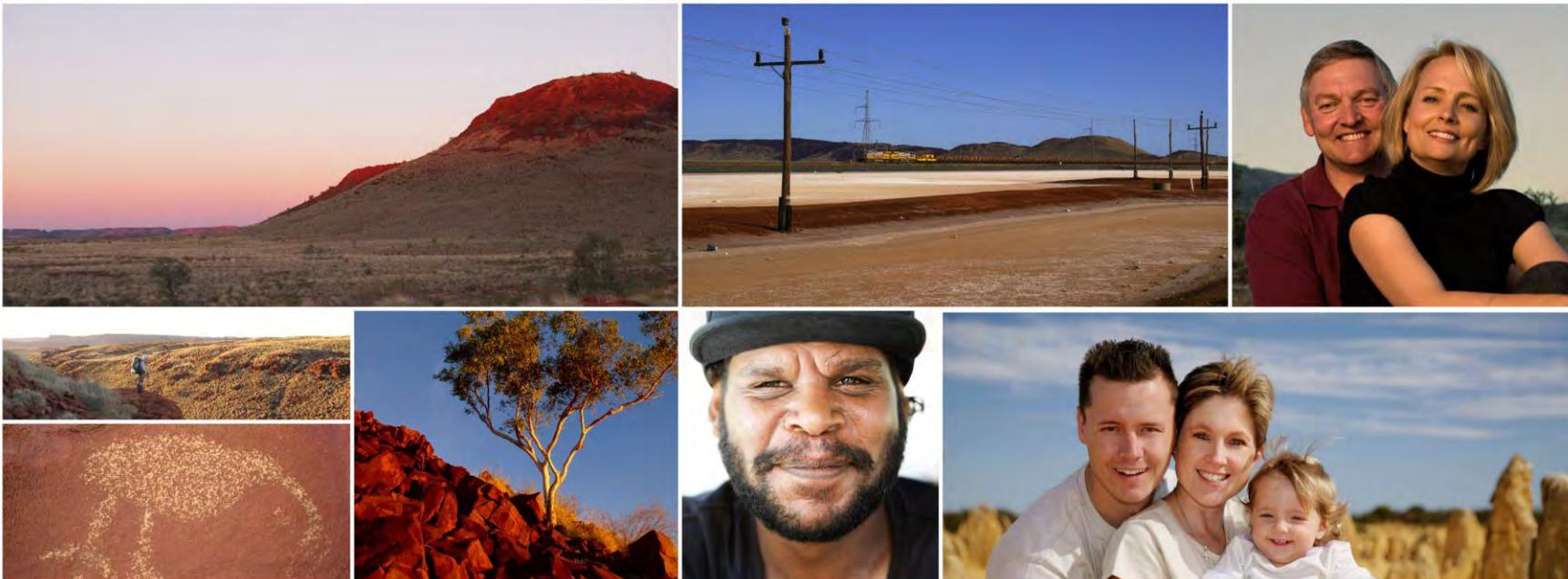


COMMUNITY, SOCIAL AND ECONOMIC PLANNING RECOMMENDATIONS REPORT
JULY 2012



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1. Introduction

1.1. Background

The development of Mulataga provides the first significant green fields development to stem directly from the Karratha City of the North (KCN) Plan, a key part of the State Government's Pilbara Cities initiative.

The aim is to develop Mulataga as place that harnesses the outdoor and active Pilbara lifestyle while providing the level of service and amenity that people expect of great urban centres.

The development of an attractive, accessible and vibrant coastal node will provide an iconic destination not available elsewhere in Karratha. The opportunity for Mulataga is to build a distinctive residential community which celebrates the Karratha lifestyle and develops a character inspired by the unique natural environment.

It is proposed that Mulataga will become a waterfront community that epitomises Karratha's transformation from a town to a city. It will be a designed for community, with places for the people to recreate and celebrate the outdoor lifestyle opportunities of the region.

Mulataga is envisaged to be the postcard neighbourhood of the North West where visitors come to experience the best of life in the Pilbara. It will be a place that people see not just as a home but a community in which to establish a lifelong base in Karratha.

There is much more to ensuring the long term success of Mulataga than just the spatial planning and land development. Sustainable community outcomes require innovative, practical and locally-based approaches. The key to developing Mulataga as a place where all people aspire to live and recreate is investment in a strategic, coordinated and collaborative community development planning and implementation process.

1.1. Document Purpose

This document provides a detailed analysis of the community and economic context of Karratha and the implications for the urban planning and development of Mulataga in the future.

The findings and recommendations provided in this document have been informed by a detailed literature review and the outcomes of a Planning Design Forum conducted in Karratha in April 2012

Key content of this document was produced initially to inform the Mulataga Planning team, prior to the Planning Design Forum, with further details in the report updated since this forum was held.

2. Key Recommendations: Social Planning and the Provision of Community/Commercial Facilities

The following are the key recommendations for the provision of community facilities and the social planning of Mulataga.

More detailed recommendations are provided in Section 9.

2.1. Community Engagement and Social Planning Recommendations

2.1.1. Develop a Community Engagement and Communications Plan

A community engagement and communications plan should be developed to guide public participation in all phases of the project's development. The first phase of this engagement has already commenced with the development of a community reference group and the completion of the Planning Design Forum. As the project progresses, there are many opportunities to expand the broader community understanding of, and engagement with, Mulataga's development.

2.2. Develop a Community and Economic Development Plan

To ensure a distinctive quality of life at Mulataga, it is recommended that a Community and Economic Development Plan (CEDP) be developed with a view to implementation during the next five to 10 years.

This CEDP will result from intentional social planning processes and be informed by collaboration with key stakeholders and the community. The role of the plan will be to provide a strategy through which the new residents are able to obtain the direction and resources necessary to become empowered to actively realise the lifestyle to which they aspire.

2.3 Community and Commercial Facilities Provision

The recommendations in relation to community and commercial facilities are focused on the key future development areas of:

1. School / Community Hub (Current development phase)
2. Coastal Node (Future development phase)
3. Neighbourhood/District Centre (Future development phase)

2.3.1 School / Community Hub

Schools often play the role as key community hubs and activity centres. With the demographic analysis predicting a high proportion of young families to be living in Mulataga in the future, the development of the primary school site and its surrounding areas provide an important opportunity for engendering the shared use of facilities, thus creating a place of connection for all community members.

The designed interrelatedness between the use of public open space, community amenity and school facilities will be an essential element to the effective urban planning of the first phase of Mulataga's development.

With support from government there is the potential to develop an innovative Government primary school, with a possible focus on environmental and sustainability studies - responding to the environmental significance of the area.

Facilities that are recommended for further consideration for development in the integrated site/hub include:

- An innovatively designed school campus that challenges the current primary school design brief and facilitates the development of shared use facilities and innovation in the delivery of a locally responsive curriculum.
- Fast tracked development of an Early Learning Centre (ELC) – for early childhood and parenting partnerships, (e.g. in houses abutting the school site). When the school is ready the ELC would transfer to the permanent site, and the houses could be used for staff accommodation.
- Development of a 'full service' model school with adjoining multi use consulting rooms, providing integrated access to allied community and health services such as child health nurse, counsellors, occupational therapists, speech therapists, parenting courses.
- Development of multi-use facility - with a separate entrance to the main school buildings (for use by the school and community). The facility could include retractable inner walls providing modifiable spaces for key focus activities such as environmental studies, parenting/vocational classes, playgroup, out of hours child care, community arts (and should include a small kitchen space).
- Early development of a shared senior sized oval, (even before the school buildings are developed), to enable quick access to a local sporting and recreation space. The single senior oval would encompass a full AFL sized ground, with enough width to internally contain a soccer pitch (Note: normally a primary school only has a junior oval space).
- Provision of change rooms for community sport, which could be integrated with the multi use space described above.
- Shared use covered assembly/ meeting area for larger community functions.
- Possible shared use of library facilities (if not developed in the neighbourhood/district centre in future).
- Shared hard court facilities for court sports (Including additional courts to the usual provision of a primary school).
- Integrated play space and community open space, with a high standard of landscaping and amenity e.g., BBQs, shelters; seating. This could include the provision of innovative and interactive playground facilities, clear pedestrian and cycling connections and the development of a shared use "kitchen garden" area that support the school health education curriculum and can be utilised by community groups. etc.).
- A multi-wheeled track with active elements at different points that enable varying ages and levels of competence to use the amenity with scooters, bikes, skateboards and rollerblades.
- Provision of facilities that enable the establishment of an environmental/sustainability focus through the use innovative environmental/sustainable practices including third pipe water re-use, use of solar panels and energy-saving devices. The retained use of existing vegetation and connections to riparian vegetation will enhance access and delivery of environmental education programs.
- Investigation into the potential provision of teacher accommodation within close proximity (or within the hub) for in unit/apartment-style accommodation to meet teacher housing shortages.
- Adjoining small café /shop

2.3.2 Coastal Node Development

The establishment of a vibrant coastal node provides a transformational opportunity for Mulataga and Karratha. It has the potential to deliver a key destination point for people from across the region. All attempts should be made to ensure the development of coastal facilities and amenities occur as soon as possible.

Key features that are recommended for consideration for development at the coastal node include:

- An ocean front main street, with up to 4-5 shops which would be no more than 350sqm – 500sqm retail and associated pedestrian cycling connections.
- Medium-density residential accommodation in a walkable catchment to the coastal amenity (though not restricting views to the coast). This could include a mix of residential; short-stay accommodation, high-class worker accommodation and aged-care accommodation.
- Board walk and jetty that links to community facilities and integrates with a coastal walk.
- Recreational nodes of interest – with high-level amenity of attractive landscaping, BBQs, gazebos; seating etc).
- An integrated landmark coastal activation building, within the foreshore area - consisting of a two storey café/family-style hospitality venue, with outdoor area and balcony. The building could range from 500 - 1000 sqm 1,000sqm in size (inclusive of outdoor space). This place could be integrated with a community centre and provide catering services. (Examples include Port Hedland Yacht Club; Point Samson Tavern; Clancy's; Little Creatures, Matsos).
- A possible beachside pool or urban beach concept; or water play features.
- Imaginative and interactive playground that caters for a range of ages and includes innovative materials, coastal themes and passive and active amenity (e.g. passive – outdoor musical instruments; talking pipes, pullies and buckets); (e.g. active – carousel; spider climbers; climbing apparatus).
- Linkages to a cultural interpretive trail linking the Karratha Hills (Regals) to the ocean.
- Implementing outdoor fitness machines along the pedestrian links.

2.3.3 Neighbourhood/District Centre

The future Neighbourhood/District centre will include larger scale community and retail facilities.

These facilities could include:

- Integrated urban development with an innovative independent K-12 school
- Development of shared facilities with an integrated school including
 - Library
 - Playing fields
 - Covered areas
 - Meeting rooms
 - Arts areas
- A multi-purpose community facility that includes a function area; meeting/seminar areas (for use by groups such as church groups, training and community meetings); day/childcare facility; community arts area; display area; kitchen; indoor/outdoor recreational grassed area; amphitheatre; bar facilities.
- Child care centre
- District Shopping centre

3. Executive Summary

This section provides a summary of the full details of this report. Further details are provided in sections 3-10.

3.1. Site Context

3.1.1. Community

The current population of the Karratha is approximately 18,500 people and has an aspirational population target of 50,000 people (Karratha City of the North Plan), totalling an additional 31,500 people. The Mulataga development will provide a home for 25% of this additional population. Using the current demographic profile of Karratha as a guide is it likely the future profile of Mulataga may include the following:

- A high proportion of family households with children (~50%) - particularly younger children, a quarter will be couples without children, a fifth will be people living alone and the remainder will be people in group/share housing arrangements.
- A high weekly household income (~ \$2,000/week).
- A high proportion of school aged children, particularly primary school and pre-school.
- A skilled population, with approximately three-quarters of people aged 15 and over having some form of post school qualification.
- A high proportion of people in the labour force working full time (63%) and a low proportion of unemployed people (2%).
- A diverse population, including people from New Zealand, England, Philippines, India and South Africa; however the majority will be Australian (~70%), including Indigenous (~6%).

