. WOODLAND					
Types Identified	Woodland B-05	Woodland B-07	Closed tussock grassland G-21			
Exclusion Clause	N/A					
Effective Slope	Measured	flat 0 degrees	Applied Range (Method 1)	Upslope or flat 0 degrees		
Foliage Cover (all layers)	10-30%	Shrub/Heath Height	N/A	Tree Height	Up to 30m	
Description/Justification:	Woodland Dominant Area - Eucalypt dominant area. Understorey consists of primarily low grasses. Occasional open areas between canopies.					
Post Development Assumptions:	Not Applicable.					
						
PHOTO ID: 6			PHOTO ID: 7			
						
PHOTO ID: 8			PHOTO ID: 9			

VEGETATION AREA 2						
Classification	B. WOODLAND					
Types Identified	Woodland B-05	Woodland B-07	Closed tussock grassland G-21			
Exclusion Clause	N/A					
Effective Slope	Measured	flat 0 degrees	Applied Range (Method 1)	Upslope or flat 0 degrees		
Foliage Cover (all layers)	10-30%	Shrub/Heath Height	N/A	Tree Height	Up to 30m	
Description/Justification:	As Above.					
Post Development Assumptions:	As Above.					
						
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PHOTO ID: 12						

VEGETATION AREA 3

Classification	N/A						
Types Identified	N/A						
Exclusion Clause	2.2.3.2 (e) Non-vegetated areas and (f) Low threat vegetation - minimal fuel condition.						
Effective Slope	Measured	N/A		Applied Range (Method 1)	N/A		
Foliage Cover (all layers)	N/A		Shrub/Heath Height	N/A		Tree Height	N/A
Description/Justification:	<p>Managed private properties and gardens. Trees under-pruned to a minimum of two (2) metres in height. Grasses slashed and maintained to less than 50mm in height. Hardstand areas cleared of unmanaged vegetation.</p> <p>Note – Some sparse grasses present. This will not support a running fire.</p>						
Post Development Assumptions:	Not Applicable.						



PHOTO ID: 13



PHOTO ID: 14



PHOTO ID: 15



PHOTO ID: 16

VEGETATION AREA 3							
Classification	N/A						
Types Identified	N/A						
Exclusion Clause	2.2.3.2 (e) Non-vegetated areas and (f) Low threat vegetation - minimal fuel condition.						
Effective Slope	Measured	N/A		Applied Range (Method 1)	N/A		
Foliage Cover (all layers)	N/A		Shrub/Heath Height	N/A		Tree Height	N/A
Description/Justification:	As Above.						
Post Development Assumptions:	As Above.						
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A1.3: EFFECTIVE SLOPE

Measuring

Effective slope refers to the slope “under the classified vegetation which most significantly influences bushfire behaviour (AS 3959:2018, clause B4, CB4). It is not the average slope.

It is described as upslope, flat or downslope when viewed from the exposed element (e.g., building) looking towards the vegetation – and measured in degrees. Ground slope has a direct and significant influence on a bushfire's rate of spread and intensity, which increases when travelling up a slope.

The slope under the vegetation in closest proximity to the exposed element(s), over the distance that will most likely carry the entire depth of the flaming front, will be a significant consideration in the determination of the effective slope. This distance is determined as a function of the potential quasi-steady rate of spread and expected residence time (i.e., the flaming combustion period at a single point on the ground), of a bushfire in the specific vegetation type/landscape scenario.

Slope Variation Within Areas of Vegetation

Where a significant variation in effective slope exists under a consistent vegetation type, these will be delineated as separate vegetation areas to account for the difference in potential bushfire behaviour, in accordance with AS 3959:2018 clauses 2.2.5 and C2.2.5.

Slope Variation Due to Multiple Development Sites

When the effective slope, under a given area of bushfire prone vegetation, will vary significantly relative to multiple proposed development sites (exposed elements), then the effective slopes corresponding to each of the different locations, are separately identified.

The relevant (worst case) effective slope is determined in the direction corresponding to the potential directions of fire spread towards the subject building(s).

Differences in Application of Effective Slope - AS 3959:2018 Method 1 versus Method 2 Procedures

The Method 1 procedure provides five different slope ranges from flat (including all upslopes) to 20 degrees downslope to define the effective slope and bushfire behaviour model calculations apply the highest value in each range (i.e., 0°, 5°, 10°, 15° or 20°).

The Method 2 procedure requires an actual slope (up or down in degrees) to be determined. AS 3959:2018, clause B1 limits the effective slope that can be applied to 30 degrees downslope and 15 degrees upslope. Where any upslope is greater than 15 degrees, then 15 degrees is to be used.

SITE ASSESSMENT DETAILS - EXPLANATION & JUSTIFICATION

The effective slopes determined from the site assessment are recorded in Table 1 of this report. When their derivation requires additional explanation and justification, this is provided below.

A1.4: SEPARATION DISTANCE

Measuring

The separation distance is the distance in the horizontal plane between the receiver (building/structure or area of land being considered) and the edge of the classified vegetation (AS 3959:2018, clause 2.2.4)

The relevant parts of a building/structure from which the measurement is taken is the nearest part of an external wall or where a wall does not exist, the supporting posts or columns. Certain parts of buildings are excluded including eaves and roof overhangs.

The edge of the vegetation, for forests and woodlands, will be determined by the unmanaged understorey rather than either the canopy (drip line) or the trunk (AS 3959:2018, clause C2.2.5).

Measured Separation Distance as a Calculation Input

If a separation distance can be measured because the location of the building/structure relative to the edge of the relevant classified vegetation is known, this figure can be entered into the BAL calculation. The result is a determined BAL rating.

Assumed Separation Distance as a Calculation Input

When the building/structure location within the lot is not known, an assumed building location may be applied that would establish the closest positioning of the building/structure relative to the relevant area of vegetation.

The assumed location would be based on a factor that puts a restriction on a building location such as:

- An established setback from the boundary of a lot, such as a residential design code setback or a restrictive covenant; or
- Within an established building envelope.

The resultant BAL rating would be indicative and require later confirmation (via a Compliance Report) of the building/structure actual location relative to the vegetation to establish the determined BAL rating.

SITE ASSESSMENT DETAILS - EXPLANATION & JUSTIFICATION

Measured and assumed separation distances determined from the site assessment are recorded in Table 1 of this report.

When their derivation requires additional explanation and justification, including when the relevant R-Code or other regulated building setbacks are being applied, this is provided below.

APPENDIX B: ADVICE - ONSITE VEGETATION MANAGEMENT - THE APZ

THE ASSET PROTECTION ZONE (APZ) - DESCRIPTION

This is an area surrounding a habitable building containing low threat fire fuel fuels (including vegetation), or vegetation managed in a minimal fuel condition, no fire fuels or any combination. The primary objectives include:

- To ensure the building is sufficiently separated from the bushfire hazard to limit the impact of its direct attack mechanisms. That is, the dimensions of the APZ will, for most site scenarios, remove the potential for direct flame contact on the building, reduce the level of radiant heat to which the building is exposed and, dependent on the types of vegetation present, potentially provide some reduction in exposure to ember attack,);
- To ensure any vegetation retained within the APZ is low threat and prevents surface fire spreading to the building;
- To ensure other combustible materials that can result in consequential fire (typically ignited by embers) within both the APZ and parts of the building, are eliminated, minimised and/or appropriately located or protected.

Note: The explanatory notes in the Guidelines for Planning in Bushfire Prone Areas DPLH v1.4 (Guidelines) provide some guidance for achieving this objective and other sources are available. Research shows that consequential fire, ignited by embers, is the primary cause of building loss in past bushfire events; and

- To provide a defensible space for firefighting activities.

B1: Asset Protection Zone (APZ) Dimensions

APZ DIMENSIONS – DIFFERENCES IN REQUIREMENTS FOR PLANNING ASSESSMENTS COMPARED TO IMPLEMENTATION

THE 'PLANNING BAL-29' APZ DIMENSIONS

The 'Planning BAL-29' APZ is not necessarily the size of the APZ that must be physically implemented and maintained by a landowner. Rather, its purpose is to identify if an acceptable solution for planning approval can be met i.e., can a specified minimum separation distance from bushfire prone vegetation exist.

An assessment against the Bushfire Protection Criteria is conducted for planning approval purposes. To satisfy 'A2.1: Asset Protection Zone', it must be demonstrated that certain minimum separation distances between the relevant building/structure and different classes of bushfire prone vegetation, either exist or can be created and will remain in perpetuity. These minimum separation distances determine the 'Planning BAL-29' APZ dimensions.

Dimensions: The minimum dimensions are those that will ensure the potential radiant heat impact on subject buildings does not exceed 29 kW/m². These dimensions will vary dependent on the vegetation classification, the slope of the land they are growing on and certain other factors specific to the subject site.

Note: For certain purposes associated with vulnerable land uses, the 'Planning BAL-29' APZ may be replaced with dimensions corresponding to radiant heat impact levels of 10 kW/m² and 2 kW/m² and calculated using 1200K flame temperature.

Location: The identified 'Planning BAL-29' APZ must not extend past lot boundaries onto land the landowner has no control over either now or potentially at some point in the future. Limited exceptions include:

- When adjoining land is not vegetated (e.g., built out, roads, carparks, drainage, rock, water body etc.);
- When adjoining land currently or, will in the short term, contain low threat vegetation and or vegetation managed in a minimal fuel condition as per AS 3959:2018 cl. 2.2.3.2. It must be reasonable (justifiable) to expect this low threat vegetation and/or level of management will continue to exist or be conducted in perpetuity and require no action from the owner of the subject lot.

Such areas of land include formally managed areas of vegetation (e.g., public open space / recreation areas / services installed in a common section of land). For specific scenarios, evidence of the formal

commitment to manage these areas to a certain standard may be required and would be included in the BMP.

These areas of land can also be part of the required APZ on a neighbouring lot for which the owner of that lot has a recognised responsibility to establish and maintain; and

- When there is a formalised and enforceable capability and responsibility created for the subject lot owner, or any other third party, to manage vegetation on land they do not own in perpetuity. This would be rare, and evidence of the formal authority would be included in the BMP.

The bushfire consultant's 'Supporting Assessment Detail', that is presented in the assessment against the acceptable solution A2.1, will identify and justify how any adjoining land within the 'Planning BAL-29 APZ will meet the APZ standards. Or otherwise, explain how this condition cannot be met.

THE 'BAL RATING' APZ DIMENSIONS

The applicable BAL rating will have been stated in the BAL Assessment Data section of the BAL Assessment Report or BMP (as relevant). The BAL rating can be assessed as 'determined' or 'indicative' or be 'conditional', dependent of the specific conditions associated with the site and the stage of assessment or planning. It is the eventual assessment of the 'Determined' BAL that will establish both the BAL rating that is to apply and its corresponding 'BAL Rating' APZ dimensions.

Dimensions: The minimum dimensions of the 'BAL Rating' APZ to be established and maintained will be those that correspond to the determined BAL rating for the subject building/structure that has accounted for surrounding vegetation types, the slope of the land they are growing on and certain other factors specific to the subject site and surrounding land.

Establishing the 'BAL Rating' APZ will ensure that the potential radiant heat exposure of the building/structure will be limited to the level that the applied construction requirements are designed to resist when that building/structure is required to be constructed to the standard corresponding to the Determined BAL.

Note: For certain purposes associated with vulnerable land uses, the 'BAL Rating' APZ dimensions may be replaced with dimensions corresponding to the specific radiant heat impact levels of 10 kW/m² and 2 kW/m² and calculated using 1200K flame temperature.

Location: The same conditions will apply as for the 'Planning BAL-29' APZ.

THE 'LOCAL GOVERNMENT' APZ DIMENSIONS

Some Local Government's establish the dimensions of the APZ that must be established surrounding buildings in their annual Firebreak/Hazard Reduction Notice. Or for a specific site they may establish a maximum allowable dimension (typically that corresponding to BAL-29). When established, the landowner will need to be comply with these.

THE 'REQUIRED' APZ DIMENSIONS

This is the APZ that is to be established and maintained by the landowner within the subject lot and surrounding the subject building(s). It will be identified on the Property Bushfire Management Statement when it is required to be included in this Report/Plan.

Dimensions: The 'Required APZ' dimensions are the minimum (or maximum when relevant) distances away from the subject building(s) that the APZ must extend. These distances will not necessarily be the same all around the building(s). They can vary and are dependent on the different vegetation types (and their associated ground slope) that can exist around the building(s), and specific local government requirements. The dimensions to implement are determined by:

- A. The 'BAL Rating APZ' of the subject building(s) when distances are greater than 'B' below (except when 'B' establishes a maximum distance); or
- B. The 'Local Government' APZ' derived from the Firebreak/Hazard Reduction Notice when distances are greater than 'A' above, other than when a maximum distance is established, in which case this will apply; or
- C. A combination of 'A' and 'B'.

Location: The same conditions will apply as for the 'Planning BAL-29' APZ.

B2: The Standards for the APZ as Established by the Guidelines (DPLH, v1.4)

Within the Guidelines (source: <https://www.wa.gov.au/government/document-collections/state-planning-policy-37-planning-bushfire-prone-areas>), the management Standards are established by:

- Schedule 1: Standards for Asset Protection Zones (see extract below) established by the Guidelines; and
- The associated explanatory notes (Guidelines E2) that address (a) managing an asset protection zone (APZ) to a low threat state (b) landscaping and design of an asset protection zone and (c) plant flammability.

Guidelines for
Planning in
Bushfire
Prone Areas

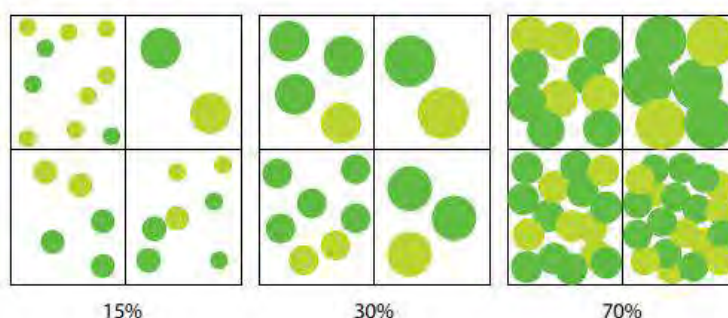
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ELEMENT 2: SITING AND DESIGN OF DEVELOPMENT

SCHEDULE 1: STANDARDS FOR ASSET PROTECTION ZONES

OBJECT	REQUIREMENT
Fences within the APZ	<ul style="list-style-type: none"> • Should be constructed from non-combustible materials (for example, iron, brick, limestone, metal post and wire, or bushfire-resisting timber referenced in Appendix F of AS 3959).
Fine fuel load (Combustible, dead vegetation matter <6 millimetres in thickness)	<ul style="list-style-type: none"> • Should be managed and removed on a regular basis to maintain a low threat state. • Should be maintained at <2 tonnes per hectare (on average). • Mulches should be non-combustible such as stone, gravel or crushed mineral earth or wood mulch >6 millimetres in thickness.
Trees* (>6 metres in height)	<ul style="list-style-type: none"> • Trunks at maturity should be a minimum distance of six metres from all elevations of the building. • Branches at maturity should not touch or overhang a building or powerline. • Lower branches and loose bark should be removed to a height of two metres above the ground and/or surface vegetation. • Canopy cover within the APZ should be <15 per cent of the total APZ area. • Tree canopies at maturity should be at least five metres apart to avoid forming a continuous canopy. Stands of existing mature trees with interlocking canopies may be treated as an individual canopy provided that the total canopy cover within the APZ will not exceed 15 per cent and are not connected to the tree canopy outside the APZ.

Figure 19: Tree canopy cover – ranging from 15 to 70 per cent at maturity



<p>Shrub* and scrub* (0.5 metres to six metres in height). Shrub and scrub >6 metres in height are to be treated as trees.</p>	<ul style="list-style-type: none"> • Should not be located under trees or within three metres of buildings. • Should not be planted in clumps >5 square metres in area. • Clumps should be separated from each other and any exposed window or door by at least 10 metres.
<p>Ground covers* (<0.5 metres in height. Ground covers >0.5 metres in height are to be treated as shrubs)</p>	<ul style="list-style-type: none"> • Can be planted under trees but must be maintained to remove dead plant material, as prescribed in 'Fine fuel load' above. • Can be located within two metres of a structure, but three metres from windows or doors if >100 millimetres in height.
<p>Grass</p>	<ul style="list-style-type: none"> • Grass should be maintained at a height of 100 millimetres or less, at all times. • Wherever possible, perennial grasses should be used and well-hydrated with regular application of wetting agents and efficient irrigation.
<p>Defendable space</p>	<ul style="list-style-type: none"> • Within three metres of each wall or supporting post of a habitable building, the area is kept free from vegetation, but can include ground covers, grass and non-combustible mulches as prescribed above.
<p>LP Gas Cylinders</p>	<ul style="list-style-type: none"> • Should be located on the side of a building furthest from the likely direction of a bushfire or on the side of a building where surrounding classified vegetation is upslope, at least one metre from vulnerable parts of a building. • The pressure relief valve should point away from the house. • No flammable material within six metres from the front of the valve. • Must sit on a firm, level and non-combustible base and be secured to a solid structure.

* Plant flammability, landscaping design and maintenance should be considered – refer to explanatory notes

B3: The Standards for the APZ as Established by the Local Government

Refer to the firebreak / hazard reduction notice issued annually (under s33 of the Bushfires Act 1954) by the relevant local government. It may state Standards that vary from those established by the Guidelines and that have been endorsed by the WAPC and DFES as per Section 4.5.3 of the Guidelines.

A copy of the relevant annual notice is not included here as they are subject to being reviewed and modified prior to issuing each year. Refer to ratepayers notices and/or the local government's website for the current version.

B4: Vegetation and Areas Excluded from Classification - Ensure Continued Exclusion

AS 3959:2018 establishes the methodology for determining a bushfire attack level (BAL). The methodology includes the classification of the subject site's surrounding vegetation according to their 'type' and the application of the corresponding relevant bushfire behaviour models to determine the BAL.

Certain vegetation can be considered as low threat and be excluded from classification. Where this has occurred in assessing the site, the extract from AS3959:2018 below states the requirements that must continue to exist for the vegetation on those areas of land to be excluded from classification (including the size of the vegetation area if relevant to the assessment).

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AS 3959:2018

2.2.3.2 Exclusions—Low threat vegetation and non-vegetated areas

The following vegetation shall be excluded from a BAL assessment:

- (a) Vegetation of any type that is more than 100 m from the site.
- (b) Single areas of vegetation less than 1 ha in area and not within 100 m of other areas of vegetation being classified vegetation.
- (c) Multiple areas of vegetation less than 0.25 ha in area and not within 20 m of the site, or each other or of other areas of vegetation being classified vegetation.
- (d) Strips of vegetation less than 20 m in width (measured perpendicular to the elevation exposed to the strip of vegetation) regardless of length and not within 20 m of the site or each other, or other areas of vegetation being classified vegetation.
- (e) Non-vegetated areas, that is, areas permanently cleared of vegetation, including waterways, exposed beaches, roads, footpaths, buildings and rocky outcrops.
- (f) Vegetation regarded as low threat due to factors such as flammability, moisture content or fuel load. This includes grassland managed in a minimal fuel condition, mangroves and other saline wetlands, maintained lawns, golf courses (such as playing areas and fairways), maintained public reserves and parklands, sporting fields, vineyards, orchards, banana plantations, market gardens (and other non-curing crops), cultivated gardens, commercial nurseries, nature strips and windbreaks.

NOTES:

- 1 Minimal fuel condition means there is insufficient fuel available to significantly increase the severity of the bushfire attack (recognizable as short-cropped grass for example, to a nominal height of 100 mm).
- 2 A windbreak is considered a single row of trees used as a screen or to reduce the effect of wind on the leeward side of the trees.

