

ROEBOURNE

NGARLUMA ABORIGINAL SUSTAINABLE HOUSING

CORNER OF NORTH WEST COASTAL
HIGHWAY & ROEBOURNE-POINT SAMSON
ROAD, ROEBOURNE

SHIRE OF ROEBOURNE

PREPARED BY:

burgess design group
TOWN PLANNING + URBAN DESIGN

ENDORSEMENT PAGE

This structure plan is prepared under the provisions of the City of Karratha
Local Planning Scheme No.8

IT IS CERTIFIED THAT THIS STRUCTURE PLAN WAS APPROVED BY RESOLUTION OF THE
WESTERN AUSTRALIAN PLANNING COMMISSION ON:

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NGARLUMA ABORIGINAL SUSTAINABLE HOUSING

SHIRE OF ROEBOURNE

ROEBOURNE

Issue 1

Prepared for: Ngarluma Aboriginal Corporation

Prepared by: Burgess Design Group
351 Newcastle Street, Northbridge W.A. 6003
PO Box 374, Northbridge W.A. 6865
Telephone: (08) 9328 6411
Facsimile: (08) 9328 6511
Website: www.burgessdesigngroup.com.au
Email: reception@burgessdesigngroup.com.au

Project Planner: Rochelle Van Santen
Job code: NACROEST
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1.0 INTRODUCTION

1.1 Background

In 2007, the Minister of Housing established a steering Committee comprising of representatives from the Ngarluma Aboriginal Corporation to help address housing provision in Roebourne.

The subject site selection was supported and negotiations with the State Government were then pursued to acquire the land. As such the subject land has the Ngarluma Aboriginal Corporation endorsement for urban development and has State Government support to ultimately transfer the land from the crown to freehold status in favour of the Ngarluma Aboriginal Corporation.

Burgess Design Group was been commissioned by the Ngarluma Aboriginal Corporation, who have since formed the group 'Ngarluma Aboriginal Sustainable Housing' to undertake this development project, to firstly undertake the required rezoning of the northern portion of the site and subsequently the structure planning as is required for the entire site prior to subdivision approval being granted.

1.2 The Proposal

The enclosed Development Plan (structure plan) has been prepared in conjunction with civil engineering, environmental, traffic, and urban design consultancies as well as in consultation with some building companies to achieve a land use plan that shall effectively guide the future land use and subdivision of a 62ha site for residential, active and passive recreation, mixed business and commercial purposes as per the requirements of the Shire of Roebourne's Town Planning Scheme No.8 for land zoned 'Urban Development'. A summary of the proposed land uses are as follows:

- 240 x R20 lots;
- 35 x R30 lots;
- 19 x R5 lots;
- 3 x R40 grouped housing lots totalling 1.4ha and yielding approximately 50 dwelling units;



- 1 x 1ha R30/R60 grouped housing site potentially yielding up to about 50 dwellings potentially in the form of units, apartments, retirement living, nursing home or even work force related accommodation depending upon the future needs of Roebourne;
- 18 x Mixed Business lots;
- 1 x 2.5ha commercial site intended to cater for a mix of uses including commercial, short stay accommodation and permanent residential as well as possibly educational, welfare and community purposes;
- A total of 13.75ha of public open space distributed across 3 different areas; and,
- A road, drainage and infrastructure network as required.

2.0 LAND DETAILS

2.1 Location

The Development Plan (structure plan) area is comprised of approximately a 62ha parcel of land located along the North West Coastal Highway within the Roebourne town site. The northern portion (being that on the north side of the North West Coastal Highway) is comprised of approximately 55ha and the southern portion is approximately 6ha. Both areas are located to the west of Roebourne-Point Samson Road and are within the Roebourne town centre. A Location Plan is provided at Figure 1.

2.2 Ownership

The majority of the subject land comprises the most eastern third of a 152ha Vacant Crown Land owned by the State Government.

The 18ha Reserve No. 33643, vested in the Shire of Roebourne for recreation purposes, forms the south-eastern portion of the subject site and within which the existing sports oval is contained.

The 1ha Reserve No. 33250 located towards the centre of the site is vested in the Shire of Roebourne for 'Club and Club Purposes' and contains the sports club and associated access road known as Samson Road.

In addition, an approximately 1ha triangular portion of the irregular shaped Roebourne-Point Samson road reserve is included in the subject area. Its inclusion in the subject area has no impact on the adequate width and function of the constructed Roebourne-Point Samson Road and a road closure shall be sought to formalise the proposed land use arrangement.

The Ngarluma Aboriginal Corporation is finalising negotiations with the State Government to acquire the land and wish the Shire to consider divesting the reserved land so that the amalgamation of the overall land parcel can be completed.

The subject land represents a logical planning unit located adjoining the existing road network and linking two currently developed portions of the Roebourne townsite (being the mixed business development along Roebourne-Point Samson Road and the residential and commercial development along the North West Coastal Highway and beyond). Overall the site is well capable of supporting the proposed Development Plan, as also confirmed by the enclosed consultancy reports.

2.3 Existing Land Use

The subject land is predominantly vacant and disused, containing native grass scrubland of varying conditions and a couple of discernible informal access tracks. The exception to this being the Shire's senior sports oval (football and cricket) and associated tennis courts, car parking and poor condition sports club. An Orthophoto (Figure 3) and Site Photos (Figure 4) are included to help illustrate the existing land uses and nature of the site.

The north-west portion of the subject land is affected by the nominal 500m buffer around the Roebourne wastewater treatment plant located further to the north-west. Urban development within the buffer area is restricted, as such, the existing buffer and restrictions on development within shall remain and are accurately reflected as such on the Development Plan.

An existing water pipeline easement runs generally north-south along the western boundary of the site, generally forming the western boundary to the development area, this easement is not proposed to be altered or impacted upon by the structure planning or resultant development.

As noted above, the small triangular portion of the Roebourne-Point Samson road reserve included in the subject area is not used for road purposes.

2.4 Neighbouring Land Uses

Land to the north of subject land is already zoned and partially developed for Mixed Business uses, accessed directly or via the local road network from the Roebourne-Point Samson Road. Lots sizes in the existing Mixed Business development generally range about 1,000m² to 2,500m².