Currently Karratha's sense of place and uniqueness is strongly influenced by the landscape and landform (mangroves, hills, and the coast), climate (and seasons), cultural diversity and history, the resources industry and the lifestyle this mix provides to residents. As the planning and development of Mulataga progresses it will be important to ensure the development reflects and builds upon Karratha's sense of place and uniqueness to ensure the development truly reflects the Karratha lifestyle and links the new development to the rest of Karratha (both in the physical and community sense).

Beyond Karratha's sense of place and uniqueness a number key observations can be made about the existing social construct:

- Key benefits to living in Karratha are:
 - Rational – close-knit community, outdoor lifestyle, country feel, everything is in close proximity, work and pay opportunities, access to other towns.
 - Emotional – relaxed, less stress and hassle, carefree, sense of belonging, tight friendships, safe and happy lifestyle.
- Key community priorities are: provision of medical, education, recreation and leisure facilities and services.
- Key community challenges are: high cost of living, population transience, income disparity, attracting volunteers, increasing number of fly-in fly-out workers. Key community changes (or perceptions of) are: quality of life and sense of community has declined over time, increasing antisocial behaviour (criminal and drug/alcohol related); Indigenous heritage is not obvious, recognised or celebrated.

3.1.2. Economic (Tactics 4)

Karratha is one of the major economic centres in the Pilbara, it is dominated by the resources industry (mineral, petroleum and gas) and businesses servicing and supporting this industry. Other key industries of employment are retail, education and training and public administration and safety.

Mulataga is primarily a residential development with one potential commercial activity node on the coast, home-based business, and employment associated with education and community facilities. Beyond this no significant employment activity is planned in Mulataga.

The key objective to providing commercial activity in the Mulataga Community includes the opportunity to:

1. Connect the Karratha community to Nickol Bay
2. Provide the local Mulataga residents with a vibrant village/ shopping centre

Commercial and social analysis indicates that these opportunities are considered mutually exclusive and should be considered as separate activity nodes rather than a single location.

The Mulataga commercial activity node has the opportunity to service the local community (Mulataga residents), broader community (Karratha and Dampier residents) and visitors/tourists. A number of factors will impact on the overall performance and nature of this node – existing and planned activity in the Karratha Town Centre, potential activity east of Mulataga (i.e. within the Mulataga Neighbourhood/District Centre) and the spending capacity and market demand by consumer markets.

3.2. Site Opportunities and Issues/Challenges

3.2.1. Community

Issues/Challenges	Opportunities
Social capital – attraction, retention and connection	
<p>1. Developing and maintaining community fabric There is a community perception in Karratha that the quality of life and sense of community is declining. The challenge for Mulataga is to create a well-functioning and socially connected community to develop and maintain a great social fabric.</p> <p>2. Attraction and retention of residents Resident attraction and retention depends on a range of factors including access to quality community facilities, infrastructure, amenities and social connections.</p> <p>3. Community involvement and volunteerism As per many regions of Australia, Karratha experiences difficulty in obtaining volunteers to support community organisations. This is often due to varying shift work patterns and the changing demographic of the population.</p>	<p>1. Focus Mulataga’s planning on the community By focusing on ‘people’ at the core of Mulataga’s planning this will reinforce a strong sense of place and respond to community needs, climate and lifestyle opportunities.</p> <p>2. Identify and establish social gathering spaces (hubs) The key to effective development of Mulataga will be the establishment of social gathering spaces, both within the proposed villages and at the coastal node.</p> <p>3. Foster community involvement Engaging the community from the very beginning to create enthusiasm, ‘buy-in’ and a sense of ownership in Mulataga.</p> <p>4. Establish local community groups Support and involve residents in the development local community groups and clubs in</p>

Issues/Challenges	Opportunities
	<p>Mulataga over time.</p> <p>5. Activate the Mulataga community Community activation initiatives with simulate community interaction, build relationships, establish networks, create a sense of local pride, identity and direction in Mulataga.</p>
Community engagement fatigue	
<p>4. Extensive community consultation There has been a significant amount of community consultation in relation to the growth and development of Karratha, particularly in recent years. The challenge for Mulataga is to engage the community in an exciting and innovative manner.</p> <p>5. Perceived over consultation and lack of delivery There is a community perception that they have been over-consulted and under-delivered in previous years.</p>	<p>6. Ongoing meaningful engagement and communication with the community A clearly thought-out strategy for community engagement and communications can be developed and implemented across all phases of the process to ensure effective community involvement and sense of commitment to the development of Mulataga. The key for the Mulataga project will be to ensure some evident action occurring and some key quick wins are achieved.</p>
Cost of living and the social divide	
<p>6. Impacts of population and industry driven demands on cost of living Population and industry driven demands have impacted on accommodation costs in particular. This impacts significantly on businesses and service providers, with costs often passed on to the consumer.</p> <p>7. Cost of regional isolation The isolation of Karratha from major trade source centres and the resultant transport costs impact significantly on expenses. This isolation is further reinforced due to a lack of local supply chains.</p> <p>8. High accommodation costs and lack of housing diversity Karratha has a limited variety of housing to meet the varying needs of singles, couples, families and others. This leads to a range of often unappealing sharing arrangements.</p> <p>9. Increasing social divide There is an increasing social divide, and income disparity, between those employed within the resource sector and those not employed within this industry.</p> <p>10. Catering for families Karratha has a large proportion of young families; there is a strong sense that many family needs are not adequately catered for, especially in regards to community services, programs, entertainment and shopping.</p>	<p>7. Provide a range accommodation types Through the provision of a range of accommodation types Mulataga will be able to meet the needs of a diverse market (singles, couples, families, Indigenous, tourists/visitors, FIFO workers, etc.).</p> <p>8. Local provision of services Early provision of key local services will have a positive impact on resident's local standard and cost of living. This could include access to free/low cost quality recreational amenity and experience, childcare, schooling, medical and affordable retail shopping.</p> <p>9. Develop family-based facilities and services This will support families moving into Mulataga. Facilities and services could include flexible facilities and public open spaces, activation programs and events targeting families and local family attractions (e.g. playgrounds).</p>
Indigenous heritage, wellbeing and engagement	
<p>11. Indigenous wellbeing Karratha is the hub for medical, shopping and other services for outlying Indigenous communities. At times this has resulted in increased anti-social behaviour, mostly from drug and alcohol use and lack of transport out of town.</p> <p>12. Reflecting Indigenous heritage</p>	<p>10. Indigenous engagement The opportunity exists to better reflect the significant Aboriginal culture in the region in the development of Mulataga and to better engage with the Aboriginal community.</p> <p>11. Celebrate Indigenous heritage and values Acknowledgement of cultural heritage can be developed in the built form of community</p>

Issues/Challenges	Opportunities
<p>The sites of cultural significance that have been identified in Mulataga, may constrain some development in those areas, but also present a cultural recognition opportunity.</p> <p>13. Indigenous engagement Sub-optimal communication, engagement and integration between cultural groups limits the sense of community cultural cohesion; engagement with Indigenous should be a focus of the Mulataga development.</p> <p>14. Indigenous training and employment Employment outcomes for Indigenous people in the region are still lower than the rest of the population, despite efforts to date.</p>	<p>amenities, public art, community art and community activities.</p> <p>12. Indigenous training and employment The Mulataga development provides an opportunity for the Indigenous communities for ground level training and employment. This could be in the areas of construction, community services, hospitality, environmental/heritage tourism.</p>
Social, cultural and recreational facilities	
<p>15. Current under-provision of social, cultural, recreation facilities and amenities The challenge for the Mulataga development is to identify which is the most appropriate community and recreation facilities that will meet the community need and can be delivered on a site that has a number of constraints.</p> <p>16. Sporting and recreation facilities The challenge for the Mulataga development is to ensure there is provision of sporting and recreation facilities that promote social engagement while also catering for the high level of active recreation needs.</p>	<p>13. Provide a range of community facilities and amenity The opportunity exists to provide a range of community facilities that will provide amenity for both local residents and those that aspire to visit the place where Karratha touches the sea. The key focus should be on the coastal node.</p> <p>14. Provide high quality public open space and recreation facilities The focus on the development of public open space can be combined with the provision of a high-quality recreation amenity that is usable, attractive, safe and accessible, and has the capacity to meet a broad range of recreational needs within close proximity to homes.</p> <p>15. Reflect Karratha's culture in facilities and amenities There is an opportunity to develop facilities and amenities to incorporate and reflect on the culture of the area such as interpretive/cultural trail, school-based facilities for arts and cultural activities outside of school hours and a space to display local Indigenous heritage.</p>
Crime and safety	
<p>17. Perception versus reality of crime and safety Perception of crime and safety can be just as important as its reality for community residents. The challenge for the Mulataga development will be to create a community that feels safe and effectively prevents crime from occurring.</p>	<p>16. Develop pedestrian and cycle friendly streets By planning Mulataga's urban environment to support pedestrians and cyclists (including shade along these corridors), it will have a positive impact on many facets of community life; including perceptions of safety.</p> <p>17. Embrace 'Designing out Crime' principles Perceived and actual community safety and security can be enhanced through use of the 'Designing out Crime' principles.</p>
FIFO/Transient worker integration	
<p>18. FIFO – responding to worker choice and cost of living There are a growing number of FIFO workers in Karratha; while FIFO is most evident in the resources sector, it is also used by other businesses, government and non-government sectors. A challenge for the Mulataga development is to providing housing options to capture this</p>	<p>18. Engage with resource companies Dialogue should occur with resource companies on how higher density developments close to amenities might be accommodated as part of a broader product mix.</p> <p>19. Engage with FIFO workers</p>

Issues/Challenges	Opportunities
<p>market.</p> <p>19. Community concerns about FIFO There is a significant backlash against the prevalence of FIFO in Karratha and surrounding towns. This issue has the potential to be a divisive wedge within the community that could hinder Karratha's reputation and growth, if not properly addressed.</p> <p>20. FIFO integration There is a desire within some members of the residential population to better integrate the FIFO workforce into the community. This can be both a challenge and opportunities for the Mulataga development.</p>	<p>It will be important to consider the needs of FIFO workers in the development of community activation and engagement activities. The Mulataga development provides an opportunity to take a proactive approach to integrating transient workers more effectively in the community.</p>
Health facilities and services	
<p>21. Current under provision of health services and facilities Health and emergency services are overwhelmingly key areas causing much community dissatisfaction and a primary reason for older people leaving Karratha.</p>	<p>20. Local medical services There is the possibility to develop consulting rooms near a full service school, which provide access to GP services or allied health services such as occupational therapy, dentistry and child health nurse.</p>
Education facilities and services	
<p>22. Education – a community priority The provision of education services is a priority area for all sectors of Karratha's community.</p> <p>23. Community perceptions of education Despite the improvements, there is still a significant flow of young people and families seeking educational opportunities in Perth due to a perceived lack of choice and limited educational quality, particularly in secondary and tertiary levels.</p> <p>24. Housing for education staff The diversity of housing for education staff is currently limited and this affects the ability to attract and retain quality staff.</p> <p>25. Human resources challenges The ability to attract and retain staff in the Pilbara and other remote areas is impacted on by the cost of living, lifestyle opportunities and salary conditions. There is also a drain of staff from Schools and TAFE to the resource sector.</p>	<p>21. Investigate innovative government primary school options These could include: seeking independent public school status, developing an early learning centre, integrated access to allied community and health services, shared library, early development of the school oval, incorporation of teachers' accommodation, using high environmental sustainability standards and early establishment of the School Board.</p> <p>22. Investigate non-government school options Two possible options could be considered: development of a site for the provision of an Anglican Schools Commission School or a Catholic Primary School.</p>
Youth facilities and services	
<p>26. Lack of facilities, services and activities for youth Feedback from young people is that there is not enough to do, outside of sport.</p>	<p>23. Engage young people Positive engagement of young people in community activities and decision making will help establish a sense of ownership, connection and pride in their community. Establish youth friendly open spaces and amenities.</p>
Urban integration, accessibility and connectivity	
<p>27. Limited connection and articulation Karratha is currently characterised by limited connection and articulation of streets and suburbs. There is no real public transport, meaning a high reliance on cars.</p>	<p>24. Create good internal and external movement pathways There is the opportunity to create good internal and external connections by creating clearly articulated streets that feel safe and familiar and landscaped and shaded.</p>