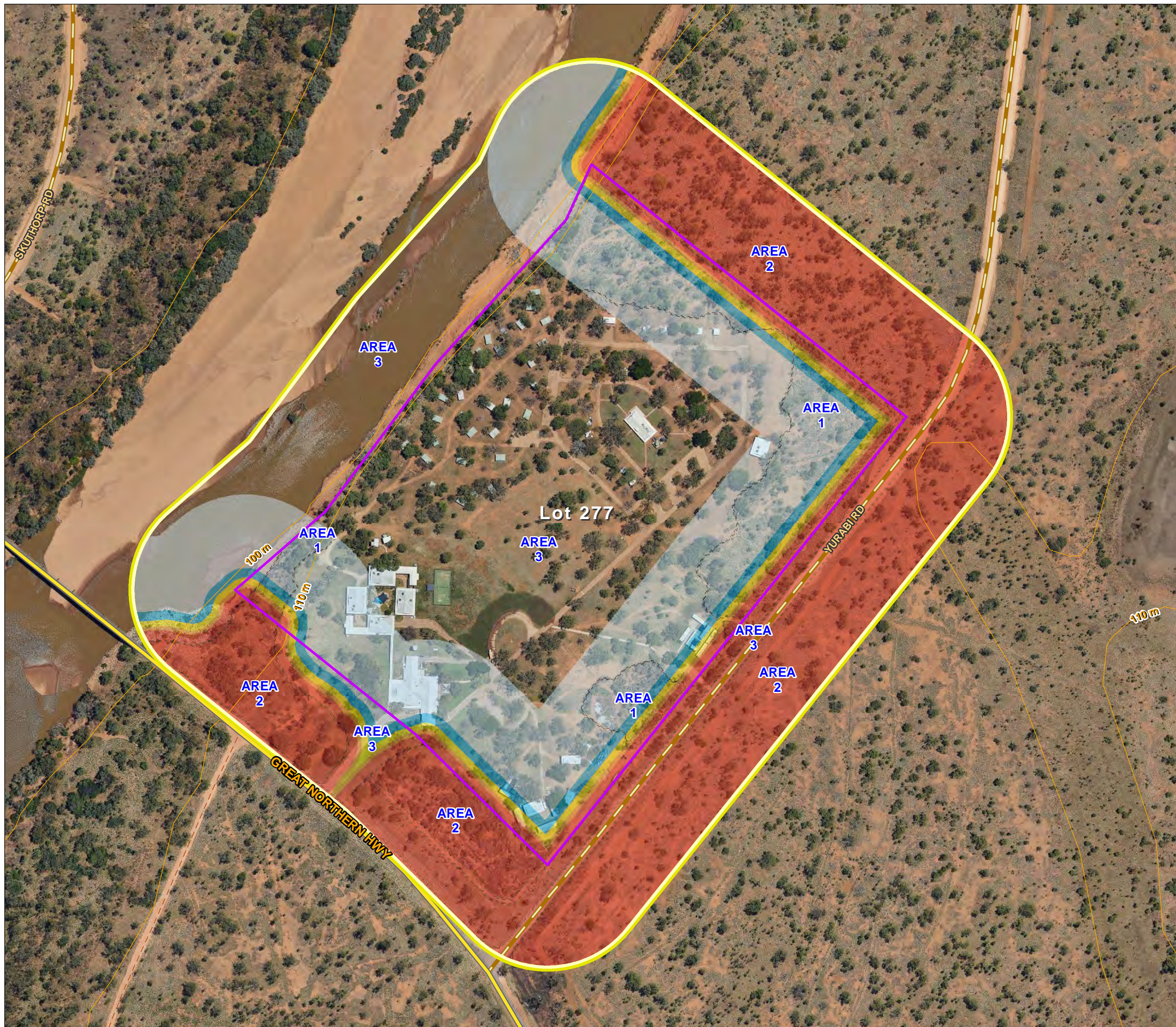
APPENDIX E: ADVICE - BAL RATINGS – CORRESPONDING THREATS AND CONSTRUCTION REFERENCES

BAL ¹	DESCRIPTION OF PREDICTED BUSHFIRE DIRECT ATTACK MECHANISMS (THREATS) AND LEVELS OF EXPOSURE	REFERENCES FOR CONSTRUCTION REQUIREMENTS	
		AS 3959:2018 Construction of Buildings in Bushfire Prone Areas	The NASH Standard (2021) – Steel Framed Construction in Bushfire Areas
		Referenced by the Building Code of Australia for Building Classes 1, 2, 3 & 10a	Referenced by the Building Code of Australia for Building Classes 1 & 10a
BAL – LOW	There is insufficient risk to warrant specific construction requirements but there is still some risk. <i>(Note: DFES recommend that ember attack protection features be incorporated into the design where practicable).</i>	Section 4. No Requirements	No Requirements
BAL – 12.5	There is a risk of ember attack. Construction elements are expected to be exposed to heat flux not greater than 12.5 kW/m ²	Sections 3 & 5.	All construction requirements for BAL-12.5 to BAL-40 are the same except for windows and external doors, which must comply with AS 3959. The construction requirements are set out as essentially non-combustible construction systems for each of the following building elements: Section 1.4: General Requirements Section 2: Roof and Ceiling System Section 3: External Wall System Section 4: Floor System Section 5: Carports Verandahs and Decks.
BAL – 19	There is a risk of ember attack and burning debris ignited by windborne embers and a likelihood of exposure to radiant heat. The construction elements are expected to be exposed to a heat flux not greater than 19 kW/m ² .	Sections 3 & 6	
BAL – 29	There is an increased risk of ember attack and burning debris ignited by windborne embers and a likelihood of exposure to an increased level radiant heat. The construction elements are expected to be exposed to a heat flux not greater than 29 kW/m ² .	Sections 3 & 7.	
BAL – 40	There is a much increased risk of ember attack and burning debris ignited by windborne embers, a likelihood of exposure to a high level of radiant heat and some likelihood of direct exposure to flames from the fire front. The construction elements are expected to be exposed to a heat flux not greater than 40kW/m ² .	Sections 3 & 8.	
BAL – FZ (Flame Zone)	There is an extremely high risk of ember attack and burning debris ignited by windborne embers, and a likelihood of exposure to an extreme level of radiant heat and direct exposure to flames from the fire front. The construction elements are expected to be exposed to a heat flux greater than 40 kW/m ² .	Sections 3 & 9.	The construction requirements are set out in Sections 1-5 and differ from the requirements for all other BAL ratings.

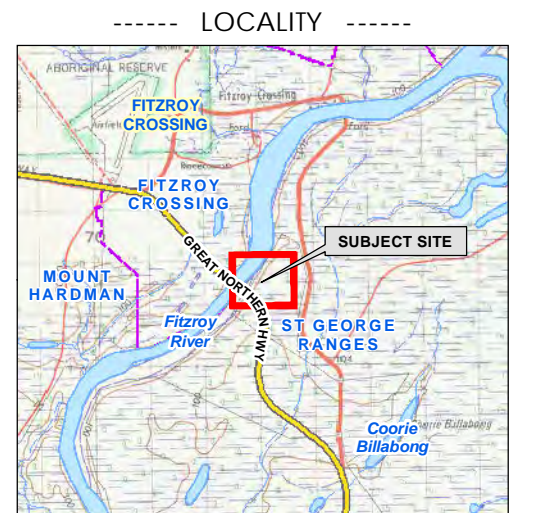
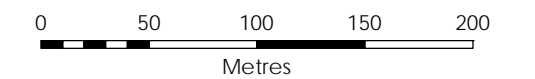
¹ AS 3959:2018 *Construction of buildings in bushfire prone areas*, defines a Bushfire Attack Level (BAL) as a “means of measuring the severity of a building’s potential exposure to ember attack, radiant heat and direct flame contact, using increments of radiant heat flux expressed in kW/m², and is the basis for establishing the requirements for construction to improve protection of building elements from attack by bushfire.”

Figure 3.2b
BAL Contour Map
(Excluded Onsite)

FITZROY CROSSING
SHIRE OF DERBY - WEST KIMBERLEY



- LEGEND -----
- Subject Site
 - 100m Vegetation Assessment Area
 - 100m from Subject Site
 - Indicative Bushfire Attack Levels
 - BAL FZ
 - BAL 40
 - BAL 29
 - BAL 19
 - BAL 12.5
 - Classified Vegetation Boundary



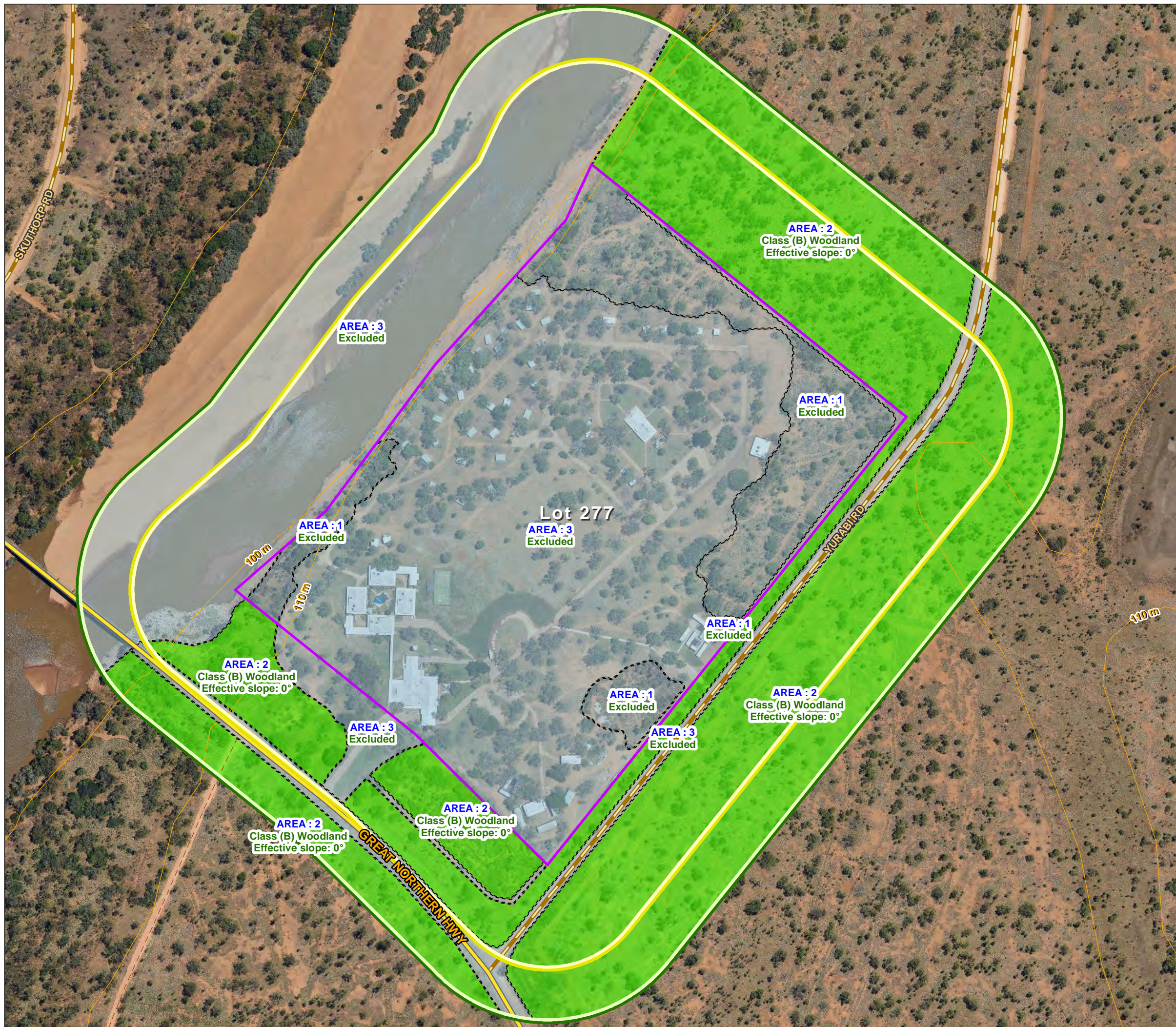
Aerial Imagery : Landgate/SLIP
Image Date : Oct 2022

Coordinate System: GDA 1994 MGA Zone 51
Projection: Universal Transverse Mercator Units: Metre
Map compiled by: Ian Ross 13/03/2023
Map updated by: Ian 13/03/2023
A3 Scale 1:3,500



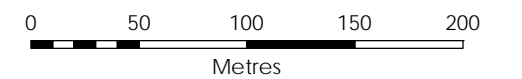
Figure 3.1b
Classified Vegetation &
Topography
(Excluded Onsite)

FITZROY CROSSING
SHIRE OF DERBY - WEST KIMBERLEY

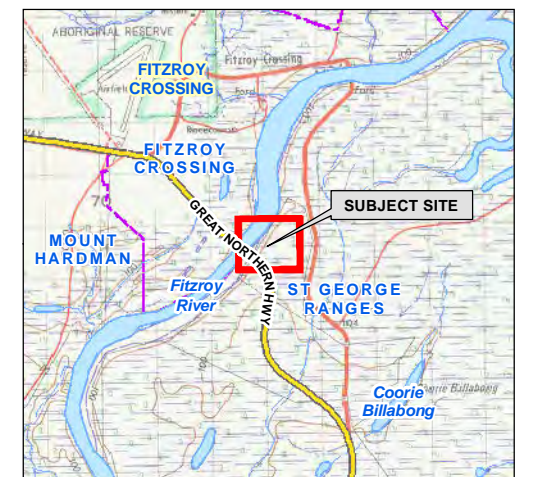


----- LEGEND -----

- Subject Site
- 150m Vegetation Assessment Area
- 100m Vegetation Assessment Area
- Class (B) Woodland
- Exclusion 2.2.3.2



----- LOCALITY -----



Aerial Imagery : Landgate/SLIP
Image Date : Oct 2022

Coordinate System: GDA 1994 MGA Zone 51
Projection: Universal Transverse Mercator Units: Metre
Map compiled by: Ian Ross 13/03/2023
Map updated by: Ian 13/03/2023
A3 Scale 1:3,500



Bushfire management plan/Statement addressing the Bushfire Protection Criteria coversheet

Site address:

Site visit: Yes No

Date of site visit (if applicable): Day Month Year

Report author or reviewer:

WA BPAD accreditation level (please circle):

Not accredited Level 1 BAL assessor Level 2 practitioner Level 3 practitioner

If accredited please provide the following.

BPAD accreditation number: Accreditation expiry: Month Year

Bushfire management plan version number:

Bushfire management plan date: Day Month Year

Client/business name:

	Yes	No
Has the BAL been calculated by a method other than method 1 as outlined in AS3959 (tick no if AS3959 method 1 has been used to calculate the BAL)?		
Have any of the bushfire protection criteria elements been addressed through the use of a performance principle (tick no if only acceptable solutions have been used to address all of the bushfire protection criteria elements)?		

Is the proposal any of the following (see [SPP 3.7 for definitions](#))?

	Yes	No
Unavoidable development (in BAL-40 or BAL-FZ)		
Strategic planning proposal (including rezoning applications)		
High risk land-use		
Vulnerable land-use		

None of the above

Note: Only if one (or more) of the above answers in the tables is yes should the decision maker (e.g. local government or the WAPC) refer the proposal to DFES for comment.

Why has it been given one of the above listed classifications (E.g. Considered vulnerable land-use as the development is for accommodation of the elderly, etc.)?

The information provided within this bushfire management plan to the best of my knowledge is true and correct:

Signature of report author or reviewer



Date



Fitzroy Crossing – The Lodge

Bushfire Management Plan (BMP)



Produced to meet the relevant requirements of STATE PLANNING POLICY 3.7 Planning in Bushfire Prone Areas & Guidelines

Address / Location: Lot 277 Great Northern Highway, St George Ranges

Shire of Derby-West Kimberley

Development Application

18 August 2023

Job Reference No: 230074

BPP GROUP PTY LTD T/A BUSHFIRE PRONE PLANNING

ACN: 39 166 551 784 | ABN: 39 166 551 784

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VERSION HISTORY					
Version	Status/Details				Date
1.0	Original				18 August 2023
-	-				
DISTRIBUTION					
Destination		Version	No. Copies	Hard Copy	Electronic Copy
Person	Email				
Amy Simpson – Northern Transportables	Amy@northerntransportables.com	1.0		<input type="checkbox"/>	<input checked="" type="checkbox"/>
		-		<input type="checkbox"/>	<input type="checkbox"/>
<p><i>Limitations: The protection measures that will be implemented based on information presented in this Bushfire Management Plan are minimum requirements and they do not guarantee that buildings or infrastructure will not be damaged in a bushfire, persons injured, or fatalities occur either on the subject site or off the site while evacuating.</i></p> <p><i>This is substantially due to the unpredictable nature and behaviour of fire and fire weather conditions. Additionally, the correct implementation of the required protection measures (including bushfire resistant construction) and any other required or recommended measures, will depend upon, among other things, the ongoing actions of the landowners and/or operators over which Bushfire Prone Planning has no control.</i></p> <p><i>All surveys, forecasts, projections and recommendations made in this report associated with the proposed development are made in good faith based on information available to Bushfire Prone Planning at the time. All maps included herein are indicative in nature and are not to be used for accurate calculations.</i></p> <p><i>Notwithstanding anything contained therein, Bushfire Prone Planning will not, except as the law may require, be liable for any loss or other consequences whether or not due to the negligence of their consultants, their servants or agents, arising out of the services provided by their consultants.</i></p> <p><i>Copyright © 2023 BPP Group Pty Ltd: All intellectual property rights, including copyright, in format and proprietary content contained in documents created by Bushfire Prone Planning, remain the property of BPP Group Pty Ltd. Any use made of such format or content without the prior written approval of Bushfire Prone Planning, will constitute an infringement on the rights of the Company which reserves all legal rights and remedies in respect of any such infringement.</i></p>					

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SUMMARY STATEMENTS

THIS DOCUMENT – STATEMENT OF PURPOSE

The Bushfire Management Plan (BMP)

The BMP sets out the required package of bushfire protection measures to lessen the risks associated with a bushfire event. It establishes the responsibilities to implement and maintain these measures.

The BMP also identifies the potential for any negative impact on any environmental, biodiversity and conservation values that may result from the application of bushfire protection measures or that may limit their implementation.

Risks Associated with Bushfire Events

The relevant risks are the potential for loss of life, injury, or destroyed or damaged assets which results in personal loss and economic loss. For a given site, the level of that risk to persons and assets (the exposed elements) is a function of the potential threat levels generated by the bushfire hazard, and the level of exposure and vulnerability of the at risk elements to the threats.

Bushfire Protection Measures

The required package of protection measures is established by *State Planning Policy 3.7 Planning in Bushfire Prone Areas (SPP 3.7)*, its associated *Guidelines* and any other relevant guidelines or position statements published by the Department of Planning, Lands and Heritage. These measures are limited to those considered by the WA planning authorities as necessary to be addressed for the purpose of land use planning. They do not encompass all available bushfire protection measures as many are not directly relevant to the planning approval stage. For example:

- Protection measures to reduce the vulnerability of buildings to bushfire threats is primarily dealt with at the building application stage. They are implemented through the process of applying the Building Code of Australia (Volumes 1 and 2 of the national Construction Code) in accordance with WA building legislation and the application of construction requirements based on a building's level of exposure - determined as a Bushfire Attack Level (BAL) rating); or
- Protection measures to reduce the threat levels of consequential fire (ignited by bushfire and involving combustible materials surrounding and within buildings) and measures to reduce the exposure and vulnerability of elements at risk exposed to consequential fire, are not specifically considered.

The package of required bushfire protection measures established by the Guidelines includes:

- The requirements of the bushfire protection criteria which consist of:
 - Element 1: Location (addresses threat levels).
 - Element 2: Siting and Design of Development (addresses exposure levels of buildings).
 - Element 3: Vehicular Access (addresses exposure and vulnerability levels of persons).
 - Element 4: Water (addresses vulnerability levels of buildings).
 - Element 5: Vulnerable Tourism Land Uses (addresses exposure and vulnerability as per Elements 1-4 but in use specific ways and with additional considerations of persons exposure and vulnerability).
- The requirement to develop Bushfire Emergency Plans / Information for 'vulnerable' land uses for persons to prepare, respond and recover from a bushfire event (this addresses vulnerability levels).
- The requirement to assess bushfire risk and incorporate relevant protection measures into the site emergency plans for 'high risk' land uses (this addresses threat, exposure and vulnerability levels).

