



PROPOSED SCHEME AMENDMENT
WARANYJARRI ESTATE LOCAL CENTRE REZONING
PART LOT 9007 SARIAGO TERRANCE, BILLINGURR

RFF 

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1 INTRODUCTION

RFF act on behalf of DevelopmentWA in relation to this request to initiate an amendment to the Shire of Broome Local Planning Scheme No. 6 to rezone part lot 9007 on Deposited Plan 74189 in Bilingurr from R30/40; R40; and Road Reserve and Town Centre to R20 and include additional use provisions which ensure a child care centre is a permissible use over a sufficient area to support development.

DevelopmentWA is rolling out the Regional Land Booster Scheme. Alongside state and federal government stimulus, DevelopmentWA has experienced heightened demand for vacant residential land when compared to previous years leading to a surge in sales. In response to this, DevelopmentWA is looking to rapidly bring new lots to market utilising underutilised land in the Waranyjarri Estate to ensure adequate supply now and into the future. The proposed rezoning to residential of the Broome North Local Commercial Centre site is the most practical and orderly method to enable this outcome, firming up land availability into the future in a high amenity infill project; as opposed to new greenfield development.

The proposed Scheme Amendment also forms part of a broader body of work underway by DevelopmentWA to amend District and Local Structure Plans to align with the Shire's adopted Local Commercial Strategy. A commitment to progressing these interlinked amendments has been provided by Stuart Nahajski, Regional Manager for DevelopmentWA.

In light of the above demand shift and commitment to coordinated reform regarding commercial land in Broome, DevelopmentWA is seeking the Shire of Broome's assistance to facilitate changes to the Statutory Planning Framework in a timely manner to meet targets set, requiring construction of new lots to commence in 2021.

This report describes the site details and provides justification to support the rezoning of the land as proposed.



2 LAND DETAILS

2.1 LOCATION

Part Lot 9007 on Deposited Plan 74189 (the subject site) is bound by Magabala Road, Sariago Terrace, Shingoro Street and Yako Mall in the locality of Billingurr within the Shire of Broome and Western Australia's broader Kimberley region. It is centrally located within Development WA's Stage 1 of Waranyjarri Estate, north of Gubinge Road and is approximately 4.5km from Broome iconic Chinatown.

A location plan is provided as Figure 1.

2.2 LAND TENURE

The subject site forms part Lot 9007 on Deposited Plan 74189 which is owned by Western Australia Land Authority.

Several easements traverse the subject site which are detailed Table 1. A copy of the Certificate of Title and Deposited Plan showing ownership and easements is included in Appendix 1.

Table 1 Encumbrances

Purpose	Statutory Reference	Benefit to
Easement (Electricity Supply)	SEC 167 of the P & D Act REG 33C	Regional Power Corporation
Easement (Sewage and Water Supply)	SEC 167 of the P & D Act REG 33B	Water Corporation
Easement (Electricity Supply)	SEC 167 of the P & D Act REG 33C	Regional Power Corporation

2.3 SITE DESCRIPTION

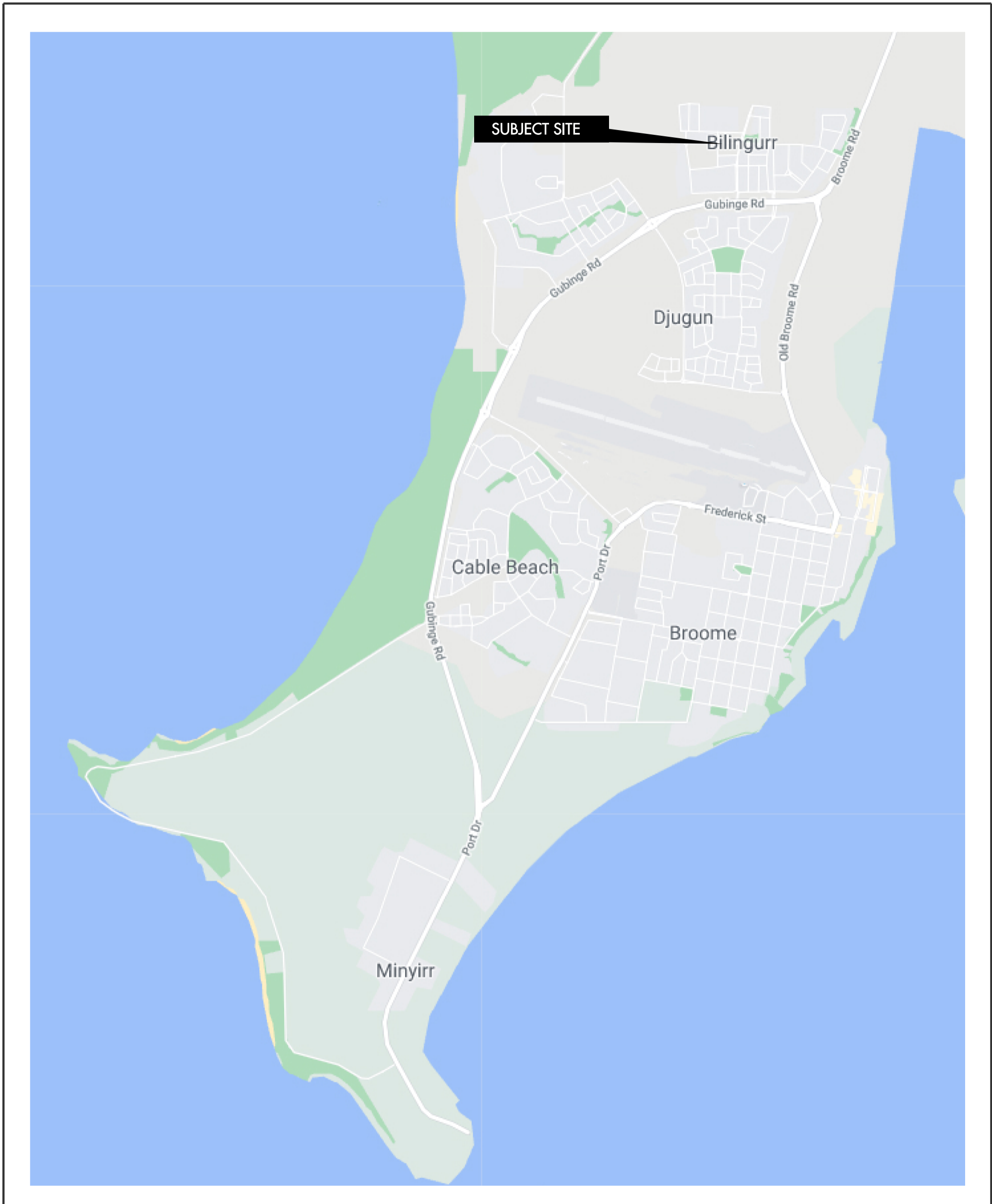
The subject site is 3.07ha in area of part lot 9007 which totals 40.0079ha. The subject site is vacant undeveloped land which is flat. Some vegetation and trees have been retained on-site where they were/are expected to align with future public roads created as part of a future subdivision.

Whilst a preliminary road network contemplated creation of a connection between Tanami Road and development of two laneways referred to as Kaino Lane and Barba Lane, none of these roads have been gazetted.

A small community garden shed used for a community bookshare and shaded slab is located on the eastern side of the subject site immediately north of the roundabout at the junction of Magabala and Tanami Roads. DevelopmentWA is liaising directly with the Shire with regards to the options available for the relocation of the Community Garden.

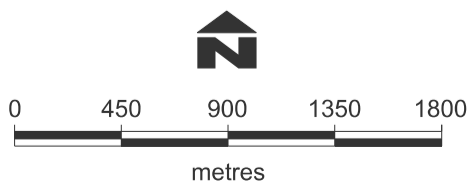
Various service connections to the subject site already exist in line with planned previous subdivision to create a local commercial centre and adjoining higher





SOURCE: GOOGLE MAPS

**LOCATION PLAN
PT. LOT 9007 SARIAGO TERRACE, BROOME**



Client: -
 Date: **AUGUST 2020**
 Scale: **1:45,000@A4**
 Revision No: **A**
 File No: **9007-5-001**



FIGURE 1

density development. Underground power connections aligned with the anticipated road network also exist and may require removal in association with any future subdivision/ development. As constructed drawings of services are included in Appendix 2.

The surrounding road frontages to the subject site incorporates:

- footpaths to all sides of the property frontage;
- on-street carparking within the Yako Mall, Shingoro Road and Sariago Terrace; and
- pre-constructed crossovers into the anticipated lane (Barba Lane and Kaino Laine).

Any modifications to existing utilities and the verge arrangements surrounding the site can be resolved through the subdivision and development process.

An aerial photo of the site is provided as Figure 2.

2.4 SURROUNDING CONTEXT

The site is located centrally within stage 1 of DevelopmentWA's Broome North Project at the intersections of the primary integrator and connector roads. It is also adjacent to:

- Broome North Primary School;
- Two local neighbourhood parks at Tanami Drive and Sariago Tce; and
- A Multiple Use Corridor incorporating passive public open space through retained bushland to the north at the intersection of Sariago Terrace and Magabala Road.

Blue Haze industrial area is 300m east of the site offering employment opportunities. The estate also includes a local Caltex Starmart Fuel and convenience store located at the intersection of Mavis and Flowerdale roads.

The subject site is therefore well serviced by existing education, recreation, retail and employment opportunities.

The surrounding residential estate includes predominantly low density single residential land with lots of 500 – 800m². Some higher density grouped, and multiple dwelling developments are dispersed between the predominantly lower density single residential housing. Residential density and diversity targets have already been achieved within the broader Broome North area facilitated through changes to R-Codes which enabled much higher dwelling yields than previously anticipated on medium density development sites.

2.5 EXISTING TOWN PLANNING FRAMEWORK

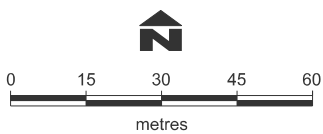
2.5.1 Shire of Broome Local Planning Scheme No. 6 (LPS6)


The subject site incorporates several zones and reserves designated within the Shire of Broome LPS6, shown in Figure 2. This includes:





**SITE PLAN - AERIAL PHOTO
PT. LOT 9007 SARIAGO TERRACE, BROOME**



LEGEND
 SUBJECT BOUNDARY

Client: -
 Date: AUGUST 2020
 Scale: 1:1,500@A4
 Revision No: A
 File No: 900-5-001



- Residential zoned land with a split density coding of R30/40 and single density coding of R20;
- Local Centre zone;
- Parks and Recreation Reserve; and
- Road Reserve.

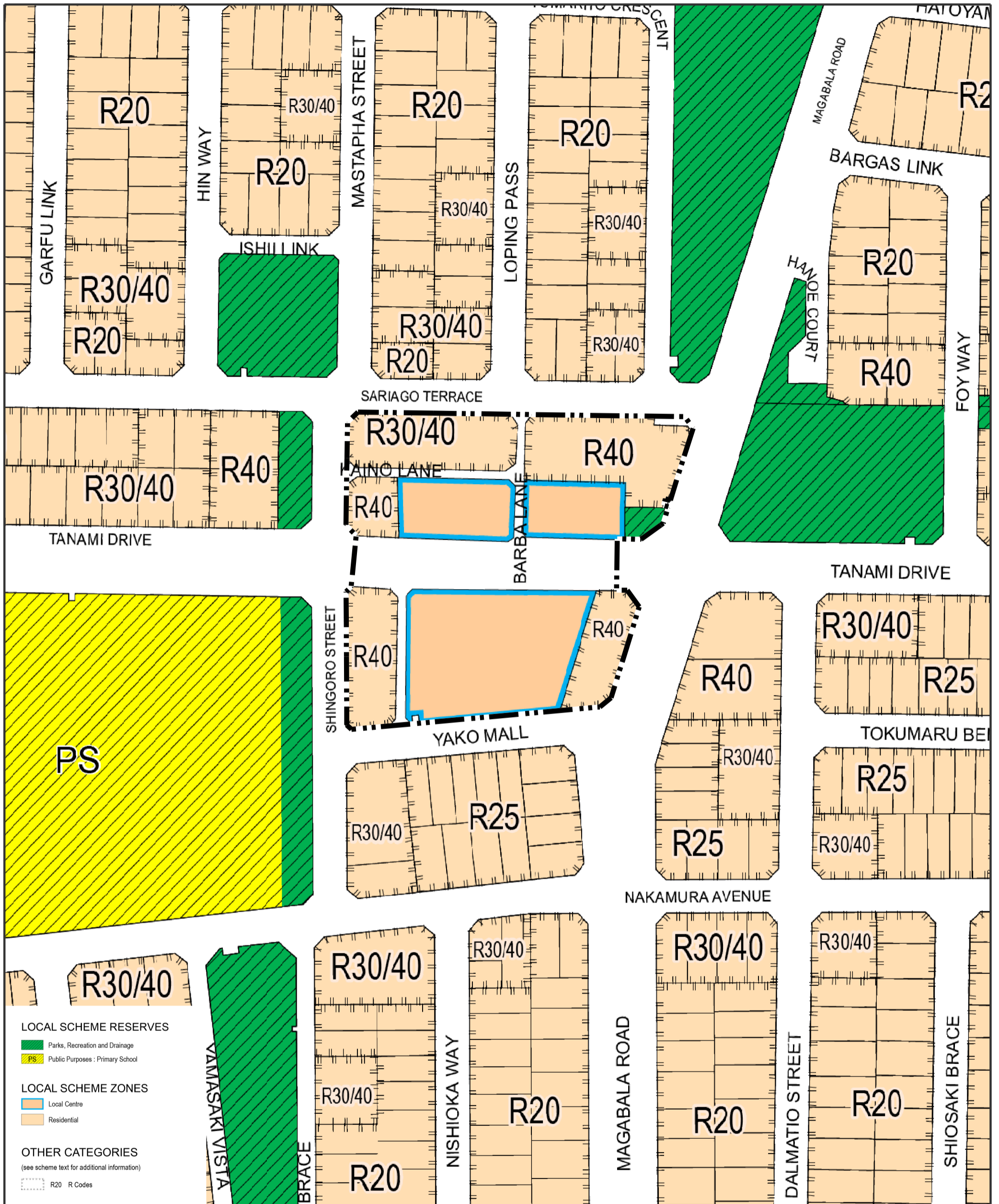
The provisions relating to split densities no longer form part of LPS6. A zoning map is provided as Figure 3.

2.5.2 Broome North Local Centre – Local Development Plan

The Shire adopted the Broome North Local Centre Local Development Plan (Rev C) in January 2015. The objectives of this Local Development Plan are as follows:

- o *Provides for an appropriate mix of convenience retailing, health, welfare and community facilities serving the needs of the neighbourhood;*
- o *Creates a safe and vibrant centre accessible by a diverse range of users;*
- o *Contributes to the delivery of a high-quality public realm providing shade and comfort for users and enabling use of the centre at all times of the day and in all seasons; and*
- o *Incorporates ‘Broome-style’ architectural principles whilst allowing for modern interpretation of its characteristic elements.*

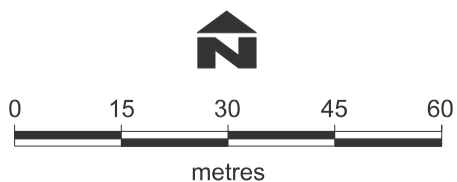




LEGEND

SUBJECT BOUNDARY

**EXISTING ZONING PLAN EXTRACT
PT. LOT 9007 SARIAGO TERRACE, BROOME**



Client: -
Date: AUGUST 2020
Scale: 1:3,000@A4
Revision No: A
File No: 900-5-003



3 PROPOSED AMENDMENT

3.1 SCHEME AMENDMENT PROPOSAL

It is proposed to rezone the subject site, excluding the Tanami Drive Public Road Reservation running east-west, to 'Residential' with an applicable density coding of R20. In addition, it is proposed to impose an additional use provision for a 'Child Care Centre' over 2,600m² as permitted use within the area south of the Tanami Drive Road Reserve shown in LPS6.

The purpose of this proposed amendment is as follows:

- Re-purpose land located in a high amenity location for an alternative use as residential given the redundancy (and failed market interest) in development of a new local commercial centre;
- Bring new residential lots to market which are consistent with the prevailing lot typology in the Waranyjarri Estate and market demand, being low density single residential dwellings;
- Allocate sufficient land to enable development of a new child care centre given the ideal location due to its proximity to the existing primary school;
- Retain and protect the requirement to construct the missing link of Tanami drive centrally through the site.

To achieve construction in accordance with the desired development program, it is imperative the scheme amendment be initiated as soon as possible.

3.2 SUBDIVISION CONCEPT

A preliminary subdivision plan has been prepared which indicates the potential arrangement to be created through future subdivision and development. It is intended to finalise the proposed arrangement in consultation with the Shire of Broome in parallel with this proposed amendment. Such details include:

- whether the provision of open space and drainage reserve is necessary based on the alternative development outcome and the approved Local Development Plan accommodating greater than 10% open space;
- the size and location of the child care centre site which requires input from the industry via direct market engagement, but anticipated to be require no more than 2,600m²;
- direct access to Magabala Road for single residential lots; and
- the final road arrangement for Tanami Drive and any modifications to the as-built road network necessary to enable subdivision.

The anticipated low-density subdivision could bring up to 40 lots to market consistent with the residential lot typologies in the Broome North Structure Plan,



noting limited opportunities to achieve an east-west lot orientation due to the existing built road network.