Issues/Challenges	Opportunities
<p>28. Integrating Bulgarra and Mulataga Careful consideration will need to be given on how best to interconnect the areas and not create a disparate mismatch between the two.</p>	
Responding to the Pilbara climate and landscape	
<p>29. Climate – harsh, beautiful and extreme The development of Mulataga’s urban, housing and community facility design needs to take into account the realities of this unique environment.</p> <p>30. Coastal and riparian protection There is environmental and cultural significance to the coastal environment and the riparian links, and community access will need to be managed delicately.</p>	<p>25. Create people friendly environments The design of Mulataga can respond to the local climate via the provision of shaded areas, effective management of the micro-climate and the use of Pilbara-savvy building designs with breezeways, covered outdoor living spaces and appropriate building orientations.</p> <p>26. Minimise environmental impacts Involve and inform residents and the broader community in development measure that minimise environmental impact. This could be through interpretive signage, use of boardwalks or a local recycling program.</p>
Tourism/short-term – caravan park accommodation	
<p>31. Lack of affordable short term tourist accommodation There is a drastic lack of affordable short-term tourist accommodation. In order to diversify the Shire of Roebourne economy and attract tourists to the region, it will be important to provide additional caravan parks that are dedicated to tourists.</p>	<p>27. Development of short-stay tourist accommodation Potential development of short stay units in close proximity to the coastal node.</p>
Seniors facilities and services	
<p>32. Lack of seniors facilities, services and amenities There is a lack of seniors’ services and amenities in Karratha making the town currently no a very a viable location to retire.</p>	<p>28. Development of an aged care facility Potential development of independent living units in close proximity to the Neighbourhood/District centre.</p>
Sustaining community facilities	
<p>33. Sustaining facilities A common community concern is how the level and quality of service provided by a developer can be transitioned effectively to the local government once handover of the development is completed.</p>	<p>29. Long term maintenance of community facilities and amenities As part of developer contribution negotiations, commitments need to be sought from the Shire for how community facilities and amenity will be maintained to a high standard once the development is handed over.</p>

3.2.2. Economic

Issues/Challenges	Opportunities/Options
<p>1. Potential Impact on Dampier Commercial and community activity in Dampier continues to struggle in the trade shadow of Karratha facilities. Dampier does have a competitive advantage over Karratha by virtue of</p>	<p>1. Scenario A - No commercial activity A range of community based activity developed around coastal recreation only. Commercial activity may be restricted to membership based hospitality as part of a recreation based facility</p>

Issues/Challenges	Opportunities/Options
<p>access to high visual and physical access to the water front. The development of community or commercial facilities in a coastal node at Mulataga (Scenario A) may attract members and customers away from Dampier facilities and subsequently reduce the attractiveness viability and commercial efficiency of Dampier facilities.</p> <p>2. Potential Impact on Karratha Town Centre None of the scenarios offered as potential development at the coastal node will impact on the performance of the Karratha Town Centre.</p>	<p>(such as a boating or other water based club).</p> <p>2. Scenario B - Single business operator Development of a coastal node around a single operator. Trade area and spending analysis indicates that a single operator could be developed up to 400 sqm floor area on 1,200 sqm land area.</p> <p>3. Scenario C - Small supermarket based local centre Despite the introduction of a supermarket based centre as part of a larger Mulataga community. A smaller IGA operation could reinforce the coastal node activity and provide an alternative to the major operators. A small Supermarket based centre could comprise a total floor space of 2,000 sqm, and include:</p> <ul style="list-style-type: none"> • 1,000 sqm - supermarket (1/3 typical size) • 600 sqm - 5 local shops/takeaway • 400 sqm - cafe/restaurant <p>4. Scenario D - Major supermarket based centre The coastal node could provide the role of the neighbourhood centre (single supermarket based centre) planned in subsequent phases. Creating the centre as part of the coastal node reinforces the sustainability of activity in Mulataga by reducing the potential for duplication of activity (by the Neighbourhood/District centre) and providing a single focal point for the community east of the Karratha Town Centre. A major Supermarket based centre could contain up to 5,000 sqm and include:</p> <ul style="list-style-type: none"> • 3,500 sqm full line supermarket – either operator • 1,500 sqm - 15-20 specialty shops

3.3. Planning / Design Response

Community	Commercial
<p>1. Establish a high-class coastal node development Establishing the coastal node is the most important and transformational opportunity of the Mulataga development. It will provide the key destination point for people from across the region. All attempts should be made to ensure the development of coastal facilities and amenities occur as soon as possible.</p> <p>2. Provide a unique range of recreational facilities (in addition to coastal node facilities) The provision of quality public open space and its associated amenity will be a hallmark of the development and contribute significantly to the quality of life for those living, working or visiting Mulataga. The focus on the development of public open space should be on the provision</p>	<p>1. Single trading front Development should where possible encourage a single trading front – where all commercial activity can be accessed and seen from a single point.</p> <p>2. Direct access The highly transient nature of the labour force and visitors means that access to a new activity away from the centrality of the Karratha Town Centre should be possible without having to extensively ‘way find’. The activity should be directly accessible via the continuation of the coastal route and directly via the inland route.</p> <p>3. Create a strong sense of arrival</p>

Community	Commercial
<p>amenity that is usable, attractive, safe and accessible, and has the capacity to meet a broad range of recreational needs within close proximity to homes.</p> <p>3. Provide culturally responsive facilities and amenities There is the opportunity to reflect the local culture through facilities, amenities and programs.</p> <p>4. Address the key cost of living impact – housing costs The Mulataga development has the opportunity to address the cost of living via positively impacting on the local housing market by developing accommodation choices that have a range of prices/affordability, tenures, densities, typologies and lot sizes.</p> <p>5. Develop short-stay tourist accommodation Provide opportunities for the potential development of short stay tourist units close to the coastal node.</p> <p>6. Apply of Crime Prevention Through Environmental Design (CPTED) Principles The Mulataga development should embrace CPTED principles.</p> <p>7. Consider a range of education facility options The provision of a local school will be one of the key attractors to prospective residents. It therefore worth considering how education facilities will be planned for in the Mulataga development. One or more of the following options could be considered.</p> <ul style="list-style-type: none"> • (Primary School Option 1) An Innovative Government Primary School • (Primary School Option 2) Another Non-Government Primary School to meet demand for the Non • (Non-Government Secondary School with secondary school site allocated in the new phase of development - abutting the Mirvac site <p>8. Develop facilities that cater for youth Development of youth-based facilities such as a multi-wheeled track; access to arts/band jam places and social amenities in parks and open spaces.</p> <p>9. Create seamless connections between Mulataga and surrounding areas Creating clearly accessible and linked roads, pedestrian and cycling links as well as lineal parks will enable easy access to the beach, the hills or the city centre and encourage people to recreate in their community. Links and continuity to Bulgara are essential</p> <p>10. Provide local access to medical services There is the opportunity to develop consulting rooms in close proximity to a full service school, which provide access to health services such as a GP, occupational therapy, dentist and child health nurse.</p>	<p>Physical integration of all community and commercial activity is imperative to creating a strong activity node.</p> <p>4. Flexibility The development of activity servicing the local community will take time to become sustainable. The development of activity servicing the broader District/Regional and visitor /tourist community may be developed earlier but may lack amenity if developed too early. The development of a larger centre may be developed in stages and require a staging plan.</p> <p>5. Main Street The alignment of the street or the orientation of the shop/café fronts will be crucial to success. Pedestrian movement thru the street to the supermarket will afford the smaller specialty shops exposure and awareness to trade successfully.</p> <p>6. Alignment /Orientation of street and shops An East West main street alignment with shops orientated north provides a single sided street allowing all shops to take advantage of the vistas primarily facing the coast. However this alignment also limits the ability for the group of shops to build a trading synergy that can occur when shops trade opposite one another. A North South main street alignment with shops orientated east and west provides a double sided street (under larger centre options only) The northern most tenants could be café/restaurant based and still take advantage of the coastal vistas while the street creates a logical and strong sense of arrival.</p>

Community	Commercial
<p>11. Respond effectively to the local environment to create people friendly environments The design of Mulataga should respond to the local climate via the provision shaded areas, effective management of the micro-climate and the use of Pilbara-savvy building designs with breezeways, covered outdoor living spaces and appropriate building orientations.</p> <p>12. Focus on 'layers of place' in Mulataga The development of Mulataga provides the unprecedented opportunity for Karratha to embrace the ocean (water) and beauty. It provides the canvas to create the notion of “an outdoor living room” albeit in a hot and dry climate. There are opportunities to create destinations for the people of Karratha as well as visitors, while creating a lifestyle that encourages local residents to develop the feeling of being “at home.” These opportunities include:</p> <ul style="list-style-type: none"> • Embracing the ocean (interface) • Designing exceptional buildings for the climate • Strategies to ‘make Mulataga (Karratha) home • Developing integrated planning and governance approaches • Strategies to create a strong social fabric (through social connectedness and hardiness of resident) 	

3.4. Implementation

3.4.1. Community

Develop a Community Engagement and Communications Plan

A community engagement and communications plan will be developed to guide public participation in all phases of the project’s development.

Develop a Community and Economic Development Plan

To ensure a distinctive quality of life at Mulataga, it is recommended that a Community and Economic Development Plan (CEDP) be developed with a view to implementation during the next five to 10 years.

3.4.2. Commercial

The commercial activation of the coastal node will require an attraction plan to target and partner with a recognised and previously successful operator to establish the commercial operations.

It should be noted that the future Neighbourhood/District activity centre (which sits outside of Mirvac's site) will require the attraction of a major supermarket operator. These operators are already located in Karratha and will make their decisions based on satisfying a balance between commercial sustainability without unduly eroding it existing store sales to a non-sustainable level.

4. Community Overview

4.1.1. Sense of Place

Karratha's sense of place is strongly influenced by its unique and ancient landscape and evolution as a burgeoning community boosted by the boom in the resources industry.

Mulataga has environmental riches that make it distinctive and accessible, providing an unsurpassed opportunity to finally connect Karratha to the beautiful Nickol Bay. Up until now, people were teased by views of the coast from the upper reaches of the Karratha Hills, and have not had the means to truly connect with the coastal lifestyle unless venturing to Dampier, or further north to Point Samson.

Key features include:

- The mangroves, foreshore and beach that provide an opportunity for unique environmental and community engagement, with a view of Nickol Bay and enjoyment of the cool evening breezes, which are so cherished in the Pilbara.
- Riparian links – These ecologically diverse and culturally significant landforms contribute to the health of the aquatic ecosystems by filtering out pollutants and preventing erosion.
- The Karratha Hills – these ancient, deep red rock features define the entering edge of Mulataga, providing amazing inland views and a visual link to the hinterland.

Findings from the Karratha City of the North community engagement process revealed the following as the key elements that community members felt best reflected their sense of place in the town. These aspects were seen as being essential in being retained and celebrated in the development of Karratha as a city. Mulataga provides an amazing opportunity to harness these facets:

Community, Social, Heritage

- Sport and recreation (e.g. boating).
- Outdoor living/activities during evening/night.
- Relaxed and casual (country town) feel.
- Indigenous culture.
- High population turnover (i.e. length of stay in the town).

Environmental

- Materials and colours – red, brown, soft spinifex yellow, dark blue purple, silver of gums, sky.
- Landform – framed by hills, tributaries into the bay, potential for connection to the Ocean.
- Climate - outdoor living/activities occur during the evening/night as it's too hot during the day.
- Sea/foreshore - tidal changes.

- Seasons – lack of rain, outdoor activities in the evening, planning for sun and wind.