Compliance of the Proposed Development or Use with SPP 3.7 Requirements

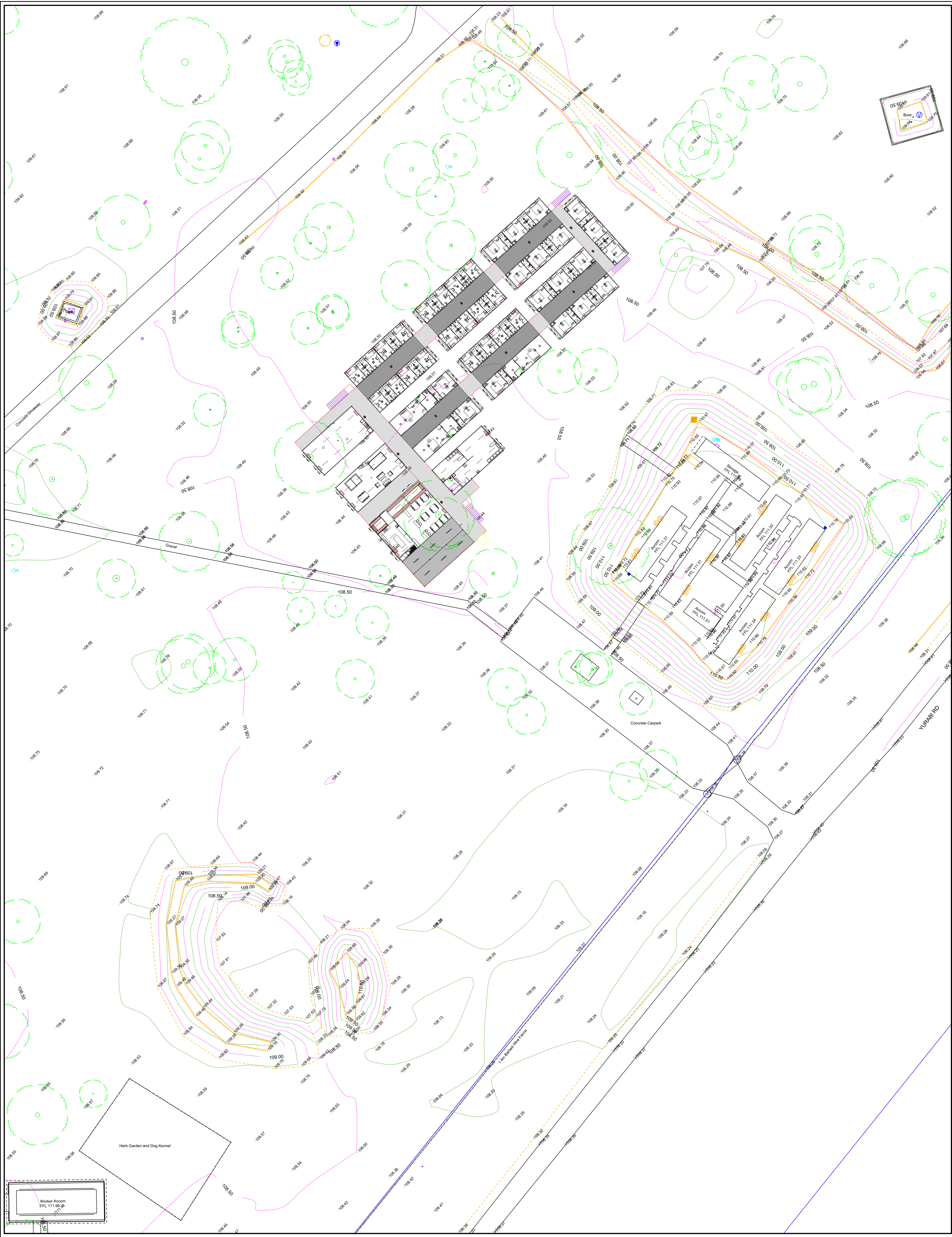
The BMP assesses the capacity of the proposed development or use to implement and maintain the required 'acceptable' solutions and any additionally recommended bushfire protection measures - or its capacity to satisfy the policy intent through the justified application of additional bushfire protection measures as supportable 'alternative' solutions.

THE PROPOSED DEVELOPMENT/USE – BUSHFIRE PLANNING COMPLIANCE SUMMARY		
Environmental Considerations		Assessment Outcome
Will land with identified environmental, biodiversity and conservation values limit the full application of the required bushfire protection measures?		Unlikely (check)
Will land with identified environmental, biodiversity and conservation values need to be managed in the implementation and maintenance of the bushfire protection measures - but not limit their application?		Unlikely (check)
Required Bushfire Protection Measures The Acceptable Solutions of the Bushfire Protection Criteria (Guidelines)		Assessment Outcome
Element	The Acceptable Solutions	
1: Location	A1.1 Development location	Fully Compliant
2: Siting and Design of Development	A2.1 Asset Protection Zone (APZ)	Fully Compliant
3: Vehicular Access	A3.1 Public roads	Fully Compliant
	A3.2a Multiple access routes	Fully Compliant
	A3.2b Emergency access way	N/A
	A3.3 Through-roads	N/A
	A3.4a Perimeter roads	N/A
	A3.4b Fire service access route	N/A
	A3.5 Battle-axe legs	N/A
	A3.6 Private driveways	Fully Compliant
4: Water	A4.1 Identification of future water supply	N/A
	A4.2 Provision of water for firefighting purposes	Fully Compliant
Other 'Bushfire Planning' Documents to Be Produced		
This necessity for additional documents is determined by the proposed development/use type and the requirements established by SPP 3.7 and the associated Guidelines (as amended). They may be produced concurrently or subsequent to the BMP. Relevant actions will be identified within Section 6 'Responsibilities for Implementation of Bushfire Protection Measures.		Required
Bushfire Emergency Plan: An operational document presenting prevent, prepare, respond and recover procedures and associated actions. As necessary, supporting information to justify determinations is included.		No
Bushfire Emergency Information (Poster): As a concise response information poster for certain vulnerable land uses.		No
Bushfire Emergency Information (Content): As content for inclusion into the Site's Emergency Plan for certain high risk land uses:		No
Bushfire Risk Assessment and Management Report:		No


1 PROPOSAL DETAILS AND THE BUSHFIRE MANAGEMENT PLAN

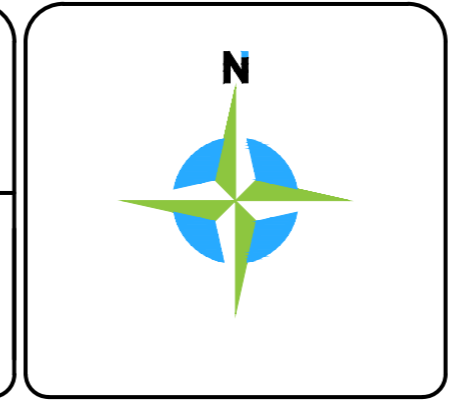
1.1 The Proposed Development/Use Details, Plans and Maps

The Proposal's Planning Stage For which certain bushfire planning documents are required to accompany the planning application.		Development Application
The Subject Land/Site		Lot 277 Great Northern Highway, St George Ranges – Shire of Derby-West Kimberley
Total Area of Subject Lot/Site		19.9988 hectares
Number of Additional Lots Created		N/A
Primary Proposed Construction	Type(s)	New Building(s)
	NCC Classification	Class 1b (house/hostel)
The 'Specific' Land Use Type for Bushfire Planning When applicable, this classification establishes a requirement to conduct assessments and develop documents that are additional to this Bushfire Management Plan.		N/A
Description of the Proposed Development/Use		
This Bushfire Management Plan has been prepared to accompany a Development Application for the installation of Transportables, located at Lot 277 Great Northern Highway, St George Ranges in the Shire of Derby-West Kimberley.		
Description of Planned Staged Development and the Management of Potential Bushfire Planning Issues		
Not Applicable.		



Rev.	Description	Drawn	Date	Checked
A	INITIAL RELEASE	RMA	31/10/22	BGI


 Surveyor: RMA
 Survey Date: 22/10/22
 File: S:\1
 FILES Software: -



FITZROY RIVER LODGE
DETAIL SURVEY
 CLIENTENGAWA

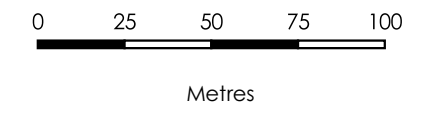
The contents of this plan are current and correct as of the date stated within the revision panel. All consultants and persons wishing to utilise this data should satisfy themselves of this plans currency by contacting MNG.

Figure 1.2
Proposed Development Map

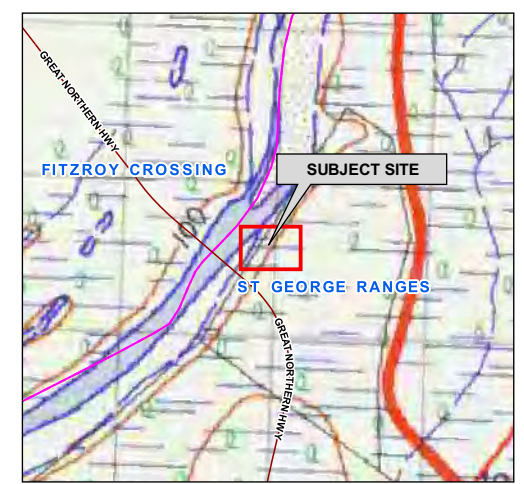
Lot 277 on Plan / Diagram: P188285
 Great Northern Highway
 St George Ranges
 Shire of Derby-West Kimberley

----- **LEGEND** -----

- Cadastre
- Water Supply**
- Water Tank
- Bore
- HR Hose Reel
- Subject Site
- Proposal**
- Transportable



----- **LOCALITY** -----



AERIAL IMAGERY: Landgate/SLIP



Coordinate System: GDA 1994 MGA Zone 50
 Projection: Universal Transverse Mercator Units: Metre
 Map by: Sarina Gorman 18-08-2023
 SCALE (A3): 1 : 2200



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Figure 1.3

Location Plan

Lot 277 on Plan / Diagram: P188285
Great Northern Highway
St George Ranges
Shire of Derby-West Kimberley

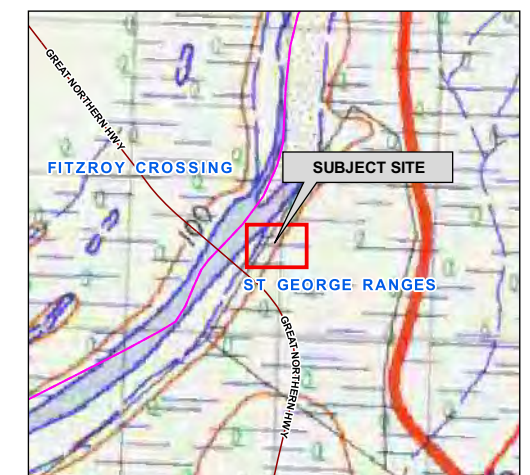
----- LEGEND -----

- Subject Site
- Local Government Authority
- Localities/Suburb
- DFES Stations (DFES-023)**
- Volunteer Fire & Emergency Service
- Reserves
- DBCA Legislated Lands & Waters**
- Conservation Park
- National Park
- DBCA Lands of Interest (DBCA-012)**
- Crown Freehold
- Crown Reserve
- Unallocated Crown Land

0 1,000 2,000 3,000 4,000

Metres

----- LOCALITY -----

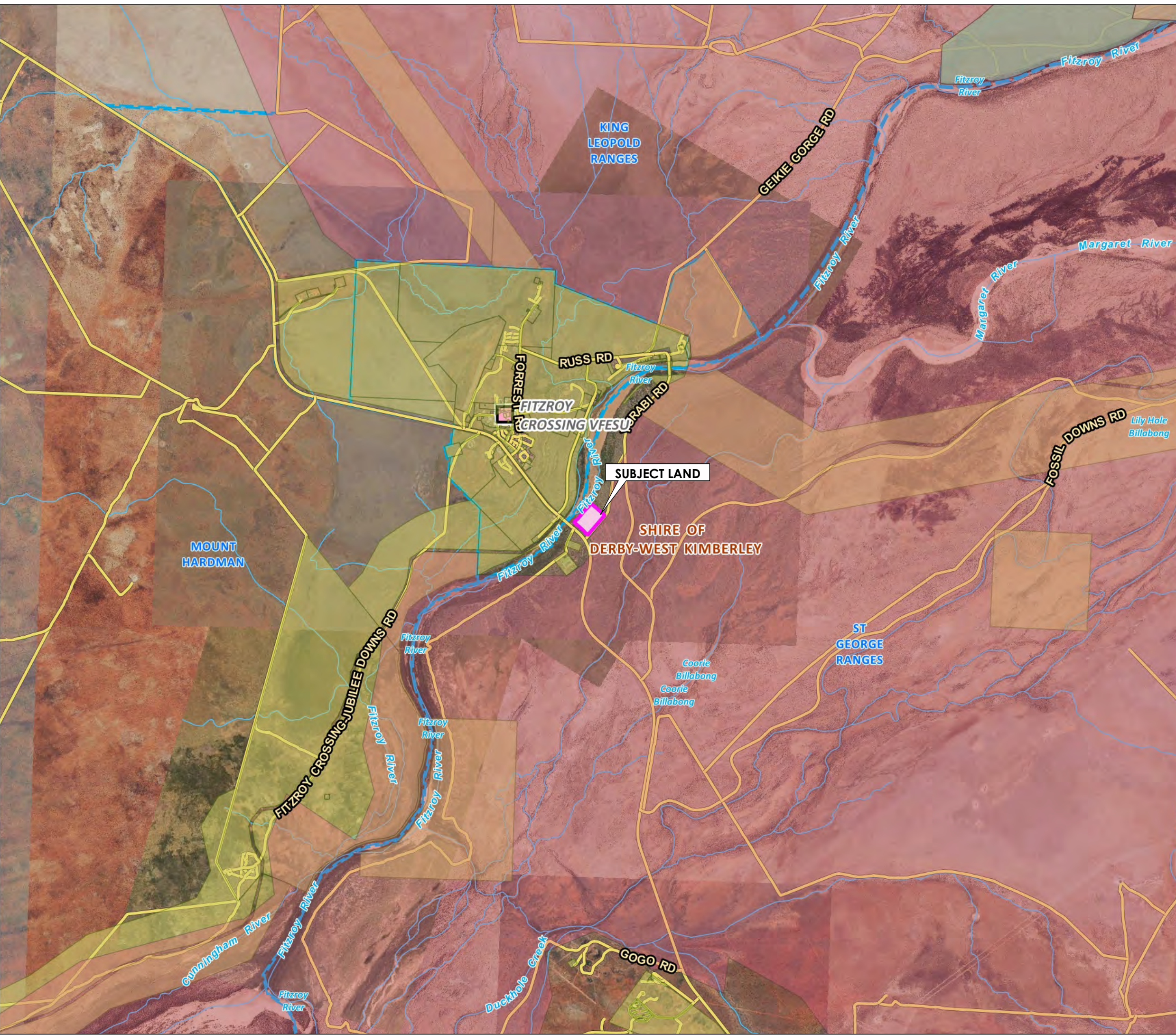


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 Map by: Sarina Gorman 18-08-2023
 SCALE (A3): 1 : 75000

230074_Location_Fitzroy_Crossing_Lodge.gxz



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WHERE SPP 3.7 AND THE GUIDELINES ARE TO APPLY – DESIGNATED BUSHFIRE PRONE AREAS

All higher order strategic planning documents, strategic planning proposals, subdivisions and development applications located in designated bushfire prone areas need to address SPP 3.7 and its supporting Guidelines. This also applies where an area is not yet designated as bushfire prone but is proposed to be developed in a way that introduces a bushfire hazard.

For development applications where only part of a lot is designated as bushfire prone and the proposed development footprint is wholly outside of the designated area, the development application will not need to address SPP 3.7 or the Guidelines. (Guidelines DPLH 2021 v1.4, s1.2).

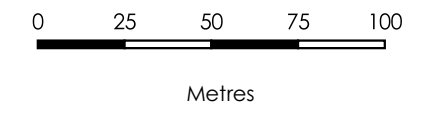
For subdivision applications, if all the proposed lots have a BAL-LOW indicated, a BMP is not required. (Guidelines DPLH 2021 v1.4, s5.3.1).

Figure 1.4
Bushfire Prone Area

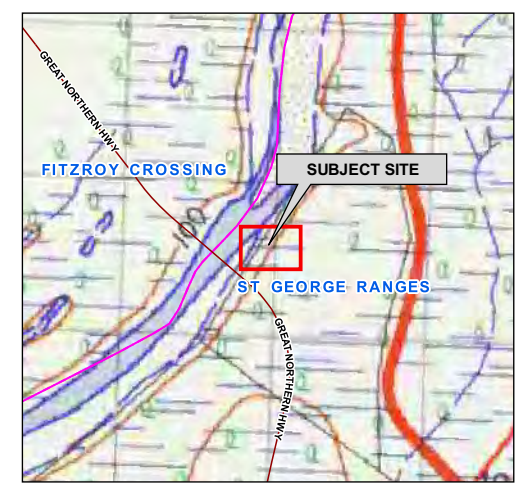
Lot 277 on Plan / Diagram: P188285
 Great Northern Highway
 St George Ranges
 Shire of Derby-West Kimberley

----- **LEGEND** -----

-  Bushfire Prone Area
-  Local Government Authority
-  Localities/Suburb
-  Cadastre
- Water Supply**
-  Water Tank
-  Bore
-  Hose Reel
-  Subject Site
- Proposal**
-  Transportable



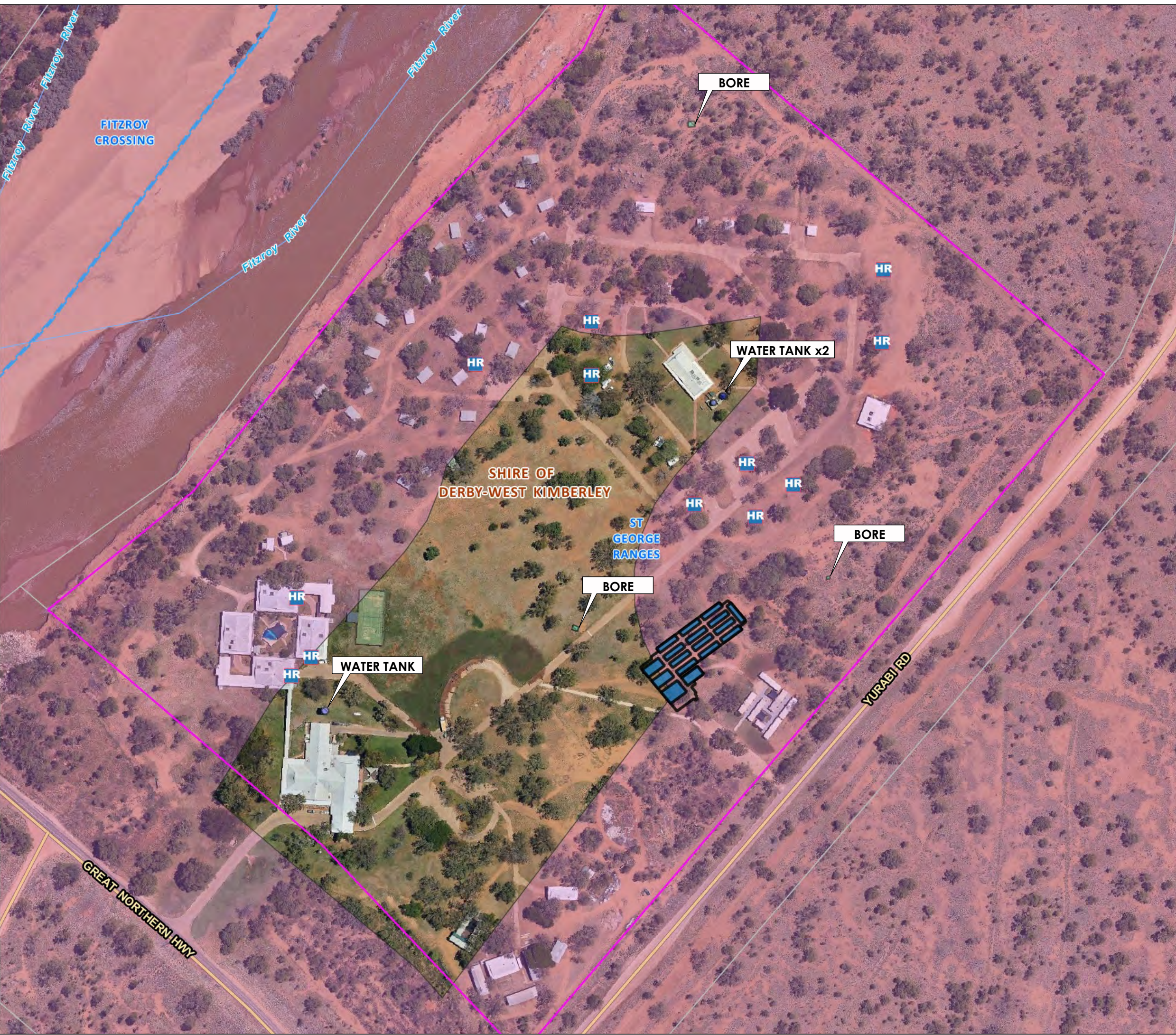
----- **LOCALITY** -----



AERIAL IMAGERY: Landgate/SLIP



Coordinate System: GDA 1994 MGA Zone 50
 Projection: Universal Transverse Mercator Units: Metre
 Map by: Sarina Gorman 18-08-2023
 SCALE (A3): 1 : 2200



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1.2 The Bushfire Management Plan (BMP)

1.2.1 Commissioning and Purpose

Landowner / proponent:	Leedal Pty Ltd
Bushfire Prone Planning commissioned to produce the BMP by:	Northern Transportables
Purpose of the BMP:	To assess the proposal's ability to meet all relevant requirements established by State Planning Policy 3.7: Planning in Bushfire Prone Areas (SPP 3.7), the associated 'Guidelines and any relevant Position Statements; and To satisfy the requirement for the provision of a Bushfire Management Plan to accompany the development application.
BMP to be submitted to:	Shire of Derby-West Kimberley

1.2.1 Other Documents with Implications for Development of this BMP

This section identifies any known assessments, reports or plans that have been conducted and prepared previously, or are being prepared concurrently, and are relevant to the planned proposal for the subject. They potentially have implications for the assessment of bushfire threats and the identification and implementation of the protection measures that are established by this Bushfire Management Plan.

Table 1.4: Other relevant documents that may influence threat assessments and development of protection measures.