Land to the south-east of the subject land contains a range of town centre uses, including limited retail and business uses along the North West Coastal Highway, a primary school and junior sporting oval, a range of residential dwellings and lot sizes more reflective of an R12.5 or R15 equivalent. Within the Roebourne town



centre there is a small range of various government and administrative services appropriate for the local population. The town has a medical centre, hospital, school, library and police station. Services and facilities within the town are relatively dispersed though tending to congregate in the southern zone of the town centre and off Withnell Street and Sholl Street.

Land adjoining the southern portion of the Development Plan is developed for residential uses accessed via an existing street network and access points such as Crawford Way and Andover Way onto the adjoining highway.

Land to further to the west of the subject land is vacant, other than the adjoining water pipeline easement which immediately adjoins the western boundary of the subject land. That to the north-west is likely to remain rural whereas land to the south-west is also zoned 'Urban Development' and may eventually be developed for further residential expansion in the longer term.

3.0 CONTEXT ANALYSIS

3.1 Landform, Topography & Land Capability

The subject land is generally flat, sloping from north to south, varying only 3-4 metres across the site with slight depressions associated with natural drainage lines. The other exception to the generally flat land being an elevated rocky ridgeline generally running east-west also towards the northern boundary of the site.

The site appears to exhibit the basalt derived dark clay soils typical of the locality, suitable for urban development. The soils and rocky outcrops of the ridgeline however are likely to form a constraint to some development with any earthworks expected to be cost prohibitive to standard residential development. Instead, site responsive housing and lot sizes are proposed in this location.

3.2 Conservation & Environmental Values

The lots are generally cleared, containing only degraded grass scrubland typical of the area and does not contain any flora or fauna of significance. An environmental analysis has been undertaken by Coffey Environmental to further elaborate upon the environmental opportunities and constraints of the site and forms an appendix to the Development Plan documentation (refer Appendix 1). This analysis confirms that there are no significant environmental constraints to the development of the land as intended, the exception being the generic buffer around the nearby waste water treatment plant, a constraint readily accommodated within the more detailed subsequent development planning. Also, that there may be noise concerns associated with the adjoining North West Coastal Highway, an issue which can be addressed as part of the subdivision of the abutting lots if required, noting that these lots are simply an extension to the existing residential area also abutting the highway.

As is evident on the aerial photography, two significant drainage lines run from the east to the north-west corner of the site and a rocky ridgeline traverses the site, both features requiring retention in the planning design, potentially within easements or corridors or site responsive lot layout.

3.3 Climate

Roebourne experiences a semi-arid climate, characterised by high temperatures, low rainfall and high evaporation rates and historically only occasionally affected by summer cyclonic activity.

Breezes are generally from the east in the mornings and north-east or north-west in the afternoons.

The east-west or north-south lot orientation and street network, generally in a 50/50 split, helps to provide the opportunity to site houses in response to the climate, however the physical design of the dwellings has a better opportunity to ensure a suitable built form results.

3.4 Heritage

The mapping viewed through the Department of Indigenous Affairs online enquiry system did not reveal the presence of sites of significance and nor does it contain any structure of non indigenous significance. The site forms part of the Ngarluma Aboriginal people's Native Title successful claim, and being the proponents of the Development Plan, no further heritage assessment has been requested or is required.

3.5 Demographic Pattern

Roebourne townsite has a resident population of 850 people (as at 2006), of which over 70% are Aboriginal and a forecasted growth rate of just under 10 per cent, though averaged across the broader Shire. The age structure in Roebourne differs from the WA structure mostly in that there is a greater proportion of children (under 18 years) and fewer elderly (over 65 years) in Roebourne.

80% of households comprise family groups, the majority with children, leaving 20% as single person households.

The median individual income per week of Roebourne residents is well below the WA median, but the household income is comparable to the WA median, suggesting that more income earners live in the one household than is typical of WA. The number of cars per household however is significantly lower than experienced throughout the rest of the state.

These patterns suggest a higher reliance on walking, a greater need for children and youth facilities, a greater number of people living in the one home with a lower socio-economic base. The need to provide smaller housing for single people remains similar to the demand experienced throughout the rest of WA. As such, the Development Plan proposes a range of lot types including family sized blocks, variety in grouped housing sites, some smaller cottage lot products and several larger lifestyle blocks.

4.0 PLANNING CONTEXT

4.1 Strategic Planning

Neither the subject land, nor Roebourne townsite itself, is contained within a contemporary strategic plan to guide the land use or development across the site. However, the Shire of Roebourne and Department of Planning are currently progressing a draft Local Planning Strategy intended to guide the land use planning applicable to the Shire. The intention of the proposed Development Plan is not to undermine the ongoing strategic planning for the locality but rather for each to inform the other to ensure ultimate consistency, to the benefit of Roebourne.

4.2 Statutory Planning

The Shire of Roebourne Town Planning Scheme No.8 includes objectives relevant to Roebourne, these include the following:

- 1. Preserve the heritage values of the Roebourne town, whilst facilitating an increased range of services;*
- 2. Limit further development within the Harding River Flood Plain;*
- 3. Develop the Roebourne Mixed Business Zone as a precinct in which businesses may be developed in conjunction with single residences, uses are not permitted which are incompatible with the residential component, and no site may be developed purely for a residential function.*

In this regard, the subject land is consistent with these objectives in that the proposal does not propose to impact on the heritage values of Roebourne and any additional commercial or retail services proposed under the Development Plan shall have close regard to its impact on the town as investigated further in Appendix 4. The site is not affected by the river flood plain however drainage flows towards the river have been incorporated into the plan design utilising the existing culvert location. The site shall also help offer residential opportunities in close proximity to the existing Mixed Business zoned sites, offering housing only a short walk to potential employment opportunities and helping to connect existing residents and businesses in the Mixed Business precinct back to the centre of town.

In regards to the proposed uses of the ultimate 'Urban Development' zone provides for a wide range of possible land uses including 'Aged and Dependent Persons Dwellings', 'Grouped Dwellings', 'Take-away Food Outlet', 'Public Recreation' and 'Education Establishment', effectively providing suitable flexibility to accommodate the proposed Development Plan.