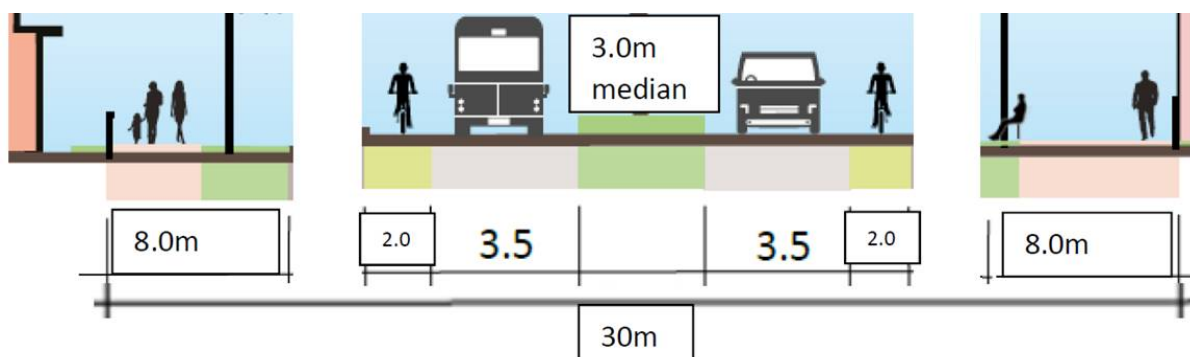
3.3 TANAMI DRIVE ROAD CARRIAGEWAY ARRANGEMENT

GHD have been engaged by DevelopmentWA to assist on all three Broome North projects underway. A Broome Traffic Study 2016 by Jacobs the forecast traffic volumes to 2051 on the section of Tanami Drive west of Magabala Road for various scenarios will not exceed 234vph in one direction and 351vph in both directions. Based on peak hour factors in the report this would represent approximately 4,400vpd. The proposed changes created through this amendment will generate lower traffic volumes.

Tanami Drive is designated as a local distributor road under Main Roads WA classification and an Integrator Arterial B in the Broome Traffic Study and provides ultimate connectivity between Broome Road and Sanctuary Road/Cable Beach Road West (both local distributors). Broader traffic volumes previously forecast on Tanami Drive to the east and west are significantly higher than volumes projected for this short section of Tanami Drive across all scenarios. Given that the Commercial Centre will be relocated to the southwest off Fairway Drive traffic patterns will change, however Tanami Drive will still ultimately form an important east-west route.

Based on previous modelling, the need for duplication of Tanami Drive west of Magabala Road would seem unlikely as Gubinge Road and Fairway Drive will instead be used to access the planned alternative location of the future District Centre.

On this basis, GHD has recommended the following cross section as a Neighbourhood Connector to future proof ultimate volumes based on Liveable Neighbourhoods (WAPC 2015), noting that provision of on-street bays will be limited due to requirements for crossovers to residential lots on both sides of the street.



4 TOWN PLANNING CONSIDERATIONS – JUSTIFICATION

4.1 STRATEGIC PLANNING

4.1.1 State Planning Strategy 2050

The State Planning Strategy 2050 (SPS 2050) was adopted in 2014 by the Western Australian Planning Commission (WAPC). The State Planning Strategy provides the strategic context for planning and development decisions throughout the State.

The Strategy includes key elements regarding land supply which are relevant to the proposed amendment and included in Table 8 of the SPS 2050. Such elements include:

- *Well-serviced regional towns that have a built-in capacity to cater for forecast growth and future expansion*
- *Effective land supply monitoring and modelling tools guide infrastructure and servicing agencies*
- *Affordable and well-located land that is accessible and well-serviced, especially to align with affordable housing demands*
- *Government leads by example in the delivery of affordable land.*

The proposed amendment is focused on enabling DevelopmentWA, the State's primary development agency to ensure an adequate pipeline of readily accessible, affordable, and well-located residential land can be brought to market in Broome, a well serviced regional town. Therefore, the proposed amendment is consistent with the aspirations of SPS50.

4.1.2 Kimberley Regional Planning and Infrastructure Framework 2015

The Kimberley Regional Planning and Infrastructure Framework (KRPIF) was adopted by the Department of Planning to provide strategic direction for the future development of the Kimberley region over the next 25 years. It seeks to ensure that development and change in the Kimberley is achieved in a way that improves people's lives and enhances the character and environment of the region.

Key Planning initiatives with respect to settlement in the KPRIF as detailed and consistency of this proposed amendment area outlined in the table below.



#	Planning Initiative	Amendment Consistency
4b	<p><i>Identify future land requirements for residential, commercial and industrial purposes in local planning strategies and schemes by:</i></p> <ul style="list-style-type: none"> - <i>determining future demand and timing scenarios;</i> - <i>identifying opportunities for private sector involvement in urban and development;</i> - <i>identifying infrastructure requirements; and</i> - <i>identify future land requirements for public utilities</i> 	<p>The land is no longer required for commercial purposes and alternative land has been identified and is being zoned through an amendment to the District Structure Plan and Broome North Local Development Plan No. 3.</p> <p>Alternate use of service and development land will improve the short-medium term supply of residential land in Broome North where the bulk of longer-term demand for housing is to be accommodated.</p>
4c	<p><i>Facilitate the release of additional residential, commercial and industrial land in areas that have been identified for future development by:</i></p> <ul style="list-style-type: none"> - <i>timely resolution of land tenure issues;</i> - <i>identifying and addressing development constraints and formulating strategies to address these;</i> - <i>inundation as a result of climate change;</i> - <i>providing adequate and appropriately zoned land; and</i> - <i>ensuring utility, community and transport infrastructure capacity is sufficient.</i> 	<p>The rezoning of this land to residential is a logical measure given Shires adopted Local Commercial strategy clearly indicates the land is not suitable for a local centre purpose in the short, medium or long-term.</p> <p>All other key development challenges are addressed and the rezoning of the land will ensure it's capable of timely release to the market given increased demand for residential land resulting from the State's Regional Land Booster Scheme.</p>

4.1.3 Shire of Broome Local Planning Strategy

The Shire of Broome Local Planning Strategy (BLPS) was adopted by the Shire of Broome and endorsed by the Western Australian Planning Commission in August 2014. The Shire has commenced a review of the Strategy in parallel with LPS6. The Report of Review was adopted by the Shire of Broome in February 2020 and subsequently by the WAPC in April 2020.

The review of the BLPS recommended changes to enable alignment with several other informing planning documents including adopted Local Commercial Strategy.

This proposed amendment, in parallel with other committed town planning changes occurring within the Shire's Statutory and Strategic Framework are enabling measures to achieve alignment with the Shire's adopted Local Commercial Strategy. Details of its alignment with the adopted Local Commercial Strategy are outlined below in section 4.1.4.

4.1.4 Broome Commercial Strategy

The Shire of Broome adopted its Local Commercial Strategy in 2017. The purpose of the strategy was to review existing and long-term demand for commercial space and make recommendations on the strategic distribution of commercial space in Broome.

The Local Commercial Strategy identified that amendments to the scale and location of commercial space in Broome North was necessary to align with current and longer-term demands. It recommended the following:

1. Allocation of land to support development of a District Centre by 2031 located centrally to the neighbourhoods of Broome North, Cable Beach, Roebuck and Roebuck West; at the intersection of major roads which accommodates:
 - o 1 full-line supermarket (2,500m² – 4,500m²)
 - o other food, grocery + liquor
 - o food catering
 - o apparel, homewares + leisure
 - o retail services
 - o local professional and service businesses

2. Allocation of land to support development of a Local Centre by 2051 in the most northern part of Broome north (i.e. with frontage to Fairway Drive) capable of accommodating:
 - o 1 full-line supermarket (2,500m² –4,500m²) (expansion of 2031 half-line supermarket)
 - o other food, grocery + liquor
 - o food catering
 - o local professional and service businesses.

Whilst specific locations for these centres were recommended to be determined through future planning and design and enabled through an amendment to the

Broome North District Structure Plan, it did note the inappropriate size and location for a local centre in Broome North (i.e. the subject site) outlining:

The land currently set aside for the Broome North (South) local centre is considered insufficient for accommodating a district centre and may be too close to the future district centre to be sustainable.

It is on this basis an alternative logical use for the existing nominated centre should be found; in this case residential consistent with the existing density throughout the Waranyjarri Estate.

Broader changes to the land use framework are required to properly implement the recommendations of the Local Commercial Strategy. Whilst it is appreciated the Shire must maintain a sufficient allocation of land to meet longer-term demand, Development WA has committed to the progressing the required amendments to both the District Structure Plan and Broome North Local Development Plan No. 3 in parallel with this amendment request. These processes progressing in parallel will ensure there is adequate commercial space to meet longer-term demand in the appropriate location.

4.2 STATUTORY PLANNING

4.2.1 Shire of Broome Local Planning Scheme No. 6 (LPS6)

4.2.1.1 Scheme Aims

LPS6 provides a list of aims of the Scheme. Aims that are relevant to the proposed amendment are listed below and justification follows on how the proposed amendment is consistent with each 'aim'.

1.6.1 Place –

(b) Promoting environmentally sustainable land use and development.

The amendment will facilitate the sustainable use of land within the Shire of Broome in advance of new greenfield development.

(f) Safeguarding and enhancing the character and amenity of the built environment and urban spaces of the Scheme area.

Development of a centrally located land parcel within Waranyjarri Estate will improve amenity for existing residents. New residential development enabled by the amendment and future subdivision will also offer future residents a high level of amenity given the existing urban space and built environment of the estate.

1.6.2 People –

(a) Supporting a diverse range of housing choice for a varied residential population, to establish and maintain community identity and high levels of amenity.



Rezoning to residential R2O will create additional lots to cater for the prevailing demand of housing typology within Broome. Density diversity targets for the Waranyjarri Estate will not be compromised as previous medium and high-density development have achieved desired housing diversity objectives.

1.6.3 Prosperity –

(a) Providing for convenient, lively, accessible and attractive local activity centres.

The subject site has been shown to be an inappropriate location to achieve this aim, both through its lack of development and also the finding of the adopted Local Commercial Strategy. Rezoning the land for an alternative use and identifying more suitable locations for district and local commercial centres is underway through coordinated planning approach by DevelopmentWA which will ensure this aim is achieved.

1.6.4 Infrastructure –

(a) Ensuring timely and sufficient supply of serviced and suitable land for housing, employment, economic activities, community facilities, recreation and open space.

Facilitating timely changes to rezone the land to residential will ensure adequate short-term supply of housing in response to heightened demand experienced in Broome following the State and National COVID recovery plans being implemented.

(b) Providing for the air, land and water transportation needs by providing, where practical, an integrated transport system that includes public transport, cycling and walking.

Initial consideration has been given to the potential changes to the road network to manage the impacts of the amendment. The impacts will see a reduction in traffic in the immediate vicinity of the site and along Tanami Drive with the altered road network arrangement contemplated earlier in section 3.3.

1.6.5 Sustainability –

(a) Providing for the sustainable use and development of land

Rezoning to enable a suitable use ensures sustainable use of land and services.

(b) Providing opportunities for planned, contained and sustainable settlements in locations with access to services and infrastructure.

The rezoning enables sustainable settlement of the Broome North area by using land which is readily accessible to services and infrastructure.

1.6.6 Organisation/Governance –



(a) Assisting the effective implementation of regional plans and policies endorsed by the local government and the Commission.

A timely progression of this amendment will ensure implementation of the Local Commercial Strategy in response to the COVID recovery planning implemented by the State and Federal Governments.

4.2.1.2 Residential Zone

Clause 3.2.1 of LPS6 describes the purpose of the residential zone as follows;

The purpose of the Residential Zone is to provide for residential development at a range of densities with a variety of housing to meet the needs of different household types through the application of the Residential Design Codes, as varied by the Scheme and any Local Planning Policy adopted under Part 5 of the Residential Design Codes.

The amendment will create residential zoned land capable of enabling low density residential housing which is consistent with the prevailing demand and need of the Broome community.

Clause 3.2.2 outlines the objectives of the Residential Zone which are as follows:

- a. allow development in accordance with the Residential Design Codes;*
- b. provide for climatically responsive housing forms that are consistent with energy efficiency and sustainable design principles set out in design guidelines adopted by the local government; and*
- c. ensure the built form is in accordance with Broome-style architecture as specified in clause 4.12 and with applicable local design guidelines.*

The proposed amendment will enable subdivision of the land, creating lots capable of development in accordance with the R-Codes and in a practical lot arrangement which can achieve sustainable design principles. The proposed amendment is therefore consistent with the objectives of the Residential zone.

4.2.2 State Planning Policy 3 -Urban Growth and Settlement

State Planning Policy 3 (SPP3) sets out the principles and considerations which apply to planning for urban growth and settlement in Western Australia. Core principles and objectives of SPP3 include the efficient use of existing and serviced land to support regional population growth in advance of new development.

The proposed amendment will enable new residential development where existing infrastructure is already in place to service the development and a high level of amenity can be offered to future residents given the existing community and recreational infrastructure in close proximity to the site. The subdivision and development of the site for residential purposes can occur in advance of new greenfield expansion in Broome North which likely will require new major infrastructure upgrades, the provision of additional public open space and other community infrastructure to meet liveable neighbourhood design principles.



In light of this, the rezoning of the site is consistent with SPP3, enabling efficient use of land, located in a well-serviced location to meet future population growth in Broome.

4.2.3 State Planning Policy 3.7 – Bushfire Planning

Bushfire Prone Planning were engaged to evaluate the proposed amendment with respect to Bushfire Regulation and Planning requirements. A BAL Contour Plan and Assessment Against Bushfire Protection Criteria was carried out on the subject site with a range of BAL-LOW t BAL-12.5 and therefore no further bushfire management measures will be required to be incorporated into any future subdivision or development within the proposed amendment area.

The full report is included in Appendix 3.

4.2.4 Broome North Local Centre – Local Development Plan

Rezoning of the land will make the Local Development Plan which applies to the subject site redundant. Once the amendment has been gazetted, revocation of the Local Development Plan can occur pursuant to regulation 58 of the *Planning and Development (Local Planning Schemes) Regulations 2015*.

4.2.5 Planning Bulletin 72/2009 – Child Care Centres

The Western Australian Planning Commission adopted Planning Bulletin 72 in August 2009. The purpose of the Planning Bulletin is to:

- a) differentiate between child care related activities operating in existing residential area, such as family day care that takes place in dwellings, and non-residential child care activities;*
- b) outline a consistent policy approach to planning for child care centres; and*
- c) advise of planning considerations in relation to the location and development of child care centres.*

The bulletin highlights that market forces have a material impact on the location and accessibility of services. The intent of integrating flexibility into the proposed amendment by including the additional use provision and applying it to 2,600m2 is to retain some flexibility to support the market in providing a service into the Broome North Area. Retaining ‘D’ use (i.e. no additional use provision) and/ or limiting the additional use provision to a designated land area would influence market engagement due to lack of certainty and flexibility in the planning framework.

Section 3.3 of the bulletin deals with the location of centres. The provisions of this section are considered below with respect to the proposed amendment. Accordingly, the incorporation of the additional use provision to accommodate a child care centre as ‘Permitted’ is considered appropriate.

Preferred Location Characteristics	Response
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<p>Distributed strategically to provide the maximum benefit to the community it serves</p>	<p>There are no existing child care centres located in Broome North, or north of Gubinge Road within the sunset park estate. Longer term expansion of Broome North will logically lead to demand for a new, conveniently located service. The nominated location adjoining a primary school is convenient and consistent with the placement of most existing centres in Broome which adjoin or are adjacent to primary schools.</p>
<p>Within easy walking distance or part of appropriate commercial, recreation or community nodes and education facilities</p>	<p>The subject site is well located within walking distance of Broome North Primary School and will be in close proximity to future district commercial centres, notionally nominated for the corner of Gubinge and Fairway Drive in the adopted Local Commercial Strategy.</p>
<p>Located in areas where adjoining uses are compatible with a child care centre (includes considering all permissible uses under the zoning of adjoining properties)</p>	<p>Future adjoining uses to the premises will be residential. As outlined in the bulletin, most centres are located within a residential setting. Future purchasers of adjoining properties will be aware of the potential centre. Existing residents in Broome North would also be aware of the potential development intensive, commercial uses such as a child care centre consistent with the currently adopted Local Development plan for the subject site.</p>
<p>Serviced by public transport (where available)</p>	<p>Magabala and Tanami Drive are nominated in the Broome North LDP1 as future public transport routes.</p>
<p>Considered suitable from a traffic engineering/safety point of view</p>	<p>Previous planning and design of the area allowed for more intensive use.</p>
<p>Of sufficient size and dimension to accommodate the development without affecting the amenity of the area</p>	<p>The proposed amendment provides some flexibility to ensure a lot can be created of a suitable size and dimension to meet market requirements.</p>



5 SUMMARY

This proposed amendment seeks the rezoning of the former local commercial centre in the Waranyjarri Estate to Residential R20, with the additional use provision of a Child Care Centre and retention of the Tanami Drive public Road Reserve. The proposed amendment will enable the efficient use of already serviced and well-located land to meet future population growth in Broome.

Rezoning of the subject site in advance of any higher order Strategic or Statutory alteration will not compromise the longer-term allocation and zoning of commercial land in Broome noting:

- DevelopmentWA's three interlinked projects have all been committed to and are in progress; and
- The site already being recognised as an inappropriate location for a Local Commercial Centre in the Shire's adopted Local Commercial Strategy.

In light of the justification within this report and supporting appendices, we respectfully seek your timely initiation of the proposed amendment.



Appendix 1 – Certificate of Title and Deposited Plan

WESTERN



AUSTRALIA

REGISTER NUMBER 9007/DP74189	
DUPLICATE EDITION 1	DATE DUPLICATE ISSUED 12/11/2012

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

VOLUME **2801** FOLIO **377**

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.