RELEVANT DOCUMENTS					
Document	Relevant	Currently Exists	To Be Developed	Copy Provided by Proponent / Developer	Title
Structure Plan	No	N/A	N/A	N/A	-
Bushfire Management Plan	Yes	No	Yes	N/A	-
Bushfire Emergency Plan or Information	No	N/A	N/A	N/A	-
Bushfire Risk Assessment and Management Report	No	N/A	N/A	N/A	-
Environmental Asset or Vegetation Survey	No	N/A	N/A	N/A	-
Landscaping and Revegetation Plan	No	N/A	N/A	N/A	-
Land Management Agreement	No	N/A	N/A	N/A	-

2 BUSHFIRE PRONE VEGETATION – ENVIRONMENTAL & ASSESSMENT CONSIDERATIONS

2.1 Environmental Considerations – ‘Desktop’ Assessment

This ‘desktop’ assessment must not be considered as a replacement for a full Environmental Impact Assessment. It is a summary of potential environmental values at the subject site, inferred from information contained in listed datasets and/or reports, which are only current to the date of last modification.

These data sources must be considered indicative where the subject site has not previously received a site-specific environmental assessment by an appropriate professional.

Many bushfire prone areas also have high biodiversity values. Consideration of environmental priorities within the boundaries of the land being developed can avoid excessive or unnecessary modification or clearing of vegetation. Approval processes (and exemptions) apply at both Commonwealth and State levels.

Any ‘modification’ or ‘clearing’ of vegetation to reduce bushfire risk is considered ‘clearing’ under the *Environmental Protection Act 1986* (EP Act) and requires a clearing permit under the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004* (Clearing Regulations) – unless for an exempt purpose.

Clearing native vegetation is an offence, unless done under a clearing permit or the clearing is for an exempt purpose. Exemptions are contained in the EP Act or are prescribed in the Clearing Regulations (note: these do not apply in environmentally sensitive areas).

The *Department of Water and Environmental Regulation* (DWER) is responsible for issuing ‘clearing’ permits and the framework for the regulation of clearing. Approvals under other legislation, from other agencies, may also be required, dependent on the type of flora or fauna present.

Local Planning Policy or Local Biodiversity Strategy: Natural areas that are not protected by the above Act and Regulation (or any other National or State Acts) may be protected by a local planning policy or local biodiversity strategy. Permission from the local government will be required for any modification or removal of native vegetation in these Local Natural Areas (LNA's). Refer to the relevant local government for detail.








For further Information refer to Guidelines v1.4, the Bushfire and Vegetation Factsheet - WAPC, Dec 2021 and <https://www.der.wa.gov.au/our-work/clearing-permits>

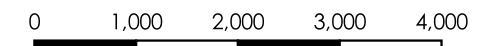
Figure 2.1

Environmental Considerations

Lot 277 on Plan / Diagram: P188285
Great Northern Highway
St George Ranges
Shire of Derby-West Kimberley

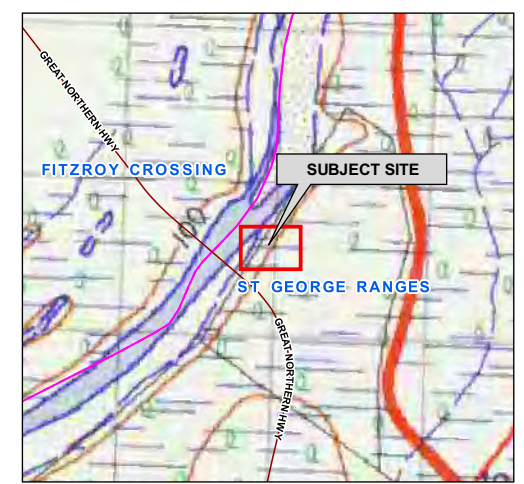
----- LEGEND -----

-  Subject Site
 -  Bush Forever Sites
 -  Clearing Regulations
 -  Reserves
- Environmentally Sensitive Areas**
-  Declared Rare Fauna
 -  Threatened Ecological Community
 -  Declared Rare Flora



Metres

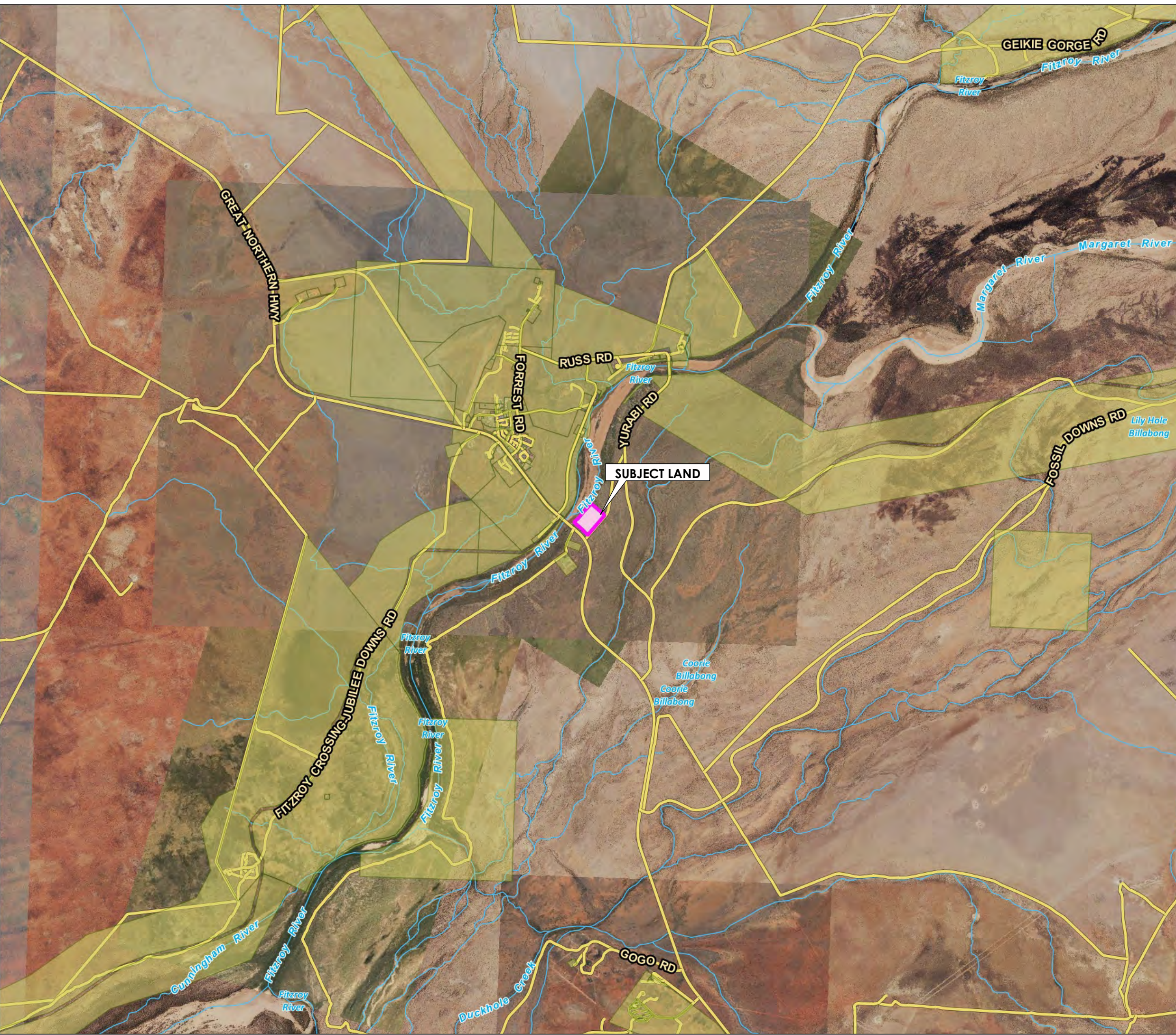
----- LOCALITY -----



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2.1.1 Declared Environmentally Sensitive Areas (ESA)

IDENTIFICATION OF RELEVANT ENVIRONMENTALLY SENSITIVE AREAS							
ESA Class	Relevant to Proposal	Influence on Bushfire Threat Levels and / or Application of Bushfire Protection Measures	Relevant Dataset	Information Source(s) Applied to Identification of Relevant Vegetation			Further Action Required
				Dataset	Landowner or Developer	Environmental Asset or Vegetation Survey	
Wetlands and their 50m Buffer (Ramsar, conservation category and nationally important)	No	N/A	DBCA-010 and 011, 019, 040, 043, 044	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	None
Bush Forever	No	N/A	DPLH-022, SPP 2.8	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	None
Threatened and Priority Flora + 50m Continuous Buffer	No	N/A	DBCA-036	Restricted Scale of Data Available (security)	<input type="checkbox"/>	<input type="checkbox"/>	None
Threatened Ecological Community	No	N/A	DBCA-038		<input type="checkbox"/>	<input type="checkbox"/>	None
Heritage Areas National / World	No	No	Relevant register or mapping	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	None

2.1.2 Other Protected Vegetation on Public Land

IDENTIFICATION OF PROTECTED VEGETATION ON PUBLIC LAND							
Land with Environmental, Biodiversity, Conservation and Social Values	Relevant to Proposal	Influence on Bushfire Threat Levels and / or Application of Bushfire Protection Measures	Relevant Dataset	Information Source(s) Applied to Identification of Relevant Vegetation			Further Action Required
				Dataset	Landowner or Developer	Environmental Asset or Vegetation Survey	
Legislated Lands (tenure includes national park/reserve, conservation park, crown reserve and state forest)	No	N/A	DBCA-011	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	None
Conservation Covenants	Unlikely	Unlikely	DPIRD-023	Only Available to Govt.	<input type="checkbox"/>	<input type="checkbox"/>	Confirm with relevant agency
National World Heritage Areas	No	N/A	-	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	None

2.1.3 Response of Proposed Development to Identified Environmental Limitations

Consideration of the implications that identified protected areas of vegetation (i.e., those with environmental and subject to conservation) have for the proposed development.

PROPOSED DEVELOPMENT RESPONSE TO IDENTIFIED 'PROTECTED' VEGETATION	
The existence of 'protected' areas of vegetation has implications for the ability of the proposed development to reduce potential bushfire impact through modification or removal of vegetation.	No
Application of Design and/or Construction Responses to Limit Vegetation Modification or Removal	
Modify the development location to reduce exposure by increasing separation distance.	N/A
Comments: Not Applicable	
Redesign development, structure plan or subdivision.	N/A
Comments: Not Applicable	
Reduction of lot yield where this can increase available separation distances.	N/A
Comments: Not Applicable	
Cluster development to limit modification or removal of vegetation.	N/A
Comments: Not Applicable	
Construct building(s) to the requirements corresponding to higher BAL ratings to reduce required separation distances.	N/A
Comments: Not Applicable	

2.2 Bushfire Assessment Considerations

2.2.1 Planned Onsite Vegetation Landscaping

Identification of areas of the subject site planned to be landscaped, creating the potential for increased or decreased bushfire hazard for proposed development.

PLANNED LANDSCAPING	
Relevant to Proposal:	No

2.2.2 Planned / Potential Offsite Rehabilitation or Re-Vegetation

Identification of areas of land adjacent to the subject site on which re-vegetation (as distinct from natural re-generation) will or may occur and is likely to present a greater bushfire hazard for proposed development.

POTENTIAL RE-VEGETATION PROGRAMS		
Land with Environmental, Biodiversity, Conservation and Social Values	Relevant to Proposal	Description
Riparian Zones / Foreshore Areas	No	
Wetland Buffers	No	
Legislated Lands	No	
Public Open Space	No	
Road Verges	No	
Other	No	

2.2.3 Identified Requirement to Manage, Modify or Remove Onsite or Offsite Vegetation

Identification of native vegetation subject to management, modification or removal.

REQUIREMENT TO MANAGE, MODIFY OR REMOVE NATIVE VEGETATION	
Has a requirement been identified to manage, modify or remove <u>onsite</u> native vegetation to establish the required bushfire protection measures on the subject site?	Yes
Refer to Figure 3.1b – Site Assessment Map (Incorporating APZ) - Conditional BAL – BAL-12.5 and Appendix A1.2 for justification details supporting the change.	
Is approval, from relevant state government agencies and/or the local government, to modify or remove <u>onsite</u> native vegetation required? (Note: if 'Yes' evidence of its existence should be provided in this BMP).	Yes
Refer to Figure 3.1b – Site Assessment Map (Incorporating APZ) - Conditional BAL – BAL-12.5 and Appendix A1.2 for justification details supporting the change.	
Has a requirement been identified to manage, modify or remove <u>offsite</u> native vegetation to establish the required bushfire protection measures on the subject site?	No
Is written approval required, from relevant state government agencies and/or the local government, that permits the landowner, or another identified party, to modify or remove <u>offsite</u>	No

<p>bushfire prone vegetation and/or conduct other works, to establish an identified bushfire protection measure(s)?</p> <p>If 'Yes', appropriate evidence of the approval or how it is to be established, shall be provided in this BMP as an addendum.</p>	
<p>Is a written management agreement required that states the obligation of the landowner, or another responsible party, to manage defined areas of <u>offsite</u> bushfire prone vegetation, in perpetuity, to ensure the conditions of no fire fuels and/or low threat vegetation and/or vegetation managed in a minimal fuel condition, continue to be met?</p> <p>If 'Yes', appropriate evidence of the agreement or how it is to be established, shall be provided in this BMP as an addendum.</p>	No

2.2.4 Variations to Assessed Areas of Classified Vegetation to be Applied

FOR THE PROPOSED DEVELOPMENT SITUATIONS TO BE ACCOUNTED FOR IN ASSESSING THE POTENTIAL BUSHFIRE IMPACT (BAL)	
<p>Area(s) of land will be subject to future vegetation rehabilitation or re-vegetation that will require a change to a higher threat classification of vegetation on that land to. (Note: this is not regeneration to the mature natural state which is accounted for in the 'existing state' assessment in accordance with AS 3959:2018).</p>	No
<p>Modification of existing area(s) of classified vegetation due to the implementation of the proposed development and/or prior to the site's occupancy or use. This modification will require a change to a lower threat classification (or exclusion from classification) for that area of vegetation.</p>	Yes
<p>Refer to Figure 3.1b – Site Assessment Map (Incorporating APZ) - Conditional BAL – BAL-12.5 and Appendix A1.2 for justification details supporting the change.</p>	
<p>Complete removal of existing area(s) of classified vegetation due to the implementation of the proposed development and/or prior to the site's occupancy or use. This modification will require an exclusion from classification for that area of vegetation.</p>	No

3 BUSHFIRE ATTACK LEVEL (BAL) ASSESSMENT

BUSHFIRE ATTACK LEVELS (BAL) - UNDERSTANDING THE RESULTS

The potential transfer (flux/flow) of radiant heat from the bushfire to a receiving object is measured in kW/m². The AS 3959:2018 BAL determination methodology establishes the ranges of radiant heat flux that correspond to each bushfire attack level. These are identified as BAL-LOW, BAL-12.5, BAL-19, BAL-29, BAL-40 and BAL-FZ.

The bushfire performance requirements for certain classes of buildings are established by the Building Code of Australia (Vol. 1 & 2 of the NCC). The BAL will establish the bushfire resistant construction requirements that are to apply in accordance with AS 3959:2018 - *Construction of buildings in bushfire prone areas* and the NASH Standard – *Steel framed construction in bushfire areas (NS 300 2021)*, whose solutions are deemed to satisfy the NCC bushfire performance requirements.

DETERMINED BAL RATINGS

A BAL Certificate can be issued for a determined BAL. A BAL can only be classed as 'determined' for an existing or future building/structure when:

1. It's final design and position on the lot are known and the stated separation distance from classified bushfire prone vegetation exists and can justifiably be expected to remain in perpetuity; or
2. It will always remain subject to the same BAL regardless of its design or position on the lot after accounting for any regulatory or enforceable building setbacks from lot boundaries as relevant and necessary (e.g., R-codes, restrictive covenants, defined building envelopes) or the retention of any existing classified vegetation either onsite or offsite.

If the BMP derives determined BAL(s), the BAL Certificate(s) required for submission with building applications can be provided, using the BMP as the assessment evidence.

INDICATIVE BAL RATINGS

A BAL Certificate cannot be issued for an indicative BAL. A BAL will be classed as 'indicative' for an existing or future building/structure when the required conditions to derive a determined BAL are not met.

This class of BAL rating indicates what BAL(s) could be achieved and the conditions that need to be met are stated.

Converting the indicative BAL into a determined BAL is conditional upon the currently unconfirmed variable(s) being confirmed by a subsequent assessment and evidential documentation. These variables will include the future building(s) location(s) being established (or changed) and/or classified vegetation being modified or removed to establish the necessary vegetation separation distance. This may also be dependent on receiving approval from the relevant authority for that modification/removal.

BAL RATING APPLICATION – PLANNING APPROVAL VERSUS BUILDING APPROVAL

1. Planning Approval: SPP.3.7 establishes that where BAL- LOW to BAL-29 will apply to relevant future construction (or existing structures for proposed uses), the proposed development may be considered for approval (dependent on the other requirements of the relevant policy measures being met). That is, BAL40 or BAL-FZ are not acceptable on planning grounds (except for certain limited exceptions).

Because planning is looking forward at what can be achieved, as well as looking at what may currently exist, both determined and indicative BAL ratings are acceptable assessment outcomes on which planning decisions can be made (including conditional approvals).

2. Building Approval: The Building Code of Australia (Vol. 1 & 2 of the NCC) establishes that relevant buildings in bushfire prone areas must be constructed to the bushfire resistant requirements corresponding to the BAL rating that is to apply to that building. Consequently, a determined BAL rating and the BAL Certificate is required for a building permit to be issued - an indicative BAL rating is not acceptable.

3.1 BAL Assessment Summary (Table Format)

3.1.1 The BAL Determination Methodology and Location of Data and Results

LOCATION OF DATA & RESULTS					
BAL Determination Methodology		Location of the Site Assessment Data			Location of the Results
AS 3959:2018	Applied to Assessment	Classified Vegetation and Topography Map(s)	Calculation Input Variables		Assessed Bushfire Attack Levels and/or Radiant Heat Levels
			Summary Data	Detailed Data with Explanatory and Supporting Information	
Method 1 (Simplified)	Yes	Figure 3.1a & 3.1b	Table 3.1	Appendix A1	Table 3.1
Method 2 (Detailed)	No	N/A	N/A	N/A	

3.1.2 Site Assessment Data and BAL Results

Table 3.1: Summary of applied calculation input variables applied to deriving the BAL rating for the identified exposed element (the relevant building/structure).

DATA APPLIED TO THE DERIVATION OF THE BUSHFIRE ATTACK LEVELS (BAL) ¹							
BAL Determination Method	METHOD 1 - AS 3959:2018 CLAUSE 2.2 - SIMPLIFIED PROCEDURE				Applied Fire Danger Index		FDI 80
The Receiver of Radiant Heat Relevant Building(s) / Structure(s)	Vegetation Classification		Effective Slope		Separation Distance		Bushfire Attack Level (AS 3959:2018 Table 2.5)
			Measured	Applied Range	Minimum Allowed Building Setback from Lot Boundary ²	Total	
Transportables	1	(B) Woodland	flat 0	Upslope or flat 0		15	BAL-29
	2	(B) Woodland	flat 0	Upslope or flat 0		59	BAL-12.5
	3	Excluded cl 2.2.3.2(e & f)	N/A	N/A		N/A	BAL-LOW
	Determined Bushfire Attack Level						
¹ All data and information supporting the determination of the classifications and values stated in this table and any associated justification, is presented in Appendix A. ² This is the minimum building setback (i.e., the distance from a proposed building to the lot boundary) that is established by either the applicable R-code setback or another mechanism (e.g., restricted covenant), that is to apply to the proposed building/structure on the relevant lot. It is identified as a fixed component of the total separation distance from vegetation when its application is important to be identified because it establishes the closest distance to the lot boundary that a building/structure can legally exist. In other words, it identifies the part of the lot on which development cannot occur. When it is not critical for this distance to be identified, just the total separation distance is stated.							

3.2 Provision of a Conditional Bushfire Attack Level

CONDITIONS TO BE MET

The assessments conducted to produce this report have determined it is possible to achieve a lower Bushfire Attack Level for the proposed development/use. The conditions to be met are:

1. The identified areas(s) of classified vegetation are modified to enable justifiable reclassification to a lower threat classification;
2. Establish increased separation distances between the subject building works and identified areas of classified vegetation by either changing the design or location on the lot of any proposed building works and/or modification/removal of existing bushfire prone vegetation;
3. Ensure the APZ is established within the boundaries of the lot on which the proposed building works or use is situated. It can only include land outside the lot where that land is non-vegetated and/or any existing vegetation is low threat, or managed in a minimal fuel condition and it can be justified that it will be maintained in this state in perpetuity; and
4. Where native vegetation modification/removal is required, that environmental approval from the local government (or other relevant authority) has been received prior to modifying / removing native vegetation.