Amendment No.15 to the Shire of Roebourne Local Planning Scheme No.8, initiated by Council in June 2009, is the mechanism for achieving the 'Urban Development' zone referred to by rezoning the northern portion of the subject area, being that on the north side of the Northwest Coastal Highway from 'Rural' and 'Parks, Recreation and Drainage' to 'Urban Development'. The recently advertised rezoning is anticipated to be endorsed in early 2010 to facilitate the subdivision and development of the site in accordance with the proposed Development Plan.

The land to the south of the North West Coastal Highway is currently already zoned for urban development, simply requiring structure planning prior to subdivision.

Clause 6.4 of Council's Scheme outlines the matters to be addressed as part of the preparation of a Development Plan within the proposed zone, this includes the usual physical analysis, the road and access provision, the land use and density allocation and the provision of public open space and recreation provision. These provisions have been given due regard in the preparation of this document with the supporting investigations included herewith.

4.3 Commercial Strategy

A commercial strategy that will consider the implications for retail and commercial land use in the West Pilbara is currently underway. Although this report has not yet been finalised nor made available to the public, it is expected that there will be continued growth pressures experienced in the West Pilbara region as a result of its strategic position as a major centre for mining and petroleum exports.

The proposed commercial site within the Development Plan will build on the social, environmental and economic benefits of the region and will assist in matching local demand with supply. Tactiks4 retail consultants were engaged to prepare a Retail Analysis to better address this matter prior to any future subdivision and development of this site as part of the preparation of a Detailed Area Plan.



Retailing is currently limited to the one primary retailer, the Roebourne General Food Store, with some convenience goods available from the service station. The creation of a new commercial site provides the opportunity for a small retail component to service the expanding residential area of Roebourne and passing traffic utilising the Roebourne-Point Samson Road combined with opportunities for varying accommodation or other community uses.

5.0 THE PROPOSED DEVELOPMENT PLAN

5.1 Design Rationale

The Development Plan evolved after consideration to a number of features and visions, adapted to suit the physical constraints of the site including ridgeline, drainage, waste water treatment plant buffer and access restrictions. These included:

- to maximise the number of lots with the best orientation to enable flexibility in built form and opportunities for more sustainable housing resulting in more of an east-west or north-south general alignment;
- to provide several opportunities for grouped housing and/or mixed use in recognition of the fluctuating and changing needs often experienced in the Pilbara Region;
- To create a site suitable for accommodating a small commercial element in the most highly visual location, integrated with medium density housing or short stay accommodation
- To provide a variety of lot sizes to cater for varying socio-economic levels and varying family types;
- To connect the existing mixed business uses to the north with the rest of Roebourne townsite whilst ensuring a transition of lot sizes so that the amenity between contrasting uses is protected;
- To consolidate public open space into usable and manageable forms so that the end result is quality and variety rather than quantity;
- To avoid creating any social problems by maximising passive surveillance, sightlines and permeable street blocks;
- To provide opportunities for longer term access arrangements should a link road ever be required to connect the North West Coastal Highway to the Roebourne-Point Samson Road around the back of the site, avoiding the existing intersection;
- To integrate with the existing residential and street network in the south whilst retaining opportunities for connections to the west in recognition of possible longer term expansion; and,



- To provide lot sizes reflective of desirable robust housing types designed for the North West.

5.2 Lot Summary

The proposed Development Plan consists of approximately 300 residential lots, yielding approximately 400 residential dwelling units plus some mixed business and mixed use opportunities as summarised below. The lot layout shown on the Development Plan is indicative only to demonstrate the potential for the site.

Land Use	Yield
Single Residential Lots (R20-R30)	275 lots
Large Residential Lots (R5)	19 lots
Medium Density Grouped Housing (R40)	3 lots (yielding approximately 30/50 dwelling units)
High Density Grouped Housing (R30/60)	1 lot (yielding approximately 50 dwellings)
Commercial (intended for Mixed Use)	1 lot
Mixed Business	2 lots intended to be subsequently refined to allow for approximately 18 lots.

5.3 Residential Land Use

5.3.1 Single residential lots

The majority of the subject site is intended for single residential lots generally at sizes ranging from 5,00m² to 7,00m² to cater for family homes. Discussions have already been held to subsequently help facilitate the development of these lots by builders familiar with the north-west and already active in the Shire. The intention being to create lot sizes suitable for the anticipated built form, ensuring appropriate setbacks within for accommodating airflow and eaves.

A selection of R30 single residential lots, generally at 350m² to 450m² are proposed along the main entry road into the estate and opposite active recreation areas. These lots are intended to provide the opportunity for some smaller 3 bedroom homes with narrower widths (whilst still deep lots) to encourage a narrower built form for improved cross ventilation through the homes.

5.3.2 Grouped housing lots

A selection of grouped housing sites, varying in size and ranging from a nominated R40 density to an R30/R60 density is included within the Development Plan to offer the opportunity for future developers to develop a feasible and sustainable housing product, similar to those grouped housing sites evolving in Maratha. The grouped housing sites also enable the opportunity for alternative housing types such as retirement living, aged care or work force accommodation.

All four grouped housing sites have direct road access on at least three sides and overlook public open space, allowing greater flexibility in access to the site when developing, an improved amenity to future residents and maximum surveillance and activity within the open space areas for personal safety reasons.

5.3.3 R30/R60 Grouped housing site

The 1ha R30/R60 site, being larger and co-located with the proposed commercial site, potentially ensures its suitability for a multiple dwelling development or a wider variation in design. Given its size, this grouped housing site requires a Detailed Area Plan prior to further subdivision or development within, the intent of which being to ensure an appropriately designed built form results.

Key objectives to be considered in the future preparation of a Detailed Area Plan for the 1ha R30/R60 site being:

- Minimising crossovers onto the key east-west entry road and maximising shared access arrangements to all surrounding roads to minimise the potential for traffic conflict;
- Maximising future development frontages to the surrounding public roads and drainage areas to encourage passive surveillance of the public domain from habitable rooms and assisting in creating an attractive streetscape;
- Particular attention given to the provision of an appropriate interface with the drainage reserve and Roebourne-Point Samson Road so that high quality fencing, landscaping and built form contributes to an attractive and active streetscape;
- Appropriately maximising the use of the site area to achieve a mix of housing density across the site in accordance with the applicable density code requirements and other objectives for the site;

- Encouraging dwelling orientation and dwelling type that will best suit the local climate and local breezes;
- Encouraging both visual and pedestrian connections through the site for the benefit of future residents of the development and the broader locality;
- Maximising surveillance of the nearby public open space;
- Provision of adequate car parking, particularly in recognition of the adjoining commercial site and sporting club facilities;
- Ensuring the orientation, built form, road and pedestrian networks and landscaping are appropriately designed to achieve integration with surrounding land uses and residential lots.