REGISTRAR OF TITLES

LAND DESCRIPTION:

LOT 9007 ON DEPOSITED PLAN 74189

REGISTERED PROPRIETOR:
(FIRST SCHEDULE)

WESTERN AUSTRALIAN LAND AUTHORITY OF LEVEL 6, 40 THE ESPLANADE, PERTH
(AF M086634) REGISTERED 26/10/2012

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

1. L642126 EASEMENT TO REGIONAL POWER CORPORATION FOR ELECTRICITY PURPOSES. SEE DEPOSITED PLAN 74189 REGISTERED 1/6/2011.
2. L642127 EASEMENT BURDEN FOR GAS PIPELINE PURPOSES. SEE DEPOSITED PLAN 74189 REGISTERED 1/6/2011.
3. EASEMENT BURDEN CREATED UNDER SECTION 167 P. & D. ACT FOR ELECTRICITY PURPOSES TO REGIONAL POWER CORPORATION - SEE DEPOSITED PLAN 74189 AS CREATED ON DEPOSITED PLAN 69434
4. EASEMENT BURDEN CREATED UNDER SECTION 167 P. & D. ACT TO WATER CORPORATION FOR SEWERAGE AND WATER SUPPLY PURPOSES - SEE DEPOSITED PLAN 74189 AS CREATED ON DEPOSITED PLAN 72354
5. EASEMENT BURDEN CREATED UNDER SECTION 167 P. & D. ACT FOR ELECTRICITY PURPOSES TO REGIONAL POWER CORPORATION - SEE DEPOSITED PLAN 74189 AS CREATED ON DEPOSITED PLAN 72354

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: DP74189
PREVIOUS TITLE: 2800-250
PROPERTY STREET ADDRESS: NO STREET ADDRESS INFORMATION AVAILABLE.
LOCAL GOVERNMENT AUTHORITY: SHIRE OF BROOME
RESPONSIBLE AGENCY: WESTERN AUSTRALIAN LAND AUTHORITY

TYPE FREEHOLD	SUBDIVISION
PURPOSE SUBDIVISION	
PLAN OF	

**LOTS 326-328, 353-361,
9007, ROADS &
EASEMENTS**

DISTRICT ... DAMPIER	SSA YES/NO
TOWNSHIP ... BROOME	FORMER TENURE
LOCAL AUTHORITY ... SHIRE OF BROOME	LOT 9006 C/T 2800-250
LOCALITY ... BILINGUPUR	FIELD BOOK
INDEX ... SEE SMART PLAN	111132

SCALE: 1:500 AT A2 SIZE
ALL DIMENSIONS ARE IN METRES

SURVEYOR'S CERTIFICATE - GENERAL
I, GARRY WILLIAM SULLIVAN, hereby certify that this is a correct and accurate representation of the correct representation of the subject land and that all calculations from measurements were made in accordance with the provisions of the Act and that it complies with the relevant provisions of the Act in relation to which it is lodged.

REGISTERED SURVEYOR
GARRY WILLIAM SULLIVAN
REGISTRATION NO. 2014/00000000

LOADED	DATE	BY
8-Aug-12	8-Aug-12	G FONG
\$1100.00	15186-2011	
11150750	220-2012	

APPROVED BY
REG. 26A (4) 28/10/2012

IN ORDER FOR REALINE
Sec 136C of the TLA
Sec 188(1)(2) of the P & D Act

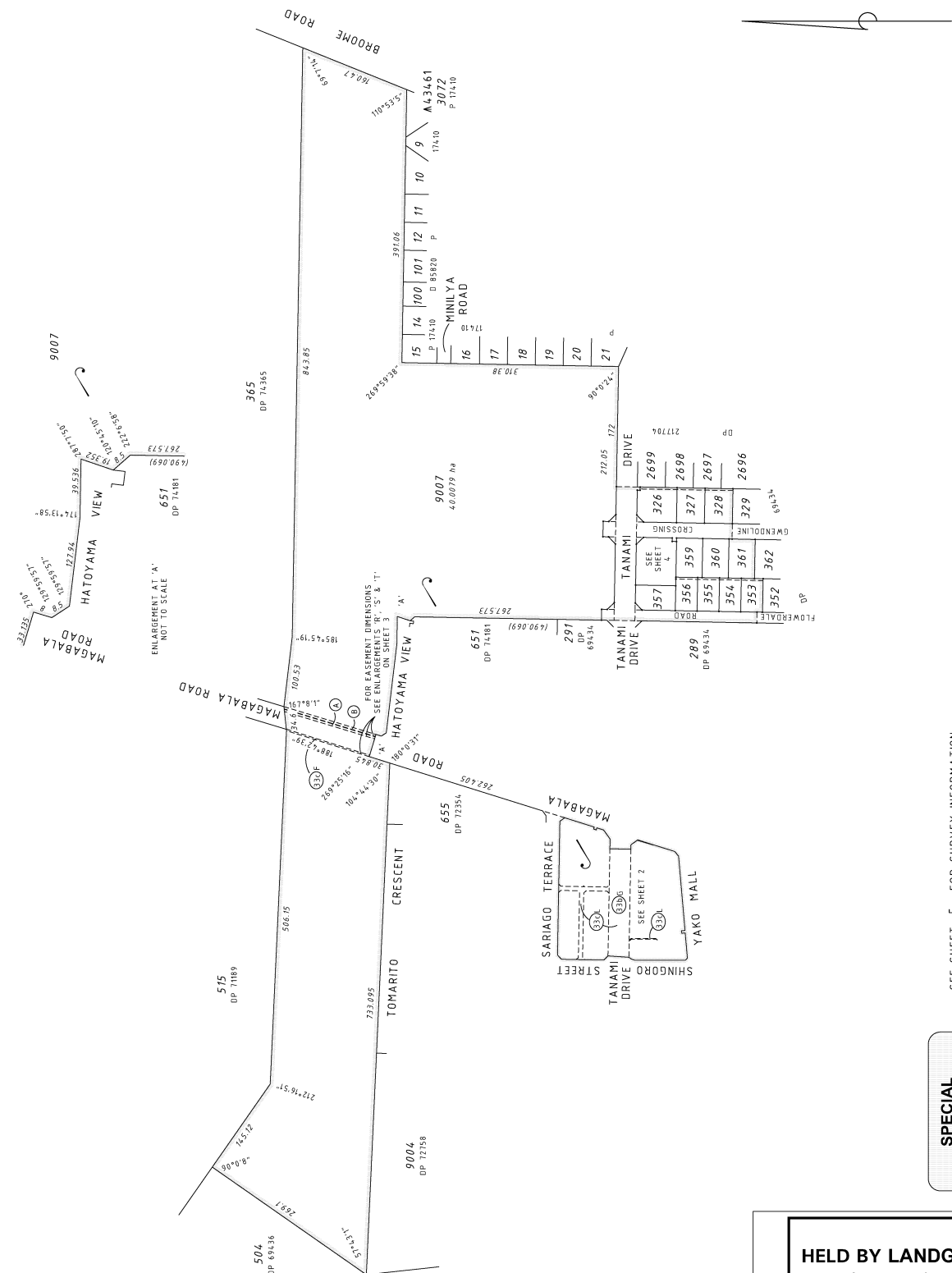
FOR INSPECTOR OF PLANS & SURVEYS / AUTHORIZED LAND OFFICER
DATE: 25-Oct-2012

FOR INSPECTOR OF PLANS & SURVEYS / AUTHORIZED LAND OFFICER
DATE: 28/10/2012



1/20/2014 10:30:37 AM - File Path: \\server\pub\60934386\60934386-01.dwg
PLOT: 60934386-01.dwg

FOR INTERESTS AND NOTIFICATIONS SEE SHEET 3



VER	AMENDMENT	AUTHORISED BY	DATE
2	added FSC & s/sheet	Landgate	14/09/2012

SEE SHEET 5 FOR SURVEY INFORMATION
SURVEY CARRIED OUT UNDER REG 26A
SPECIAL SURVEY AREA GUIDELINES

**SPECIAL SURVEY AREA
SUBDIVISION**

**HELD BY LANDGATE
IN DIGITAL FORM ONLY.**

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SCALE: 1:750 AT A1 SIZE
ALL DIMENSIONS IN METRES

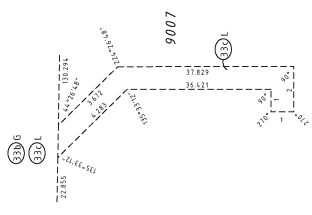
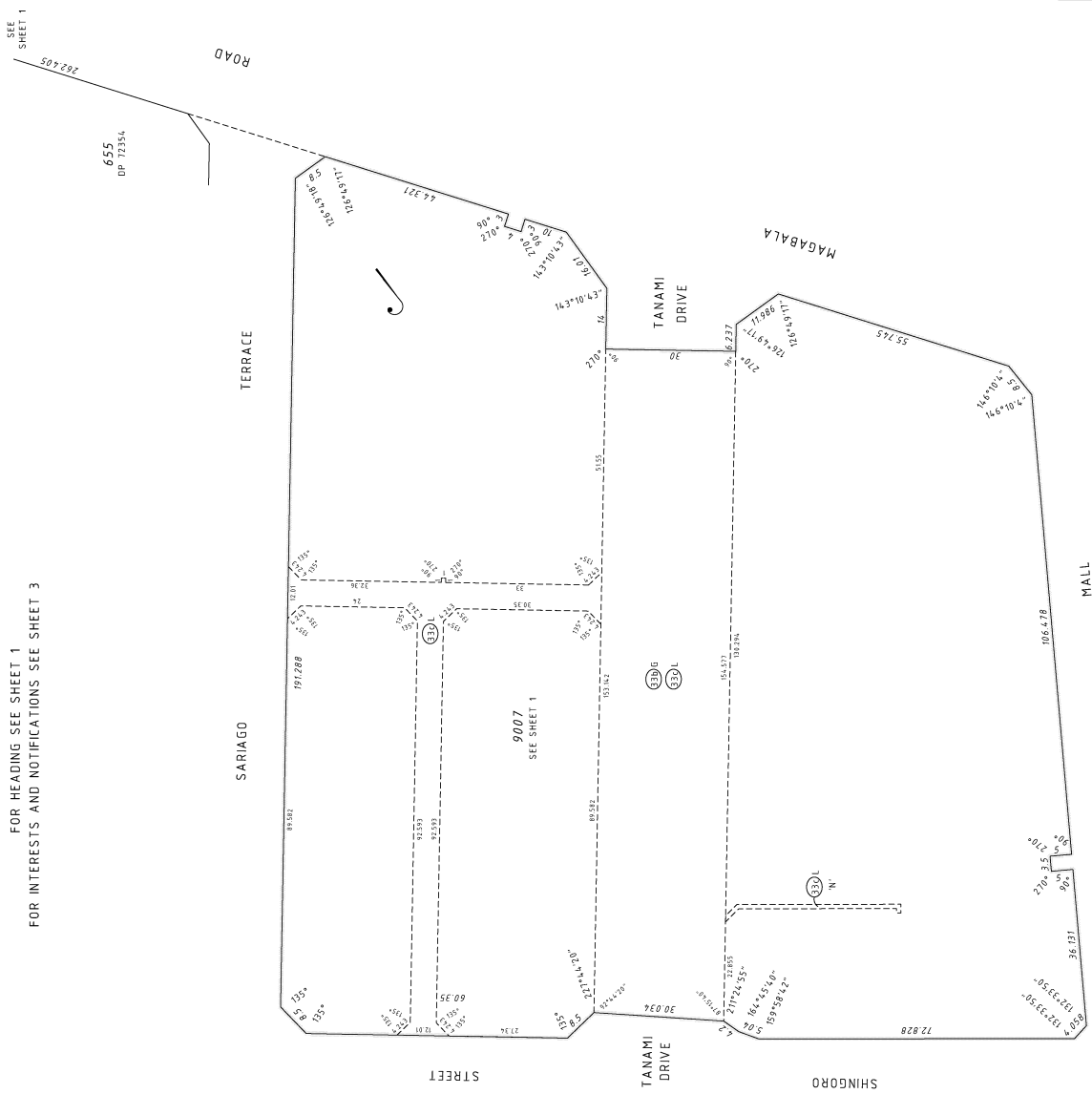
Geary Williams Solicitors
Landgate
Licensed Surveyor

whelans
WHELAN'S (WA) PTY. LTD.
081 9443 1511 www.whelans.com.au
139/140 Hay Street Perth WA 6000

Landgate
Western Australian Land Information Authority

DEPOSITED PLAN
74189

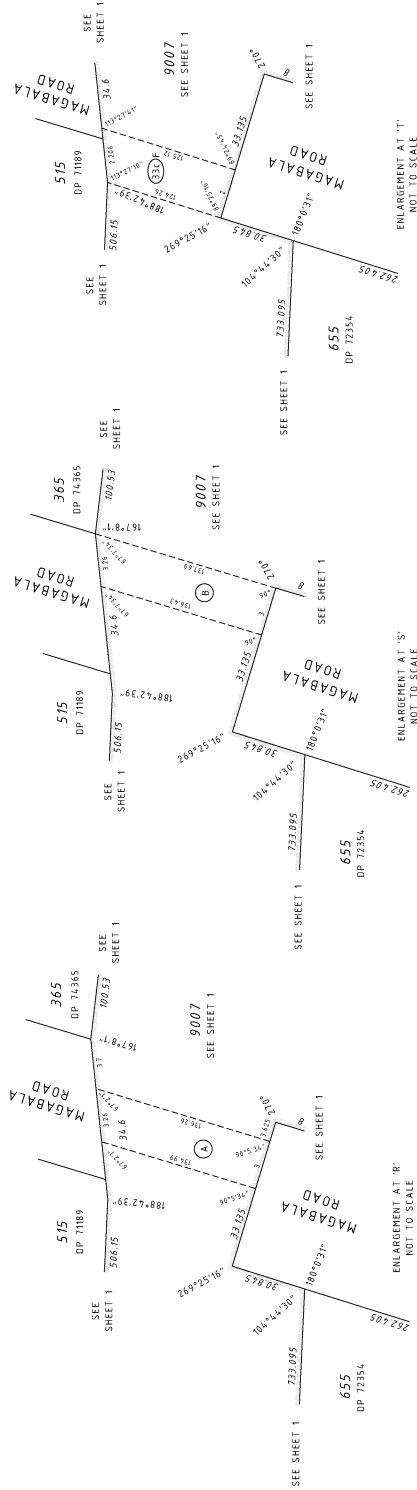
SHEET 2 OF 5
VERSION 2



ENLARGEMENT AT 'N'
NOT TO SCALE

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FOR HEADING SEE SHEET 1



INTERESTS & NOTIFICATIONS

SUBJECT	PURPOSE	STATUTORY REFERENCE	ORIGIN	LAND BURDENED	BENEFIT TO	COMMENTS
(A)	EASEMENT	SEC 144 OF THE LAA	DOC L642127	LOT 9007	EOL NOD (WA) PTY LTD	
(B)	EASEMENT	SEC 144 OF THE LAA	DOC L642726	LOT 9007	REGIONAL POWER CORPORATION	
(23-F)	EASEMENT (ELECTRICITY SUPPLY)	SEC 167 OF THE P. & D. ACT REG 33C	DP 69434	LOT 9007	REGIONAL POWER CORPORATION	
(23-G)	EASEMENT (SEWERAGE & WATER SUPPLY)	SEC 167 OF THE P. & D. ACT REG 33B	DP 72354	LOT 9007	WATER CORPORATION	
(23-L)	EASEMENT (ELECTRICITY SUPPLY)	SEC 167 OF THE P. & D. ACT REG 33C	DP 72354	LOT 9007	REGIONAL POWER CORPORATION	
(E1)	EASEMENT (DRAINAGE)	SEC 136C OF THE TLA	THIS PLAN & DOC M86538	LOT 356	LOT 359	
(E2)	EASEMENT (DRAINAGE)	SEC 136C OF THE TLA	THIS PLAN & DOC M86538	LOT 355	LOTS 359 & 360	
(E3)	EASEMENT (DRAINAGE)	SEC 136C OF THE TLA	THIS PLAN & DOC M86538	LOT 354	LOTS 360 & 361	
(E4)	EASEMENT (DRAINAGE)	SEC 136C OF THE TLA	THIS PLAN & DOC M86538	LOT 353	LOT 361 & LOT 362 ON DP 69434	
(E5)	EASEMENT (DRAINAGE)	SEC 136C OF THE TLA	THIS PLAN & DOC M86538	LOT 326	LOT 327	
(E6)	EASEMENT (DRAINAGE)	SEC 136C OF THE TLA	THIS PLAN & DOC M86538	LOT 327	LOT 328	
(E7)	EASEMENT (DRAINAGE)	SEC 136C OF THE TLA	THIS PLAN & DOC M86538	LOT 328	LOT 329 ON DP 69434	