THE PROCESS AND INFORMATION PROVIDED BY BUSHFIRE PRONE PLANNING (BPP)

1. When modification/removal of native vegetation is required, BPP will not provide a conditional BAL lower than BAL-29. A lower BAL requires a larger APZ for which approval should be sought from the local government. An exception to this approach may exist if a justification statement identifies that the native vegetation to be modified/removed is minor;
2. When modification/removal of non- native vegetation is proposed, BPP will state the lowest BAL that can be achieved. Due consideration is given to the resultant APZ size and how realistic it will be to maintain; and
3. Once the required conditions are met, a compliance report will be produced, and the BAL Certificate can be issued. If vegetation is modified/removed, a site re-visit will be required to confirm the achievement of the vegetation separation distances or any change to the classification of vegetation.

MINIMUM VEGETATION SEPARATION DISTANCES REQUIRED TO ACHIEVE THE CONDITIONAL BAL						
The Receiver of Radiant Heat Relevant Building(s)/Structure(s)	Vegetation Classification		Conditional Bushfire Attack Level	Vegetation Separation Distance		
	Area	Class		Required (m)	Current (m)	Minimum Additional Required (m)
Transportables	1	(B) Woodland	BAL-29	14	15	N/A
	1	(B) Woodland	BAL-12.5	29	15	14
	2	(B) Woodland	BAL-29	14	59	N/A
	2	(B) Woodland	BAL-12.5	29	59	N/A
	3	Excluded, clauses 2.2.3.2 (e) & (f)	N/A	N/A	N/A	N/A
Comments: Vegetation works required include but are not limited to the under- pruning of trees to two (2) metres in height (where retained), the removal of dead flammable materials (i.e. - felled branches, sticks and twigs) and the slashing of grasses to heights no greater than 50mm in accordance with the Shire of Derby/West Kimberley Fire break and Fuel Hazard Reduction Notice.						

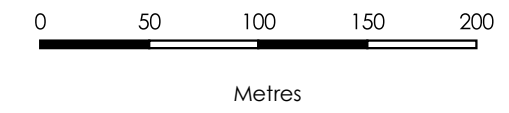
Figure 3.1a

Site Assessment Map

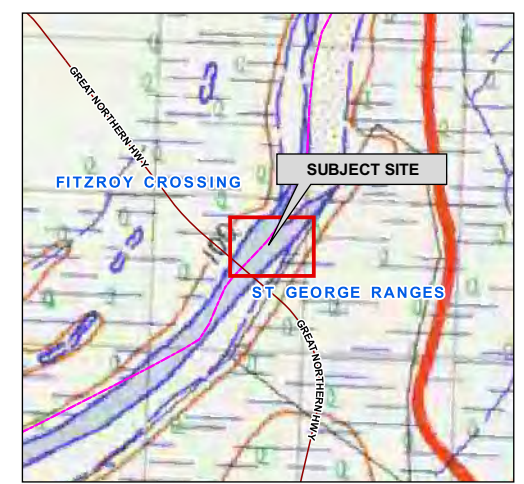
Lot 277 on Plan / Diagram: P188285
 Great Northern Highway
 St George Ranges
 Shire of Derby-West Kimberley

----- LEGEND -----

- Photos
- Elevation (m)
- Distance
- Water Supply**
- Water Tank
- Bore
- Hose Reel
- Subject Site
- Proposal**
- Transportable
- Assessment Area**
- 150m Buffer
- Classified Vegetation**
- Class B - Woodland
- Exclusion 2.2.3.2



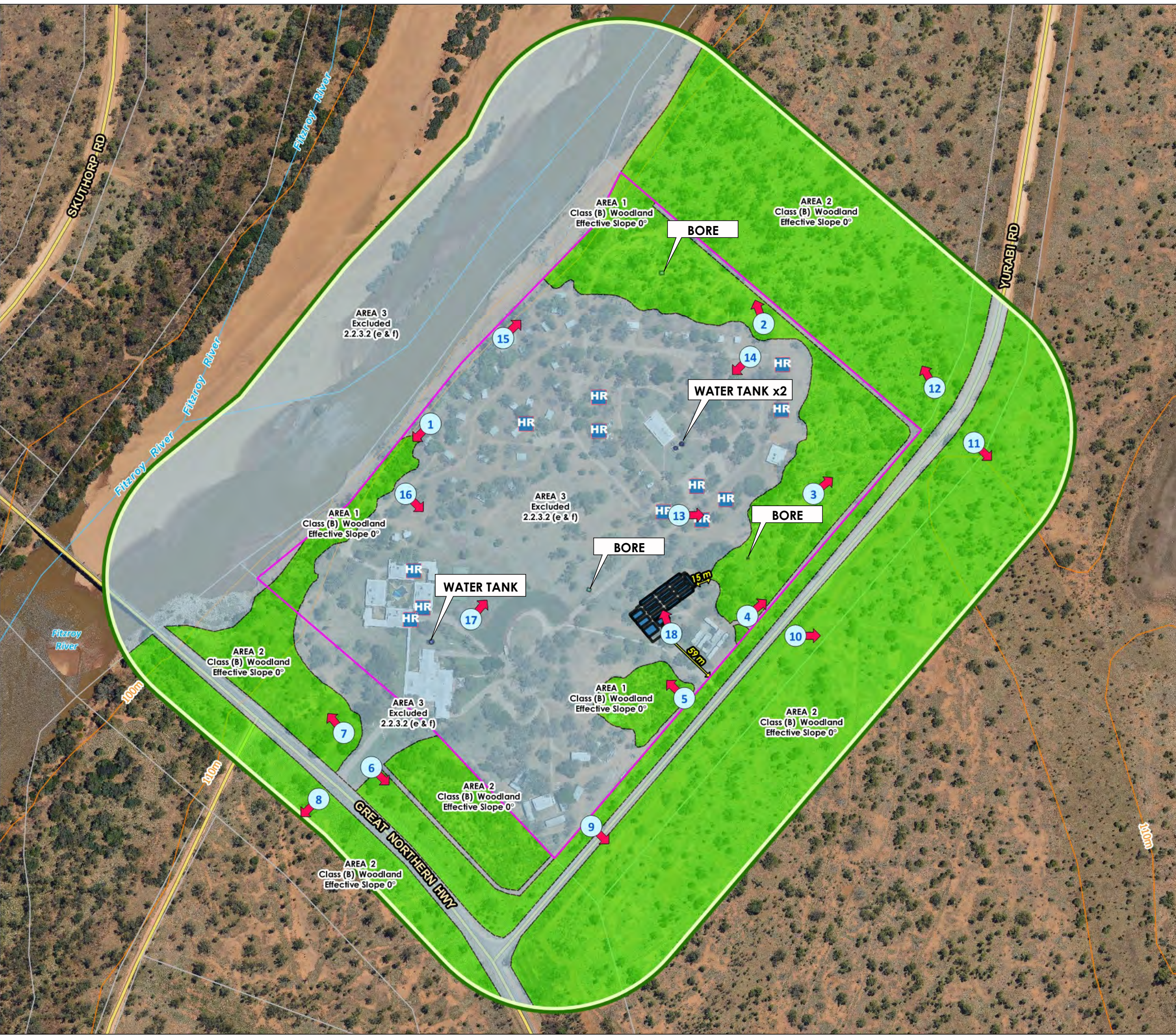
----- LOCALITY -----



AERIAL IMAGERY: Landgate/SLIP



Coordinate System: GDA 1994 MGA Zone 50
 Projection: Universal Transverse Mercator Units: Metre
 Map by: Sarina Gorman 18-08-2023
 SCALE (A3): 1 : 3500



Disclaimer and Limitation: This map has been prepared for bushfire management planning purposes only. All depicted areas, contours and any dimensions shown are subject to survey. Bushfire Prone Planning does not guarantee that this map is without flaw of any kind and disclaims all liability for any errors, loss or other consequence which may arise from relying on any information depicted.

Figure 3.1b

Site Assessment Map (Incorporating APZ) - Conditional BAL-12.5

Lot 277 on Plan / Diagram: P188285
Great Northern Highway
St George Ranges
Shire of Derby-West Kimberley

----- **LEGEND** -----

— Elevation (m)

Water Supply

Water Tank

Bore

Hose Reel

Subject Site

Proposal

Transportable

Asset Protection Zone

APZ - BAL-29

APZ Distance (m)

APZ - BAL-12.5

APZ Distance (m)

APZ - LGA Requirements

APZ Distance (m)

Assessment Area

150m Buffer

Classified Vegetation

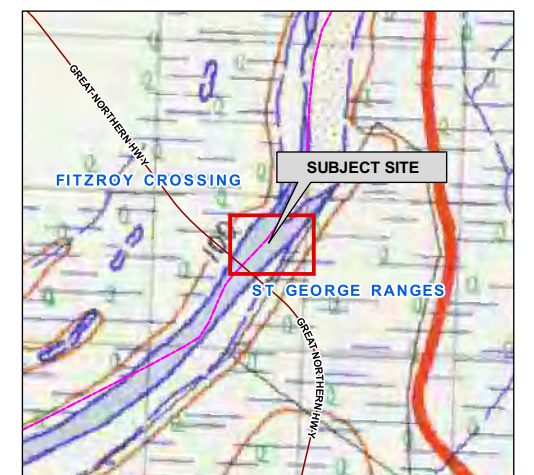
Class B - Woodland

Exclusion 2.2.3.2



Metres

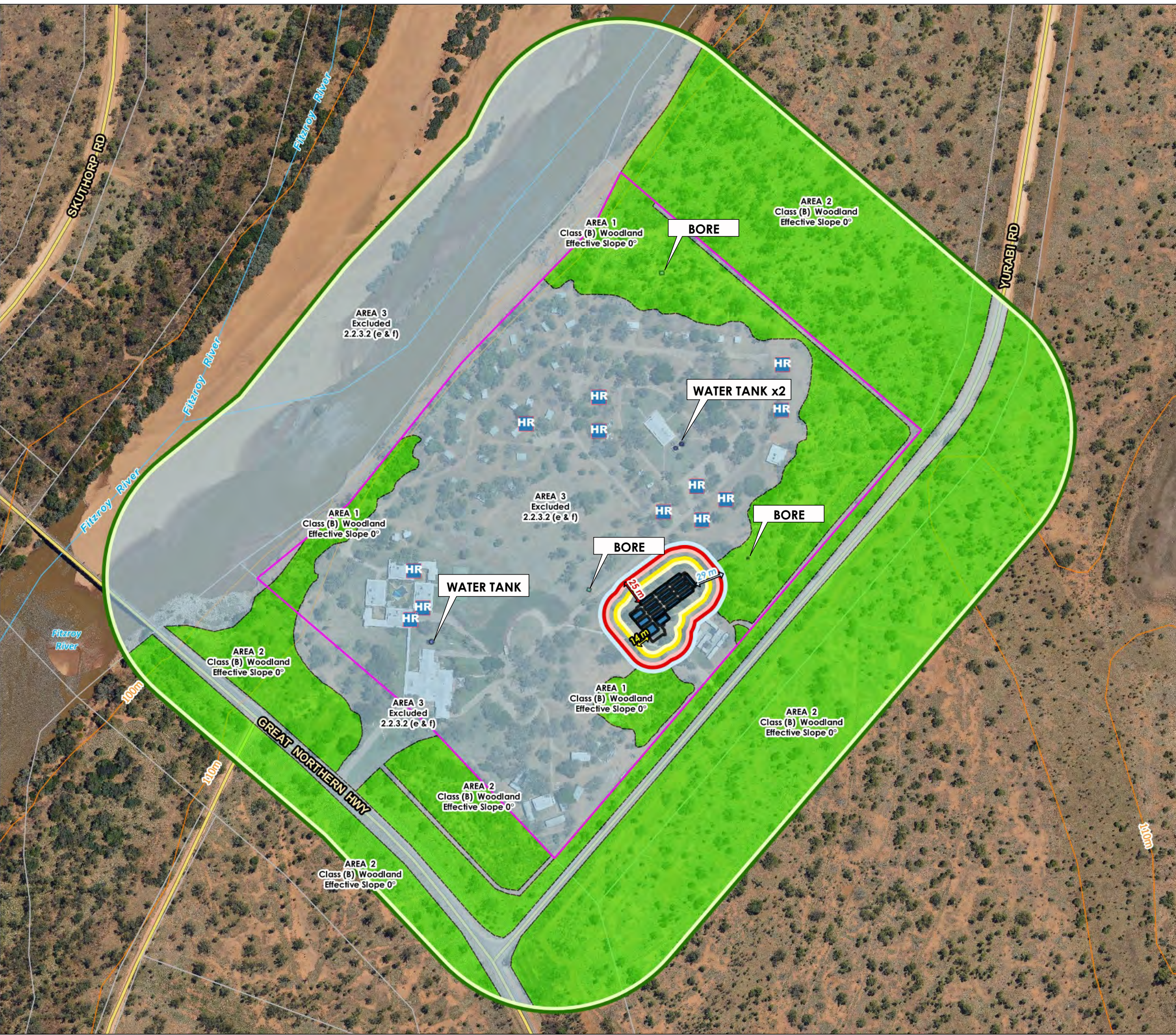
----- **LOCALITY** -----



AERIAL IMAGERY: Landgate/SLIP



Coordinate System: GDA 1994 MGA Zone 50
Projection: Universal Transverse Mercator Units: Metre
Map by: Sarina Gorman 18-08-2023
SCALE (A3): 1 : 3500



4 IDENTIFICATION OF BUSHFIRE HAZARD ISSUES

The Guidelines for Planning in Bushfire Prone Areas (WAPC 2021 v1.4), Appendix 5, establish that the application of this section of the BMP is intended to support *strategic planning* proposals. At the strategic planning stage there will typically be insufficient proposed development detail to enable all required assessments, including the assessment against the bushfire protection criteria.

Strategic Planning Proposals

For strategic planning proposals this section of the BMP will identify:

- Issues associated with the level of the threats presented by any identified bushfire hazard;
- Issues associated with the ability to implement sufficient and effective bushfire protection measures to reduce the exposure and vulnerability levels (of elements exposed to the hazard threats), to a tolerable or acceptable level; and
- Issues that will need to be considered at subsequent planning stages.

All Other Planning Proposals

For all other planning stages, this BMP will address what are effectively the same relevant issues but do it within the following sections:

- Section 2 – Bushfire Prone Vegetation - Environmental and Assessment Considerations: Assess environmental, biodiversity and conservation values;
- Section 3 – Potential Bushfire Impact: Assess the bushfire threats with the focus on flame contact and radiant heat; and
- Section 5 – Assessment Against the Bushfire Protection Criteria (including the guidance provided by the *Position Statement: 'Planning in bushfire prone areas – Demonstrating Element 1: Location and Element 2'*): Assess the ability of the proposed development to apply the required bushfire protection measures thereby enabling it to be considered for planning approval for these factors.

Is the proposed development a strategic planning proposal?

No

5 ASSESSMENT AGAINST THE BUSHFIRE PROTECTION CRITERIA (GUIDELINES V1.4)

5.1 Bushfire Protection Criteria Elements Applicable to the Proposed Development/Use

APPLICATION OF THE CRITERIA, ACCEPTABLE SOLUTIONS AND PERFORMANCE ASSESSMENT

The criteria are divided into five elements – location, siting and design, vehicular access, water and vulnerable tourism land uses. Each element has an intent outlining the desired outcome for the element and reflects identified planning and policy requirements in respect of each issue.

The example acceptable solutions (bushfire protection measures) provide one way of meeting the element's intent. Compliance with these automatically achieves the element's intent and provides a straightforward pathway for assessment and approval.

Where the acceptable solutions cannot be met, the ability to develop design responses (as alternative solutions that meet bushfire performance requirements) is an alternative pathway that is provided by addressing the applicable performance principles (as general statements of how best to achieve the intent of the element).

A merit based assessment is established by the SPP 3.7 and the Guidelines as an additional alternative pathway along with the ability of using discretion in making approval decisions (sections 2.5, 2.6 and 2.7). This is formally applied to certain development (minor and unavoidable – sections 5.4.1 and 5.7). Relevant decisions by the State Administrative Tribunal have also supported this approach more generally.

Elements 1 – 4 should be applied for all strategic planning proposals, subdivision or development applications, except for vulnerable tourism land uses which should refer to Element 5. Element 5 incorporates the bushfire protection criteria in Elements 1 – 4 but caters them specifically to tourism land uses. (Guidelines DPLH 2021v1.4)

The Bushfire Protection Criteria	Applicable to the Proposed Development/Use
Element 1: Location	Yes
Element 2: Siting and Design	Yes
Element 3: Vehicular Access	Yes
Element 4: Water	Yes
Element 5: Vulnerable Tourism Land Uses	No

5.2 Local Government Variations to Apply

Local governments may add to or modify the acceptable solutions to recognise special local or regional circumstances (e.g., topography / vegetation / climate). These are to be endorsed by both the WAPC and DFES before they can be considered in planning assessments. (Guidelines DPLH 2021v1.4).

Do endorsed regional or local variations to the acceptable solutions apply to the assessments against the Bushfire Protection Criteria for the proposed development /use?	None known or identified
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5.3 Assessment Statements for Element 1: Location

LOCATION	
Element Intent	To ensure that strategic planning proposals, subdivision and development applications are located in areas with the least possible risk of bushfire to facilitate the protection of people, property and infrastructure.
Proposed Development/Use – Relevant Planning Stage	(Do) Development application other than for a single dwelling, ancillary dwelling or minor development
Element Compliance Statement	The proposed development/use achieves the intent of this element by being fully compliant with all applicable acceptable solutions.
Pathway Applied to Provide an Alternative Solution	N/A
Acceptable Solutions - Assessment Statements	
<p>All details of acceptable solution requirements are established in the Guidelines for Planning in Bushfire Prone Areas, DPLH v1.4 (Guidelines) and apply the guidance established by the Position Statement: 'Planning in bushfire prone areas – Demonstrating Element 1: Location and Element 2: Siting and design' (WAPC Nov 2019) and the 'Bushfire Management Plan Guidance for the Dampier Peninsula' (WA Department of Planning, Lands and Heritage, 2021 Rev B) as relevant. These documents are available at https://www.wa.gov.au/government/document-collections/state-planning-policy-37-planning-bushfire-prone-areas.</p>	
Solution Component Check Box Legend	<input checked="" type="checkbox"/> Relevant & met <input checked="" type="checkbox"/> Relevant & not met <input type="checkbox"/> Not relevant
A1.1 Development location	Applicable: Yes Compliant: Yes
ASSESSMENT AGAINST THE REQUIREMENTS ESTABLISHED BY THE GUIDELINES	
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> The development application is located in an area that is or will, on completion, be subject to either a moderate or low bushfire hazard level, or BAL-29 or below.	
<p>Supporting Assessment Details:</p> <p>The proposed development will provide an area of land within the lot that can be considered suitable for development as BAL-40 or BAL-FZ construction requirements will not be required to be applied. This meets the requirements established by Acceptable Solution A1.1 and its associated explanatory note. In addition, the vegetation surrounding the proposed development can be classed as a moderate bushfire hazard level.</p>	
ASSESSMENTS APPLYING THE GUIDANCE ESTABLISHED BY THE WAPC ELEMENT 1 & 2 POSITION STATEMENT (2019)	
<p>“Consideration should be given to the site context where ‘area’ is the land both within and adjoining the subject site. The hazards remaining within the site should not be considered in isolation of the hazards adjoining the site, as the potential impact of a bushfire will be dependent on the wider risk context, including how a bushfire could affect the site and the conditions for a bushfire to occur within the site.”</p> <p>Strategic Planning Proposals: Consider the threat levels from any vegetation <u>adjoining</u> and <u>within</u> the subject site for which the potential intensity of a bushfire in that vegetation would result in it being classified as an Extreme Bushfire Hazard Level (BHL). Identify any proposed design strategies to reduce these threats.</p> <p>Structure Plans (lot layout known) and Subdivision Applications: As for strategic planning proposals but <u>within</u> the subject site the relevant threat levels to consider are the radiant heat levels represented by BAL-FZ and BAL-40 ratings.</p>	
<p>The planning proposal is a development application, consequently the referenced position statement is not applicable to the Element 1 assessment.</p>	

5.4 Assessment Statements for Element 2: Siting and Design

SITING AND DESIGN OF DEVELOPMENT	
Element Intent	To ensure that the siting and design of development minimises the level of bushfire impact. (BPP Note: not building/construction design)
Proposed Development/Use – Relevant Planning Stage	(Do) Development application other than for a single dwelling, ancillary dwelling or minor development
Element Compliance Statement	The proposed development/use achieves the intent of this element by being fully compliant with all applicable acceptable solutions.
Pathway Applied to Provide an Alternative Solution	N/A
Acceptable Solutions - Assessment Statements	
<p>All details of acceptable solution requirements are established in the Guidelines for Planning in Bushfire Prone Areas, DPLH v1.4 (Guidelines) and apply the guidance established by the Position Statement: 'Planning in bushfire prone areas – Demonstrating Element 1: Location and Element 2: Siting and design' (WAPC Nov 2019) and the 'Bushfire Management Plan Guidance for the Dampier Peninsula' (WA Department of Planning, Lands and Heritage, 2021 Rev B) as relevant. These documents are available at https://www.wa.gov.au/government/document-collections/state-planning-policy-37-planning-bushfire-prone-areas.</p>	
Solution Component Check Box Legend	<input checked="" type="checkbox"/> Relevant & met <input checked="" type="checkbox"/> Relevant & not met <input type="checkbox"/> Not relevant
A2.1 Asset Protection Zone (APZ)	Applicable: Yes Compliant: Yes
<p style="text-align: center;">APZ DIMENSIONS – DIFFERENCES IN REQUIREMENTS FOR PLANNING ASSESSMENTS COMPARED TO IMPLEMENTATION</p> <p>A key required bushfire protection measure is to reduce the exposure of buildings/infrastructure (as exposed vulnerable elements at risk), to the direct bushfire threats of flame contact, radiant heat and embers and the indirect threat of consequential fires that result from the subsequent ignition of other combustible materials that may be constructed, stored or accumulate in the area surrounding these structures. This reduces the associated risks of damage or loss.</p> <p>This is achieved by separating buildings (and consequential fire fuels as necessary) from areas of classified bushfire prone vegetation. This area of separation surrounding buildings is identified as the Asset Protection Zone (APZ) and consists of no vegetation and/or low threat vegetation or vegetation continually managed to a minimal fuel condition. The required separation distances will vary according to the site specific conditions and local government requirements.</p> <p>The APZ dimensions stated and/or illustrated in this Report can vary dependent on the purpose for which they are being identified.</p> <div style="border: 1px solid black; padding: 10px; margin: 10px auto; width: 80%;"> <p><i>Note: Appendix B 'Onsite Vegetation Management' provides further information regarding the different APZ dimensions that can be referenced, their purpose and the specifications of the APZ that are to be established and maintained on the subject lot.</i></p> </div> <p style="text-align: center;">THE 'PLANNING BAL-29' APZ DIMENSIONS</p> <p>Purpose: To provide evidence of the development or use proposal's ability to achieve minimum vegetation separation distances. To achieve 'acceptable solution' planning approval for this factor, it must be demonstrated that the minimum separation distances corresponding to a maximum level of radiant transfer to a building of 29 kW/m², either exist or can be implemented (with certain exceptions). These separation distances are the 'Planning BAL-29' APZ dimensions.</p> <p><i>The 'Planning BAL-29' APZ is not necessarily the size of the APZ that must be physically implemented and maintained by a landowner. Rather, its sole purpose is to identify if an acceptable solution for planning approval can be met.</i></p>	

THE 'REQUIRED' APZ DIMENSIONS

Purpose: Establishes the dimensions of the APZ to be physically implemented by the landowner on their lot: These will be the minimum required separation distances from the subject building(s) to surrounding bushfire prone vegetation (identified by type and associated ground slope). These are established by:

- A. The 'BAL Rating APZ' of the subject building(s) when distances are greater than 'B' below (except when 'B' establishes a maximum distance); or
- B. The 'Local Government' APZ' derived from the Firebreak/Hazard Reduction Notice when distances are greater than 'A' above, other than when a maximum distance is established, in which case this will apply; or
- C. A combination of 'A' and 'B'.