4.1.2. Community – Social Construct

The following key observations are made in relation to Karratha's Community Social Construct from the review of a range of consultation findings:

- The provision of hospital and medical services; the cost of living; entertainment and leisure; sports and recreation facilities; and youth activities and facilities , are the highest priorities for the community.(As described in the Shire of Roebourne 2011 Community Survey
- The sense of wellbeing within the community is primarily centred on social proximity and financial aspects.
- The cost of living, in particular housing/accommodation costs pervades all aspects of community life including attracting and retaining community members, the viability of small business and the continuity of community services.
- There are key rational benefits to living in Karratha – close-knit community, outdoor lifestyle, country feel, everything is in close proximity, work and pay opportunities, access to other towns.
- There are emotional benefits to living in Karratha – relaxed, less stressed and less hassle, carefree, sense of belonging, tight friendship, and safe and happy lifestyle.
- There is a perceived decline in quality of life and sense of community over time as the population has increased and the prevalence of shift work and transient workers grows.
- Attracting volunteers amongst community members in Karratha is difficult, and is impacted on by shift work and a transient population.
- The region's Indigenous heritage is not obvious in the local community and could be better recognised and celebrated.
- Income disparity amongst the employment sectors causes some concern amongst the community.
- There are challenges for stay-at-home parents, with the need for additional child care services and opportunities for increased social interaction.
- There are concerns in relation increasing anti-social behaviour – both criminal and alcohol/drug-related.
- There are high levels of population transience due to:
 - Career motivations – with Karratha providing an opportunity for advancement and financial security;
 - Cost of living – particularly for those not employed in the resources industry;
 - Limited availability of key community services, in particular education and health services, compared to Perth or other cities;
 - Concerns related to the lack of services for young people (note: large demographic drop at this age – with families moving from town);
 - Lack of leisure and entertainment options.

The following findings are generated from the Shire of Roebourne's 2011 Community Survey.¹

- As with previous surveys, the community's biggest concerns are health and the costs of living.
- Leisure and entertainment was the third-biggest concern – an area that the Shire does have responsibility. Females thought this need would best be met through cafés/restaurants, while males felt it was boating and camping amenity. Other priority areas include community safety and events/activities.

¹ Source: Shire of Roebourne Community Needs and Satisfaction Survey June 2011 Prepared for the Shire of Roebourne by Geografia

- More generally, youth services, leisure/entertainment, footpaths and cycle-ways, parking and streetscapes were areas of poorest performance. Affordability, safety/security, sense of community and health services were areas that had become so bad for 10% or more of the community that they now may consider leaving.

General satisfaction for the City of North vision is high, and in keeping with the finding from the Karratha 2020 Vision survey that residents would like to see Karratha grow with expanded services and facilities.

- Nearly one-third of residents don't know how long they intend to stay, suggesting that the Shire's efforts to improve quality of life can influence future decisions. Of note is the fact that since 2008, there has been a decline in the number of people who intend to stay for 10 years or more.
- Addressing the costs of living, followed by investments in local amenity (particularly health services) are the most likely ways to entice FIFO workers, with Dampier and the Karratha CBD the preferred place of residence.
- Continuing to advocate for improved medical services, being innovative in working to reduce the cost of living and continued investments in improved amenity are obvious Shire priorities.

4.1.3. Neighbourhood – Spatial Construct

Residential Realities

The Karratha town site consists of six suburbs: Bulgarra, Karratha, Pegs Creek, Millars Well, Nickol and Baynton (and Bayton West), running in an east-west linear pattern.

Growth suburbs are:

- Nickol
- Baynton (West)
- Mulataga (in planning phase)

Housing stock within Karratha varies greatly, from low-quality shacks in Bulgarra, older-style housing in Pegs Creek, and newer housing, brick and tile/Colourbond, some with double storeys and ocean views in Nickol, Baynton and Bayton West. More recently, transportable homes have been introduced in Karratha.

High housing costs make it difficult for employees to live in Karratha unless employees receive significant accommodation support from their employer. Resource companies often provide staff with this assistance; however, many retail, personal services, hospitality and tourism companies are unable to provide this level of accommodation support.

A significant amount of Karratha's dwelling stock is either owned or controlled by resource companies or resource-related contractors. As well as purchasing new homes, the companies rent privately-owned properties as they become available. Resource company schemes are also offered to some employees to either buy or rent houses on the open market.

Scarce housing limits diversity in the local economy and hampers the ability of private and public organisations to provide the services and opportunities for the town to develop mature, functioning housing and labour markets. In Karratha, this causes a high labour turnover as workers and their families tend to only stay in the town for as long as jobs last. High-cost housing also displaces lower-income households, whether they are renters or potential buyers. Volatile house prices are a dis-incentive to prospective, longer-term residents and deter them from making a financial commitment to the town. Market volatility also works against the private property sector, with high levels of uncertainty making it difficult for developers to attract finance for both residential and large-scale commercial projects.

The Pilbara Towns Housing Study (2009, unpublished) assessed the housing market conditions and unmet housing needs (to 2015) in the Pilbara towns and recorded the then current apparent demand of 613 dwellings in Karratha. It was recently reported in the West Australian newspaper that the figure had reached over 1,200. This includes unmet housing needs from existing residents.

5. Economic Context

5.1. Economic Factors

5.1.1. Key aspects of Karratha's local economy

The town's local economy is characterised by:

- Domination by the mineral, petroleum and offshore gas industries - More than 250 million tonnes of exports per annum (three times the output of Fremantle) and \$87 billion worth of resource related infrastructure under construction or consideration
- The key industries of employment are mining, construction, retail, education and training, and public administration and safety.
- Businesses servicing the minerals and energies sectors and engineering, surveying, personnel and equipment hiring are well represented.
- Along with Port and South Hedland, Karratha is one of the major centres of commercial activity in the Pilbara.
- Tourism is a small contributor to the economy, as are the manufacturing and retail sectors. This is mostly due to the lack of available short term accommodation and the high costs for goods and services
- Most tourists are from the domestic market, with only a small percentage from overseas.
- The manufacturing sector consists mainly of small businesses supplying the regional market.

5.1.2. Mulataga's local economic context

No significant employment activity is planned in Mulataga beyond a potential commercial activity node on the coast and the typical home based business and education and community facilities. Commercial activity in Mulataga will therefore depend on satisfying consumer demand by a range of markets. The vision for commercial activity in this node must reflect an understanding of:

- What the commercial activity node could be?
- What it should be and what it shouldn't be?
- What will it never be?

Activity at a coastal node has the opportunity to serve a range of consumer targets:

- Activity that will serve the local Mulataga community
- Activity that will serve the broader Karratha/Dampier community
- Activity that will serve the visitor/tourist market

Key factors that will influence activity in a coastal node at Mulataga include the spending capacity and market demand for commercial activity by arrangement of consumer markets including:

- Population of Mulataga Estate
- Population of the broader Mulataga District
- Population of Karratha/Dampier
- Population of hinterland including Wickham, Point Samson and Roebourne townships
- Visitor and tourist numbers

The overall performance and nature of commercial activity will depend on the influences of existing and planned activity in and around Mulataga:

- Existing activity in Karratha Town Centre
- Planned activity in Current Karratha Town Centre
- Potential activity east of Mulataga – size, location, nature, timing and staging of 'Mulataga Neighbourhood/District Centre'

5.1.3. Existing Commercial Activity

Karratha Town Centre

Karratha Town Centre is the only commercially successful activity node in Karratha. The Karratha Town Centre has two full line supermarkets (Coles and Woolworths) and Discount Department store (Kmart). These supermarkets capture the vast majority of not only typical supermarket spending but also the spending that would normally be captured by specialist food/grocery tenants that are not available in Karratha.

The Town Centre will continue to attract sales from a Region wide and District wide catchment. There is sufficient dollars available in Karratha to create a sustainable demand for these specialty tenants. However the high cost of transport logistics for a relatively small weekly supply has traditionally restricted the attraction of these specialty stores into the Karratha market. The Karratha supermarkets therefore benefit from the capture of goods and services that it would normally lose to these specialty tenants in an urban context.

Regional Townships

The towns of Point Samson and Roebourne have a very limited supermarket offer, while Wickham has a small Woolworths offer that attracts sales from communities in these townships. However the Karratha supermarkets also capture a significant amount of the supermarket spending capacity from these communities.

Local Centres

A lesson needs to be learnt from numerous previous attempts to create smaller centres in Karratha to service 'walkable' or 'liveable' community catchments. Whilst there can be debate over the relevance of this approach in an urban context, the different dynamic of consumer behaviour in Karratha reduces the relevance and effectiveness of this typology in remote and isolated communities.

5.1.4. Planned or Potential Commercial Activity

Structure planning for the area identifies the potential location for of a district/neighbourhood activity node at the "Potential Future Mulataga Neighbourhood/ District Centre" allocated to land immediately adjacent (east) to the Mulataga estate. The potential Mulataga Neighbourhood/District Centre site is located 4 km east of the Karratha Town Centre. Whilst this centre is not part of the current planning for the immediate Mulataga estate, the vision for the nature and staging of this centre will have the potential to impact on the performance of any activity planned to be developed in the Mulataga estate.

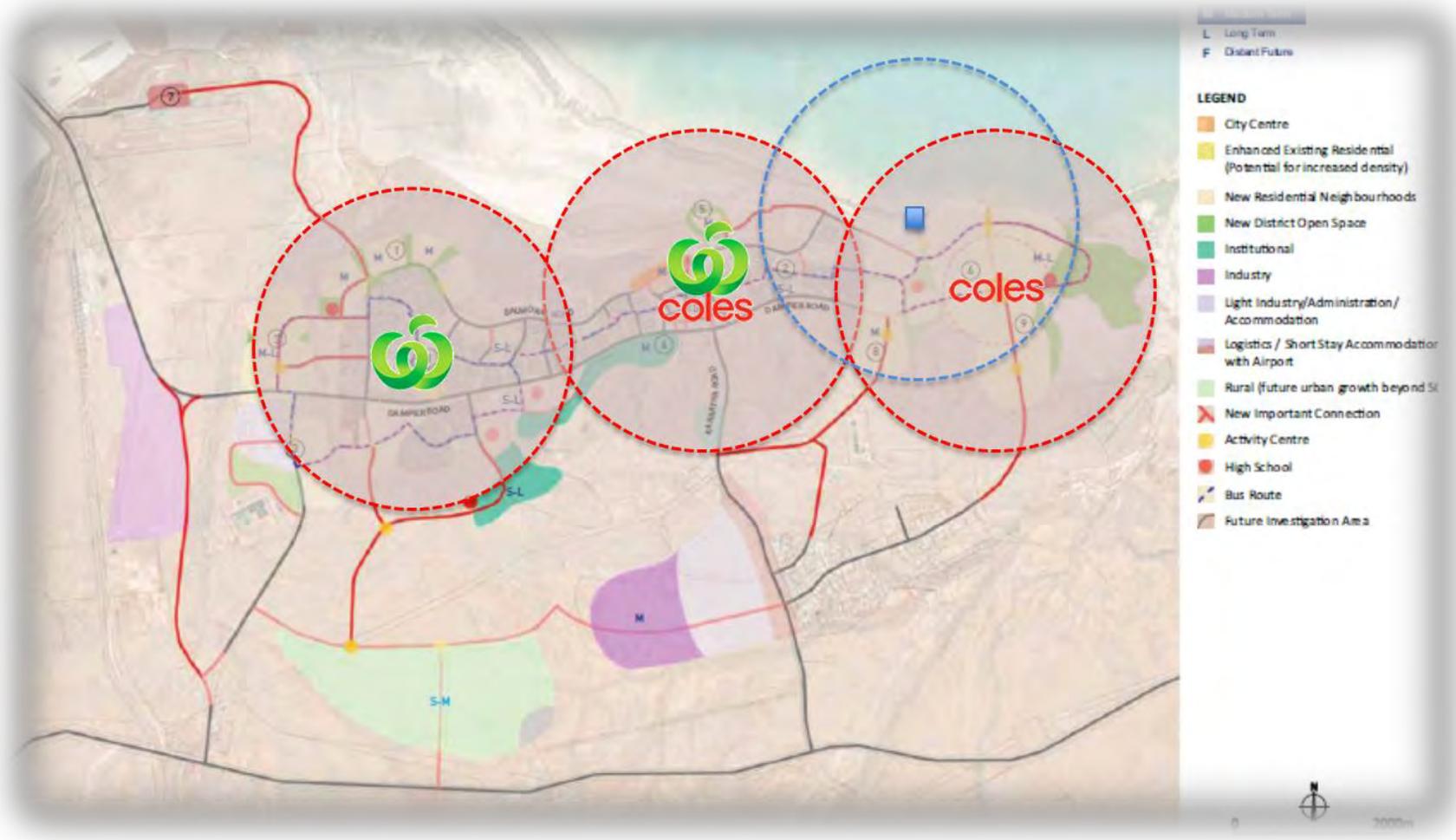
In an urban context the Mulataga future proposed District/Neighbourhood activity node could comprise a DDS and full line supermarkets – similar to the current offer of the Karratha Town Centre, however it is unlikely that this would be the intention for the Mulataga Neighbourhood/District Centre, with the focus for this type of shopping being in the City Centre..