NOT TO SCALE

ALL SPACES ARE IN METRES

Landgate
Western Australian Land Information Authority

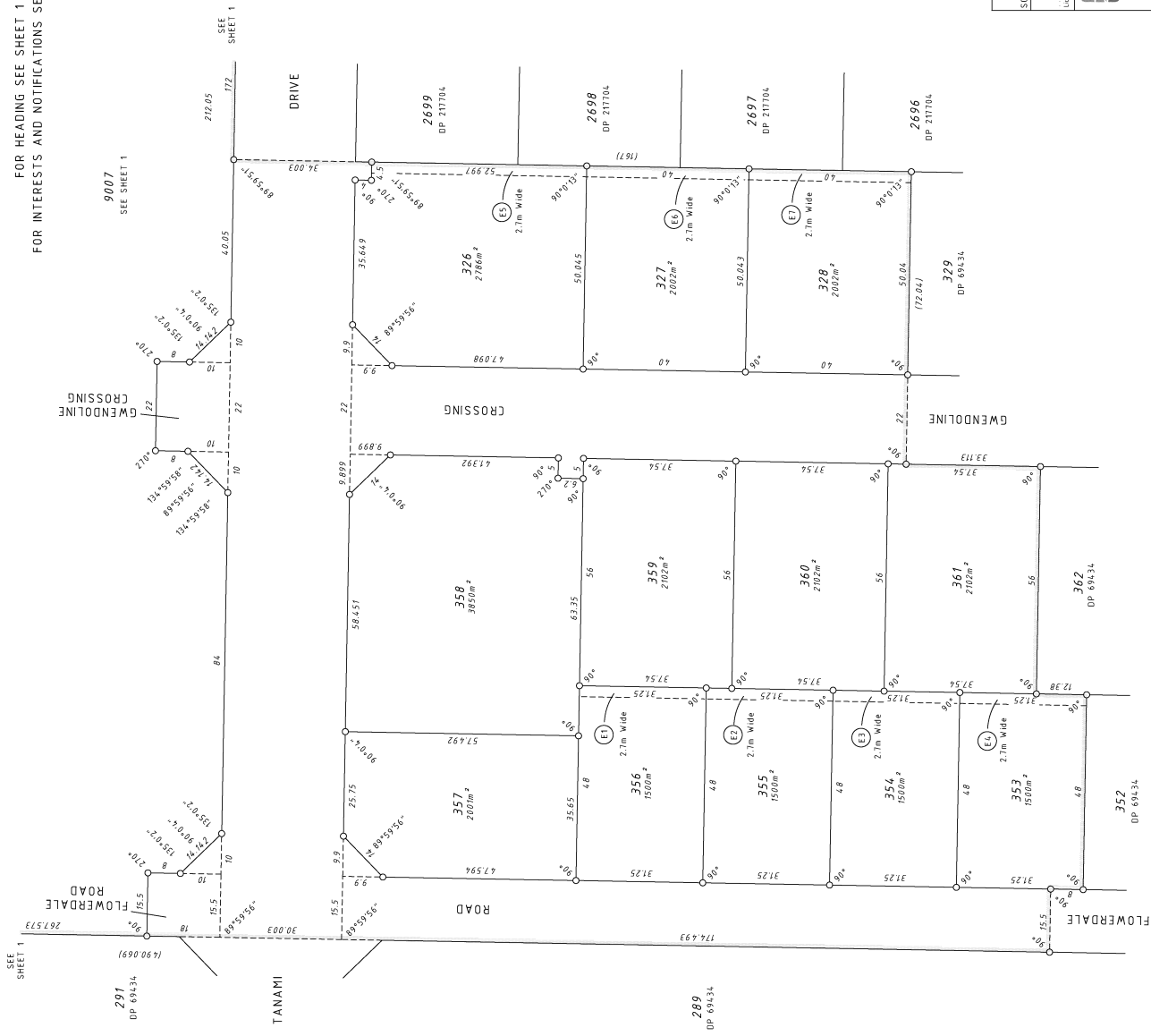
whelans
WHELAN'S (WA) PTY. LTD.
081 944 9151 www.whelans.com.au

DEPOSITED PLAN
74189

VERSION 2

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IN DIGITAL FORM ONLY.

FOR HEADING SEE SHEET 1
FOR INTERESTS AND NOTIFICATIONS SEE SHEET 3



SCALE: 1:750 AT A SIZE
ALL DIMENSIONS ARE IN METRES

Landgate
Western Australian Land Information Authority

whelans
Garry Whelan
Garry Whelan Pty Ltd
Licensed Surveyor

WHELAN'S (WA) PTY. LTD.
081 9443 1511 www.whelans.com.au
130 The Esplanade
Perth WA 6000

DEPOSITED PLAN
74189

SHEET 4 OF 5
VERSION 2

HELD BY LANDGATE
IN DIGITAL FORM ONLY.



S Projects/03/018/3/04/00000000/03/018/3/04/00000000

SCALE: 1:150

ALL DIMENSIONS ARE IN METRES

Landgate
Western Australian Land Information Authority

SURVEYORS CERTIFICATE - PAGE 54
GARRY WILLIAM SULLIVAN
I hereby certify that this is accurate and is a correct representation of the
field measurements and calculations from measurements
(where it is appropriate)
that it complies with the relevant written law(s)
in relation to which it is signed.

Witnessed on: 2022/08/13 13:43:37
Witnessed by: William Sullivan

Licensee/Drawer: 00809 Date: 2022/08/13 13:43:37

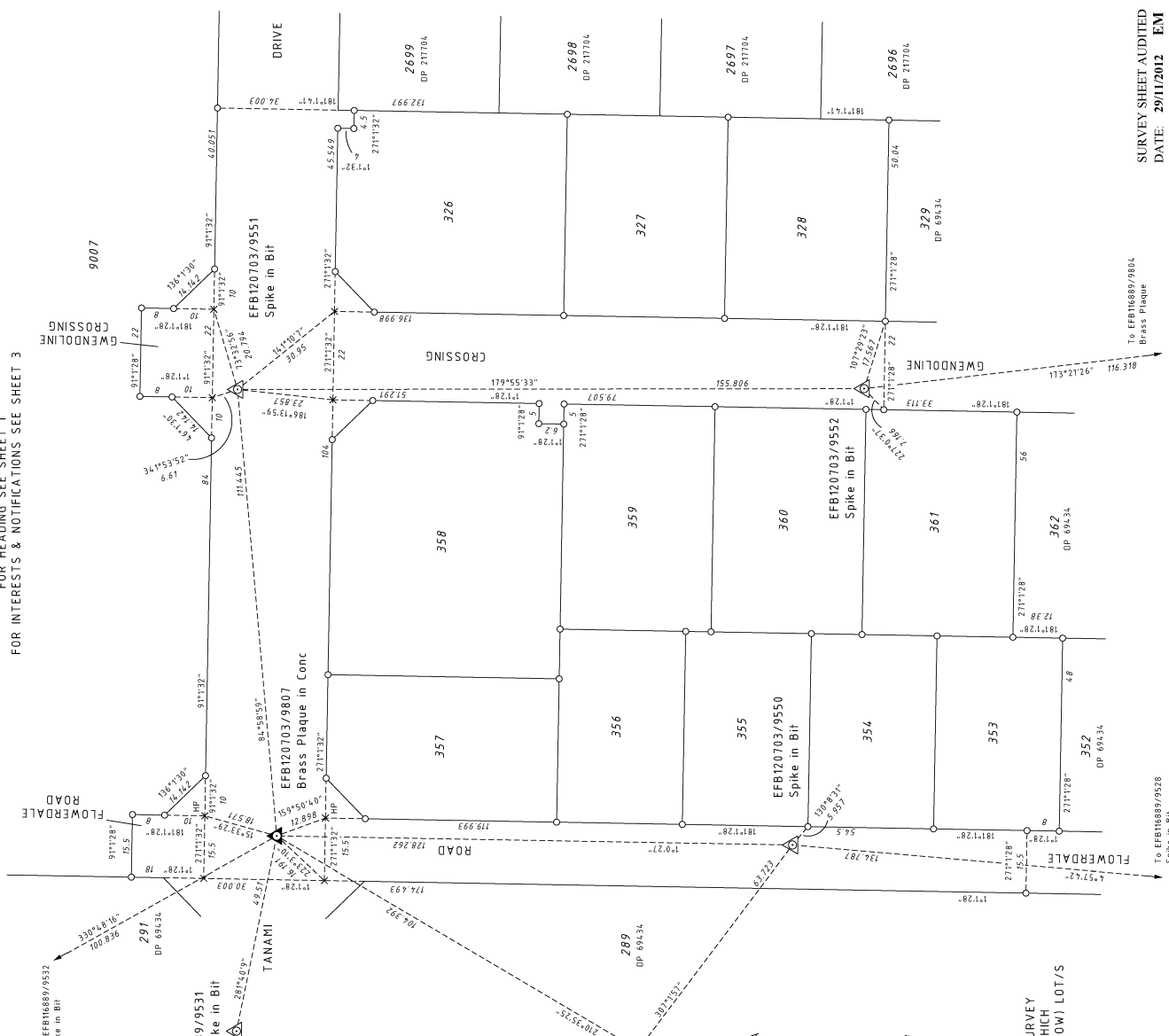
SHEET 5 OF 5

VERSION: 2

DEPOSITED PLAN

74189

FOR INTERESTS & NOTIFICATIONS SEE SHEET 3



- SURVEY INFORMATION ONLY**
- FINAL SURVEY SHEET
SURVEY CARRIED OUT UNDER REG26A
SPECIAL SURVEY AREA GUIDELINES
- ▲ Denotes Standard Survey Mark
 - △ Denotes Permanent Survey Mark
 - ▽ Denotes Permanent Control Mark
 - ▽ Denotes Temporary Control Mark
 - Denotes Peg unless stated otherwise
 - X Spike
 - HP Hilt in Brick Paving

THIS SUBDIVISION AT THE TIME OF SURVEY
MAY CONTAIN RETAINING WALLS WHICH
ARE ALL LOCATED WITHIN THE HIGH (OR LOW) LOT/S

PROJECT GRID IS BR 94

SURVEY SHEET AUDITED
DATE: 29/11/2012 EM
DOCKET:

Appendix 2 - Existing Services and Utilities



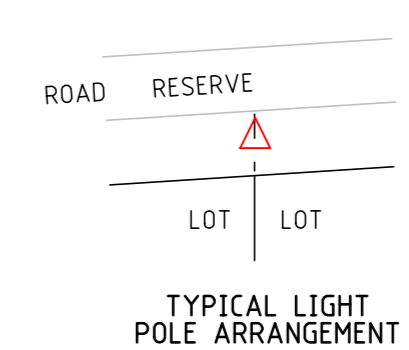
STREET LIGHTING

POLE TYPE	OUTREACH	LUMINAIRE/WATTAGE	No.
△ 6.5m STANDARD CYCLONIC	-	URBAN 70w MH	24
△ 10.5m STANDARD CYCLONIC	STANDARD SOR	ROADSTER 150w MH	4

POLE COLOUR POWDER COATED: HERITAGE RED
ROAD LIGHTING COMPLIES TO AS/NZS1158.3:2005 ROAD LIGHTING STD'S UNLESS OTHERWISE INDICATED

CONTRACTOR TO REFER NOTE 2
ALL SL 1m BEHIND BACK OF KERB

ALL STREET LIGHTS TO BE INSTALLED
1.0m BEHIND BACK OF KERB



CABLE	CONDUIT SIZE
400mm ² HV	150mm
240mm ² HV	150mm
185mm ² HV	150mm
95mm ² HV	150mm
50mm ² HV	150mm
35mm ² 3c HV	100mm
240mm ² LV	100mm
120mm ² LV	100mm
35mm ² 1c HV	50mm
25mm ² LV	50mm
16mm ² SL	50mm

STREET LIGHTS	EXISTING
○ 70w HPS	△ 70/75w MH
○ 150w HPS	△ 150w MH
○ 125w HV	△ 250w MH

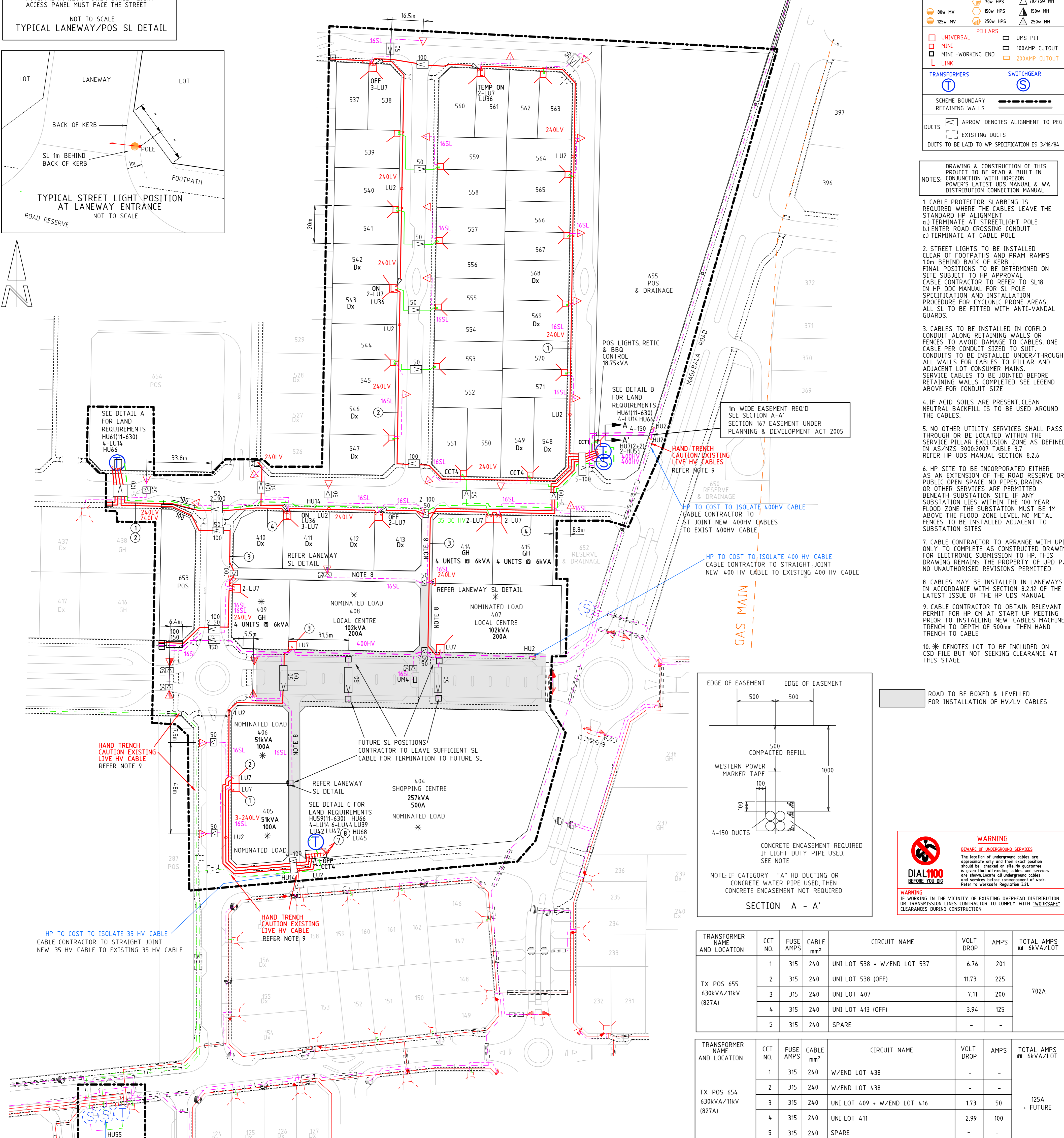
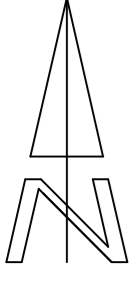
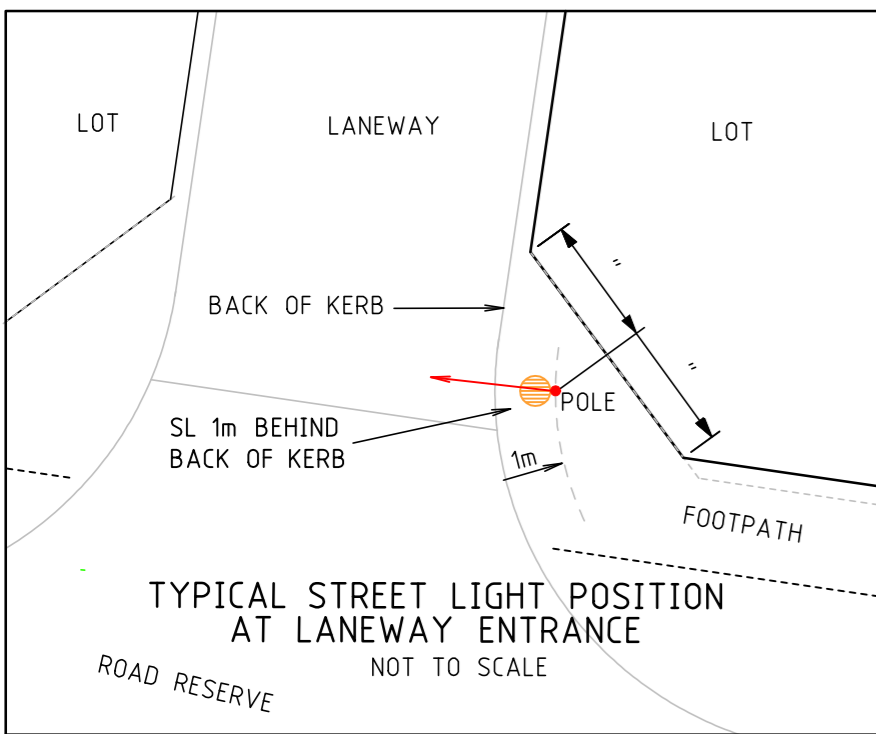
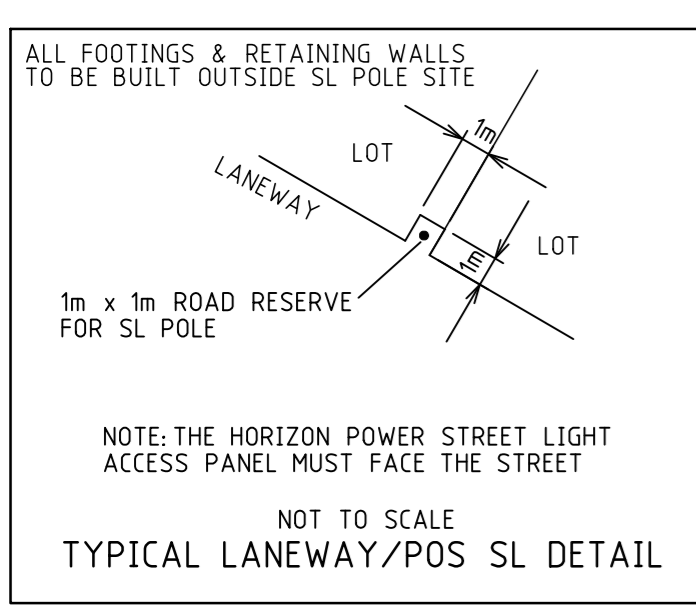
PILLARS	UMS PIT
□ UNIVERSAL	□ UMS PIT
□ MINI	□ 100AMP CUTOUT
□ MINI -WORKING END	□ 200AMP CUTOUT
□ LINK	