Within this Report/Plan it is the 'Planning BAL-29' APZ that will be identified on maps, diagrams and in tables as necessary – unless otherwise stated.

The 'Required' APZ dimension information will be presented in Appendix B1.1 and on the Property Bushfire Management Statement, when required to be included for a development application.

ASSESSMENT AGAINST THE REQUIREMENTS ESTABLISHED BY THE GUIDELINES

APZ Width: The proposed (or a future) habitable building(s) on the lot(s) of the proposed development - or an existing building for a proposed change of use – can be (or is) located within the developable portion of the lot and be surrounded by a 'Planning BAL-29' APZ of the required dimensions (measured from any external wall or supporting post or column to the edge of the classified vegetation), that will ensure their exposure to the potential radiant heat impact of a bushfire does not exceed 29 kW/m².

Restriction on Building Location: It has been identified that the current developable portion of a lot(s) provides for the proposed future (or a future) building/structure location that will result in that building/structure being subject to a BAL-40 or BAL-FZ rating. Consequently, it may be considered necessary to impose the condition that a restrictive covenant to the benefit of the local government pursuant to section 129BA of the Transfer of Land Act 1893, is to be placed on the certificate(s) of title of the proposed lot(s) advising of the existence of a restriction on the use of that portion of land (refer to Code F3 of Model Subdivision Conditions Schedule, WAPC June 2021 and Guidelines s5.3.2).

APZ Location: The required dimensions for a 'Planning BAL-29' APZ can be contained solely within the boundaries of the lot(s) on which the proposed (or a future) habitable building(s) - or an existing building(s) for a proposed change of use – is situated.

APZ Location: The required dimensions for a 'Planning BAL-29' APZ can be partly established within the boundaries of the lot(s) on which the proposed (or a future) habitable building(s) - or an existing building(s) for a proposed change of use – is situated. The balance of the APZ would exist on adjoining land that satisfies the exclusion requirements of AS 3959:2018 cl 2.2.3.2 for non-vegetated areas and/or low threat vegetation and/or vegetation managed in a minimal fuel condition.

APZ Location: It can be justified that any adjoining (offsite) land forming part of a 'Planning BAL-29' APZ will:

- If non-vegetated, remain in this condition in perpetuity; and/or
- If vegetated, be low threat vegetation or vegetation managed in a minimal fuel condition in perpetuity.

<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<p>APZ Management: The area of land (within each lot boundary), that is to make up the required 'Landowner' APZ dimensions (refer to Appendix B, Part B1), can and will be managed in accordance with the requirements of the Guidelines Schedule 1 'Standards for Asset Protection Zones' (refer to Appendix B).</p>
<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="radio"/>	<p>Staged Subdivision: The subdivision proposes development in stages and each stage is to comply with the relevant bushfire protection criteria.</p> <p>A balance lot is created or classified vegetation within a subsequent stage will be removed and/or modified and/or be subject to ongoing management, to ensure that proposed lots within the current stage of the subdivision achieve a development site subject to 29 kW/m² or below.</p> <p>The planned approach for achieving the required outcome is described in the supporting assessment details below.</p>
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<p>Firebreak/Hazard Reduction Notice: Any additional requirements established by the relevant local government's annual notice to install firebreaks and manage fuel loads (issued under s33 of the Bushfires Act 1954), can and will be complied with.</p>
<p>Supporting Assessment Details: Asset protection zones can be contained solely within the boundaries of the subject land.</p> <p>The APZ that currently exists include, but is not limited to a combination of the following:</p> <ul style="list-style-type: none"> • Roads /Hardstand Areas • Parking bays • Maintained vegetation in accordance with s2.2.3.2 exclusion requirements of AS3959-2018 in conjunction with the Shire of Derby-West Kimberley Firebreak Notice. <p>APZ Management Within the Subject Land:</p> <p>Refer to Figures 3.1a, 3.1b and the Photographic evidence contained within this plan - The exclusion requirements of s2.2.3.2 of AS3959 is demonstrated via the existing APZ surrounding the structures. Furthermore, vegetation that is located onsite is within the control of the subject site's landowner and therefore can potentially be removed or modified to mitigate the bushfire risk where applicable.</p> <p>APZ Management Outside the Subject Land:</p> <p>Not Applicable – The Subject Land is of sufficient size to ensure that all proposed habitable buildings are surrounded by an APZ to ensure their exposure to the potential radiant heat impact of a bushfire does not exceed 29 kW/m² (BAL-29).</p> <p>APZ Management - General: Where any part of the required APZ dimension is vegetated for the purposes of landscaping, it will be managed in accordance with the technical requirements established by the Schedule 1: 'Standards for Asset Protection Zones (Guidelines)'. The APZ specifications are also detailed in Appendix 1 and the Shire of Derby-West Kimberley.</p>	
<p>ASSESSMENTS APPLYING THE GUIDANCE ESTABLISHED BY THE WAPC ELEMENT 1 & 2 POSITION STATEMENT (2019)</p>	
<p>Strategic Planning Proposals: "At this planning level there may not be enough detail to demonstrate compliance with this element. The decision-maker may consider this element is satisfied where A1.1 is met."</p> <p>Structure Plans (lot layout known) and Subdivision Applications: "Provided that Element 1 is satisfied, the decision-maker may consider approving lot(s) containing BAL-40 or BAL-FZ under the following scenarios.</p>	
<p>The planning proposal is a development application, consequently the referenced position statement is not applicable to the proposed development.</p>	

5.5 Assessment Statements for Element 3: Vehicular Access

VEHICULAR ACCESS	
Element Intent	To ensure that the vehicular access serving a subdivision/development is available and safe during a bushfire event.
Proposed Development/Use – Relevant Planning Stage	(Do) Development application other than for a single dwelling, ancillary dwelling or minor development
Element Compliance Statement	The proposed development/use achieves the intent of this element by being fully compliant with all applicable acceptable solutions.
Pathway Applied to Provide an Alternative Solution	N/A
Acceptable Solutions - Assessment Statements	
<p>All details of acceptable solution requirements are established in the Guidelines for Planning in Bushfire Prone Areas, DPLH v1.4 (Guidelines) and apply the guidance established by the Position Statement: 'Planning in bushfire prone areas – Demonstrating Element 1: Location and Element 2: Siting and design' (WAPC Nov 2019) and the 'Bushfire Management Plan Guidance for the Dampier Peninsula' (WA Department of Planning, Lands and Heritage, 2021 Rev B) as relevant. These documents are available at https://www.wa.gov.au/government/document-collections/state-planning-policy-37-planning-bushfire-prone-areas.</p> <p>The technical construction requirements for access types and components, and for each firefighting water supply component, are also presented in Appendices C and D. The local government will advise the proponent where different requirements are to apply and when any additional specifications such as those for signage and gates are to apply (these are included in the relevant appendix if requested by the local government).</p>	
Solution Component Check Box Legend	<input checked="" type="checkbox"/> Relevant & met <input checked="" type="checkbox"/> Relevant & not met <input type="checkbox"/> Not relevant
A3.1 Public roads	Applicable: Yes Compliant: Yes
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<p>The technical construction requirements of vertical clearance and weight capacity (Guidelines, Table 6) can and will be complied with (Refer also to Appendix C in this BMP).</p>
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<p>All other applicable technical requirements of trafficable width, gradients and curves, are required to be in "accordance with the class of road as specified in the IPWEA Subdivision Guidelines, Liveable Neighbourhoods, Ausroad Standards and/or any applicable standard in the local government area" (Guidelines, Table 6 and E3.1. Refer also to Appendix C in this BMP).</p> <p>The assessment conducted for the bushfire management plan indicates that it is likely that the proposed development can and will comply with the requirements.</p> <p>However, the applicable class of road, the associated technical requirements and subsequent proposal compliance, will need to be confirmed with the relevant local government and/or Main Roads WA.</p> <p>or</p> <p>The applicable class(s) of road and technical requirements have been confirmed with the relevant local government/Main Roads WA. These can and will be complied with.</p>
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<p>A traversable verge is available adjacent to classified vegetation (Guidelines, E3.1), as recommended.</p>
Supporting Assessment Details: None Required	

A3.2a Multiple access routes	Applicable:	Yes	Compliant:	Yes
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> For each lot, two-way public road access is provided in two different directions to at least two different suitable destinations with an all-weather surface.				
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> The two-way access <u>is</u> available at an intersection no greater than 200m from the relevant boundary of each lot, via a no-through road.				
<p>The two-way access is <u>not</u> available at an intersection within 200m from the relevant boundary of each lot. However, the available no-through road satisfies the established exemption for the length limitation in every case. These requirements are:</p> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <ul style="list-style-type: none"> • Demonstration of no alternative access (refer to A3.3 below); • The no-through road travels towards a suitable destination; and • The balance of the no-through road that is greater than 200m from the relevant lot boundary is within a residential built-out area or is potentially subject to radiant heat levels from adjacent bushfire prone vegetation that correspond to the BAL-LOW rating (<12.5 kW/m²). 				
<p>Supporting Assessment Details: Refer to Figure 1.2 and 1.3 - Multiple access Routes is provided for in two different directions to two different destinations via Great Northern Highway, located adjacent (to the south-west) of the Subject Site.</p>				
A3.2b Emergency access way	Applicable:	No	Compliant:	N/A
<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> The proposed or existing EAW provides a through connection to a public road.				
<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> The proposed or existing EAW is less than 500m in length and will be signposted and gated (remaining unlocked) to the specifications stated in the Guidelines and/or required by the relevant local government.				
<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> The technical construction requirements for widths, clearances, capacity, gradients and curves (Guidelines, Table 6 and E3.2b. Refer also to Appendix C in this BMP), can and will be complied with.				
<p>The subdivision proposes development in stages and each stage is to comply with the relevant bushfire protection criteria.</p> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> A temporary EAW is planned to facilitate the staging arrangements of a subdivision as an interim second access route until the required second access route is constructed as a public road in a subsequent stage. The planned approach for achieving the required outcome is described in the supporting assessment details below.				
<p>Supporting Assessment Details: None Required</p>				
A3.3 Through-roads	Applicable:	No	Compliant:	N/A
<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> A no-through public road is necessary as no alternative road layout exists due to site constraints.				
<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> The no-through public road length does not exceed the established maximum of 200m to an intersection providing two-way access (Guidelines, E3.3).				
<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> The no-through public road exceeds 200m but satisfies the exemption provisions of A3.2a as demonstrated in A3.2a above.				

<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="radio"/>	The public road technical construction requirements (Guidelines, Table 6 and E3.1. Refer also to Appendix C in this BMP), can and will be complied with as established in A3.1 above.
<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="radio"/>	The turnaround area requirements (Guidelines, Figure 24) can and will be complied with.
Supporting Assessment Details: None Required	
A3.4a Perimeter roads	Applicable: No Compliant: N/A
<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="radio"/>	The proposed greenfield or infill development consists of 10 or more lots (including those that are part of a staged subdivision) and therefore should have a perimeter road. This is planned to be installed.
<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="radio"/>	<p>The proposed greenfield or infill development consists of 10 or more lots (including those that are part of a staged subdivision). However, it is not required on the established basis of:</p> <ul style="list-style-type: none"> • The vegetation adjoining the proposed lots is classified Class G Grassland; • Lots are zoned rural living or equivalent; • It is demonstrated that it cannot be provided due to site constraints; or • All lots have existing frontage to a public road.
<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="radio"/>	The technical construction requirements of widths, clearances, capacity, gradients and curves (Guidelines, Table 6 and E3.4a) can and will be complied with.
Supporting Assessment Details: None Required	
A3.4b Fire service access route	Applicable: No Compliant: N/A
<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="radio"/>	The FSAR can be installed as a through-route with no dead ends, linked to the internal road system every 500m and is no further than 500m from a public road.
<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="radio"/>	The technical construction requirements of widths, clearances, capacity, gradients and curves (Guidelines, Table 6 and E3.4b. Refer also to Appendix C in this BMP), can and will be complied with.
<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="radio"/>	The FSAR can and will be signposted. Where gates are required by the relevant local government, the specifications can be complied with.
<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="radio"/>	Turnaround areas (to accommodate type 3.4 fire appliances) can and will be installed every 500m on the FSAR.
Supporting Assessment Details: None Required	
A3.5 Battle-axe access legs	Applicable: No Compliant: N/A
<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="radio"/>	A battle-axe leg cannot be avoided due to site constraints.
<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="radio"/>	The proposed development is in a reticulated area and the battle-axe access leg length from a public road is no greater than 50m. No technical requirements need to be met.
<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="radio"/>	The proposed development is not in a reticulated area. The technical construction requirements for widths, clearances, capacity, gradients and curves (Guidelines, Table 6 and E3.5. Refer also to Appendix C in this BMP), can and will be complied with.

<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> Passing bays can and will be installed every 200m with a minimum length of 20m and a minimum additional trafficable width of 2m.			
Supporting Assessment Details: None Required			
A3.6 Private driveways	Applicable:	Yes	Compliant: Yes
<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> The private driveway to the most distant external part of the development site is within a lot serviced by reticulated water, is accessed via a public road with a speed limit of 70 km/hr or less and has a length is no greater than 70m (measured as a hose lay). No technical requirements need to be met.			
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> The technical construction requirements for widths, clearances, capacity, gradients and curves (Guidelines, Table 6 and E3.6. Refer also to Appendix C in this BMP), can and will be complied with.			
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Passing bays can and will be installed every 200m with a minimum length of 20m and a minimum additional trafficable width of 2m.			
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> The turnaround area requirements (Guidelines, Figure 28, and within 30m of the habitable building) can and will be complied with.			
Supporting Assessment Details: None Required			

5.6 Assessment Statements for Element 4: Water

FIREFIGHTING WATER	
Element Intent	To ensure water is available to enable people, property and infrastructure to be defended from bushfire.
Proposed Development/Use – Relevant Planning Stage	(Do) Development application other than for a single dwelling, ancillary dwelling or minor development
Element Compliance Statement	The proposed development/use achieves the intent of this element by being fully compliant with all applicable acceptable solutions.
Pathway Applied to Provide an Alternative Solution	N/A
<p>Acceptable Solutions - Assessment Statements</p> <p><i>All details of acceptable solution requirements are established in the Guidelines for Planning in Bushfire Prone Areas, DPLH v1.4 (Guidelines) and apply the guidance established by the Position Statement: 'Planning in bushfire prone areas – Demonstrating Element 1: Location and Element 2: Siting and design' (WAPC Nov 2019) and the 'Bushfire Management Plan Guidance for the Dampier Peninsula' (WA Department of Planning, Lands and Heritage, 2021 Rev B) as relevant. These documents are available at https://www.wa.gov.au/government/document-collections/state-planning-policy-37-planning-bushfire-prone-areas.</i></p> <p><i>The technical construction requirements for access types and components, and for each firefighting water supply component, are also presented in Appendices C and D. The local government will advise the proponent where different requirements are to apply and when any additional specifications such as those for signage and gates are to apply (these are included in the relevant appendix if requested by the local government).</i></p>	
Solution Component Check Box Legend	<input checked="" type="checkbox"/> Relevant & met <input checked="" type="checkbox"/> Relevant & not met <input type="checkbox"/> Not relevant
A4.1 Identification of future firefighting water supply	Applicable: No Compliant: N/A
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	It can be demonstrated that reticulated or sufficient non-reticulated water for firefighting can be provided at the subdivision and/or development application stage in accordance with the specifications of the relevant water supply authority or the requirements of Schedule 2.
Supporting Assessment Details: None Required	
A4.2 Provision of water for firefighting purposes	Applicable: Yes Compliant: Yes
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	A reticulated water supply is available to the proposed development. The existing hydrant connection(s) are provided in accordance with the specifications of the relevant water supply authority.
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	A reticulated water supply will be available to the proposed development. Hydrant connection(s) can and will be provided in accordance with the specifications of the relevant water supply authority.
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	A static water supply (tank) for firefighting purposes will be installed on the lot that is additional to any water supply that is required for drinking and other domestic purposes.
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	A strategic water supply (tank or tanks) for firefighting purposes will be installed within or adjacent to the proposed development that is additional to any water supply that is required for drinking and other domestic purposes. The required land will be ceded free of cost to the local government and the lot or road reserve where the tank is to be located will be identified on the plan of subdivision.

The strategic static water supply (tank or tanks) will be located no more than 10 minutes travel time from a subject site (at legal road speeds).

The technical requirements (location, number of tanks, volumes, design, construction materials, pipes and fittings), as established by the Guidelines (A4.2, E4 and Schedule 2) and/or the relevant local government, can and will be complied with.

Supporting Assessment Details: Refer to Figure 1.2 - Three (3) standalone tanks and internal hose reels are currently available across the Subject Site. These are fed from three (3) onsite bores. The Subject Site is within a non-reticulated water supply area for potable water and fire-fighting operations. To ensure the Bushfire Technical Requirements established by the Guidelines are achieved, the following should be considered:

- Installation of couplings/fittings to the Technical Requirements established by the Guidelines to ensure access to the water supply in a bushfire event – This includes a 50mm or 100mm male camlock coupling with full flow valve.
- Ensure all above-ground, exposed water supply pipes and fittings are metal.
- Any exposed electrical cabling should be concealed.

Refer to information contained in Appendix D for the firefighting water supply specifications and technical requirements.