5.1.5. Implications

It is possible that the two existing supermarkets in Karratha Town Centre could become too busy to service their expanded community upon reaching 50,000 residents. This has already occurred in places like Broome where the demand and movement of some stock supermarket items regularly results in the inability to keep stock shelved.

In the future there may be an opportunity for the introduction of an urban distribution of full line supermarkets including one in a centre either side of the Town Centre. There may subsequently be a future tenant demand for a full line supermarket in Mulataga and if this occurs it will place even more pressure on the potential economic viability of any business activity within the Coastal nose at Mulataga.

Figure 1 Potential Supermarket Distribution (Example)



5.1.6. Market demand

Realising the vision for a resident population of 50,000 in Karratha/Dampier will create \$900M p.a. in retail spending including \$364M p.a. in food and grocery spending and \$132M p.a. in cafe restaurant takeaway spending.

It is predicted that 6000 residents in Mulataga would potentially generate an aggregate retail spending of \$99M p.a. including \$40.5M p.a. in food and grocery spending and \$14.25 M p.a. in cafe and restaurant spending.

The broader Karratha/Dampier community is intended to comprise a further 44,000 residents. The broader Karratha community is expected to generate an aggregate retail spending of \$697M p.a. including \$282M p.a. in food/grocery retail spending and \$102M p.a. in cafe/restaurant and takeaway spending.

6. Planning for People

6.1. The Sociology of Community

In planning for the development of the Mulataga community, it is important to examine how this can be done from a sociological perspective.

This includes examining:

- Social Capital.
- Wellness.
- Quality of Life.
- Cultural Anthropology.

Social Capital is about relationships that either lead to collaborative action or the influence that collaboration has by its very existence. It's about achieving successes that collectively are greater than is possible working alone. It's about activating networks.

In many ways, its greatest asset is **trust**.

It is important to recognise that there are downsides to social capital, including the fact that the privileged are often more able to mobilize their networks to their mutual benefit in comparison to the less privileged, creating resentment and a greater gap between the haves and have-nots. Another example is when a small group of protestors oppose a change to their neighbourhood that would be of great benefit to the majority.

However, generally social capital is an essential element to a functioning community.

Wellness is a term used to highlight how satisfied we are with our own lives. It is quite a personal perspective and is often viewed very subjectively, as it is based on personal values, beliefs and preferences. It has been described as "positive health" and covers the dimensions of:

- Social well-being.
- Physical well-being.
- Psychological well-being.
- Intellectual well-being.
- Spiritual well-being.
- Material well-being.

It appears as though the sense of wellness of a person is connected to the level of responsibility they assume for their own well-being. Community wellness is connected to the level of self-management and responsibility that a community is willing to assume.

Quality of life, on the other hand, is more closely associated with how we believe others are satisfied with their lives. Interestingly, quality of life appears to be influenced by the degree of congruence there is between a person’s perception of what is happening around them and their own values, priorities and goals. In some ways, wellness and quality of life are opposite sides of the same coin, as there is a strong connection between self and the perception of the positivity or negativity of what is happening around them.

Social anthropology is more connected to the meaning that people make of the places and community in which they live. It is critical to individual wellbeing and a sense of community.

Social anthropology is not just connected to place but as the rise of communities of interest and virtual communities occur, it can be seen as being symbolically based on the experiences, histories and activities that people have shared. Interestingly, it remains a result of social interaction. In a very simplistic manner the complexity of the sociology of community has been summarised into the following graphic:

© Creating Communities Australia Pty Ltd 2005

Figure 2: Sociology of Community Matrix



6.2. The Connection between Community and the Local Economy

Economic sustainability must be applied to local employment, locally owned and operated businesses, the ability of local people to get local jobs, the skills of local people matched to emerging jobs, with young people having the opportunity of being engaged in a meaningful way in the local area. *Local* as applied to economic sustainability and the local economy usually is a larger area than the local neighbourhood, but it should not exceed the boundaries of the district or region that people relate to, or it becomes meaningless.

6.3. Creating Communities by Intention

What has emerged in recent years is the need to intentionally create communities that are based on values-based aspirational visions of the future and not expect that they will just emerge over time. Actually, the task of creating a community is as complex as, or even more complex as, starting and running a business over many years!

However, the outcomes speak for themselves and are a salient consideration in the development of Mulataga.

Over time, Karratha has evolved, with little thought to the dimension of planning for community, with the focus being more on development of the urban form rather than community.

The development of Mulataga provides a unique opportunity for Karratha to not only plan urban form and neighbourhoods, but to actually plan for a community.

The model that can be used (below) was developed as an easy method of taking the components of the sociology of community and arranging them into the realms in which they live. The realms are as individuals, in community, in what they do to gain purpose, whether that is paid or voluntarily, and in the physical space in which they live.

6.3.1. Intentional Communities Matrix

Figure 3: Intentional Communities Matrix



INTENTIONAL COMMUNITIES MATRIX © CREATING COMMUNITIES AUSTRALIA PTY LTD

6.3.2. Four Layers of Place

The effective planning of the urban space of Mulataga is essential. Of particular note is the “golden opportunity” of connecting Karratha to the coast for the first time, via the development of a unique coastal node, with community amenity and accessing an outlook that is currently unavailable in the town.

The urban design process for such a development is very important, including the careful planning of built form, traffic flow, pedestrian connections and so on – as this can result in the creation of a pleasing physical environment. The essence of a vibrant place, however, is to be found in the social dimension. Some places have a significant ‘buzz’ yet have developed with minimal or even bad planning, while other places have failed to make the transition from magnificence on the drafting table to life at street level.

A pleasing social environment shapes experience and perception of the physical environment. Therefore, Mulataga’s coastal node in particular must be a ‘people place’ that reflects the values of the community and a shared sense of belonging and wellbeing.

The ‘Four Layers of Place’ concept (developed by Creating Communities Australia Pty Ltd) can usefully be applied to the development of a unique place like the Mulataga coastal node. This concept indicates how ‘layering’ is required to maximise the potential of a place.

In planning and developing Mulataga, and in particular the coastal node, the following four layers are proposed:

First Layer: Venue. Streets, footpaths, parks, piazzas, cultural facilities and so on can all be components of the venue or physical environments that can together be labeled ‘place’. Traditional methods to place and facility-creation focus on the provision of the material, and reflect a ‘build it and they will come’ approach.

Second Layer: Managed Venue. A second layer of place can be achieved through the establishment of a planning mechanism or management model to increase the appeal of the physical venue. Economic development plans, for example, can also be developed to benefit enterprise co-located with community facilities.

Third Layer: Activated Space. This layer adds sophistication to the management of place so that full activation occurs through public events, activities and programs. Through the presence and engagement of a broad range of demographic groups, the Mulataga coastal node can become a very lively space.

Fourth Layer: Sense of Place – A Connected Place. The essential elements of the fourth layer are that it is a place where people are connected to each other and to the place. They are places of meaning where the connection is deep and create a sense of belonging and acceptance, which is translated into ownership and a desire to contribute.

6.4. Local Economic Development

Mulataga's local economy is not planned to include significant employment activity beyond commercial retail on the coastal node, although there will be home business and education and community facilities.

Commercial activity in Mulataga will therefore depend on the vision for the community and must balance:

- What Mulataga could be?
- What should it be?
- What it shouldn't be?
- What will it never be?

The overall performance and nature of commercial activity will depend on the influences of existing and planned activity in and around Mulataga including:

- Existing activity in Karratha town centre
- Planned activity in Current Karratha town centre
- Potential activity east of Mulataga – size, location, nature, timing and staging of 'Mulataga Neighbourhood/District Centre'

Activity at a coastal node may serve a range of consumer targets:

- Activity that will serve the local Mulataga community
- Activity that will serve the broader Karratha/Dampier community
- Activity that will serve the visitor/tourist market

Karratha Town Centre is the only commercially successful activity node, and it is very successful (in commercial and economic terms). Nothing planned for development at the coastal node will impact on the success of the town centre.

However, other activity nodes planned to be provide elsewhere in the Mulataga District may influence the nature and performance of activity in Mulataga Estate and the coastal node in particular.

7. Challenges and Opportunities

7.1. Social

Although Karratha has both natural and economic attractions, there is a recent history of some community dissatisfaction, primarily relating to a feeling of being ‘short-changed’ in the provision of community facilities, amenities and services, and the desire for a standard and cost of living that is commensurate with a town of its size – especially one that is a source of significant export wealth.

The State Government’s Pilbara Cities program is certainly addressing these concerns head on, and there is evidence of public support for this significant investment and for the focus on developing Karratha into a city. Concerns raised by the community in relation to core services and facilities are being addressed in areas such as health (new hospital proposed with additional services), education (new schools), utilities infrastructure (improved water and power), transport (proposed transport corridor) and community amenities (youth shed; community centres); and housing (Bayton West and Mulataga developments).

Growth in the resource industry and associated projects will continue to place pressure on housing, facilities, services, amenities, and the attraction and retention of a workforce in non-resource industry employment. The development of Mulataga is crucial in mitigating these pressures.

The following section describes the key challenges and the associated opportunities that could be harnessed to address these challenges.

Those identified relate more broadly to Karratha and their relevance to Mulataga, while the opportunities identified specifically relate to the development of the Mulataga in how these can address the challenges.

The following table provides additional details of key challenges and opportunities identified in the Executive Summary.

Challenges	Opportunities
<p>1. Social Capital - Attraction, Retention and Connection</p>	
<p>Community Fabric The social fabric, including quality of life and sense of community wellbeing in Karratha is perceived by some as declining. Much of this has been reported to be the result of 12 hour shifts, high cost of living, the increased amount of FIFO and the high turnover of residents.</p> <p>This high resident turnover impacts on the continuity of services and the</p>	<p>Planning for Community Mulataga provides the opportunity to establish a new example for how development can be effective in the Pilbara, by responding to the community needs, climate and lifestyle opportunities evident in this unique location.</p> <p>A new and innovative approach that places people at its core will reinforce the strong sense of place and provide a wide range of amenities and facilities that the community</p>

Challenges	Opportunities
<p>social connections, with people becoming tired of making friendships and then people leave. Some believe these challenges erode the sense of community and impact on attraction and retention of residents.</p> <p>Several factors may contribute to a perceived lack of connection including:</p> <ul style="list-style-type: none"> • Poor community infrastructure which inhibits social connection including an unmet need for community gathering places that enable new residents to connect socially with others. • A lack of long-term commitment to Karratha – with living in the town seen as a short phase in which the focus is to earn money, not as a place to invest relationally or economically, beyond family survival needs. • A dearth of professional, social and personal development opportunities for partners of employees. • Poor planning. <p>Other more recent developments have been described as ‘soulless’ with a perception that they more reflect the northern suburbs of Perth rather than the uniqueness of the Pilbara, both in their layout, built form and lack of retention of the natural environmental features.</p> <p>Attraction and Retention Central to the quality of life and expectations of the community is access to quality community facilities and amenities. Infrastructure, services and facilities in Karratha, are currently not able to adequately cater for the current population, though significant changes are being made.</p> <p>Additionally retention of residents is linked to the development of social connections. Currently some workplaces offer new employees work orientation, welcome events and support in regards to accommodation matters. However these initiatives tend to be focused on workplace induction as opposed to orientation to the community and town, an issue that risks potentially isolating individuals and families new to the area. A key reason for</p>	<p>desperately seeks.</p> <p>The development of a vibrant and attractive suburb that capitalises on its connection to the foreshore and reflects the aspirations of the community will greatly assist in providing a vehicle to better attract and retain residents and a skilled workforce required to diversify and grow the local economy and community.</p> <p>Public Amenity Development The development of the coastal node to include a high level of amenity that caters for a broad cross-section of the community is essential as the iconic destination and social interaction point.</p> <p>The development needs to embrace the natural environment to create a sense of place, by providing more opportunities for social engagement through the development of connected, activated and well-managed places that act as destination points for all sectors of the community.</p> <p>A key to the effective development of Mulataga will be the establishment of social gathering places, both within the proposed villages on a smaller scale and at the coastal node on a larger scale. This includes the provision of intimate social spaces integrated with community and commercial facilities; attractive and functional open spaces (with BBQs, gazebos; trees, play areas etc.), and connection to pedestrian/cycling corridors.</p> <p>Fostering Community Involvement The Mulataga development presents the opportunity to engage the community from the very beginning to create enthusiasm, ‘buy in’ and a sense of ownership in the development of the area.</p> <p>Feedback and input provided by community members and other stakeholders will help to guide planning in a way that will ensure that what is planned is what is needed now and into the future.</p>