TRANSFORMERS	SWITCHGEAR
⊕	⊕

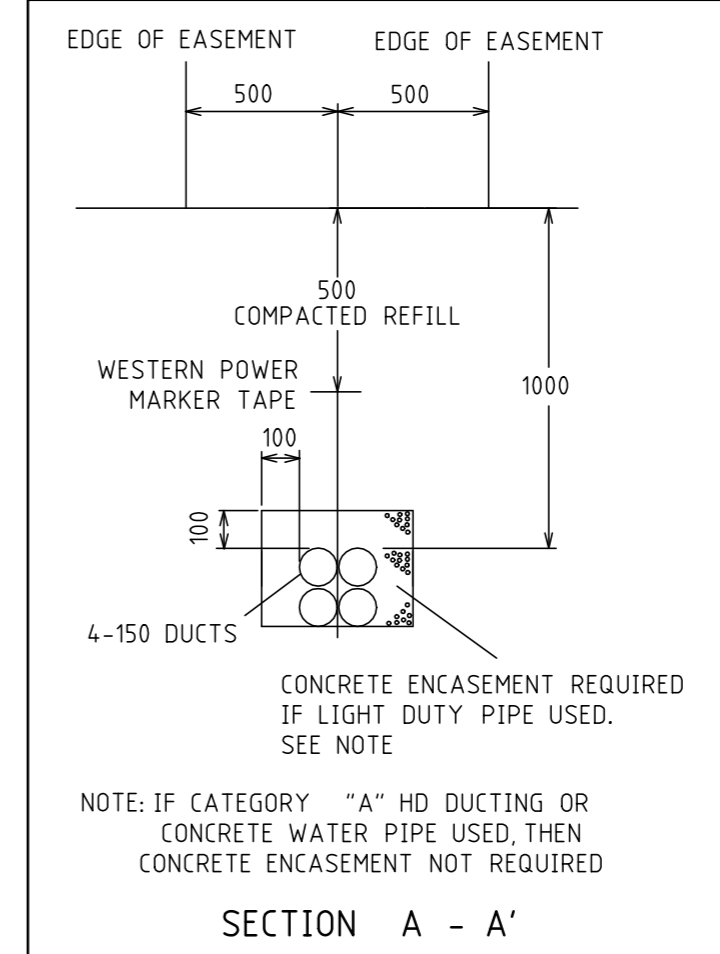
SCHEME BOUNDARY	RETAINING WALLS
—	—

DUCTS	EXISTING DUCTS
—	—

DUCTS TO BE LAID TO WP SPECIFICATION ES 3/16/84



- DRAWING & CONSTRUCTION OF THIS PROJECT TO BE READ & BUILT IN CONJUNCTION WITH HORIZON POWER'S LATEST UDS MANUAL & WA DISTRIBUTION CONNECTION MANUAL
- CABLE PROTECTOR SLABBING IS REQUIRED WHERE THE CABLES LEAVE THE STANDARD HP ALIGNMENT
a) TERMINATE AT STREETLIGHT POLE
b) ENTER ROAD (CROSSING CONDUIT)
c) TERMINATE AT CABLE POLE
 - STREET LIGHTS TO BE INSTALLED CLEAR OF FOOTPATHS AND PRAM RAMP 1.0m BEHIND BACK OF KERB
FINAL POSITIONS TO BE DETERMINED ON SITE SUBJECT TO HP APPROVAL
CABLE CONTRACTOR TO REFER TO SL18 IN HP DOC MANUAL FOR SL POLE SPECIFICATION AND INSTALLATION PROCEDURE FOR CYCLONIC PRONE AREAS. ALL SL TO BE FITTED WITH ANTI-VANDAL GUARDS.
 - CABLES TO BE INSTALLED IN CORFO CONDUIT ALONG RETAINING WALLS OR FENCES TO AVOID DAMAGE TO CABLES. ONE CABLE PER CONDUIT SIZED TO SUIT. CONDUITS TO BE INSTALLED UNDER/THROUGH ALL WALLS FOR CABLES TO PILLAR AND ADJACENT LOT CONSUMER MAINS. SERVICE CABLES TO BE JOINTED BEFORE RETAINING WALLS COMPLETED. SEE LEGEND ABOVE FOR CONDUIT SIZE.
 - IF ACID SOILS ARE PRESENT, CLEAN NEUTRAL BACKFILL IS TO BE USED AROUND THE CABLES.
 - NO OTHER UTILITY SERVICES SHALL PASS THROUGH OR BE LOCATED WITHIN THE SERVICE PILLAR EXCLUSION ZONE AS DEFINED IN AS/NZS 3000:2007 TABLE 3.7 REFER HP UDS MANUAL SECTION 8.2.6
 - HP SITE TO BE INCORPORATED EITHER AS AN EXTENSION OF THE ROAD RESERVE OR PUBLIC OPEN SPACE. NO PIPES, DRAINS OR OTHER SERVICES ARE PERMITTED BENEATH SUBSTATION SITE. IF ANY SUBSTATION LIES WITHIN THE 100 YEAR FLOOD ZONE THE SUBSTATION MUST BE 1M ABOVE THE FLOOD ZONE LEVEL. NO METAL FENCES TO BE INSTALLED ADJACENT TO SUBSTATION SITES
 - CABLE CONTRACTOR TO ARRANGE WITH UPD ONLY TO COMPLETE AS CONSTRUCTED DRAWING FOR ELECTRONIC SUBMISSION TO HP. THIS DRAWING REMAINS THE PROPERTY OF UPD P/L NO UNAUTHORISED REVISIONS PERMITTED
 - CABLES MAY BE INSTALLED IN LANEWAYS IN ACCORDANCE WITH SECTION 8.2.12 OF THE LATEST ISSUE OF THE HP UDS MANUAL
 - CABLE CONTRACTOR TO OBTAIN RELEVANT PERMIT FOR HP CM AT START UP MEETING PRIOR TO INSTALLING NEW CABLES MACHINE TRENCH TO DEPTH OF 500mm THEN HAND TRENCH TO CABLE
 - * DENOTES LOT TO BE INCLUDED ON CSD FILE BUT NOT SEEKING CLEARANCE AT THIS STAGE



WARNING
REMOVAL OF UNDERGROUND SERVICES
The location of underground cables are approximate only and their exact position should be checked on site. No guarantee is given that all existing cables and services are shown. Locate all underground cables and services before commencement of work. Refer to Worksafe Regulation 321

WARNING
IF WORKING IN THE VICINITY OF EXISTING OVERHEAD DISTRIBUTION OR TRANSMISSION LINES CONTRACTOR TO COMPLY WITH "WORKSAFE" CLEARANCES DURING CONSTRUCTION

TRANSFORMER AND LOCATION	CCT NO.	FUSE AMPS	CABLE mm ²	CIRCUIT NAME	VOLT DROP	AMPS	TOTAL AMPS @ 6kVA/LOT
TX POS 655 630kVA/11kV (827A)	1	315	240	UNI LOT 538 + W/END LOT 537	6.76	201	702A
	2	315	240	UNI LOT 538 (OFF)	11.73	225	
	3	315	240	UNI LOT 407	7.11	200	
	4	315	240	UNI LOT 413 (OFF)	3.94	125	
	5	315	240	SPARE	-	-	

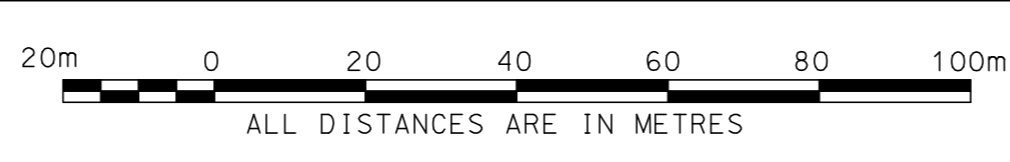
TRANSFORMER NAME AND LOCATION	CCT NO.	FUSE AMPS	CABLE mm ²	CIRCUIT NAME	VOLT DROP	AMPS	TOTAL AMPS @ 6kVA/LOT
TX POS 654 630kVA/11kV (827A)	1	315	240	W/END LOT 438	-	-	125A + FUTURE
	2	315	240	W/END LOT 438	-	-	
	3	315	240	UNI LOT 409 + W/END LOT 416	1.73	50	
	4	315	240	UNI LOT 411	2.99	100	
	5	315	240	SPARE	-	-	

TRANSFORMER SPECIFICATIONS AND LOCATION	FUSEWAY NO.	CIRCUIT NO.	FUSE AMPS	CABLE mm ²	CIRCUIT NAME	VOLT DROP	AMPS	TOTAL AMPS @200kVA/ha
TX LOT 404 630kVA/11kV (827A)	1	1	315	240	UNI LOT 405	1.57	100	739 A
	2	2	315	240	UNI LOT 406	1.48	100	
	3	3	315	240	UNI LOT 408	7.11	200	
	4	4	315	240	INTERCONNECTION (OFF)	-	-	
	5	5	315	240	SPARE	-	-	
	6	6	315	240	SPARE	-	-	
	7	7		630A LINKS	CONTIGUOUS LOT 404	0.43	500	
	8	8						

AS CONSTRUCTED

** THE HV CABLE AND ALL HV JOINTS WILL REQUIRE TERMITE PROTECTION TO HP APPROVAL

CABLE TYPE	STOCK No.	DESCRIPTION
CABLE - HIGH VOLTAGE	EE2153	35mm 3x1 CORE STRANDED ALUMINIUM XLPE
CABLE - HIGH VOLTAGE	EE2169	400mm 3x1 CORE STRANDED ALUMINIUM XLPE
CABLE - LOW VOLTAGE	EC1337	240mm 3 CORE SOLID SECTOR SHAPE ALUMINIUM XLPE
CABLE - LOW VOLTAGE	EC1104	25mm 3 CORE STRANDED COPPER XLPE
CABLE - STREET LIGHTING	EE2559	16mm 1 CORE STRANDED COPPER XLPE



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Underground Power Development A.B.N. 53 094 593 087

BROOME NORTH - STAGE 6 RESIDENTIAL

BROOME

27 RESIDENTIAL LOTS + 12 DX + 3 GHs + 5 COMMERCIAL + 2 POS UNDERGROUND POWER DISTRIBUTION

DESIGNER	DRAWN	RM	Horizon Power Reference No	KS010060	Drawing No	Revision
V.BURSAC	NPER	ENGINEER	KS	142150	UPD4658 1/2	6

REV	DESCRIPTION	DATE	DRAWN	CHKD	SENT HP	APPR. HP
6	AS CONSTRUCTED - ADVANCE EXCAVATIONS	24-11-11	RM	GG		24-11-11
5	RWUC - RELOCATE WP SITE & SL REMOVED	21-7-11	RM	VB		26-7-11
4	HP REQUESTED CHANGES - RESUBMITTED TO HP	17-5-11	VB	VB		18-5-11
3	UPDATED BASE-SWGR RELOCATED POS 655 + LANEWAY SL CHANGED	14-4-11	RM	VB		20-4-11
2	ISSUED TO HP FOR CR	15-3-11	SBE	VB		17-3-11
1	DRAFT ISSUED TO CLIENT FOR COMMENT	24-11-10	RM	VB		

Appendix 3 Bushfire Evaluation





BAL Contour Plan & Assessment Against Bushfire Protection Criteria

Broome North Stage 1 – Local Centre
Bilingurr

Shire of Broome

Job Number:	190520
Assessment Date:	14 July 2020
Report Date:	11 September 2020

BPP Group Pty Ltd t/a Bushfire Prone Planning
ABN: 39 166 551 784

Level, 159-161 James Street
Guildford WA 6055

PO Box 388
Guildford WA 6935

Ph: 08 6477 1144

Email: admin@bushfireprone.com.au



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Disclaimer

The measures contained in this Bushfire Management Plan are considered to be minimum standards and they do not guarantee that a building 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 extreme weather conditions. Additionally, the correct implementation of the required bushfire protection measures (and any associated response/evacuation plan if applicable) will depend, among other things, on the actions of the landowners or occupiers over which Bushfire Prone Planning has no control.


All surveys, forecasts, projections and recommendations made in this report associated with the project are made in good faith based on information available to Bushfire Prone Planning at the time.

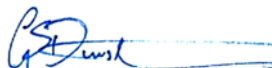
All maps included herein are indicative in nature and are not to be used for accurate calculations.

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.

Document Control

Version	Version Details	Date Submitted
1.0	Original Document Issue	11-Sep-20
		-
		-

Author	Accreditation	Signature
Ian Macleod	BPAD Level 2 - No. 39131	
Co-author		

Reviewed/Approved		
Greg Dunstan	BPAD Level 1 - No. 16382	

Document Content Compliance Statement

This Bushfire Management Plan (the Plan) provides the required information to address State Planning Policy No. 3.7: Planning in Bushfire Prone Areas - December 2015 (SPP 3.7), the associated Guidelines for Planning in Bushfire Prone Areas - WAPC 2017 v1.3 (Guidelines), and any additional information as directed by the WA Planning Commission (WA Department of Planning, Lands and Heritage). It is fit for accompanying a planning application.

Structure Plan / Subdivision BMP Template v7.3

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Executive Summary

This BAL Contour Map and assessment against the Bushfire Protection Criteria is produced to assist with planning amendments for a future subdivision application for the Local Centre site in LDP1, to create residential lots.

The proposal can comply with the bushfire protection criteria.

A BAL-29 rating or lower is achievable for future lots and Asset Protection Zones can be achieved and maintained dependent upon compliance with this Report and the Shire of Broome Fire Break & Fuel Hazard Reduction Notice. It is expected that all vegetation within Pt Lot 9007 will be managed and maintained to a low bushfire threat state.

Tanami Drive, Yako Mall, Shingoro Street and Magabala Road provide safe access and egress to two different destinations. As sealed public roads, they will be available to all residents and the public at all times and under all weather conditions. Compliance can be achieved for all other requirements for vehicular access.

A reticulated water supply is available to the subject site and hydrants will be installed in locations as required by the relevant authorities.

1 The Proposal and Purpose of the Plan

1.1 Details

Proponent: DevelopmentWA

Site Address: Broome North Stage 1 Local Centre, Bilingurr

Local Government: Shire of Broome

Site Area: Approximately 3.8 hectares (Lot 9007).

Planning Stage: Strategic - local structure plan amendment
Subdivision Application

Subdivision Type: Subdivision - small number of lots

Overview of the Proposal:

This BAL Contour Map and assessment against the Bushfire Protection Criteria is produced to assist with planning amendments for a future subdivision application for the Local Centre site in LDP1, to create residential lots.

Bushfire Prone Planning
Commissioned to Produce the Plan by: DevelopmentWA

Purpose of the Plan: To support a strategic planning assessment and future subdivision application (lot layout unknown).