6 BUSHFIRE PROTECTION MEASURES - RESPONSIBILITY FOR IMPLEMENTATION CHECKLIST

6.1 Developer / Landowner Responsibilities – Prior to Building and Occupancy / Operation

DEVELOPER/LANDOWNER RESPONSIBILITIES – PRIOR TO BUILDING AND OCCUPANCY/OPERATION	
No.	Implementation Actions
1	<p>The local government may condition a development application approval with a requirement for the landowner/proponent to register a notification onto the certificate of title and deposited plan (with the required wording stated by the local government).</p> <p>This will be done pursuant to <i>Section 70A Transfer of Land Act 1893 (as amended)</i> as per 'Factors affecting use and enjoyment of land, notification on title'.</p> <p>This is to notify owners and prospective purchasers of the land that:</p> <ol style="list-style-type: none"> 1. The land is in a designated bushfire prone area as designated by an Order made by the Fire and Emergency Services Commissioner; 2. The land is subject to a Bushfire Management Plan that establishes certain protection measures to manage bushfire risk that are to be implemented and continue to be applied at the owners cost; and 3. That additional planning and building requirements may apply to development on this land.
2	<p>Prior to relevant building work, inform the builder of the existence of this approved Bushfire Management Plan (BMP). The plan identifies that the development site is within a designated bushfire prone area and states the indicative (or determined) BAL rating(s) that may (or will) be applied to buildings/structures. A BAL assessment report may be required to confirm determined ratings and will be required when ratings are indicative. BAL certificates will need to be issued to accompany building applications.</p> <p>The BMP may also establish, as an additional bushfire protection measure, that construction requirements to be applied will be those corresponding to a specified higher BAL rating.</p> <p>Compliance with the Building Code of Australia (Volumes 1 and 2 of the National Construction Code), will require certain bushfire resistant construction requirements be applied to residential buildings in bushfire prone areas (i.e., Class 1, 2 and 3 and associated Class 10a buildings and decks). Other classes of buildings may also be required to comply with these construction when established by the relevant authority or if identified as an additional bushfire protection measure within the BMP.</p> <p>The deemed to satisfy solutions that will meet the relevant bushfire performance requirements are found in AS 3959 – Construction of Building in Bushfire Prone Areas (as amended) and the NASH Standard - Steel Framed Construction in Bushfire Areas (as amended).</p>
3	<p>Prior to occupancy/operation, maintain the established 'Required' Asset Protection Zone (APZ) around habitable buildings (and other structures as required) to satisfy:</p> <ul style="list-style-type: none"> • The minimum required dimensions established in Appendix B1; and • The standards established by the Guidelines DPLH, 2021 v1.4, Schedule 1, or as varied by the local government through their annually issued firebreak / hazard reduction notice when the variations have been endorsed by the WAPC and DFES as per s4.5.3 of the Guidelines. <p>If native vegetation is required to be modified or removed, ensure that approval has been received from the relevant authority (refer to the applicable local government for advice).</p>

4	<p>Prior to occupancy of the Transportables, the subject lot is to be compliant with current version of the Shire of Derby-West Kimberley Firebreak Notice issued under s33 of the Bushfires Act 1954.</p> <p>This may include standards for asset protection zones that differ from Schedule 1 in the Guidelines DPLH, 2021 v1.4, with the intent to better satisfy local conditions.</p> <p>[Refer to assessments against the Bushfire Protection Criteria the Element 2 'Siting and Design' and the information presented in Appendix B].</p>
5	<p>Prior to occupancy, maintain the private driveways and battle-axe legs to comply with the technical requirements referenced in the BMP.</p>

6.2 Landowner / Occupier Responsibilities – Ongoing Management

LANDOWNER/OCCUPIER – ONGOING MANAGEMENT	
No.	Management Actions
1	<p>Maintain the 'Required' Asset Protection Zone (APZ) around habitable buildings (and other structures as required) to satisfy:</p> <ul style="list-style-type: none"> • The minimum required dimensions established in Appendix B1; and • The standards established by the Guidelines DPLH, 2021 v1.4, Schedule 1, or as varied by the local government through their annually issued firebreak / hazard reduction notice when the variations have been endorsed by the WAPC and DFES as per s4.5.3 of the Guidelines.
2	<p>Comply with the Shire of Derby-West Kimberley Firebreak issued under s33 of the Bush Fires Act 1954. Check the notice annually for any changes.</p>
3	<p>Maintain the existing vehicular access routes within the lot to comply with the technical requirements referenced in the BMP and the relevant local government's annual firebreak / hazard reduction notice.</p>
4	<p>Ensure that builders engaged to construct dwellings/additions and/or other relevant structures on the lot, are aware of the existence of this approved Bushfire Management Plan (BMP). The plan identifies that the development site is within a designated bushfire prone area and states the indicative (or determined) BAL rating(s) that may (or will) be applied to buildings/structures.</p> <p>A BAL assessment report may be required to confirm determined ratings and will be required when ratings are indicative. BAL certificates will need to be issued to accompany building applications.</p> <p>Compliance with the Building Code of Australia (Volumes 1 and 2 of the National Construction Code), will require certain bushfire resistant construction requirements be applied to residential buildings in bushfire prone areas (i.e., Class 1, 2 and 3 and associated Class 10a buildings and decks). The deemed to satisfy solutions that will meet the relevant bushfire performance requirements are found in AS 3959 – Construction of Building in Bushfire Prone Areas (as amended) and the NASH Standard - Steel Framed Construction in Bushfire Areas (as amended).</p> <p>As an additional bushfire protection measure, other classes of buildings may also be required to comply with these construction requirements when established by the relevant authority or if identified as an additional bushfire protection measure within the BMP. The BMP may also establish that construction requirements to be applied will be those corresponding to a specified higher BAL rating. When applicable, these requirements will be identified in Section 5.7.</p>
5	<p>Ensure all future buildings the landowner has responsibility for, are designed and constructed in full compliance with:</p> <ul style="list-style-type: none"> • The bushfire resistant construction requirements of the Building Code of Australia (Volumes 1 and 2 of the National Construction Code), as established by the Building Regulations 2012 (WA Building Act 2011); and • Any additional bushfire protection measures this Bushfire Management Plan has established are to be implemented.

6.3 Local Government Responsibilities – Ongoing Management

LOCAL GOVERNMENT – ONGOING MANAGEMENT	
No.	Management Actions
1	<p>Monitor landowner compliance with the annual Firebreak Notice and with any bushfire protection measures that are:</p> <ul style="list-style-type: none"> • Established by this BMP; • Are required to be maintained by the landowner/occupier; and • Are relevant to local government operations.

APPENDIX A: DETAILED BAL ASSESSMENT DATA AND SUPPORTING INFORMATION





A1: BAL Assessment Inputs Common to the Method 1 and Method 2 Procedures


A1.1: FIRE DANGER INDICES (FDI/FDI/GFDI)

<p>When using Method 1 the relevant FDI value required to be applied for each state and region is established by AS 3959:2018, Table 2.1. Each FDI value applied in Tables 2.4 – 2.7 represents both the Forest Fire Danger Index (FFDI) and a deemed equivalent for the Grassland Fire Danger Index (GFDI), as per Table B2 in Appendix B. When using Method 2, the relevant FFDI and GFDI are applied.</p> <p>The values may be able to be refined within a jurisdiction, where sufficient climatological data is available and in consultation with the relevant authority.</p>						
Relevant Jurisdiction:	WA	Region:	Whole State	Method 1	Applied FDI:	80
				Method 2	Applied FFDI:	N/A
					Applied GFDI:	N/A



A1.2: VEGETATION ASSESSMENT AND CLASSIFICATION





<p>Vegetation Types and Classification</p> <p>In accordance with AS 3959:2018 clauses 2.2.3 and C2.2.3.1, all vegetation types within 100 metres of the 'site' (defined as "the part of the allotment of land on which a building stands or is to be erected"), are identified and classified. Any vegetation more than 100 metres from the site that has influenced the classification of vegetation within 100 metres of the site, is identified and noted. The maximum excess distance is established by AS 3959: 2018 cl 2.2.3.2 and is an additional 100 metres.</p> <p>Classification is also guided by the Visual Guide for Bushfire Risk Assessment in WA (WA Department of Planning February 2016) and any relevant FPA Australia practice notes.</p> <p>Modified Vegetation</p> <p>The vegetation types have been assessed as they will be in their natural mature states, rather than what might be observed on the day. Vegetation destroyed or damaged by a bushfire or other natural disaster has been assessed on its expected re-generated mature state. Modified areas of vegetation can be excluded from classification if they consist of low threat vegetation or vegetation managed in a minimal fuel condition, satisfying AS 3959:2018 s2.2.3.2(f), and there is sufficient justification to reasonable expect that this modified state will exist in perpetuity.</p> <p>The Influence of Ground Slope</p> <p>Where significant variation in effective slope exists under a consistent vegetation type, these will be delineated as separate vegetation areas to account for the difference in potential bushfire behaviour, in accordance with AS 3959:2018 clauses 2.2.5 and C2.2.5.</p>	
<p>THE INFLUENCE OF VEGETATION GREATER THAN 100 METRES FROM THE SUBJECT SITE</p>	
Vegetation area(s) within 100m of the site whose classification has been influenced by the existence of bushfire prone vegetation from 100m – 200m from the site:	None
Assessment Statement:	No vegetation types exist close enough, or to a sufficient extent, within the relevant area to influence classification of vegetation within 100 metres of the subject site.

VEGETATION AREA 1							
Classification	B. WOODLAND						
Types Identified	Woodland B-05	Woodland B-07	Closed tussock grassland G-21				
Exclusion Clause	N/A						
Effective Slope	Measured	flat 0 degrees	Applied Range (Method 1)		Upslope or flat 0 degrees		
Foliage Cover (all layers)	10-30%	Shrub/Heath Height	N/A		Tree Height	Up to 30m	
Description/Justification:	Woodland Dominant Area - Eucalypt dominant area. Understorey consists of primarily low grasses. Occasional open areas between canopies.						
Post Development Assumptions:	<p>Refer to Figure 3.1b contained within this Report - It is anticipated that sections of Area 1 within the boundaries of the subject site will have some form of modification as a result of Asset Protection Zone (APZ) Implementation.</p> <p>Note – The removal or modification to native vegetation is subject to any applicable Environmental Survey and subsequent approval by the relevant decision maker.</p>						
 <p>DIRECTION 206 deg(T) 18.20914°S 125.58128°E ACCURACY 5 m DATUM WGS84</p> <p>Lodge 2023-02-20 17:34:43+08:00</p>				 <p>DIRECTION 333 deg(T) 18.20739°S 125.58435°E ACCURACY 5 m DATUM WGS84</p> <p>Lodge 2023-02-20 17:10:33+08:00</p>			
PHOTO ID: 1				PHOTO ID: 2			
 <p>DIRECTION 20 deg(T) 18.20840°S 125.58527°E ACCURACY 5 m DATUM WGS84</p> <p>Lodge 2023-02-20 16:53:49+08:00</p>				 <p>DIRECTION 38 deg(T) 18.20999°S 125.58469°E ACCURACY 5 m DATUM WGS84</p> <p>Lodge 2023-02-20 16:30:52+08:00</p>			
PHOTO ID: 3				PHOTO ID: 4			

VEGETATION AREA 1						
Classification	B. WOODLAND					
Types Identified	Woodland B-05	Woodland B-07	Closed tussock grassland G-21			
Exclusion Clause	N/A					
Effective Slope	Measured	flat 0 degrees	Applied Range (Method 1)		Upslope or flat 0 degrees	
Foliage Cover (all layers)	10-30%	Shrub/Heath Height	N/A		Tree Height	Up to 30m
Description/Justification:	As Above.					
Post Development Assumptions:	As Above.					
						
PHOTO ID: 5						

VEGETATION AREA 2						
Classification	B. WOODLAND					
Types Identified	Woodland B-05	Woodland B-07	Closed tussock grassland G-21			
Exclusion Clause	N/A					
Effective Slope	Measured	flat 0 degrees	Applied Range (Method 1)	Upslope or flat 0 degrees		
Foliage Cover (all layers)	10-30%	Shrub/Heath Height	N/A	Tree Height	Up to 30m	
Description/Justification:	Woodland Dominant Area - Eucalypt dominant area. Understorey consists of primarily low grasses. Occasional open areas between canopies.					
Post Development Assumptions:	Not Applicable.					
						
PHOTO ID: 6		PHOTO ID: 7				
						
PHOTO ID: 8		PHOTO ID: 9				

VEGETATION AREA 2						
Classification	B. WOODLAND					
Types Identified	Woodland B-05	Woodland B-07	Closed tussock grassland G-21			
Exclusion Clause	N/A					
Effective Slope	Measured	flat 0 degrees	Applied Range (Method 1)	Upslope or flat 0 degrees		
Foliage Cover (all layers)	10-30%	Shrub/Heath Height	N/A	Tree Height	Up to 30m	
Description/Justification:	As Above.					
Post Development Assumptions:	As Above.					
						
PHOTO ID: 10			PHOTO ID: 11			
						
PHOTO ID: 12						

VEGETATION AREA 3							
Classification	N/A						
Types Identified	N/A						
Exclusion Clause	2.2.3.2 (e) Non-vegetated areas and (f) Low threat vegetation - minimal fuel condition.						
Effective Slope	Measured	N/A		Applied Range (Method 1)	N/A		
Foliage Cover (all layers)	N/A	Shrub/Heath Height	N/A		Tree Height	N/A	
Description/Justification:	<p>Managed private properties and gardens. Trees under-pruned to a minimum of two (2) metres in height. Grasses slashed and maintained to less than 50mm in height. Hardstand areas cleared of unmanaged vegetation.</p> <p>Note – Some sparse grasses present. This will not support a running fire.</p>						
Post Development Assumptions:	Not Applicable.						
							
PHOTO ID: 13				PHOTO ID: 14			
							
PHOTO ID: 15				PHOTO ID: 16			

VEGETATION AREA 3							
Classification	N/A						
Types Identified	N/A						
Exclusion Clause	2.2.3.2 (e) Non-vegetated areas and (f) Low threat vegetation - minimal fuel condition.						
Effective Slope	Measured	N/A		Applied Range (Method 1)	N/A		
Foliage Cover (all layers)	N/A		Shrub/Heath Height	N/A		Tree Height	N/A
Description/Justification:	As Above.						
Post Development Assumptions:	As Above.						
 <p>DIRECTION 47 deg(T) 18.21010°S ACCURACY 12 m 125.58207°E DATUM WGS84</p> <p>Lodge 2023-02-20 17:39:52+08:00</p>				 <p>DIRECTION 337 deg(T) 18.21022°S ACCURACY 4 m 125.58402°E DATUM WGS84</p> <p>Lodge 2023-02-20 16:36:40+08:00</p>			
PHOTO ID: 17				PHOTO ID: 18			

A1.3: EFFECTIVE SLOPE

Measuring

Effective slope refers to the slope “under the classified vegetation which most significantly influences bushfire behaviour (AS 3959:2018, clause B4, CB4). It is not the average slope.

It is described as upslope, flat or downslope when viewed from the exposed element (e.g., building) looking towards the vegetation – and measured in degrees. Ground slope has a direct and significant influence on a bushfire's rate of spread and intensity, which increases when travelling up a slope.

The slope under the vegetation in closest proximity to the exposed element(s), over the distance that will most likely carry the entire depth of the flaming front, will be a significant consideration in the determination of the effective slope. This distance is determined as a function of the potential quasi-steady rate of spread and expected residence time (i.e., the flaming combustion period at a single point on the ground), of a bushfire in the specific vegetation type/landscape scenario.

Slope Variation Within Areas of Vegetation

Where a significant variation in effective slope exists under a consistent vegetation type, these will be delineated as separate vegetation areas to account for the difference in potential bushfire behaviour, in accordance with AS 3959:2018 clauses 2.2.5 and C2.2.5.

Slope Variation Due to Multiple Development Sites

When the effective slope, under a given area of bushfire prone vegetation, will vary significantly relative to multiple proposed development sites (exposed elements), then the effective slopes corresponding to each of the different locations, are separately identified.

The relevant (worst case) effective slope is determined in the direction corresponding to the potential directions of fire spread towards the subject building(s).

Differences in Application of Effective Slope - AS 3959:2018 Method 1 versus Method 2 Procedures

The Method 1 procedure provides five different slope ranges from flat (including all upslopes) to 20 degrees downslope to define the effective slope and bushfire behaviour model calculations apply the highest value in each range (i.e., 0°, 5°, 10°, 15° or 20°).

The Method 2 procedure requires an actual slope (up or down in degrees) to be determined. AS 3959:2018, clause B1 limits the effective slope that can be applied to 30 degrees downslope and 15 degrees upslope. Where any upslope is greater than 15 degrees, then 15 degrees is to be used.

SITE ASSESSMENT DETAILS - EXPLANATION & JUSTIFICATION

The effective slopes determined from the site assessment are recorded in Table 3.1 of this Bushfire Management Plan. When their derivation requires additional explanation and justification, this is provided below.

A1.4: SEPARATION DISTANCE

Measuring

The separation distance is the distance in the horizontal plane between the receiver (building/structure or area of land being considered) and the edge of the classified vegetation (AS 3959:2018, clause 2.2.4)

The relevant parts of a building/structure from which the measurement is taken is the nearest part of an external wall or where a wall does not exist, the supporting posts or columns. Certain parts of buildings are excluded including eaves and roof overhangs.

The edge of the vegetation, for forests and woodlands, will be determined by the unmanaged understorey rather than either the canopy (drip line) or the trunk (AS 3959:2018, clause C2.2.5).

Measured Separation Distance as a Calculation Input

If a separation distance can be measured because the location of the building/structure relative to the edge of the relevant classified vegetation is known, this figure can be entered into the BAL calculation. The result is a determined BAL rating.

Assumed Separation Distance as a Calculation Input

When the building/structure location within the lot is not known, an assumed building location may be applied that would establish the closest positioning of the building/structure relative to the relevant area of vegetation.

The assumed location would be based on a factor that puts a restriction on a building location such as:

- An established setback from the boundary of a lot, such as a residential design code setback or a restrictive covenant; or
- Within an established building envelope.

The resultant BAL rating would be indicative and require later confirmation (via a Compliance Report) of the building/structure actual location relative to the vegetation to establish the determined BAL rating.

Separation Distance as a Calculation Output

With the necessary site specific assessment inputs and using the AS 3959:2018 bushfire modelling equations, the range of separation distances that will correspond to each BAL rating (each of which represents a range of radiant heat flux), can be calculated. This has application for bushfire planning scenarios such as:

- When the separation distance cannot be measured because the exact location of the exposed element (i.e., the building, structure or area), relative to classified vegetation, is yet to be determined.

In this scenario, the required information is the identification of building locations onsite that will correspond to each BAL rating. That is, indicative BAL ratings can be derived for a variety of potential building/structure locations; or

- The separation distance is known for a given building, structure or area (and a determined BAL rating can be derived), but additional information is required regarding the exposure levels (to the transfer of radiant heat from a bushfire), of buildings or persons, that will exist at different points within the subject site.

The calculated range of separation distances corresponding to each BAL rating can be presented in a table and/or illustrated as a BAL Contour Map – whichever is determined to best fit the purpose of the assessment.

For additional information refer to the information boxes in Section 3 'Bushfire Attack Levels (BAL) - Understanding the Results and Section 3.2. 'Interpretation of the BAL Contour Map'.

SITE ASSESSMENT DETAILS - EXPLANATION & JUSTIFICATION

Measured and assumed separation distances determined from the site assessment are recorded in Section 3, Table 3.1. When their derivation requires additional explanation and justification, including when the relevant R-Code or other regulated building setbacks are being applied, this is provided below.

APPENDIX B: ADVICE - ONSITE VEGETATION MANAGEMENT - THE APZ

THE ASSET PROTECTION ZONE (APZ) - DESCRIPTION

This is an area surrounding a habitable building containing low threat fire fuel fuels (including vegetation), or vegetation managed in a minimal fuel condition, no fire fuels or any combination. The primary objectives include:

- To ensure the building is sufficiently separated from the bushfire hazard to limit the impact of its direct attack mechanisms. That is, the dimensions of the APZ will, for most site scenarios, remove the potential for direct flame contact on the building, reduce the level of radiant heat to which the building is exposed and ensure some reduction in the level of ember attack (with the level of reduction being dependent on the vegetation types of present);
- To ensure any vegetation retained within the APZ is low threat and/or is managed in a minimum fuel condition and prevents surface fire spreading to the building;
- To ensure other combustible materials that can result in consequential fire (typically ignited by embers) within both the APZ and parts of the building, are eliminated, minimised and/or appropriately located or protected. (Note: The explanatory notes in the Guidelines provide some guidance for achieving this objective and other sources are available. Research shows that consequential fire, ignited by embers, is the primary cause of building loss in past bushfire events); and
- To provide a defensible space for firefighting activities.

B1: Asset Protection Zone (APZ) Dimensions

APZ DIMENSIONS – DIFFERENCES IN REQUIREMENTS FOR PLANNING ASSESSMENTS COMPARED TO IMPLEMENTATION

THE 'PLANNING BAL-29' APZ DIMENSIONS

The 'Planning BAL-29' APZ is not necessarily the size of the APZ that must be physically implemented and maintained by a landowner. Rather, its purpose is to identify if an acceptable solution for planning approval can be met i.e., can a specified minimum separation distance from bushfire prone vegetation exist.

An assessment against the Bushfire Protection Criteria is conducted for planning approval purposes. To satisfy 'A2.1: Asset Protection Zone', it must be demonstrated that certain minimum separation distances between the relevant building/structure and different classes of bushfire prone vegetation, either exist or can be created and will remain in perpetuity. These minimum separation distances determine the 'Planning BAL-29' APZ dimensions.