The intention of the use of a split code being to assume that an R30 Residential Design Code applies to 'Single Residential' and 'Grouped Dwelling' developments within this site. However, as an incentive to developers to construct a higher quality built form with better quality landscape treatments, an R60 density code shall apply to a 'Multiple Dwelling' or 'Aged and Dependant Persons Dwelling' development (or to the applicable component of the site) when the Detailed Area Plan satisfactorily addresses all above objectives. Further, the R60 code may apply to 'Grouped Dwelling' developments at the Shire of Roebourne's discretion, ensuring that all above objectives are satisfied and an additional benefit to residents or the community is demonstrated, such as provision of additional landscaping and security.

5.3.4 Low density lifestyle lots

The proposed larger R5 coded residential lots are intended to offer a different housing choice again, utilizing any views that may exist from the ridgeline and creating a transition of lot sizes between the medium density developments in the south and the mixed business lots in the north.

The rocky ridgeline forms a topographical constraint to any more intense development than that currently proposed on these lots, with each lot boundary determined in consultation with the consultant civil engineer to ensure an appropriate development site, capable of being serviced and accessed, exists towards the front of each lot.

5.3.5 Future residential construction & staging

Negotiations have already been made as to the development of housing on many of the proposed lots, with Fremantle Consulting assisting in these negotiations to facilitate appropriate and timely housing. Such negotiations have included private building construction companies, Department of Housing and Foundation Housing.

Foundation Housing is a not-for-profit housing company which develops, owns and manages rental housing for low and moderate income households. By working in partnership with state and local government, community based organisations, developers and private companies, Foundation Housing works toward providing safe, secure and affordable housing for individuals and families who are affected by high rents, poor living conditions or homelessness.

The Department of Housing is currently involved in the opportunity to provide some social housing within the early stages of the estate.

5.4 Mixed Business

The 'Mixed Business' site in the north of the subject land is consistent with the 'Mixed Business' zoning in the Shire's Local Planning Scheme with future use and development to be in accordance with the Scheme provisions applicable to this zone.

The land use classification also reflects that already existing immediately to the north, enabling the opportunity to rectify the existing irregular lot boundaries and interface. As such, no detailed lot layout is proposed within this site, as agreed with Council officers. Instead, the subdivision of this area enables the opportunity to investigate further land rationalisation and boundary adjustments.

Whilst no defined lot sizes or commercial floor spaces are defined, it is likely that approximately 15-20 lots may emanate from the proposed 'Mixed Business' site equating to a maximum gross floor area of approximately 2.5ha.

The 'Mixed Business' site has direct access to the Roebourne-Point Samson Road via a 20m wide road currently partially created and then connecting both north to the existing 'Mixed Business' site and south around the ridgeline to the residential lots in the south. No direct vehicular access from future lots to the Point Samson-Roebourne Road is proposed. All larger vehicular traffic servicing these lots shall logically use the direct entry road off the Roebourne-Point Samson Road rather than traverse through a residential area and over a ridgeline.

The eight larger R5 coded lots opposite the Mixed Business site, where a minimum 12m front setback applies, shall assist in creating a transition between the future Mixed Business uses and the standard R20 sized residential lots to the south, creating a satisfactory interface and linking the entire development together.

5.5 Commercial

A 2.5ha 'Commercial' site is proposed in the south-east of the subject site abutting the intersection of the North West Coastal Highway with the Point Samson-Roebourne Road where visibility from passing traffic is highest and where the proximity to the existing Roebourne town centre is closest. It is also sited so as to enable the opportunity to create a hub of activity centred around the R60 grouped housing site, the sports club and any retail, office or medium density residential uses within the commercial site.

Whilst considered large in area, the commercial site is not intended solely for retail uses, rather it is envisaged that it may accommodate a small supermarket and/or opportunity for fast-food outlet or alike as well as a mix of uses including opportunities for residential grouped housing (currently permitted at an R40 density), aged care, childcare centre or even education or recreation uses. The intent of a generic commercial zone being to enable greater flexibility in recognition of some of the transient and cyclical patterns experienced in the Pilbara region.

The site is proposed to be accessed via a 20m wide road reserve along its northern and western boundaries, with an adjoining intersection onto the Point Samson-Roebourne Road.

As stated on the Development Plan, a Detailed Area Plan is required to be prepared for the commercial site prior to any segmented development or further subdivision of the site so as to coordinate car parking, landscaping, internal access arrangements, interface to the Roebourne-Point Samson Road and North West Coastal Highway and the overall built form interface.

5.6 Public Open Space

There are three relatively even spaced areas of public open space proposed within the Development Plan comprising of the following:

POS	Size	Function
1	8.06ha	<p>Passive recreation intended for landscape amenity, vegetation conservation and possible walktrail to highest point for views.</p> <p>POS 1 is also predominantly contained within the wastewater treatment plant buffer with only the most 1.08ha south-east corner being outside of the buffer and flat enough to cater for a small formal recreation opportunity if desired in future.</p>
2	6,357m ²	<p>Intended for low maintenance passive recreation as well as a drainage function along its southern boundary. 810m² of the POS is constrained by a 1,000m² sewer pump station site though the physical construction of the pump station shall be integrated with the landscape design ensuring the site and balance of POS is contiguous in nature and fully usable as POS.</p> <p>This POS is suitable for some revegetation to generate shade and landscape amenity opportunities, well surveilled on all sides.</p>
3	5.05ha	<p>This POS contains the existing sporting oval and club, being a reduction of the existing parks and recreation reserve, so reduced to reflect its physical features and the needs of the community and Council. Its reduction in area to a 5.05ha site enables a more sustainable irrigation opportunity via grey water recycling and improved surveillance whilst still ensuring significant space for expansion of active recreation opportunities if required in future.</p> <p>There are opportunities within this site for any cash-in-lieu contributions to be spent enhancing the active recreation and sporting club facilities here, such as a playground and lighting.</p>

The size and distribution of open space ensures future residents shall have ready access to a usable park. In addition, the areas for drainage also help create a sense of openness throughout the subdivision, effectively creating a perception of space. There is scope for some of the areas of drainage to be appropriately landscaped and incorporated into the public open space.