For Submission to: The Shire of Broome

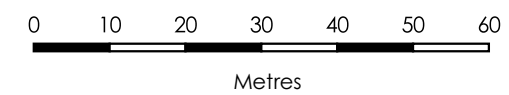
Figure 1.1

Broome North LDP1 Local Centre Site Map

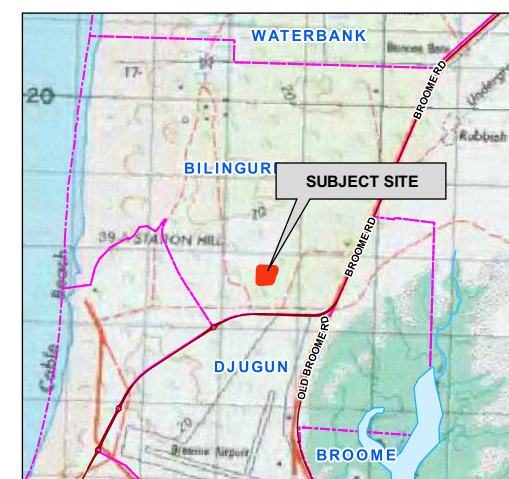
SARIAGO TERRACE & MAGABALA ROAD
BILINGURR
SHIRE OF BROOME

----- LEGEND -----

- Local Centre
- Portion of Lot 9007 on P74189
- Cadastre



----- LOCALITY -----



AERIAL IMAGERY: Landgate/SLIP

Coordinate System: GDA 1994 MGA Zone 50
 Projection: Universal Transverse Mercator Units: Metre
 Map by: Ian Macleod 11-09-2020
 SCALE (A3): 1 : 1000








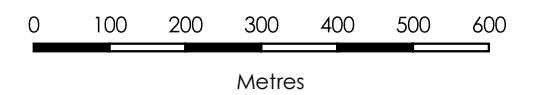
Figure 1.2

Broome North LDP1 Local Centre Bushfire Prone Areas Map

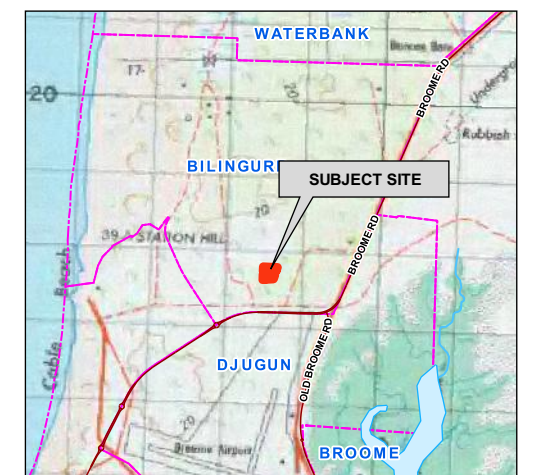
SARIAGO TERRACE & MAGABALA ROAD
BILINGURR
SHIRE OF BROOME

----- LEGEND -----

-  Bush Fire Prone Areas 2019
-  Local Centre
-  Portion of Lot 9007 on P74189
-  Localities_Suburb
-  Cadastre



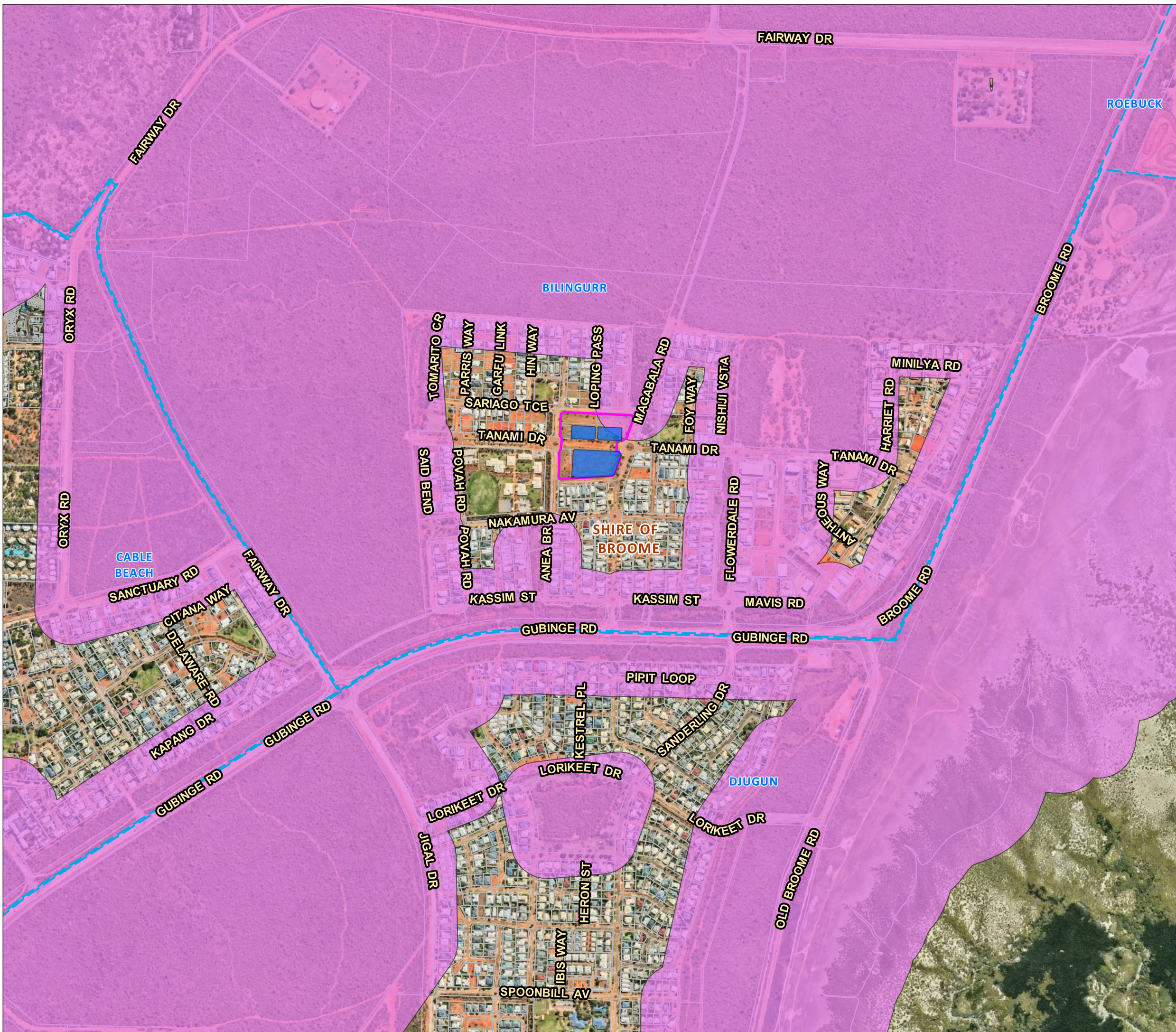
----- LOCALITY -----



AERIAL IMAGERY: Landgate/SLIP



Coordinate System: GDA 1994 MGA Zone 50
Projection: Universal Transverse Mercator Units: Metre
Map by: Ian Macleod 11-09-2020
SCALE (A3): 1 : 10000



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2 Potential Bushfire Impact Assessment

2.1 Assessment Input

2.1.1 Fire Danger Index (FDI) Applied

AS 3959-2018 specifies the fire danger index values to apply for different regions as per Table 2.1. The values used in the model calculations are for the Forest Fire Danger Index (FFDI) and for which equivalent representative values of the Grassland Fire Danger Index (GFDI) are applied as per Appendix B. The values can be refined if appropriately justified.

Table 2.1: Applied FDI Value

FDI Value			
Vegetation Area	As per AS 3959 - 2018 Table 2.1	As per DFES for the Location	Value Applied
All Vegetation Areas	80	N/A	80

2.1.2 Existing Vegetation Identification, Classification and Effective Slope

Vegetation identification and classification has been conducted in accordance with AS 3959-2018 s2.2.3 and the Visual Guide for Bushfire Risk Assessment in WA (DoP February 2016).

When more than one vegetation type is present, each type is identified separately with the worst-case scenario being applied as the classification. The predominant vegetation is not necessarily the worst-case scenario.

The vegetation structure has been assessed as it will be in its mature state (rather than what might be observed on the day). Areas of modified vegetation are assessed as they will be in their natural unmodified state (unless maintained in a permanently low threat, minimal fuel condition, satisfying AS 3959-2018 s2.2.3.2-f and asset protection zone standards). Vegetation destroyed or damaged by a bushfire or other natural disaster has been assessed on its revegetated mature state.

Effective Slope: Is the ground slope under the classified vegetation and is determined for each area of classified vegetation. It is the measured or determined slope which will most significantly influence the bushfire behaviour in that vegetation as it approaches a building or site. Where there is a significant change in effective ground slope under an area of classified vegetation, that will cause a change in fire behaviour, separate vegetation areas will be identified, based on the change in effective slope, to enable the correct assessment.

Table 2.2: Vegetation identification and classification

All Vegetation Within 150 metres of the Proposed Development				
Vegetation Area	Identified Classification Types ¹ or Description if 'Excluded'	Applied Classification ²	Effective Slope Under Classified Vegetation	
			degrees	description
1	Closed Scrub D-13 Open Scrub D-14	Class D Scrub	0	Flat & Upslope
2	Open Scrub D-14	Class D Scrub	0	Flat & Upslope
3	Open Tussock G-23 Open Herbfield G-27	Class G Grassland	0	Flat & Upslope
-	Managed residential lots, parks and street verges.	Excluded AS 3959-2018 2.2.3.2 (e) & (f)	0	N/A

Representative photos of each vegetation area, descriptions and classification justification, are presented on the following pages. The areas of classified vegetation are defined, and the photo locations identified on the topography and classified vegetation map, Figure 3.1.

Note¹: As per AS 3959-2018 Table 2.3 and Figures 2.3 and 2.4 a-h

Note²: As per AS 3959-2018 Table 2.3.

Vegetation Area 1 **Classification Applied or Exclusion Clause:** Class D Scrub

Vegetation Type Present: Closed scrub D-13 ; Open scrub D-14

Description / Classification Justification: Alongside open drain. Scrub to 5 metres tall, shrubs, grass understorey, occasional small tree.



Photo ID: 1a



Photo ID: 1b

Vegetation Area 2 **Classification Applied or Exclusion Clause:** Class D Scrub

Vegetation Type Present: Open scrub D-14

Description / Classification Justification: Scrub to 5 metres tall, shrubs, grass understorey, occasional small tree.



Photo ID: 2a

Vegetation Area 3 **Classification Applied or Exclusion Clause:** Class G Grassland

Vegetation Type Present: Open tussock G-23 ; Open herbfield G-27

Description / Classification Justification: Open grassed area, isolated small trees or scrub.



Photo ID: 3a



Photo ID: 3b

Vegetation Area **Classification Applied or Exclusion Clause:** Excluded AS3959-2018 2.2.3.2 (f) Low Threat Vegetation

Vegetation Type Present: Vegetation managed to a low bushfire threat state.

Description / Classification Justification: Managed street verges, managed parks.



Photo ID: 4a



Photo ID: 4b

Figure 2.1

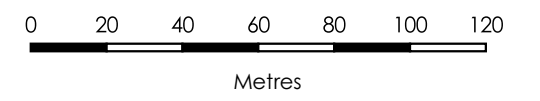
Broome North LDP1 Local Centre Existing Topography & Classified Vegetation

SARIAGO TERRACE & MAGABALA ROAD
BILINGURR
SHIRE OF BROOME

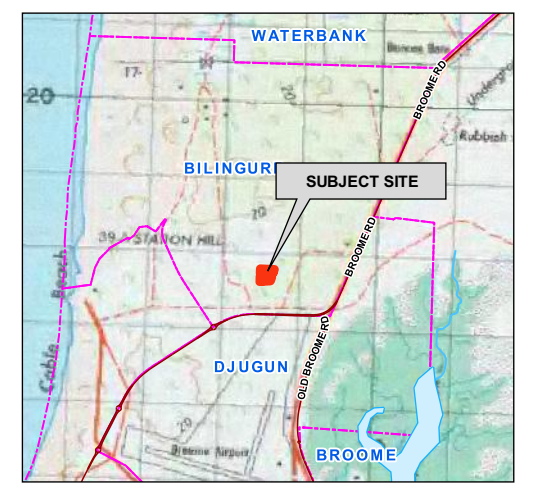


----- LEGEND -----

- Photos
- Hydrants
- Portion of Lot 9007 on P74189
- 150m Assessment Area
- Cadastre
- Classified Vegetation**
 - Class D - Scrub
 - Class G - Grassland
 - 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: Ian Macleod 11-09-2020
SCALE (A3): 1 : 2000

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2.2 Assessment Output

Understanding the Bushfire Assessment Results - Application of Bushfire Attack Levels (BAL)

The BAL rating has a different application in the building environment compared to the planning environment and the BAL assessment can result in a determined BAL or an indicative BAL which have different implications.

Building versus Planning Applications

In the building environment, a determined BAL rating is required (for the proposed construction) at the building application stage. This is to inform approval considerations and establish the construction standards that are to apply if approved. An indicative BAL rating is not acceptable for a building application.

In the planning environment, assessing the ability of a proposed development site to achieve BAL-29 or less is the objective (as one of the bushfire protection criteria being assessed). The 'development site' is defined by the LPS Amendment Regulations 2015 as "that part of a lot on which a building that is the subject of development stands or is to be constructed".

Therefore, being able to show that a BAL rating of BAL-29 or lower is achievable for a proposed development site (i.e. the building footprint) is an acceptable outcome for that criteria, as established by the bushfire provisions, SPP 3.7 and the associated Guidelines. For planning purposes, this BAL rating could be either indicative or determined.

Determined BAL Ratings

A determined BAL rating is to apply to an existing or proposed construction site (building) and not to a lot or envelope. Its purpose is to state the potential radiant heat flux to which the building will be exposed.

A determined BAL cannot be given for a future building whose location, elevation design and footprint (on a given lot) are unknown. It is not until these variables have been fixed that a BAL can be determined (typically at the development application or building application stage).

The one exception is when a building of **any dimension** can be **positioned anywhere** on a proposed lot or within defined limits within the lot (i.e. building setbacks or building envelope) and always remain subject to the same BAL rating. For this to be the case, there needs to be no classified vegetation either onsite or offsite that if retained could impact upon the determined BAL rating.

Indicative BAL Ratings

When this Plan presents a single indicative BAL rating for a proposed construction site (building), this will be because the construction is still subject to a location within the lot being confirmed and/or a vegetation separation distance being achieved. That is, it will be conditional upon some factor being confirmed at a later stage.

For planning applications associated with proposed lots, the building location, elevation design and footprint have typically not been established. Therefore, indicative rather than determined BAL rating/s will be presented for each lot (with the exception as noted above under 'Determined BAL Ratings').

When this Plan presents a single indicative BAL rating for a lot or building envelope (i.e. an 'area' that is not a located building footprint) it will represent the highest BAL rating affecting that 'area'. The BAL rating of a future building on that 'area' will be dependent on its eventual location.

Otherwise, this Plan will present all BAL ratings for each lot and for each BAL rating, the vegetation separation distances from each area of classified vegetation that are to apply. These distances will be presented as either figures in a table or as a BAL contour map.

From this indicative BAL information, it can be assessed if acceptable BAL ratings (\leq BAL-29) can be achieved for future buildings.

2.2.1 BAL Results Presented as a BAL Contour Map

Interpretation of the Bushfire Attack Level (BAL) Contour Map

The contour map will present different coloured contour intervals constructed around the classified bushfire prone vegetation. These represent the different Bushfire Attack Levels that exist at varying distances away from the classified vegetation.

Each BAL represents a set range of radiant heat flux (as defined by AS 3959-2018) that can be generated by the bushfire in that vegetation at that location.

The width of each shaded contour (i.e. the distance interval) will vary and is determined by consideration of variables including vegetation type, fuel structure, ground slope, climatic conditions. They are unique to a site and can vary across a site. The width of each contour is a diagrammatic expression of the separation distances from the classified vegetation that apply for each BAL rating, for that site.

A building (or 'area') located within any given BAL contour will be subject to that BAL rating and potentially multiple BAL ratings of which the highest rating will be applied.

Separation Distances Calculated to Construct the BAL Contours

Table 2.3: Vegetation separation distances applied to construct the BAL contours.

Calculated Vegetation Separation Distances								
Vegetation Area	Vegetation Classification	Effective Slope	BAL Assessment Method Applied ¹	BAL Rating and Corresponding Separation Distance ² (metres)				
		Degrees		BAL-FZ	BAL-40	BAL-29	BAL-19	BAL12.5
1	Class D Scrub	0	Method 1	<10	10-<13	13-<19	19-<27	27-<100
2	Class D Scrub	0	Method 1	<10	10-<13	13-<19	19-<27	27-<100
3	Class G Grassland	0	Method 1	<6	6-<8	8-<12	12-<17	17-<100

¹ Method 1 as per AS 3959-2018 Table 2.5.

2.2.2 Bushfire Attack Levels (BAL) Derived from The Contour Map

The assumption for this BAL Contour Map is that the whole of the area that is assessed as Grassland and bounded by Sariago Terrace, Magabala Road, Yako Mall and Shingoro Street, being a portion of Lot 9007 on Plan 74189, will be managed and maintained to a low bushfire threat state.

Vegetation within the nearby open drains will have some effect on the site and BAL ratings for the Local Centre will range from BAL-LOW to BAL-12.5.