Challenges	Opportunities
<p>residents choosing to leave Karratha is lack of family contentment. While the primary reason for leaving may often relate to other factors such as children's education needs, distance from other family members or the standard of community services, the failure of partners and children to settle into Karratha is a significant contributor in the high turnover of residents.</p> <p>Community Involvement and Volunteerism As per many regions of Australia, Karratha experiences difficulty in obtaining volunteers to support community organisations. This is often due to varying shift work patterns and the changing demographic of the population. There is a high turnover of residents in Karratha which results in a range of negative impacts on the community, including a lack of continuity of community services, a poor perception of the town and a lack of pride shown in the community.</p>	<p>The identification of some local community champions is essential to fostering broader public participation and excitement about the development.</p> <p>The development of a community engagement and communications plan can be devised to guide the public participation in all phases of the project's development. The first phase of this engagement has already commenced with the development of community reference group and the planning for the Planning Design Forum. As the project progresses, there are many opportunities to expand the broader community understanding of and engagement with Mulataga's development.</p> <p>Establishing Mulataga's Community Groups Mulataga will cater for a range of resident types, ranging from single workers (FIFO) to larger families. It is likely that the demographic will, however, be similar to the broader demographic of Karratha with a high proportion of young families and couples.</p> <p>Assuming that is the case, the following groups and clubs could be supported to develop over time as a critical mass of residents start to live in the area:</p> <p><i>Mulataga Founders Group:</i> – this group would have a passion for the development of Mulataga and could work with the developer in establishing key activities and community involvement. It could be the precursor to the establishment of a Mulataga Neighbours Group (which may be a subset of the Karratha Community Association) and could be supported by the developer to conduct resident welcome and induction activities, including the provision of welcome events/kits/networks for new residents.</p> <p><i>Mulataga Environmental Heritage Group:</i> – the significant riparian and coastal environment may enable the development of a local environmental care group who could engage in a range of environmental protection and education initiatives. Inclusion of Indigenous group members would be recommended.</p> <p><i>Mulataga School Board:</i> – Prior to the development of the local school, it is possible to establish a School Board that will work with the Education system provider to establish the school vision, colours, uniform, community links focus etc.</p>

Challenges	Opportunities
	<p><i>Mulataga Parents Group:</i> - The establishment of a parents group that particularly supports those parents responsible for the day-to-day care of children will be essential, based on the current Karratha experience. This group could provide social connection and activities for young families, and could work with the School and early Learning Centre to provide playgroups, a toy library and parent development sessions.</p> <p><i>Mulataga Coastal Club:</i> - A 'coastal club' that focusses on supporting a coastal social lifestyle could be developed. It would include those with boating interests, but also those that are keen to just enjoy the coastal lifestyle opportunities of fishing, beach walking and other activities. The club could be supported to hold social functions, manage the community facilities and support the ongoing development of the coastal node.</p> <p>Activation</p> <p>The importance of community activation strategies in establishing and maximising use patterns and nurturing of social capital is often underestimated. Place is an 'enabler', but the most successful and interesting places result from both place creation and community activation – not dependent on a single enabler but instead an armoury of initiatives that stimulate people to interact, build relationships, establish networks and create a sense of local pride, identity and direction.</p> <p>In an activated place, people are connected to each other, and to the location, in socially and culturally meaningful ways. In such places, the connections people make are deep, creating a sense of belonging and acceptance which translates into ownership and a desire to contribute. These connections are often what makes a place distinctive – and can focus around family, culture, heritage, environment and community.</p> <p>The community connection to Mulataga can be delivered through planning for shared</p>

Challenges	Opportunities
	<p>experiences and activities which connect people. Common experiences and rituals in a community help create a shared identity, which expresses shared values.</p> <p>Once Mulataga develops a residential population, some key activation strategies include:</p> <ul style="list-style-type: none"> • Development of an annual 'Karratha Coastal Festival' which uses the coastal node as the location for a range of vibrant festival activities, with a distinct waterfront theme. • Appointment of street representatives (as part of the Founders Group) to organise street-based activities. • Development of Evening Coastal Markets to be held at the coastal node. • Host an annual season of classic outdoor family movie nights in the coastal node. • Conduct night competitions and activities in the floodlit public open spaces – e.g. bocce. • Design walking maps and trails that link to the Bulgarra routes and the new coastal connection. These may link to interpretive signage. • Develop public facilities that support the provision of outdoor entertainment – e.g. small stage area in the coastal park, with appropriate provision of power outlets.

Challenges	Opportunities
2. Community Engagement Fatigue	
<p>Extensive Community Consultation There has been a significant amount of community consultation in relation to the growth and development of Karratha, particularly in recent years.</p> <p>Due to the incredible pace of change in Karratha, a number of key projects are being planned and delivered. Many of these rightly seek to properly involve the community in the development of plans. However, due to the large volume of activities occurring at one time, the same stakeholders and community members are asked to engage in each process in their own time, and this can become tiresome.</p> <p>Perceived Over Consultation and Lack of Delivery There has been a perception within some members of the community that they have been over-consulted and under-delivered in previous years. This is less of an issue now that there is evidence of some tangible developments being delivered as a result of Pilbara Cities. However, the key for the Mulataga project will be to ensure some evident action occurring and some key quick wins are achieved.</p>	<p>Community Engagement and Communications Strategy A clearly thought-out strategy can be developed for implementation across all phases of the process to ensure effective community involvement and a sense of commitment to the development of Mulataga's community. This approach should be future focused and consider linkages to existing community groups such as the Karratha Community Association.</p> <p>It could include the development of a stakeholder management and communications strategy that will ensure support is provided for the development and clear messages are communicated across the community. This is particularly important in a regional community where rumours can abound without clear information being provided.</p> <p>The development of a planned communications process is important to ensure the community see 'action happening'. This needs to be more than a marketing approach and should have a clear community focus.</p>

Challenges	Opportunities
3. Cost of Living & the Social Divide	
<p>Population and Industry Driven Demand The cost of living is currently very high, due to population and industry-led demand, which impacts on accommodation costs in particular. The flow-on from accommodation costs impact significantly on businesses and service providers, with costs often passed on to the consumer.</p> <p>Cost of Regional Isolation The isolation of Karratha from major trade source centres and the resultant transport costs impact significantly on expenses. This isolation is further reinforced due to a lack of local supply chains.</p> <p>High Accommodation Costs and Lack of Housing Diversity High housing costs make it difficult for employees to live in Karratha unless they receive significant accommodation support from their employer. Resource companies often provide staff with this assistance; however many retail, personal services, community organisations, hospitality and tourism companies are unable to provide this level of accommodation support.</p> <p>The cost of living in Karratha precludes many people from living and working in the town unless they receive significant subsidies from their employer.</p> <p>There is a very limited variety of housing to meet the varying needs of singles, couples, families and others. Predominantly Karratha provides 3-4 bed houses, which leads to a range of often unappealing sharing arrangements.</p> <p>Social Divide There is an increasing social divide, and income disparity, between those employed within the resource sector and those not employed within this industry. Indigenous community members and those employed in the non-government sector, in particular, are significantly marginalised.</p>	<p>Diversity of Accommodation The Mulataga development has the opportunity to address the cost of living via positively impacting on the local housing market by developing accommodation choices that have a range of prices / affordability, tenures, densities, typologies and lot sizes. The lack of diversity in housing product can be addressed by providing a range of accommodation types that meet the needs of:</p> <ul style="list-style-type: none"> • Singles • Couples • Traditional families • Inter-generational households • Indigenous households • Tourists and visitors • FIFO workers <p>Neighbourhoods can be developed that enable increased densities and typologies, particularly when located around community, recreational and community facilities.</p> <p>There is also the opportunity to be innovative in housing design by creating “flexible” housing options that may include separate living areas in the same house, with some shared amenity such as kitchens and lounge areas, but personal provision of bedrooms with own ensuite. This provides a different view of how to achieve higher density and would cater for the difficulties in accommodating single workers, couples and families, by providing interchangeable accommodation within the one abode. It could also open up opportunities for short term accommodation via “bed and breakfasts.”</p> <p>This innovation can include the provision of housing choice and design solutions that cater for the Pilbara lifestyle requirements of some residents (e.g. multiple occupancies, boat ownership, multiple 4WDs, outdoor living)</p>

Challenges	Opportunities
<p>Catering for Families</p> <p>Karratha has a large proportion of young families with children aged below 10 years. This proportion is much higher than the State average. For young families, the outdoor lifestyle options and employment opportunities are a major attraction to living in the town.</p> <p>However, there is a strong sense that many family needs are not adequately catered for within Karratha, especially in regards to community services, programs, entertainment and shopping. Family support is also needed as people are often separated from their own extended family support networks.</p> <p>The lack of services is often cited as a primary reason for people wanting to relocate from Karratha and not stay in the town as long-term residents.</p>	<p>Quality Local Community Amenity</p> <p>Mulataga residents will see the positive impacts on their cost of living if there is a degree of local provision of services such as:</p> <ul style="list-style-type: none"> • Access to free or low-cost quality recreational amenity and experiences. • Access to childcare and schooling. • Access to medical services. • Access to affordable retail shopping (still likely to be the city centre). <p>Meeting Families' Needs</p> <p>The development of family-based facilities and services could be a key focus of the Mulataga development. This could include:</p> <ul style="list-style-type: none"> • Provision of flexible facilities and public open space for family activities within the coastal node. • Family activation programs for community facilities. • Development and promotion of local family attractions. • Program of events to connect families to each other, other residents and to local recreational spots.

Challenges	Opportunities
4. Indigenous Heritage, Wellbeing and Engagement	
<p>Indigenous Wellbeing While the proportion of Indigenous residents is much lower in Karratha than in towns such as Roebourne, Karratha is still the hub for medical, shopping and other services for outlying communities. It would be true to say that there have not been significant dividends for the Indigenous community from the resources boom, with poor education, health and employment outcomes still prevalent. There are high rates of alcohol and drug use within the community, at times resulting in anti-social behaviour.</p> <p>Reflecting Indigenous Heritage The recognition and celebration of the significance of Indigenous heritage in Karratha and its surrounds is not obvious in the urban landscape, tourism or community celebrations. Greater attention is being paid to this now, but there is significant room for improvement.</p> <p>The sites of cultural significance that have been identified in Mulataga, may constrain some development in those areas, but also present a cultural recognition opportunity.</p> <p>The cultural significance of the riparian environments and mangroves should not be underestimated and must be reflected in the urban planning considerations.</p> <p>Indigenous Engagement The sub-optimal application of planning and policy around Indigenous integration in the Karratha community has proven to be problematic to the social fabric of the town. There is limited communication or integration between cultural groups, thereby limiting the sense of community cultural cohesion. Engagement with Indigenous groups has recently increased, but still requires attention and should be a focus of the Mulataga development.</p>	<p>Indigenous Engagement The opportunity exists to better reflect the significant Aboriginal culture in the region in the development of Mulataga and to better engage with the Aboriginal community through targeted approaches that foster interaction, pride and respect. Community dialogue and participation in goal-setting and decision-making processes should be engendered.</p> <p>The development of a Reconciliation Action Plan that underpins ongoing consultation and engagement with the Indigenous community could be developed.</p> <p>Celebrating Indigenous Heritage and Values Acknowledgement of cultural heritage can be developed in the built form of community amenities, public art, community art and community activities. Research into the local Indigenous heritage and culture is important to informing the planning process.</p> <p>All staff working in the area can receive cultural awareness training.</p> <p>The development of a multi-purpose community facility in close proximity to the coastal node would provide the opportunity to recognise and display local Indigenous heritage and the development of cultural/community activities.</p> <p>It is also possible to develop interpretive / cultural trails from the Karratha Hills (Regals) to the coast through public open space corridors that map the history of the Indigenous community and the significance of the land.</p> <p>Indigenous Learning and Earning The Mulataga development provides an opportunity for the Indigenous communities to 'get in on the ground floor' of training and employment. This could include, for example:</p> <ul style="list-style-type: none"> • Construction training and employment. • Community service / hospitality training and employment. • Environmental/heritage tourism.