The areas of open space are also well connected, allowing for pedestrian movement between each area via a direct road network and dual use path network as reflected on the Development Plan.

The road and lot layout has also been designed so as to achieve a clear distinction between the private and public domain and to maximise passive surveillance over areas of open space. The grouped dwellings sites have been located in close proximity to the public open space so as to provide some amenity benefit to offset the potential reduction in area of private open space on these lots.

A landscape plan will be prepared and submitted to the Shire of Roebourne for approval for the proposed 8.06ha POS and 6,357m² POS prior to development. Any cash-in-lieu contributions are likely to be suitable for additional enhancement within the 5.05ha Council POS.

5.7 Public Open Space Calculations

Originally the subject land comprised of 19.6ha of 'Parks and Recreation Reserve', with only the most south-western portion ever developed for the existing sporting facilities. Since its original reservation, a new junior sports oval has been developed on the south side of the highway, closer to the primary school, town centre and existing residents. The senior oval on the subject land having issues with irrigation availability and maintenance. As such, a rationalisation of the area of 'parks and recreation' within the subject land is warranted and supported by the Shire of Roebourne.

The calculations for the rationalisation and usable public open space to ensure a minimum of 10% land area for passive and active recreation continues to be provided across the site is summarised below.

Description	Area	POS Credit*
Total Site Area	61ha	
Total Subdivisible Area (ie less commercial uses and dedicated drainage but still includes Council sports oval site)	53.9ha	
10% POS required	5.4ha	
POS 1	6.98ha constrained (50% credit applies)	3.49ha
	1.08ha	1.08ha
POS 2	6,357m ²	5,547m ²
POS 3	5.05ha	0m ²
Total POS provided in Development Plan	13.75ha	5.12ha (9.5%)
POS Shortfall		0.28ha (0.5%)

*POS credit excludes Council reserved 5.05ha sports oval, excludes dedicated drainage, sewer pump station site and 50% of POS constrained by the waste water treatment plant buffer.

5.8 Road Reserve Rationalisation

Both the North West Coastal Highway and the Roebourne – Point Samson Road reserve have varying widths not reflective of their use. Preliminary discussions were held with both Council and Main Roads officers to ascertain whether road widenings were required to create a consistent width. As no road widening were required, road closures may be sought in future to rectify the anomaly, particularly that of the Roebourne – Point Samson Road reserve as notated on the Development Plan.

It should also be noted that the current visitor information bay along the North West Coastal Highway is currently proposed to be contained within the 5.05ha public open space and one residential lot. The bay can remain in this position until such time as an appropriate alternative arrangement is found in consultation with Main Roads WA and the Shire of Roebourne. One such alternative site might be suitable within the additional width of the road reservation of the North West Coastal Highway adjoining the proposed drainage reserve to the north west of the information bays' current position. As the Shire is currently facilitating improvements to the various town entry statements within the Shire, this Development Plan proposal represents the opportunity to co-locate a new visitor information bay and entry statement for Roebourne into a new attractive and better located position.

5.9 Transport Routes

Transcore traffic consultants has undertaken a site investigation and traffic analysis to assist in determining the requirements for road upgrades, road widths and intersection treatments. A copy of their report is contained at Appendix 3.

In summary, the investigation confirms the suitability for the road connections proposed, utilising existing road connection points wherever possible with some road intersection treatments and appropriate signage. This includes some upgrade works to the intersection of the North West Coastal Highway with the Roebourne Point Samson Road.

Additional road connections onto the North West Coastal Highway are not proposed with direct vehicular access restricted as designated on the Development Plan. In addition, the existing access to the sports oval and club being is to be replaced by access in from the north and east off the Roebourne-Point Samson Road where existing traffic volumes are significantly lower.

A cul-de-sac head is proposed adjoining the North West Coastal Highway opposite Andover Way and notated as a possible future connection only in recognition of the longer term possible idea of creating a bypass road/link road around Roebourne connecting around the back of the site towards Point Samson, reducing traffic along this portion of the North-West Coastal Highway. Should such a bypass road progress and Main Roads determine that a local access road onto the North West Coastal Highway is safe and achievable in this location, then the cul-de-sac head could be converted to an intersection to improve access to the commercial site.

The road widths proposed within the estate are generally at the 15m or 15.4m minimum width as guided by Liveable Neighbourhoods and the anticipated traffic counts based upon Transcore's modelling. The exception being 20m wide access roads where traffic volumes are likely to be higher, particularly at the entry points and adjoining the grouped housing sites. The central north-south access road is proposed at 18m wide to provide for the opportunity for additional street trees or on street car parking.

A couple of road widths have been reduced down to 12m in two short locations where it is a 'single sided' road with only 3-5 lots likely to be serviced and accessed from off that street. Drainage reserves being located on the other side of the road. These 12m wide roads shall still contain the same standard width road pavement and footpath as the adjoining 15m wide roads.

5.10 Pedestrian Access

Footpaths are intended to be provided down one side of relevant streets with the exception of where a dual use path is provided instead. All are constructed as part of the subdivision works by the developer.

Uncontrolled pedestrian access across the North West Coastal Highway shall be discouraged as best as possible, with provision made for a designated opportunity for pedestrians to cross the road closer to the commercial site. This shall be undertaken as part of the more detailed path design and general intersection works and signage upgrades in consultation with Main Roads WA and the Shire of Roebourne. An indicative and logical location for such a crossing point is reflected on the Development Plan, the aim being to generally link the Andover Way pedestrian link with the 5.05ha POS and commercial site.

As discussed with Shire of Roebourne officers, a dual use path network is shown on the Development Plan, the intention being to connect the existing Roebourne townsite with the Mixed Business site to the north, whilst also connecting future residents with the commercial and public open space within the Development Plan.

5.11 Servicing

An engineering servicing report has been produced by Wood and Grieve Engineering in consultation with the Water Corporation and Western Power. The report (refer Appendix 2) confirms that the site is readily serviced with reticulated water, sewer, power and telecommunications. The water, sewer and power capacity is adequate for catering to the yield anticipated, noting that the development shall be staged, with the first 100 lots readily accommodated without any significant upgrades.