Vegetation Area	Vegetation Class	Vegetation Type	Effective Slope
1	D	Scrub	0
2	D	Scrub	0

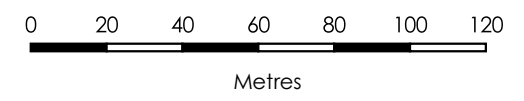
Figure 2.2

Broome North LDP1 Local Centre BAL Contour Map

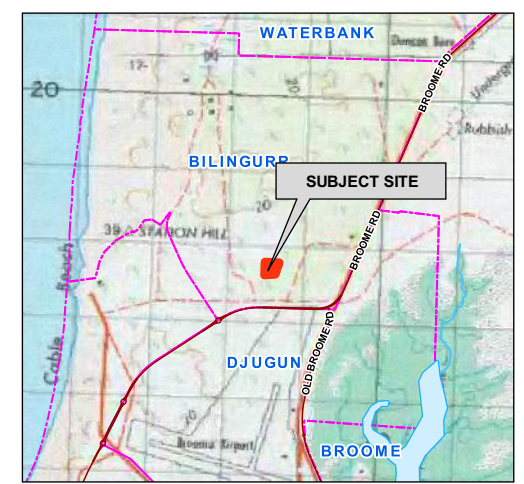
SARIAGO TERRACE & MAGABALA ROAD
BILINGURR
SHIRE OF BROOME

----- LEGEND -----

-  Hydrants
 -  Local Centre
 -  Portion of Lot 9007 on P74189
 -  100m BAL Buffer
 -  150m Assessment Area
 -  Cadastre
 -  Vegetation Outline
- Bushfire Attack Levels**
-  BAL-FZ
 -  BAL-40
 -  BAL-29
 -  BAL-19
 -  BAL-12.5
 -  BAL-LOW



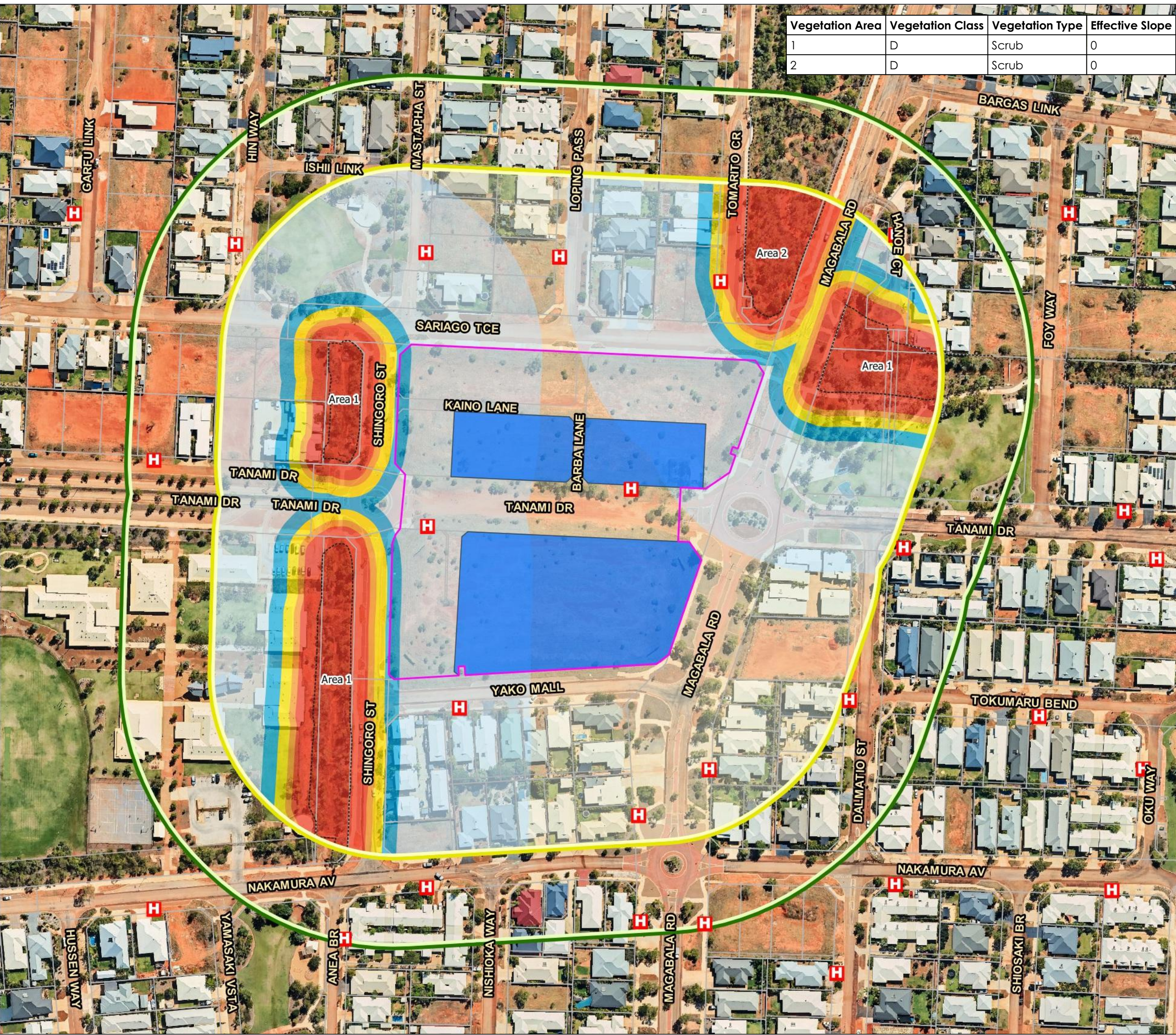
----- LOCALITY -----



AERIAL IMAGERY: Landgate/SLIP



Coordinate System: GDA 1994 MGA Zone 50
Projection: Universal Transverse Mercator Units: Metre
Map by: Ian Macleod 11-09-2020
SCALE (A3): 1 : 2000



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3 Identification of Bushfire Hazard Issues

The Broome North Local Development Plan 1 (LDP1) area is 85% urbanised with established residential housing lots, a school site and associated amenities. The land is relatively flat and is bounded by areas of scrub type vegetation to the west and north. A residential development is located to the south of the site on the opposite side of Gubinge Road. A light industrial area sits to the east along with areas of scrub vegetation.

The Local Centre area is situated relatively centrally within LDP1. There are small areas of bushfire prone vegetation relatively close to the site but the highest potential BAL rating affecting the Local Centre area is BAL-12.5. It is expected that all vegetation within Pt Lot 9007 will be managed and maintained to a low bushfire threat state.

The subject site abuts access/egress routes from the development. Tanami Drive heads east and joins onto Broome Road. Magabala Road heads south onto Gubinge Road. Both Broome Road and Gubinge Road are main arterial roads for the vicinity.

Fire hydrants are located throughout the development area as per the requirements of the relevant authorities.

4 Assessment Against the Bushfire Protection Criteria (BPC) Broome North Local Development Plan 1- Local Centre

4.1 Bushfire Protection Criteria - Assessment Summary

Summarised Outcome of the Assessment Against the Bushfire Protection Criteria (BPC)						
Element	Basis for Achieving Compliance with the Intent of the Element		The Proposal Cannot Achieve Compliance with the Intent of the Element	The Element is Not Applicable to the Proposal	Not a Strategic Planning Proposal therefore Location Options Do Not Apply	
	All Relevant Acceptable Solutions Are or Can be Met	The Performance Principle is Addressed (one or more solutions cannot be fully met, or it is inappropriate to do so –				
		Argument Justifying Compliance with the Intent is Presented	A Performance Principle-Based Solution is Applied		Different bushfire protection measures are to be applied to specified development types and land uses (as per a WAPC Position Statement or guidance)	
1. Location	✓					
2. Siting and Design of Development	✓					
3. Vehicular Access	✓					
4. Water	✓					

The Proposal has been assessed against:

1. The requirements established in Appendix 4 of the Guidelines for Planning in Bushfire Prone Areas, WAPC 2017 v1.3 (the 'Guidelines'). The detail, including the technical requirements, are found at <https://www.dplh.wa.gov.au/8194.aspx>; and
2. Any endorsed variations to the Guideline's acceptable solutions and associated technical requirements that have been established by the relevant local government. If known and applicable these have been stated in Section 5.2 of this Plan (with the detail included as an appendix if required by the relevant local government).

4.2 Local Government Variations to Apply

Local governments may add to or modify the acceptable solutions of the Bushfire Protection Criteria (BPC) and/or apply technical requirements that vary from those specified in the Guidelines for Planning in Bushfire Prone Areas (WAPC). In such instances, this Proposal will be assessed against these variations and/or any specific local government technical requirements for emergency access and water. Refer to Appendices 2 and 3 for relevant technical requirements.

Will local or regional variations to the acceptable solutions (endorsed by WAPC / DFES) and/or the technical requirements contained in the Guidelines, apply to this Proposal.	N/A
--	-----

4.3 Bushfire Protection Criteria – Acceptable Solutions Assessment Detail

4.3.1 Element 1: Location

Bushfire Protection Criteria Element 1: Location			
Assessment Statements and Bushfire Protection Measures to be Applied			
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.			
Acceptable Solution:	A1.1: Development Location	Method of achieving Element compliance and/or the Intent of the Element:	The acceptable solution is fully met.

The Broome North LDP1 – Local Centre site achieves compliance by:

- Ensuring future building work on the lots can be located on an area that will be subject to potential radiant heat from a bushfire not exceeding 29 kW/m² (i.e. a BAL rating of BAL-29 or less will apply). This can be achieved by using positioning, design and appropriate vegetation removal/modification; and
- Managing the remaining bushfire risk to an acceptable level by the existence/implementation and ongoing maintenance of all required bushfire protection measures, as identified within this Report. These measures include the requirements for vegetation management, vehicular access and firefighting water supply.

The proposed development is located relatively centrally within a built up residential area. The subject site has a potential radiant heat flux from nearby classifiable vegetation of 12.5kW/m² or less.

4.3.2 Element 2: Siting and Design of Development

Bushfire Protection Criteria Element 2: Siting and Design of Development

Assessment Statements and Bushfire Protection Measures to be Applied

Intent: To ensure that the siting and design of development (note: not building/construction design) minimises the level of bushfire impact.

Acceptable Solution:	A2.1: Asset Protection Zone	Method of achieving Element compliance and/or the Intent of the Element:	The acceptable solution can be fully met in the future.
----------------------	-----------------------------	--	---

The Broome North LDP1 – Local Centre site achieves compliance by:

- Ensuring future building work on the lots can have established around it an APZ of the required dimensions - to ensure that the potential radiant heat from a bushfire to impact future buildings, does not exceed 29 kW/m² (i.e. a BAL rating of BAL-29 or less will apply to determine building construction standards);
- The APZs can be partially established within each lots boundaries. The balance of the APZ's required dimensions are being contributed by an area on adjoining land that is either non-vegetated or assessed as being managed in a low-fuel state and which can most reasonably be expected to be managed this way in perpetuity.

The subject lots and neighbouring lots managed to the requirements of the Shire of Broome Fire Break & Fuel Hazard Reduction Notice and managed road verges will contribute to APZs for the subject lots.

- The landowner/s having the responsibility of continuing to manage the required APZ as low threat vegetation in a minimal fuel state, by maintaining the APZ to the required dimensions and standard, including compliance with the local government's annual firebreak notice.

The required APZ dimensions are set out in Section 4.4.1. The APZ technical requirements (Standards) are detailed in Appendix 1.

4.3.3 Element 3: Vehicular Access

Bushfire Protection Criteria Element 3: Vehicular Access

Assessment Statements and Bushfire Protection Measures to be Applied

Intent: To ensure that the vehicular access serving a subdivision/development is available and safe during a bushfire event.

Acceptable Solution:	A3.1: Two access routes	Method of achieving Element compliance and/or the Intent of the Element:	The acceptable solution will be fully met.
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Tanami Drive, Yako Mall, Shingoro Street and Magabala Road provide safe access and egress to two different destinations. As sealed public roads, they will be available to all residents and the public at all times and under all weather conditions.

Acceptable Solution:	A3.2 Public Road	Method of achieving Element compliance and/or the Intent of the Element:	The acceptable solution will be fully met.
----------------------	---------------------	--	--

The construction technical requirements established by the Guidelines and/or the local government will be complied with. These requirements are set out in Appendix 2.

Acceptable Solution:	A3.3 Cul-de-sacs (including a dead-end road)	Method of achieving Element compliance and/or the Intent of the Element:	The acceptable solution can be fully met.
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The construction technical requirements established by the Guidelines and/or the local government can and will be complied with. These requirements are set out in Appendix 2.

Acceptable Solution:	A3.4: Battle-axe	Method of achieving Element compliance and/or the Intent of the Element:	The acceptable solution can be fully met.
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The construction technical requirements established by the Guidelines and/or the local government can and will be complied with. These requirements are set out in Appendix 2.

Acceptable Solution:	A3.5: Private Driveways	Method of achieving Element compliance and/or the Intent of the Element:	The acceptable solution can be fully met.
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The construction technical requirements established by the Guidelines and/or the local government can and will be complied with. These requirements are set out in Appendix 2.

Bushfire Protection Criteria Element 3: Vehicular Access (continued)

Assessment Statements and Bushfire Protection Measures to be Applied

Acceptable Solution:	A3.6 Emergency Access Way	Method of achieving Element compliance and/or the Intent of the Element:	N/A
Acceptable Solution:	A3.7 Fire Service Access Routes	Method of achieving Element compliance and/or the Intent of the Element:	N/A
Acceptable Solution:	A3.8 Firebreak Width	Method of achieving Element compliance and/or the Intent of the Element:	The acceptable solution will be fully met.

The proposed lots will comply with the requirements of the local government annual firebreak notice issued under s33 of the Bush Fires Act 1954.

4.3.4 Element 4: Water

Bushfire Protection Criteria Element 4: Water

Assessment Statements and Bushfire Protection Measures to be Applied

Intent: To ensure water is available to the subdivision, development or land use to enable people, property and infrastructure to be defended from bushfire.

Acceptable Solution:	A4.1 Reticulated Areas	Method of achieving Element compliance and/or the Intent of the Element:	The acceptable solution will be fully met.
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A reticulated water supply is available to the subject site and hydrants will be installed in locations as required by the relevant authorities.

The construction technical requirements established by the Guidelines and/or the local government can and will be complied with. These requirements are set out in Appendix 3.

Acceptable Solution:	A4.2 Non-Reticulated Areas	Method of achieving Element compliance and/or the Intent of the Element:	N/A
Acceptable Solution:	A4.3 Non-reticulated Areas (Individual Lots)	Method of achieving Element compliance and/or the Intent of the Element:	N/A

4.4 Additional Information for Required Bushfire Protection Measures

The purpose of this section of the Plan is:

- As necessary, to provide additional detail (to that provided in the tables of Section 5.3) regarding the implementation of the acceptable solutions for those persons who will have the responsibility to apply the stated requirements;
- As necessary, to detail specific onsite vegetation management requirements such as the APZ dimensions, management of Public Open Space or application of landscaping plans for onsite vegetation;
- To discuss how staged development will be handled, if applicable; and
- As relevant, for future planning stages, consider and discuss the requirements that may apply to future planning applications and the content of the associated BMP. In particular:
 - Any potential Vulnerable or High-Risk Land Uses.
 - Any additional content that will be required in the future BMP.

4.4.1 Vegetation Management

Asset Protection Zone (APZ) Dimensions that are to Apply

The required dimensions of the APZ will vary dependent upon the purpose for which the APZ has been defined. There are effectively three APZ dimensions that can apply:

1. An application for planning approval will be required to show that an APZ can be created which is of sufficient size to ensure the potential radiant heat impact of a fire does not exceed 29kW/m^2 (BAL-29); and
2. Complying with the relevant local government's annual firebreak notice may require an APZ of greater size than that defined by the two previous parameters.

The dimensions (vegetation separation distances) that are to apply to the APZ for this Proposal are presented in the tables below.

Table 4.1: Planning Minimum Required Vegetation Separation Distances for the Proposed Development

The 'Planning (WAPC) BAL-29' APZ				
Minimum Required Vegetation Separation Distances for the Proposed Development				
Requirement Set By	Guidelines for Planning in Bushfire Prone Areas (WAPC 2017 v1.3)			
Relevant Fire Danger Index (AS3959-2018 Table 2.1)				80
BAL Determination Method	Method 1 (as per AS 3959-2018 s2.2.6 and Table 2.5)			
Vegetation Area	Applied Vegetation Classification	Effective Slope (degrees)	Maximum Acceptable 'Planning' BAL	Required Separation Distance (metres)
1	Class D Scrub	0	BAL-29	13
2	Class D Scrub	0		13
3	Class G Grassland	0		8
-	Excluded AS 3959-2018 2.2.3.2 (e) & (f)	N/A		N/A
This requirement has been established through the State bushfire provisions, SPP 3.7 and the associated Guidelines, as being a key compliance requirement for development proposals in WA.				

Table 4.2: Local Government Firebreak Notice Minimum Requirements.

'Local Government Firebreak Notice APZ'	
Required Minimum Dimensions for the Subject Site	
Requirement Set By:	Shire of Broome
Minimum Dimensions:	See Shire of Broome Fire Break & Fuel Hazard Reduction Notice.
Other Conditions:	If Asset Protection Zone technical requirements are defined in the Notice, the standards and dimensions may differ from the Guideline's APZ Standards, with the intent to better satisfy local conditions. When these are more stringent than those created by the Guidelines, or less stringent and endorsed by the WAPC and DFES, they must be complied with. Refer to Appendix 1.
This requirement has been established through the stated local government's annual fire break notice issued under the Bushfires Act 1954 s33.	

Consideration/Implementation of Public Open Space Management

Any planned areas of Public Open Space (POS) should be designed and managed so that the vegetation within the POS does not increase the BAL rating of adjoining or nearby lots to above BAL-29.

Consideration/Implementation of Proposed Landscape Plans

Any future landscape plans should be designed and managed so that the vegetation within the landscaped areas does not increase the BAL rating of adjoining lots to above BAL-29.

Consideration/Implementation of Staged Development

Where the proposed development is staged each stage must comply with the requirements of the Guidelines for Planning in Bushfire Prone Areas. This may require the creation of roads or management of land or installation of water supply lines outside that particular stage to achieve compliance.

Appendix 1 - Onsite Vegetation Management Technical Requirements

It is the responsibility of the landowner to maintain the established bushfire protection measures on their property. Not complying with these responsibilities can result in buildings being subject to a greater potential impact from bushfire than that determined by the assessed BAL rating presented in this Bushfire Management Plan.

For the management of vegetation within a lot (i.e. onsite) the following technical requirements exist:

1. **The APZ:** Installing and maintaining an asset protection zone (APZ) of the required dimensions to the standard established by the Guidelines for Planning in Bushfire Prone Areas (WA Planning Commission, as amended). When, due to the planning stage of the proposal to which this Bushfire Management Plan applies, defined APZ dimensions are known and are to be applied to existing or future buildings – then these dimensions are stated in Section 5.4.1 of this Plan.
2. **The Firebreak/Fuel Load Notice:** Complying with the requirements established by the relevant local government's annual firebreak notice issued under s33 of the Bushfires Act 1954. Note: If an APZ requirement is included in the Notice, the standards and dimensions may differ from the Guideline's APZ Standard – the larger dimension must be complied with.
3. **Changes to Vegetated/Non-Vegetated Areas:**
 - a. If applicable to this Plan, the minimum separation distance from any classified vegetation, that corresponds to the determined BAL for a proposed building, must be maintained as either a non-vegetated area or as low threat vegetation managed to a minimal fuel condition as per AS 3959-2018 s2.2.3.2 (e) and (f). Refer to Part 4 of this Appendix 1.
 - b. Must not alter the composition of onsite areas of classified vegetation (as assessed and presented in Section 3.1.2) to the extent that would require their classification to be changed to a higher bushfire threat classification (as per AS 3959-2018); and
 - c. Must not allow areas within a lot (i.e. onsite) that have been:
 - i. excluded from classification by being low threat vegetation or non-vegetated; and
 - ii. form part of the assessed separation distance that is determining a BAL rating
-
...to become vegetated to the extent they no longer represent a low threat (refer to Part 4 of Appendix 1). Note: The vegetation classification exclusion specifications as established by AS 3959-2018 s2.2.3.2, are included at A1.4 below for reference.