Challenges	Opportunities
<p>Indigenous Training and Employment Employment outcomes for Indigenous people in the region are still lower than the rest of the population, despite assertive approaches from resource companies to support and foster Indigenous employment via the establishment of Indigenous employment targets.</p>	

Challenges	Opportunities
5. Social, Cultural and Recreational Facilities	
<p>Current Under-provision of Social, Cultural, Recreational Facilities and Amenities Social, cultural and recreational facilities in Karratha are currently not able to adequately cater for the current population, though vital changes are being made as a result of significant investment by Pilbara Cities and the Shire of Roebourne.</p> <p>Over time, the community facilities have not been commensurate with the growth in the population, leading to a perceived decline in Karratha's livability and lifestyle.</p> <p>There is a high level of interest in sporting activities; however, due to the climate, most training and games are held in the evening or night, resulting in an even greater on the use of active recreation spaces by clubs, with many having to share spaces for training.</p> <p>The Shire of Roebourne's Draft Community Facilities Plan recognises that there is already a shortfall of facilities. Due to the population mass being mostly in Karratha, the most important current shortfalls are:</p> <ul style="list-style-type: none"> • Two sub-district playing fields. • Two playing fields. • One indoor recreation facility. • A number of skate parks. 	<p>Facility Developments The Mulataga development offers the opportunity to provide a range of community facilities that will provide amenity for both local residents and those that aspire to visit the place where Karratha touches the sea.</p> <p>The key focus should be on the coastal node development. It is unlikely that with the Pilbara climate an additional neighbourhood commercial centre would be required if the coastal node has sufficient capacity to develop in this regard.</p> <p>The only other opportunity would be to develop a small centre within proximity to the school. (See details below).</p> <p>Coastal Node Facilities Facilities at the coastal node could include:</p> <ul style="list-style-type: none"> • A beachfront main street and associated pedestrian cycling connections • An additional boat ramp • High-density residential accommodation in a walkable catchment to the coastal amenity (though not restricting views to the coast). This could include normal residential, short-stay accommodation or high-class essential worker accommodation • Board walk and jetty that links to community facilities and integrates with a coastal walk • Nodes of interest – with high-level amenity of attractive landscaping, BBQs, gazebos; seating etc.)

Challenges	Opportunities
<ul style="list-style-type: none"> • A sub district sports change rooms. • Three sub district clubrooms. • A District library. • A childcare centre. <p>The challenge for the Mulataga development is to identify which is the most appropriate community and recreation facilities that will meet the community need and can be delivered on a site that has a number of constraints.</p> <p>Sporting and Recreation Facilities The Bulgarra Recreation Precinct in the neighbouring suburb is a District level open space facility and services a range of needs. Recent upgrades include the installation of floodlighting, an upgrade of the power supply and reticulation to Bulgarra Oval, an enhanced vehicle parking area, the creation of two permanent softball diamonds, one with associated back nets, safety nets and dug outs, and the construction of permanent storage.</p> <p>The challenge for the Mulataga development is to ensure there is provision of sporting and recreation facilities that promote social engagement while also catering for the high level of active recreation needs. Currently, there is a range of sporting clubs and facilities in the town providing access to a variety of sports. There is less provision for passive recreational activities, though the community does access a range of outdoor lifestyle pursuits provided by the regional location.</p> <p>There is a need for social opportunities provided through recreational and town site amenity developments. This includes the provision of green lineal spaces, bike paths and footpaths with street lighting. As the community grows, there will be pressure to develop a greater range of sport and recreational facilities and public open spaces to meet an increasing demand. Clubs in Karratha are currently sharing facilities effectively, but some facilities</p>	<ul style="list-style-type: none"> • A multi-purpose community facility that includes a function area; meeting / seminar areas (for use by church groups, training and community meetings; day/childcare facility; community arts area; display area; kitchen; indoor/outdoor recreational grassed area; amphitheatre; bar area. • Integrated two storey café/family style licensed restaurant with outdoor area and balcony. This place could be integrated with the community centre and provide catering services. (Examples include Port Hedland Yacht Club, Clancy's, Little Creatures, and Matzos). • A beachside pool or urban beach concept. • Large, imaginative based playground that caters for a range of ages and includes innovative materials, coastal themes and passive and active amenity (e.g. passive – outdoor musical instruments; talking pipes, pullies and buckets) (e.g. Active – carousel; spider climbers; climbing apparatus) • Multi-wheeled track. Skate parks tend to be used only by competent skaters. A multi-wheeled track with active elements at different points will enable varying ages and levels of competence use the amenity with scooters, bikes, skateboards and rollerblades. • Free Wi-Fi connection <p>High-quality Public Open Space and Recreation Facilities</p> <p>The quality of the provision of public open space and its associated amenity will therefore be a hallmark of the development and contribute significantly to the quality of life for those living, working or visiting the region.</p> <p>The focus on the development of public open space can be combined with the provision of a high-quality recreation amenity that is usable, attractive, safe and accessible, and has the capacity to meet a broad range of recreational needs within close proximity to homes.</p> <p>Possible facility developments include:</p> <ul style="list-style-type: none"> • Development of a Senior Oval to cater for active sporting that can be co-located with the school and brought on earlier than the school, with associated change

Challenges	Opportunities
<p>are close to their limit in regards to the number of teams and clubs they can accommodate.</p> <p>The ongoing maintenance and servicing of sport and recreational facilities is an issue now for the Shire of Roebourne and will become even more of an issue if additional facilities are developed to meeting population demand. Of particular concern is the limited water supply. There will need to be a link between the water management planning and the recreational facilities planning, as typically sport and recreational facilities require large amounts of water in order to be maintained at a reasonable level of quality.</p> <p>Another issue that impacts on the provision of organized recreational services is the declining volunteer base to run clubs and organisations. This phenomenon is not unique to Karratha but is exacerbated by other factors, such as the high prevalence of shift workers and a highly transient population.</p>	<p>rooms being located on site.</p> <ul style="list-style-type: none"> • Sharing of shaded outdoor courts with the new school. • Lineal parks that connect the riparian links to key community nodes and other destination points that may include for drink fountains, seating, shade, tables, barbeques, bicycle lock ups, toilets, rubbish bins and dog dropping bags. • Provision of a fitness/walking/cycling trail that links to the existing route that finishes in Bulgarra. • Implementing outdoor fitness gear along the walking trail as part of a “Move it Mulataga” wellbeing initiative. <p>Cultural Facilities and Amenities</p> <p>There is the opportunity to reflect the culture of the area via the following methods:</p> <ul style="list-style-type: none"> • Sharing the development of school-based facilities for arts and cultural activities outside of school hours • Space at the multi-purpose community centre to recognise and display local Indigenous heritage and the development of cultural/community activities. • Develop an interpretive/cultural trail from the Karratha Hills (Regals) through to the coast through public open space corridors that map the history of the Indigenous community and the significance of the land.

Challenges	Opportunities
6. Crime and Safety	
<p>Perception v Reality</p> <p>Crime statistics show the number of reported crimes in the Karratha town site have actually dropped in most categories since 2006.</p> <p>Despite this, there are constant reports of community concerns related to increases in crime and anti-social behaviour. Much of the blame for this is directed at FIFO workers, even though they have strict alcohol and drug</p>	<p>Development SAFE Street Networks</p> <p>Through effective urban planning it is possible to have a positive effect on the rates of crime and thus improve the perception of safety in the community. Recent research also indicates that there is a far greater perception of safety and reduction in crime when there is more interaction between neighbours and more people engage in walking, cycling and accessing local public open spaces. By planning Mulataga’s urban</p>

Challenges	Opportunities
<p>testing that other residents are not subjected to.</p> <p>The challenge for the Mulataga development will be to create a community that feels safe and effectively prevents crime from occurring.</p>	<p>environment to support pedestrians and cyclists (including shade along these corridors), it will have a positive impact on many facets of community life.</p> <p>Designing Out Crime</p> <p>The Mulataga development can embrace the “‘Designing Out Crime’ principles including:</p> <ul style="list-style-type: none"> • Clear visibility to enhance natural surveillance. • Good traffic and cycling routes that promote walking and decrease ‘entrapment’ spots. • Encouragement for community self-policing and reporting. • No solid screen fencing at the front of houses, (which inhibit surveillance). • Provision of attractive streetscapes and public open spaces that encourage use by all sectors of the community to walk, cycle and recreate in public places, hence providing greater surveillance and an improved sense of safety. • Provision of clear boundaries between public, private and limited-use space, through the use of low fencing, appropriate vegetation, permeable barriers, differing surface treatments and ‘entry statements’. • Provision of good lighting in public places, such as pathways and parks. • Limited provision of laneways or rear access to houses to prevent access points for crime.

Challenges	Opportunities
7. FIFO / Transient Worker Integration	
<p>FIFO – Responding to Worker Choice and Cost of Living</p> <p>The population within Karratha continues to be highly transient, with increasing numbers of fly-in fly-out workers and people staying for short- to medium-term employment contracts. This is heavily influenced by industry’s</p>	<p>Engaging with the Resource Companies</p> <p>Resource companies in the Pilbara provide both residential and FIFO accommodation to service their workforce. The planning of FIFO accommodation and how to meet the needs of FIFO workforces is becoming more sophisticated, with companies recognising</p>

Challenges	Opportunities
<p>need to access and accommodate large numbers of workers within a short time period, but is also impacted upon by the high cost of living that is burdened by the prohibitive costs of purchasing or renting accommodation within the town, and the preference of many workers not to relocate their families to the Pilbara.</p> <p>FIFO is most evident in the resources sector, but is also used by other businesses, government and non-government sectors.</p> <p>Interestingly in terms of where FIFO workers might best like to live if they relocated to the area, (33%) of respondents to the Shire of Roebourne's survey indicated that the coastal location of Dampier would be their preferred place, followed by the Karratha CBD (18%) and the coastal location of Point Samson (14%).</p> <p>Community Concerns</p> <p>There is a significant backlash against the prevalence of FIFO in Karratha and surrounding towns. Resentment is evident by some residents about FIFO workers, and the perceived impact on the community has received national media attention, particularly recently with the Federal FIFO inquiry which visited Karratha on 28 March.</p> <p>FIFO is an issue that generates great emotion, but the realities of why it occurs are often not universally understood.</p> <p>FIFO provides a significant and growing proportion of the workforce needed by the resources sector, and is anticipated to double within the next 3-5 years in the region. Workforce mobility and employment choice has become, and will continue to be, a significant factor in ensuring major resource projects can</p>	<p>that 'in-town' accommodation is the most popular with FIFO workers. This type of accommodation would most likely be sought for longer-term operational FIFO workers than for short-term construction employees.</p> <p>Dialogue should occur with resource companies on how higher density developments close to amenities might be accommodated as part of a broader product mix.</p> <p>Engaging with FIFO Workers</p> <p>It will be important to consider the needs of FIFO workers in the development of community activation and engagement activities. The Mulataga development provides an opportunity to take a proactive approach to integrating transient workers more effectively in the community.</p>

Challenges	Opportunities
<p>commence.</p> <p>This issue has the potential to be a divisive wedge within the community that could hinder Karratha's reputation and growth, if not properly addressed.</p> <p>FIFO Integration</p> <p>There is a desire within some members of the residential population to better integrate the FIFO workforce into the community. This can occur with strategic planning and partnerships, and a focus on more than just accommodation planning. It also requires proper consideration of the provision and potential sharing of community facilities, involvement of FIFO workers in community activities and the shared delivery of services.</p>	