A sewer pump station site is designated on the plan, with both it and its buffer accommodated within public open space.

5.12 Drainage

The high intensity rainfall associated with being located in a cyclonic region requires the provision of a high capacity drainage network to cater for very high peak stormwater flows.

Minor storm events will be connected to open gutters along road kerblines directed to open drains in accordance with the Shire of Roebourne's requirements.

Major stormwater flows will be channeled through the road network and open drains within dedicated drainage reserves and discharged to the east of the Development Plan area via an existing culvert under the Roebourne-Point Samson road reserve adjoining the proposed sewer pump station site.

5.13 Fencing

It is recognised that approximately 15 single residential lots are proposed to back onto the North West Coastal Highway. To ensure an attractive entry into Roebourne is achieved and to ensure noise controls are realised, a higher standard of uniform fencing/walling and landscaping may be required as a condition of subdivision approval. Similar landscaping or treatments may be required along the perimeter of the adjoining drainage reserves where they also abut the North West Coastal Highway.

Uniform fencing shall also be required for the two residential lots proposed to abut the drainage reserve along the Roebourne-Point Samson Road.

The fence and/or landscape treatment along the Roebourne-Point Samson Road for the 1ha grouped housing site and commercial site shall be addressed as part of the future Detailed Area Plan. A semi-permeable fencing or landscaped bollard treatment with consideration given to pedestrian access and surveillance of the dual use path may be preferable to a non-permeable fence or wall.

Whilst it is noted that fencing/walling may assist in noise control associated with the adjoining roads, it should also be recognised that speed limits are currently restricted to 60km/hr and may be suitable for reduction to 50km/hr, reducing any noise impact and maintaining the ability for a consistent approach to that further to the east where lots also adjoin the North West Coastal Highway.

5.14 Development Staging

Whilst subdivision shall be sought for the entire 65ha site, the physical construction is likely to be staged so that approximately 100 lots are constructed within stage 1. These 100 lots are likely to emanate from the central access road proposed off the Point Samson-Roebourne Road, providing for a mix of R20 and R30 single residential lots, and also perhaps with some lots released within the most southern portion of the site where the land is already zoned and represents a 'rounding off' of the existing residential development.

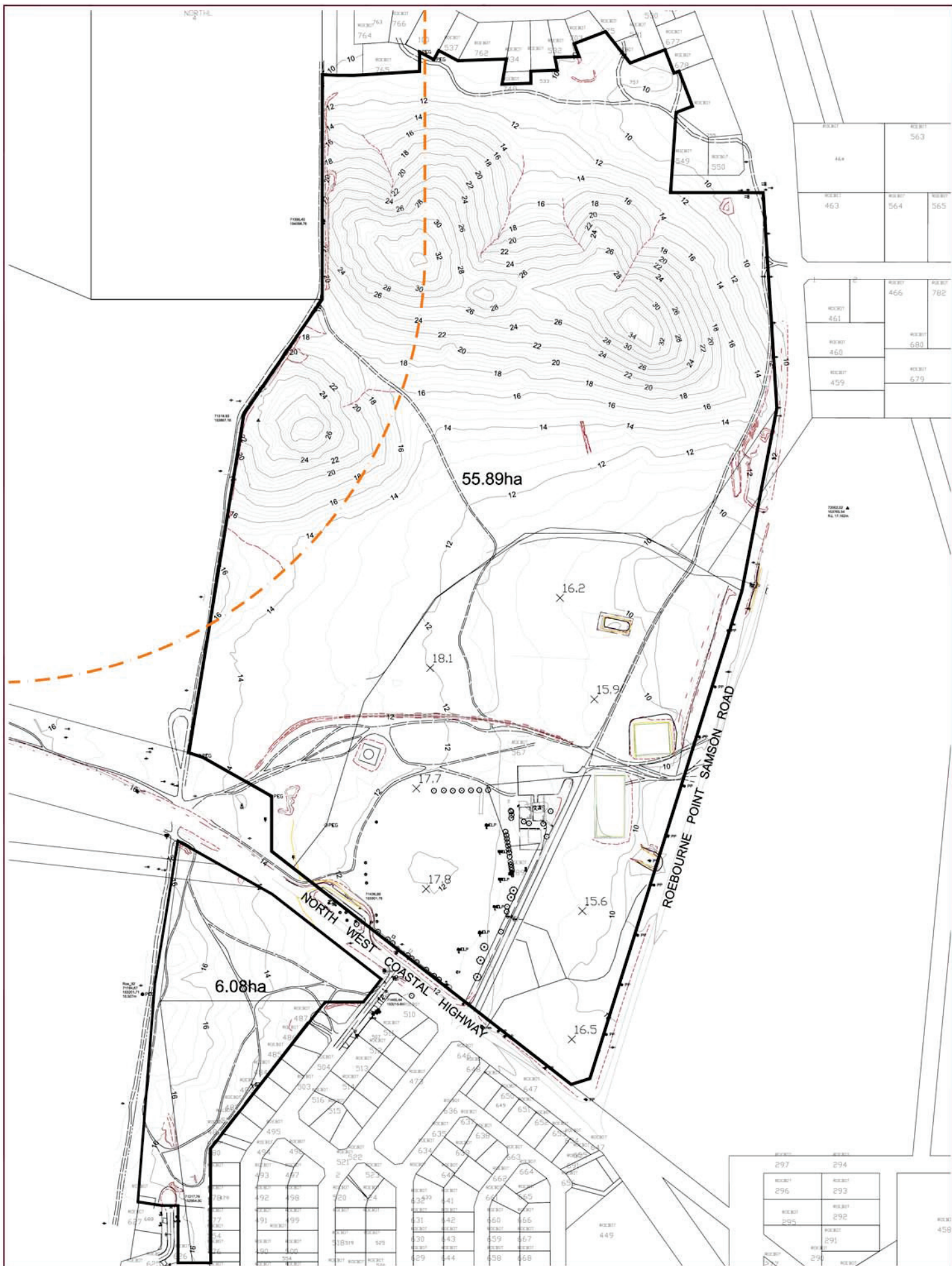
Any such staging is partially dictated by logical extensions to servicing infrastructure. An indicative Staging Plan is included in the Development Plan in this regard.