1. Requirements Established by the Guidelines – the Asset Protection Zone (APZ) Standards

(Source: Guidelines for Planning in Bushfire Prone Areas - WAPC 2017 v1.3 Appendix 4, Element 2, Schedule 1 and Explanatory Note E2.1)

Defining the Asset Protection Zone (APZ)

Description: An APZ is an area surrounding a building that is managed to reduce the bushfire hazard to an acceptable level (by reducing fuel loads). The width of the required APZ varies with slope and vegetation. For planning applications, the minimum sized acceptable APZ is that which is of sufficient size to ensure the potential radiant heat impact of a fire does not exceed 29kW/m² (BAL-29). It will be site specific.

The APZ may include public roads, waterways, footpaths, buildings, rocky outcrops, golf courses, maintained parkland as well as cultivated gardens in an urban context, but does not include grassland or vegetation on a neighbouring rural lot, farmland, wetland reserves and unmanaged public reserves.

For subdivision planning, design elements and excluded/low threat vegetation adjacent to the lot can be utilised to achieve the required vegetation separation distances and therefore reduce the required dimensions of the APZ within the lot.

Defendable Space: The APZ includes a defendable space which is an area adjoining the asset within which firefighting operations can be undertaken to defend the structure. Vegetation within the defendable space should be kept at an absolute minimum and the area should be free from combustible items and obstructions. The width of the defendable space is dependent on the space which is available on the property, but as a minimum should be 3 metres.

Establishment: The APZ should be contained solely within the boundaries of the lot on which the building is situated, except in instances where the neighbouring lot or lots will be managed in a low-fuel state on an ongoing basis, in perpetuity.

Note: Regardless of whether an Asset Protection Zone exists in accordance with the acceptable solutions and is appropriately maintained, fire fighters are not obliged to protect an asset if they think the separation distance between the dwelling and vegetation that can be involved in a bushfire, is unsafe.

Schedule 1: Standards for APZ

Fences: within the APZ are constructed from non-combustible materials (e.g. iron, brick, limestone, metal post and wire). It is recommended that solid or slatted non-combustible perimeter fences are used.

Objects: within 10 metres of a building, combustible objects must not be located close to the vulnerable parts of the building i.e. windows and doors.

Fine Fuel Load: combustible dead vegetation matter less than 6 mm in thickness reduced to and maintained at an average of two tonnes per hectare (example below).

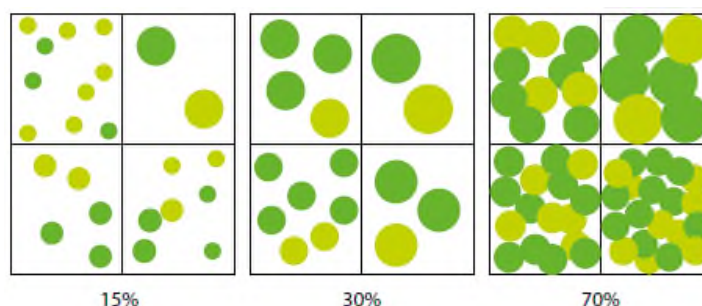
Example Fine Fuel Load of Two Tonnes per Hectare



(Image source: Shire of Augusta Margaret River's Firebreak and Fuel Reduction Hazard Notice)

Trees (> 5 metres in height): trunks at maturity should be a minimum distance of 6 metres from all elevations of the building, branches at maturity should not touch or overhang the building, lower branches should be removed to a height of 2 metres above the ground and or surface vegetation, canopy cover should be less than 15% with tree canopies at maturity well spread to at least 5 metres apart as to not form a continuous canopy. Diagram below represents tree canopy cover at maturity.

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




(Source: Guidelines for Planning in Bushfire Prone Areas 2017, Appendix 4)

Shrubs (0.5 metres to 5 metres in height): should not be located under trees or within 3 metres of buildings, should not be planted in clumps greater than 5m² in area, clumps of shrubs should be separated from each other and any exposed window or door by at least 10 metres. Shrubs greater than 5 metres in height are to be treated as trees.


Ground covers (<0.5 metres in height): can be planted under trees but must be properly maintained to remove dead plant material and any parts within 2 metres of a structure, but 3 metres from windows or doors if greater than 100 mm in height. Ground covers greater than 0.5 metres in height are to be treated as shrubs.

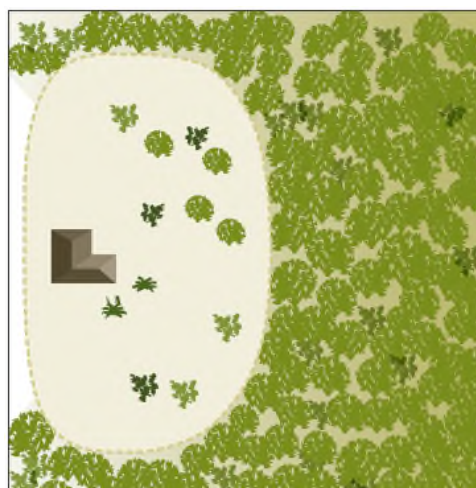
Grass: should be managed to maintain a height of 100 mm or less.

The following example diagrams illustrate how the required dimensions of the APZ will be determined by the type and location of the vegetation.

Hazard on one side
 APZ



Hazard on three sides
 APZ



2. Requirements Established by the Local Government – the Firebreak Notice

These requirements are established by the relevant local government's Firebreak Notice created under s33 of the Bushfires Act 1954 and issued annually (potentially with revisions). The Notice may include additional components directed at managing fuel loads, accessibility and general property management with respect to limiting potential bushfire impact.

The relevant local government's current Firebreak Notice is available on their website, at their offices and is distributed as ratepayer's information. It must be complied with.

If Asset Protection Zone technical requirements are defined in the Notice, the standards and dimensions may differ from the Guideline's APZ Standards, with the intent to better satisfy local conditions. When these are more stringent than those created by the Guidelines, or less stringent and endorsed by the WAPC and DFES, they must be complied with.

When, due to the planning stage of the proposal to which this Bushfire Management Plan applies, defined APZ dimensions are known and are to be applied to existing or future buildings – then these dimensions are stated in Section 5.4.1 of this Plan.

3. Requirements Recommended by DFES – Property Protection Checklists

Further guidance regarding ongoing/lasting property protection (from potential bushfire impact) is presented in the publication 'DFES – Fire Chat – Your Bushfire Protection Toolkit'. It is available from the Department of Fire and Emergency Services (DFES) website.

4. Requirements Established by AS 3959-2018 - Maintaining Areas within your Lot as 'Low Threat'

This information is provided for reference purposes. This knowledge will assist the landowner to comply with Management Requirement No. 3 set out in the Guidance Panel at the start of this Appendix. It identifies what is required for an area of land to be excluded from classification as a potential bushfire threat.

"Australian Standard - AS 3959-2018 Section 2.2.3.2: Exclusions - Low threat vegetation and non-vegetated areas:

The Bushfire Attack Level shall be classified BAL-LOW where the vegetation is one or a combination of the following:

- a) Vegetation of any type that is more than 100m from the site.*
- b) Single areas of vegetation less than 1ha in area and not within 100m of other areas of vegetation being classified.*
- c) Multiple area of vegetation less than 0.25ha in area and not within 20m of the site or each other.*
- d) Strips of vegetation less than 20m in width (measured perpendicular to the elevation exposed to the strip of vegetation) regardless of length and not within 20m of the site or each other, or other areas of vegetation being classified.*
- e) Non-vegetated areas, including waterways, roads, footpaths, buildings and rocky outcrops.*
- f) Low threat vegetation, including grassland managed in a **minimal fuel condition** (i.e. insufficient fuel available to significantly increase the severity of a bushfire attack – recognisable as short cropped grass to a nominal height of 100mm for example), maintained lawns, golf courses, maintained public reserves and parklands, vineyards, orchards, cultivated gardens, commercial nurseries, nature strips and windbreaks."*

Appendix 2 - Vehicular Access Technical Requirements

Each local government may have their own standard technical requirements for emergency vehicular access and they may vary from those stated in the Guidelines.

Contact the relevant local government for the requirements that are to apply in addition to the requirements set out as an acceptable solution in the Guidelines. If the relevant local government requires that these are included in the Bushfire Management Plan, they will be included in this appendix and referenced.

Requirements Established by the Guidelines – The Acceptable Solutions

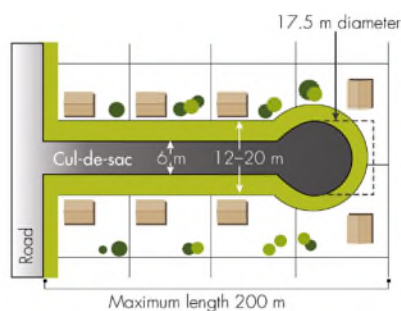
(Source: Guidelines for Planning in Bushfire Prone Areas WAPC 2017 v1.3, Appendix 4)

Vehicular Access Technical Requirements - Part 1

Acceptable Solution 3.3: Cul-de-sacs (including a dead-end road)

Their use in bushfire prone areas should be avoided. Where no alternative exists then the following requirements are to be achieved:

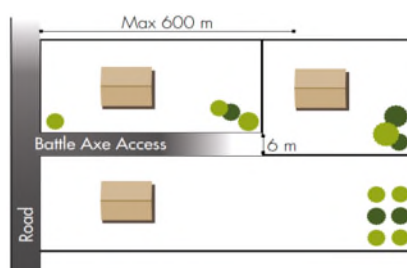
- Maximum length is 200m. If public emergency access is provided between cul-de-sac heads (as a right of way or public access easement in gross), the maximum length can be increased to 600m provided no more than 8 lots are serviced and the emergency access way is less than 600m in length;
- Turnaround area requirements, including a minimum 17.5m diameter head to allow type 3.4 fire appliances to turn around safely;
- The cul-de-sac connects to a public road that allows for travel in two directions; and
- Meet the additional design requirements set out in Part 2 of this appendix.



Acceptable Solution 3.4: Battle-axe

Their use in bushfire prone areas should be avoided. Where no alternative exists then the following requirements are to be achieved:

- Maximum length 600m and minimum width 6m; and
- Comply with minimum standards for private driveways.



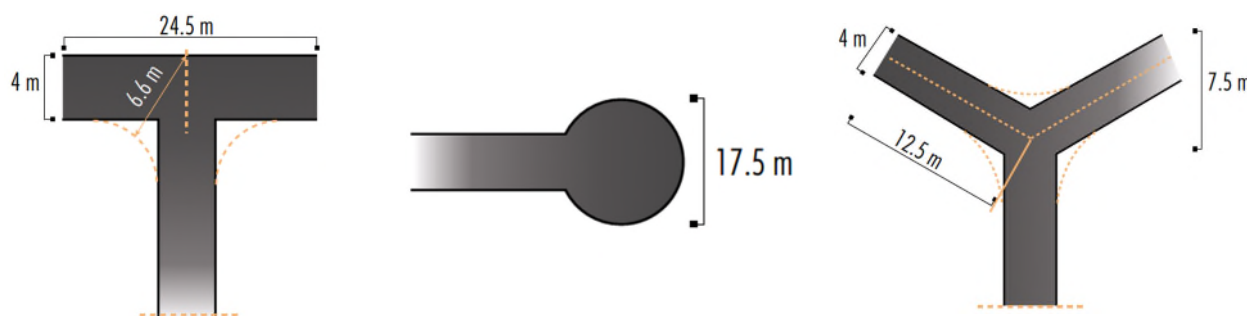
Acceptable Solution 3.5: Private Driveways

The following requirements are to be achieved:

- The design requirements set out in Part 2 of this appendix; and

Where the house site is more than 50 metres from a public road:

- Passing bays every 200 metres with a minimum length of 20 metres and a minimum width of two metres (ie combined width of the passing bay and constructed private driveway to be a minimum six metres);
- Turn-around areas every 500 metres and within 50 metres of a house, designed to accommodate type 3.4 fire appliances to turn around safely (ie kerb to kerb 17.5 metres);
- Any bridges or culverts are able to support a minimum weight capacity of 15 tonnes; and
- All weather surface (i.e. compacted gravel, limestone or sealed).



Acceptable Solution 3.8: Firebreak Width

Lots greater than 0.5 hectares must have an internal perimeter firebreak of a minimum width of three meters or to the level as prescribed in the local firebreak notice issued by the local government.

Vehicular Access Technical Requirements - Part 2

Technical Component	Vehicular Access Types				
	Public Roads	Cul-de-sacs	Private Driveways	Emergency Access Ways	Fire Service Access Routes
Minimum trafficable surface (m)	6*	6	4	6*	6*
Horizontal clearance (m)	6	6	6	6	6
Vertical clearance (m)	4.5	4.5	4.5	4.5	4.5
Maximum grade <50 metres	1 in 10	1 in 10	1 in 10	1 in 10	1 in 10
Minimum weight capacity (t)	15	15	15	15	15
Maximum cross-fall	1 in 33	1 in 33	1 in 33	1 in 33	1 in 33
Curves minimum inner radius (m)	8.5	8.5	8.5	8.5	8.5

* A six metre trafficable surface does not necessarily mean paving width. It could, for example, include four metres of paving and one metre of constructed road shoulders. In special circumstances, where 8 lots or less are being serviced, a public road with a minimum trafficable surface of four metres for a maximum distance of ninety metres may be provided subject to the approval of both the local government and DFES.

Appendix 3 - Water Technical Requirements

Requirements Established by the Guidelines - Acceptable Solution A4.1: Reticulated Areas

(Source: Guidelines for Planning in Bushfire Prone Areas WAPC 2017 v1.3, Appendix 4, Element 4)

The requirement is to supply a reticulated water supply and fire hydrants, in accordance with the technical requirements of the relevant water supply authority and DFES.

The Water Corporation's 'No 63 Water Reticulation Standard' is deemed to be the baseline criteria for developments and should be applied unless local water supply authority's conditions apply.

Key specifications in the most recent version/revision of the design standard include:

- **Residential Standard** – hydrants are to be located so that the maximum distance between the hydrants shall be no more than 200 metres.
- **Commercial Standard** – hydrants are to be located with a maximum of 100 metre spacing in Industrial and Commercial areas.
- **Rural Residential Standard** – where minimum site areas per dwelling is 10,000 m² (1ha), hydrants are to be located with a maximum 400m spacing. If the area is further subdivided to land parcels less than 1ha, then the residential standard (200m) is to be applied.

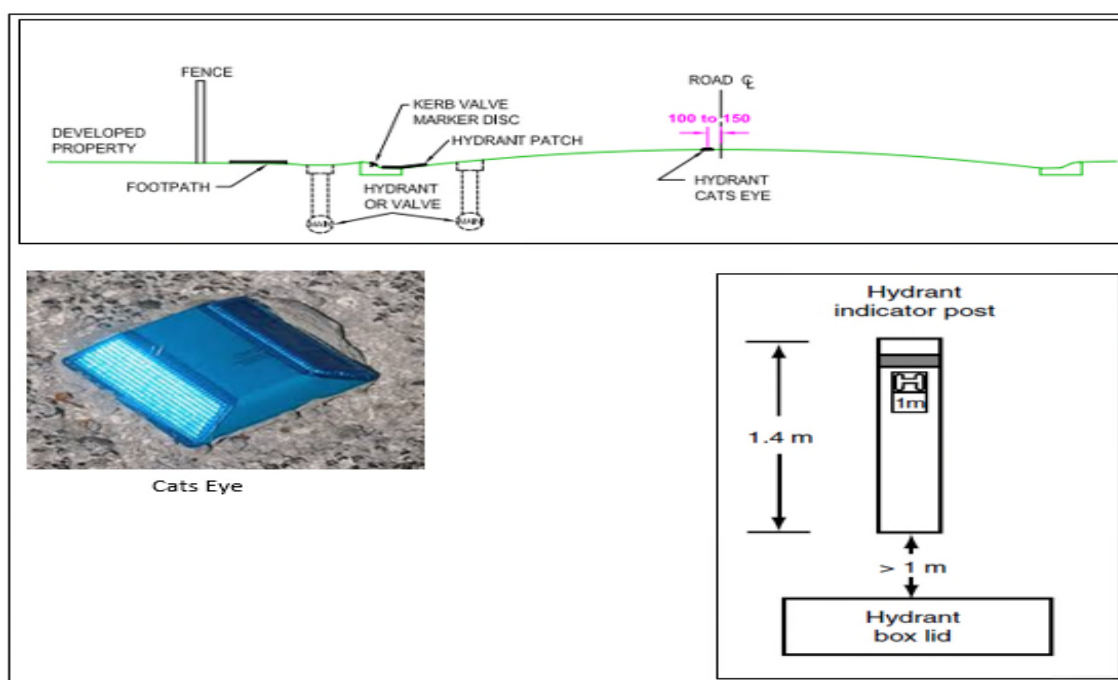


Figure A4.1: Hydrant Location and Identification Specifications

Contact the relevant water supply authority to confirm the technical requirements that are to be applied. They may differ from the minimum requirements of the 'baseline' Water Corporation's No. 63 Water Reticulation Standard.