Dimensions: The minimum dimensions are those that will ensure the potential radiant heat impact on subject buildings does not exceed 29 kW/m². These dimensions will vary dependent on the vegetation classification, the slope of the land they are growing on and certain other factors specific to the subject site.

Note: For certain purposes associated with vulnerable land uses, the 'Planning BAL-29' APZ may be replaced with dimensions corresponding to radiant heat impact levels of 10 kW/m² and 2 kW/m² and calculated using 1200K flame temperature.

Location: The identified 'Planning BAL-29' APZ must not extend past lot boundaries onto land the landowner has no control over either now or potentially at some point in the future. Limited exceptions include:

- When adjoining land is not vegetated (e.g., built out, roads, carparks, drainage, rock, water body etc.);
- When adjoining land currently or, will in the short term, contain low threat vegetation and or vegetation managed in a minimal fuel condition as per AS 3959:2018 cl. 2.2.3.2. It must be reasonable (justifiable) to expect this low threat vegetation and/or level of management will continue to exist or be conducted in perpetuity and require no action from the owner of the subject lot.

Such areas of land include formally managed areas of vegetation (e.g., public open space / recreation areas / services installed in a common section of land). For specific scenarios, evidence of the formal

commitment to manage these areas to a certain standard may be required and would be included in the BMP.

These areas of land can also be part of the required APZ on a neighbouring lot for which the owner of that lot has a recognised responsibility to establish and maintain; and

- When there is a formalised and enforceable capability and responsibility created for the subject lot owner, or any other third party, to manage vegetation on land they do not own in perpetuity. This would be rare, and evidence of the formal authority would be included in the BMP.

The bushfire consultant's 'Supporting Assessment Detail', that is presented in the assessment against the acceptable solution A2.1, will identify and justify how any adjoining land within the 'Planning BAL-29 APZ will meet the APZ standards. Or otherwise, explain how this condition cannot be met.

THE 'BAL RATING' APZ DIMENSIONS

The applicable BAL rating will have been stated in the BAL Assessment Data section of the BAL Assessment Report or BMP (as relevant). The BAL rating can be assessed as 'determined' or 'indicative' or be 'conditional', dependent of the specific conditions associated with the site and the stage of assessment or planning. It is the eventual assessment of the 'Determined' BAL that will establish both the BAL rating that is to apply and its corresponding 'BAL Rating' APZ dimensions.

Dimensions: The minimum dimensions of the 'BAL Rating' APZ to be established and maintained will be those that correspond to the determined BAL rating for the subject building/structure that has accounted for surrounding vegetation types, the slope of the land they are growing on and certain other factors specific to the subject site and surrounding land.

Establishing the 'BAL Rating' APZ will ensure that the potential radiant heat exposure of the building/structure will be limited to the level that the applied construction requirements are designed to resist when that building/structure is required to be constructed to the standard corresponding to the Determined BAL.

Note: For certain purposes associated with vulnerable land uses, the 'BAL Rating' APZ dimensions may be replaced with dimensions corresponding to the specific radiant heat impact levels of 10 kW/m² and 2 kW/m² and calculated using 1200K flame temperature.

Location: The same conditions will apply as for the 'Planning BAL-29' APZ.

THE 'LOCAL GOVERNMENT' APZ DIMENSIONS

Some Local Government's establish the dimensions of the APZ that must be established surrounding buildings in their annual Firebreak/Hazard Reduction Notice. Or for a specific site they may establish a maximum allowable dimension (typically that corresponding to BAL-29). When established, the landowner will need to be comply with these.

THE 'REQUIRED' APZ DIMENSIONS

This is the APZ that is to be established and maintained by the landowner within the subject lot and surrounding the subject building(s). It will be identified on the Property Bushfire Management Statement when it is required to be included in this Report/Plan.

Dimensions: The 'Required APZ' dimensions are the minimum (or maximum when relevant) distances away from the subject building(s) that the APZ must extend. These distances will not necessarily be the same all around the building(s). They can vary and are dependent on the different vegetation types (and their associated ground slope) that can exist around the building(s), and specific local government requirements. The dimensions to implement are determined by:

- A. The 'BAL Rating APZ' of the subject building(s) when distances are greater than 'B' below (except when 'B' establishes a maximum distance); or
- B. The 'Local Government' APZ' derived from the Firebreak/Hazard Reduction Notice when distances are greater than 'A' above, other than when a maximum distance is established, in which case this will apply; or
- C. A combination of 'A' and 'B'.

Location: The same conditions will apply as for the 'Planning BAL-29' APZ.

B1.1: THE APZ DIMENSIONS REQUIRED TO BE IMPLEMENTED BY THE LANDOWNER

DETERMINATION OF THE 'REQUIRED' APZ DIMENSIONS TO BE IMPLEMENTED AND MAINTAINED BY LANDOWNER WITHIN THEIR LOT											
Relevant Buildings(s)	Vegetation Classification [Refer to Fig 3.1]		Minimum Required Separation Distances from Building to Vegetation (metres)								The 'Required' APZ Dimensions [see note]
			Established by the 'BAL Rating' APZ Dimension					Established by the "Local Government" APZ Dimension		Maximum Allowed	
			Determined Radiant Heat Impact	Stated 'Indicative' or 'Conditional' BAL				Firebreak / Hazard Reduction Notice			
				BAL-29	BAL-19	BAL-12.5	BAL-LOW				
Area	Class										
Transportables	1	(B) Woodland	BAL-29	14	20	29	100	25		All land within the subject lot surrounding the proposed buildings/structures will be the required APZ.	
	2	(B) Woodland	BAL-12.5	14	20	29	100	25			
	3	Excluded cl 2.2.3.2(e & f)	BAL-LOW	N/A	N/A	N/A	N/A	25			
<p>Note: The 'Required' APZ Dimension corresponding to each area of vegetation is the greater of the 'BAL Rating' or the 'Firebreak/Hazard Reduction Notice' APZ dimensions - unless a local government maximum distance(s) is established as a result of their environmental assessment of the subject site. The area of the APZ will also be limited to the subject lot boundary unless otherwise justified in this Report/Plan. Final determination of the dimensions will require that any indicative or conditional BAL becomes a 'Determined' BAL.</p>											
<p>Comments: None Required.</p>											

B2: The Standards for the APZ as Established by the Guidelines (DPLH, v1.4)

Within the Guidelines (source: <https://www.wa.gov.au/government/document-collections/state-planning-policy-37-planning-bushfire-prone-areas>), the management Standards are established by:

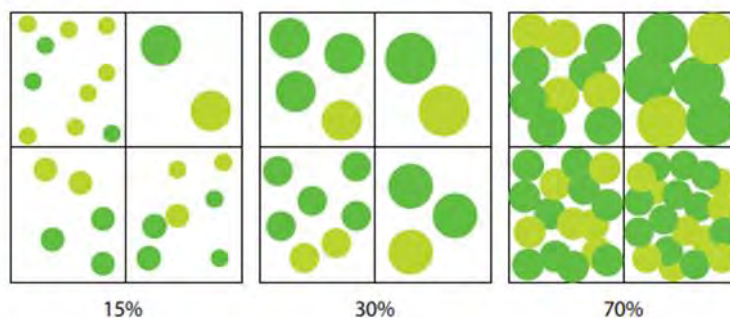
- Schedule 1: Standards for Asset Protection Zones (see extract below) established by the Guidelines; and
- The associated explanatory notes (Guidelines E2) that address (a) managing an asset protection zone (APZ) to a low threat state (b) landscaping and design of an asset protection zone and (c) plant flammability.

ELEMENT 2: SITING AND DESIGN OF DEVELOPMENT

SCHEDULE 1: STANDARDS FOR ASSET PROTECTION ZONES

OBJECT	REQUIREMENT
Fences within the APZ	<ul style="list-style-type: none"> Should be constructed from non-combustible materials (for example, iron, brick, limestone, metal post and wire, or bushfire-resisting timber referenced in Appendix F of AS 3959).
Fine fuel load (Combustible, dead vegetation matter <6 millimetres in thickness)	<ul style="list-style-type: none"> Should be managed and removed on a regular basis to maintain a low threat state. Should be maintained at <2 tonnes per hectare (on average). Mulches should be non-combustible such as stone, gravel or crushed mineral earth or wood mulch >6 millimetres in thickness.
Trees* (>6 metres in height)	<ul style="list-style-type: none"> Trunks at maturity should be a minimum distance of six metres from all elevations of the building. Branches at maturity should not touch or overhang a building or powerline. Lower branches and loose bark should be removed to a height of two metres above the ground and/or surface vegetation. Canopy cover within the APZ should be <15 per cent of the total APZ area. Tree canopies at maturity should be at least five metres apart to avoid forming a continuous canopy. Stands of existing mature trees with interlocking canopies may be treated as an individual canopy provided that the total canopy cover within the APZ will not exceed 15 per cent and are not connected to the tree canopy outside the APZ.

Figure 19: Tree canopy cover – ranging from 15 to 70 per cent at maturity



<p>Shrub* and scrub* (0.5 metres to six metres in height). Shrub and scrub >6 metres in height are to be treated as trees.</p>	<ul style="list-style-type: none"> • Should not be located under trees or within three metres of buildings. • Should not be planted in clumps >5 square metres in area. • Clumps should be separated from each other and any exposed window or door by at least 10 metres.
<p>Ground covers* (<0.5 metres in height. Ground covers >0.5 metres in height are to be treated as shrubs)</p>	<ul style="list-style-type: none"> • Can be planted under trees but must be maintained to remove dead plant material, as prescribed in 'Fine fuel load' above. • Can be located within two metres of a structure, but three metres from windows or doors if >100 millimetres in height.
<p>Grass</p>	<ul style="list-style-type: none"> • Grass should be maintained at a height of 100 millimetres or less, at all times. • Wherever possible, perennial grasses should be used and well-hydrated with regular application of wetting agents and efficient irrigation.
<p>Defendable space</p>	<ul style="list-style-type: none"> • Within three metres of each wall or supporting post of a habitable building, the area is kept free from vegetation, but can include ground covers, grass and non-combustible mulches as prescribed above.
<p>LP Gas Cylinders</p>	<ul style="list-style-type: none"> • Should be located on the side of a building furthest from the likely direction of a bushfire or on the side of a building where surrounding classified vegetation is upslope, at least one metre from vulnerable parts of a building. • The pressure relief valve should point away from the house. • No flammable material within six metres from the front of the valve. • Must sit on a firm, level and non-combustible base and be secured to a solid structure.

* Plant flammability, landscaping design and maintenance should be considered – refer to explanatory notes

B3: The Standards for the APZ as Established by the Local Government

Refer to the firebreak / hazard reduction notice issued annually (under s33 of the Bushfires Act 1954) by the relevant local government. It may state Standards that vary from those established by the Guidelines and that have been endorsed by the WAPC and DFES as per Section 4.5.3 of the Guidelines.

A copy of the applicable notice is not included here as they are subject to being reviewed and modified prior to issuing each year. Refer to ratepayers notices and/or the local government's website for the current version.

B4: Vegetation and Areas Excluded from Classification - Ensure Continued Exclusion

AS 3959:2018 establishes the methodology for determining a bushfire attack level (BAL). The methodology includes the classification of the subject site's surrounding vegetation according to their 'type' and the application of the corresponding relevant bushfire behaviour models to determine the BAL.

Certain vegetation can be considered as low threat or managed in a minimal fuel condition and can be excluded from classification. Where this has occurred in assessing the site, the extract from AS3959:2018 below states the requirements that must continue to exist for the vegetation on those areas of land to be excluded from classification (including the size of the vegetation area if relevant to the assessment).

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AS 3959:2018

2.2.3.2 Exclusions—Low threat vegetation and non-vegetated areas

The following vegetation shall be excluded from a BAL assessment:

- (a) Vegetation of any type that is more than 100 m from the site.
- (b) Single areas of vegetation less than 1 ha in area and not within 100 m of other areas of vegetation being classified vegetation.
- (c) Multiple areas of vegetation less than 0.25 ha in area and not within 20 m of the site, or each other or of other areas of vegetation being classified vegetation.
- (d) Strips of vegetation less than 20 m in width (measured perpendicular to the elevation exposed to the strip of vegetation) regardless of length and not within 20 m of the site or each other, or other areas of vegetation being classified vegetation.
- (e) Non-vegetated areas, that is, areas permanently cleared of vegetation, including waterways, exposed beaches, roads, footpaths, buildings and rocky outcrops.
- (f) Vegetation regarded as low threat due to factors such as flammability, moisture content or fuel load. This includes grassland managed in a minimal fuel condition, mangroves and other saline wetlands, maintained lawns, golf courses (such as playing areas and fairways), maintained public reserves and parklands, sporting fields, vineyards, orchards, banana plantations, market gardens (and other non-curing crops), cultivated gardens, commercial nurseries, nature strips and windbreaks.

NOTES:

- 1 Minimal fuel condition means there is insufficient fuel available to significantly increase the severity of the bushfire attack (recognizable as short-cropped grass for example, to a nominal height of 100 mm).
- 2 A windbreak is considered a single row of trees used as a screen or to reduce the effect of wind on the leeward side of the trees.

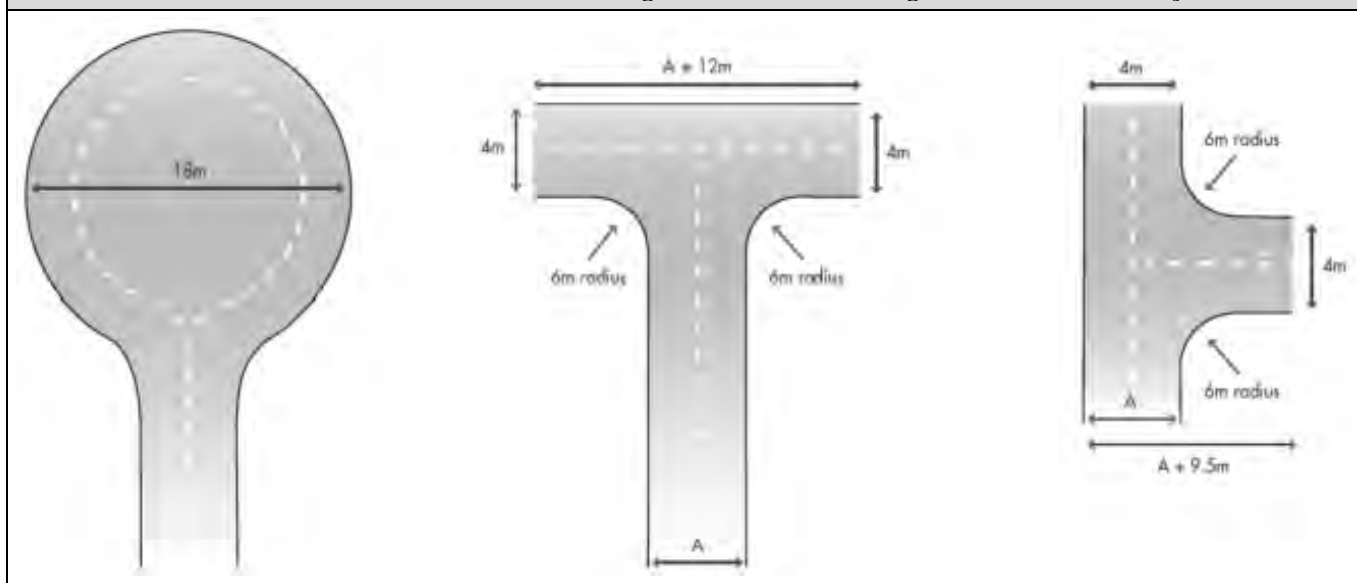
APPENDIX C: TECHNICAL REQUIREMENTS FOR VEHICULAR ACCESS

The design/layout requirements for access are established by the acceptable solutions of the Guidelines (DPLH, 2021 v1.4) Element 3 and vary dependent on the access component, the land use and the presence of 'vulnerable' persons. Consequently, the best reference source are the Guidelines. The technical requirements that are fixed for all components and uses are presented in this appendix.

GUIDELINES TABLE 6, EXPLANATORY NOTES E3.3 & E3.6 AND RELEVANT ACCEPTABLE SOLUTIONS

Technical Component	Vehicular Access Types / Components			
	Public Roads	Emergency Access Way ¹	Fire Service Access Route ¹	Battle-axe and Private Driveways ²
Minimum trafficable surface (m)	In accordance with A3.1	6	6	4
Minimum Horizontal clearance (m)	N/A	6	6	6
Minimum Vertical clearance (m)	4.5			
Minimum weight capacity (t)	15			
Maximum Grade Unsealed Road ³	As outlined in the IPWEA Subdivision Guidelines	1:10 (10%)		
Maximum Grade Sealed Road ³		1:7 (14.3%)		
Maximum Average Grade Sealed Road		1:10 (10%)		
Minimum Inner Radius of Road Curves (m)		8.5		

Turnaround Area Dimensions for No-through Road, Battle-axe Legs and Private Driveways ⁴



Passing Bay Requirements for Battle-axe leg and Private Driveway

When the access component length is greater than the stated maximum, passing bays are required every 200m with a minimum length of 20m and a minimum additional trafficable width of 2m (i.e. the combined trafficable width of the passing bay and constructed private driveway to be a minimum 6m).

Emergency Access Way – Additional Requirements

Provide a through connection to a public road, be no more than 500m in length, must be signposted and if gated, gates must be open the whole trafficable width and remain unlocked.

¹ To have crossfalls between 3 and 6%.

² Where driveways and battle-axe legs are not required to comply with the widths in A3.5 or A3.6, they are to comply with the Residential Design Codes and Development Control Policy 2.2 Residential Subdivision.

³ Dips must have no more than a 1 in 8 (12.5% or 7.1 degree) entry and exit angle.

⁴ The turnaround area should be within 30m of the main habitable building.

APPENDIX D: TECHNICAL REQUIREMENTS FOR FIREFIGHTING WATER SUPPLY

D2: Non-Reticulated Areas – Static Supply

For specified requirements, refer to the Guidelines Element 4: Water – Acceptable Solution A4.2, Explanatory Notes E4 (that provide water supply establishment detail under the headings of water supply; independent water and power supply; strategic water supplies, alternative water sources and location of water tanks) and the technical requirements established by Schedule 2 (reproduced below).

SCHEDULE 2: WATER SUPPLY DEDICATED FOR BUSHFIRE FIREFIGHTING PURPOSES

2.1 Water supply requirements

Water dedicated for firefighting should be provided in accordance with Table 7 below, and be in addition to water required for drinking purposes.

Table 7: Water supply dedicated for bushfire firefighting purposes

PLANNING APPLICATION	NON-RETICULATED AREAS
Development application	10,000L per habitable building
Structure Plan / Subdivision: Creation of 1 additional lot	10,000L per lot
Structure Plan / Subdivision: Creation of 3 to 24 lots	10,000L tank per lot or 50,000L strategic water tank
Structure Plan / Subdivision: Creation of 25 lots or more	50,000L per 25 lots or part thereof Provided as a strategic water tank(s) or 10,000L tank per lot

2.2 Technical requirements

2.2.1 Construction and design

An above-ground tank and associated stand should be constructed of non-combustible material. The tank may need to comply with AS/NZS 3500.1:2018.

Below ground tanks should have a 200mm diameter access hole to allow tankers or emergency service vehicles to refill direct from the tank, with the outlet location clearly marked at the surface. The tank may need to comply with AS/NZS 3500.1:2018. An inspection opening may double as the access hole provided that the inspection opening meets the requirements of AS/NZS 3500.1:2018. If the tank is required under the BCA as part of fire hydrant installation, then the tank will also need to comply with AS 2419.

Where an outlet for an emergency service vehicle is provided, then an unobstructed, hardened ground surface is to be supplied within four metres of any water supply.

2.2.2 Pipes and fittings

All above-ground, exposed water supply pipes and fittings should be metal. Fittings should be located away from the source of bushfire attack and be in accordance with the applicable section below, unless otherwise specified by the local government.

2.2.2.1 Fittings for above-ground water tanks:

- Commercial land uses: 125mm Storz fitting; or
- Strategic water tanks: 50mm or 100mm (where applicable and adapters are available) male camlock coupling with full flow valve; or
- Standalone water tanks: 50mm male camlock coupling with full flow valve; or
- Combined water tanks: 50mm male camlock coupling with full flow valve or a domestic fitting, being a standard household tap that enables an occupant to access the water supply with domestic hoses or buckets for extinguishing minor fires.

2.2.2.2 Remote outlets

²³In certain circumstances, it may be beneficial to have the outlet located away from the water supply. In such instances in which a remote outlet is to be used, the applicant should consult the local government and DFES on their proposal.

EXAMPLE CONSTRUCTION AND FITTINGS



Strategic 47,000 Litre Concrete Tank & Protected Fittings



10,000 Litre Concrete Tank



Storz and Camlock Couplings



Full Flow 50mm Ball Valve



Full Flow 50mm Gate Valve and Male Camlock