6.0 CONCLUSION

The Development Plan enclosed addresses the requirements specified in Council's Local Planning Scheme and has clear regard for those issues, opportunities and constraints affecting the site so as to ensure a high quality and coordinated residential, mixed use and recreational development results.

Ultimately the proposed Development plan is a legitimate attempt by an Aboriginal Corporation to address the housing, social and employment issues facing a regional community with the vision being to create a new opportunity for Roebourne and to lead the community. They are supported by the commitment of the well-established not for profit organisation, Foundation Housing, who is a key factor in attracting community organisations and businesses to a location and creating networks and linkages which help people to engage in employment, training and recreational activities. The support of the Department of Housing and State and Federal funding shall also assist in ensuring immediate opportunities for appropriate housing within the early stages of development.

The subject land's prime location at the entry to Roebourne townsite and already containing a community asset, being the sports oval and club, creates the opportunity for well planned townsite expansion and to enhance the image and approach into Roebourne. In doing so, there is the opportunity to readdress some social and amenity issues currently experienced or perceived, as well as enabling the betterment of the existing community infrastructure on site.



LEGEND:

- Subject Land
- Wastewater Treatment Plant Buffer



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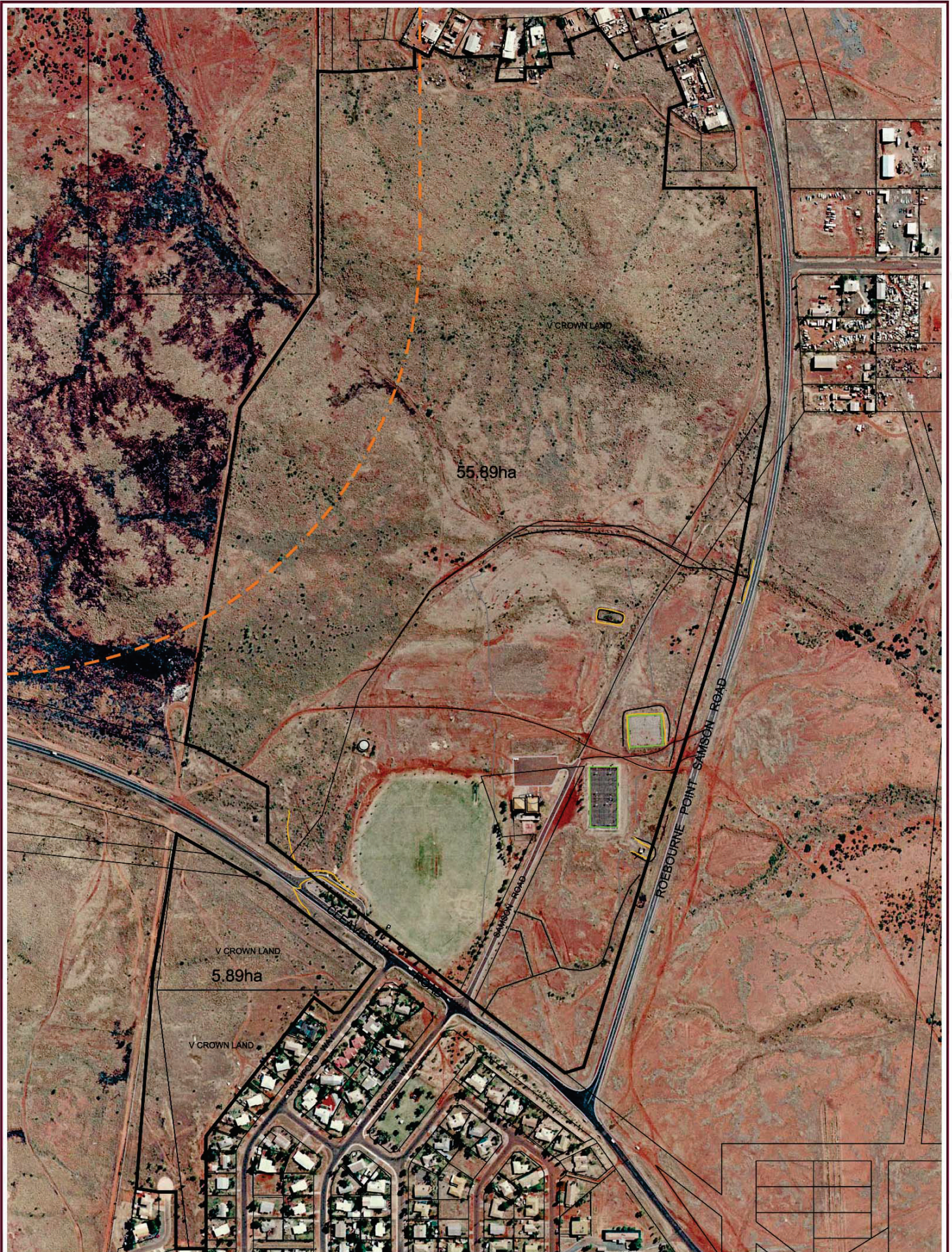
PO Box 374 Northridge WA 6960
P (08) 9228 6411 F (08) 9228 6511
www.burgessdesigngroup.com.au

LANDUSE PLAN
ROEBOURNE

1:2000 @ A1 : SCALE
18.12.2009 : DATE

NAC ROE-4-01a : DWG No
NASH : CLIENT

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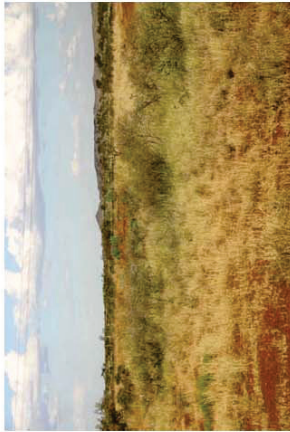




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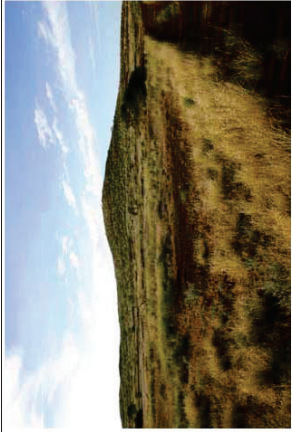
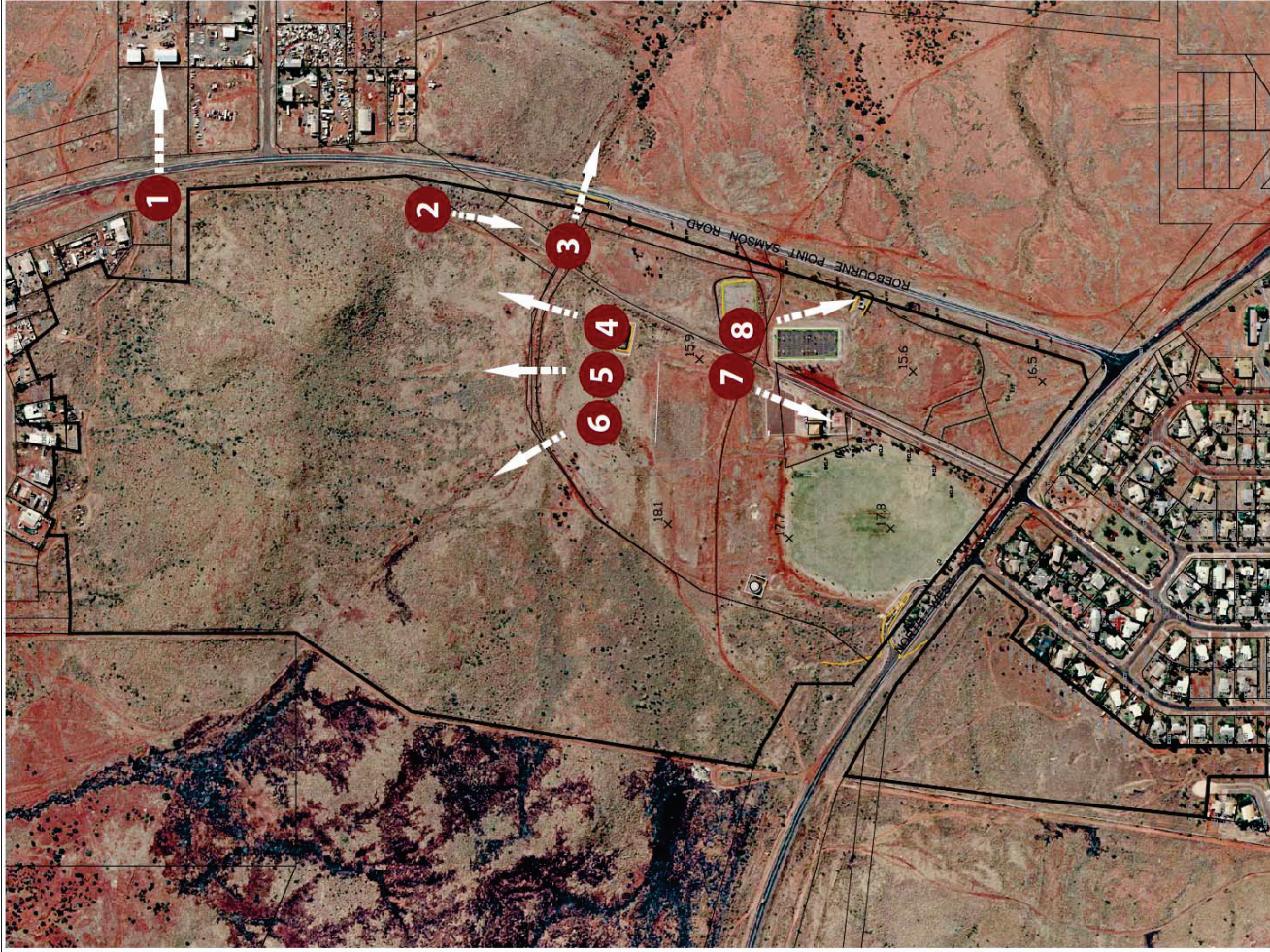
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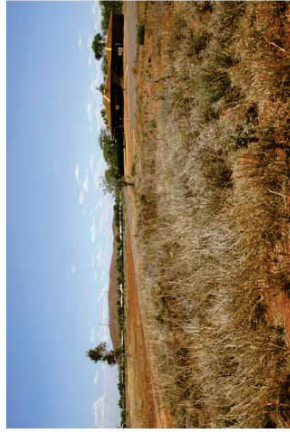
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5



6



7



8

DRAWING NUMBER: NAC ROE -4-02

DATE: 06.08.2009

SCALE: N.T.S.

351 Newcastle Street, Northbridge W.A. 6003
ph: (08) 9328 6411
www.burgessdesigngroup.com.au

LEGEND:
Subject Land



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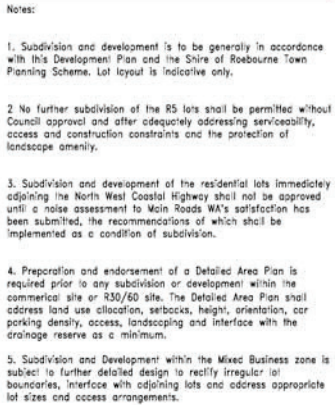
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NORTH

SITE PHOTOS

ROBOURNE





1 Passive Recreation



5 R 40 Residential



2 Streetscape Treatments



6 Active Recreation



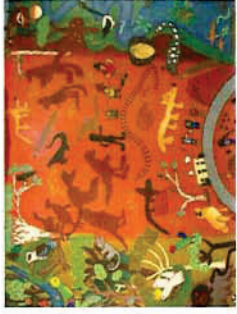
3 R 20 Residential



4 R 30 Residential



11 R 60 Residential



7 Community Input



8 Mixed Use



9 Drainage



10 Estate Feature



12 Sustainability Initiatives



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SCALE: N.T.S.
DRAWING NUMBER: NAC ROE-1.06b
DATE: 12.01.2010

351 Newcastle Street, Northbridge W.A. 6003
ph: (08) 9328 6411
www.burgessdesigngroup.com.au

DEVELOPMENT CONCEPT

Roebourne
Shire of Roebourne



All areas and dimensions are subject to survey, engineering and detailed design and may change without notice.