Challenges	Opportunities
8. Health Facilities and Services	
<p>Health Services – the Highest Community Priority</p> <p>The provision of health services continues to rate as the most important aspect for community members in regards to the provision of community services.</p> <p>Health and emergency services are overwhelmingly key areas causing much community dissatisfaction and a primary reason for older people leaving Karratha.</p> <p>It is predicted that five new GPs are required to cater for every additional</p>	<p>Local Medical Services</p> <p>Pilbara Cities has recognised the urgent health sector needs in Karratha through the provision of over \$500 million to deliver a new Nickol Bay hospital as part of the Karratha: City of the North initiative.</p> <p>While it is likely that close proximity to the hospital is the best location for most medical services including a GP super clinic, there is the opportunity to look for some localised medical services.</p> <p>With the likelihood of a high proportion of young families to be residing in Mulataga,</p>

Challenges	Opportunities
<p>5,000+ population</p> <p>The needs of servicing a growing town and region are complex, particularly with such a transient community. Currently the existing facilities and services do not meet the expectations of many members of the community.</p> <p>With a large Aboriginal population in the region, high rates of alcohol abuse and poor nutritional standards are evident (comparative to the rest of WA), and the health needs of some community members are acute. In dealing with these urgent health needs, some other services that community members expect are currently not being prioritised at the same level, leading to dissatisfaction from those not able to access those services.</p> <p>Other key challenges in relation to health services include:-</p> <ul style="list-style-type: none"> • Difficulty attracting and retaining medical staff, particularly specialist practitioners, due to the cost of living, lifestyle opportunities and salary conditions. • Lack of appropriate accommodation for medical staff. • Lack of specialist medical services including most forms of surgery. • Lack of short-term accommodation for people accessing services from outside Karratha. • No provision of private hospital services, so people with private hospital cover are unable to use it. • Limited services in allied health – e.g.; dental, mental health, occupational therapy, physiotherapy etc. • A disconnect between primary care services and hospital services. • Lack of short-term accommodation for people from outside of town accessing medical services in Karratha. • Lack of public transport for people from outside of town accessing medical services in Karratha. 	<p>there is the possibility to develop consulting rooms near a full service school, which provide access to GP services or allied health services such as occupational therapy, dentistry and child health nurse.</p>

Challenges	Opportunities
9. Education Facilities and Services	
<p>Education – A Community Priority</p> <p>The provision of education services is a priority area for all sectors of Karratha’s community.</p> <p>Servicing a growing town and region are complex, particularly with such a transient community. Significant improvements are starting to be seen in relation to the provision of facilities including the new year 11/12 Government School facility as part of the Leisure and Learning Precinct and the soon-to-be-completed year 8-10 campus on the same site; the development of a new Primary School and Education Support Centre at Karratha Primary School in Bulgarra; a new primary school in Bayton West and the provision of an Early Years Centre at Tambrey.</p> <p>Community Perception</p> <p>Despite the improvements, there is still a significant flow of young people and families seeking educational opportunities in Perth due to a perceived lack of choice and limited educational quality, particularly in secondary and tertiary levels.</p> <p>Enrolment numbers at Karratha Senior High School and the closest neighbouring primary school to Mulataga - Karratha Primary School - have been dropping. Karratha Primary School has 416 students in K-7 and Karratha Senior High School has 538 students from years 8-12.</p> <p>The provision of a new school is essential to the aspirations that residents of Mulataga are likely to have. However, the Department of Education will not</p>	<p>Innovative Government Primary School Option</p> <p>The government would require the provision of 4hectare site to develop a future government school. To require the critical mass to justify the development of a new school an additional 1500 lots would be required to be developed. Being new the school would be permitted to be an “independent Public School”, which provides more autonomous operating processes. In developing an innovative Government School the following could be considered;</p> <ul style="list-style-type: none"> • Additional Pilbara Cities funding to develop and design a school campus that challenges the current primary school design brief, enabling the development of innovative shared community facilities and curriculum delivery innovation. The design while being innovative and responsive to the local community, could not compromise educational quality and practical delivery of the curriculum. • There is currently no Early Learning Centre (ELC) at the Bulgarra/Mulataga end of town, and is definitely required. The fast tracked development of an Early Learning Centre (ELC) – for early childhood and parenting partnerships could be developed in houses abutting the school site, and when the school is ready, it can transfer to the permanent site and the houses can be used for staff accommodation. A permanent ELC would then at a later stage be developed on the school site. There is also potential to provide some specialist Aboriginal Early Years education provision, which is currently missing in the remainder of Karratha. Currently Karratha has an Early Learning Specialist Scholarship Scheme through a partnership between Pilbara TAFE, the Shire of Roebourne, Pilbara Iron and Burrup Fertilisers to encourage local individuals interested in entering or continuing a career in the field of Early Learning and the development of an ELC would provide employment opportunities for those trainees. • Development of a “full service” model with integrated access to allied community and health services such as child health nurse, counsellors,

Challenges	Opportunities
<p>consider a primary school at Mulataga until the enrolment at this school rise towards 600. There is also no prospect of a second government high school for many years to come.</p> <p>Interestingly, despite the dropping enrolment numbers at the government schools, this is not the case at the Catholic High School - St Paul's - and its feeder primary school – St Luke's. However, these schools cannot expand until they can afford to develop additional housing for staff.</p> <p>Housing for Education Staff</p> <p>The ability to attract and retain quality staff is largely dependent on the availability of adequate housing. Housing for teaching staff is currently limited. Both Government and non-Government Schools are experiencing this problem. St Luke's Primary School has had to limit their student enrolment as they cannot grow their staff numbers due to a lack of housing options. Government teachers are provided with Government Regional Officers Housing (GROH) of varying degrees of quality. This stock of houses is at capacity. There are also reports that some resource companies refuse to provide housing if they find out that their employee's spouse is eligible for a government officer's house. This adds to the strain of an already overstretched system.</p> <p>There currently is no provision of housing for school support staff who are paid even lower salaries than teaching staff. These employees include registrars, school officers, gardeners, cleaners, AIEO'S, attendance officers and education assistants. With the cost of living being so high (especially accommodation), it is very difficult to attract and retain people to these</p>	<p>occupational therapists, speech therapists, DCP parenting courses, and shared use of facilities for playgroup, out of hours child care etc. The distance from the Karratha Hospital would make it potentially feasible to locate these allied health services in suites within close proximity or abutting the school site.</p> <ul style="list-style-type: none"> • Early development of the school oval in partnership with the shire, before the school buildings are developed to enable local sporting and recreation space. This could include the development of a senior oval sized space with change rooms, (normally a primary school only has a junior oval space). The design would need to ensure that the community use facilities such as change rooms are located on the opposite side to the school. This is required as currently due to housing crisis itinerant workers are using public change rooms to shower and other ablutions, while living in their cars. Primary Schools students should not be exposed to this. • Shared library; shared covered courts and community access to other facilities, with appropriate management plans in place to ensure guaranteed school access first. • Development of an innovative school design that better uses and promotes inside/outside learning through the use of shaded covered learning areas • Development of some teacher accommodation on site or close to the site in unit/apartment styled accommodation to meet single teacher housing shortages and avoid the requirement of co-habitation, which is a major disincentive to potential workers. This would only be suitable for a small number of staff, as most would not like to be living directly abutting their worksite and engaging with their clients (students) after hours. • Development of teacher housing with adaptable usage including a shared kitchen/living areas (for social aspects), but separate personal areas including bedrooms, each with ensuites (as people will share kitchens, but dislike sharing toilets and bathrooms). • Design the school with high environmental / sustainability standards including best practice in third pipe water re-use (as part of abroader reticulated system); use of solar panels and energy saving devices and the use of natural/endemic vegetation. The school could also engage students in more intense environmental/sustainability studies including coastal, mangrove and riparian studies and out of school groups.

Challenges	Opportunities
<p>positions.</p> <p>Human Resource Challenges</p> <p>The ability to attract and retain staff in the Pilbara and other remote areas is impacted on by the cost of living, lifestyle opportunities and salary conditions. The current district allowance for teaching staff is minimal in comparison to the real costs of living and working in the area. These allowances are also minor in comparison to the incentives offered to staff working in the resources area. As a result, there is a drain of staff from Schools and TAFE to the resource sector.</p>	<ul style="list-style-type: none"> • Development of the School Board long before the commencement of the school, to enable community ownership and direction. <p>Non-Government School Options</p> <p>Due to low enrolments at the neighbouring new Karratha Primary School, a new government school in Mulataga will take many years to come on stream.</p> <p>That being the case, there are two other opportunities for consideration:</p> <ol style="list-style-type: none"> 1. The development of a site for the provision of an Anglican Schools Commission School (a moderate fee school system, who have indicated a high degree of interest in accessing a site in Karratha). <p>This would involve an abutting the development boundary with an initial primary school site (4Ha) in Mirvac's current development area and then progressing to the development of a secondary site (another 6-8 Ha) in the future Mulataga development area. This staged approach would enable the expansion of the school initially from early childhood years to middle and upper primary years and then finally to secondary years. This would require a guarantee of access to land in the phase 2 of the Mulataga development within the required timeframe, to develop the senior school as a co-joined site, enabling transition to the secondary school without interruption from primary school. (Note: a secondary school site is notionally allocated in the Phase 2 Karratha City of the North Growth Plan and this is the site that could be accessed.)</p> 2. The provision of a site for purchase by the Catholic Education Office for the development of a second feeder primary school to St Paul's. There is high demand for places and a waiting list to attend the other Catholic Primary

Challenges	Opportunities
	<p>School, and a second primary school campus would address this backlog. However, as per the government school, a solution would need to be found to provide accommodation options for staff.</p>

Challenges	Opportunities
<p>10. Youth Facilities and Services</p>	
<p>There is a sizeable decrease in the proportion of young people (12-19 years) comparative to younger ages. This movement of families away from Karratha when children reach adolescence results from concerns about the quality and choice of education, and lack of youth services and activities in the town. This has a detrimental impact on social capital, the pool of local employees and community cohesion.</p> <p>Feedback from young people is that there is not enough to do, outside of sport. The cinema closed a few years ago and there are limited youth-based events. However, the Shire of Roebourne recently opened the Karratha Youth Shed, which is a drop-in youth space for young people, located within the city centre.</p> <p>The Shire of Roebourne has developed a youth plan that is yet to be released and includes a range of recommendations for improving youth services.</p>	<p>Key opportunities to support the development of Mulataga's youth include:</p> <ul style="list-style-type: none"> • Positively engaging youth in community activities and decision-making to create a sense of ownership, connection and pride in their community. • Development of youth-based facilities such as a multi-wheeled track; access to arts/band jam places and social amenities in parks and open spaces. • Development of a local youth leadership council that links to the Shire's broader youth leadership development approach.

Challenges	Opportunities
11. Urban Integration, Accessibility and Connectivity	
<p>Limited Connection and Articulation</p> <p>Karratha is currently characterised by limited connection and articulation of streets and suburbs. There is no real public transport, meaning a high reliance on cars.</p> <p>Bus services for school students are provided, but only to and from school and not to other centres. There is, however, a community bus that runs to surrounding towns on the weekends, to enable travel to Karratha.</p> <p>Integrating Bulgarra and Mulataga</p> <p>Mulataga will be developed alongside one of the older suburbs – Bulgarra, where many houses and streets are tired and dated. Careful consideration will need to be given on how best to interconnect the areas and not create a disparate mismatch between the two.</p>	<p>Creating Connections</p> <p>There is the opportunity to create good internal and external connections by creating clearly articulated streets that feel safe and familiar and landscaped and shaded. Creating clearly accessible and linked roads, pedestrian and cycling paths as well as lineal parks will, enabling easy access to the beach, the hills or the city centre, and encourage people to recreate in their community.</p> <p>There is the opportunity to align these connections with the unique natural settings such as the riparian links, to break the formality of the streets and connect residential areas to the foreshore. The open space network will be designed in combination with the urban water management system to allow drainage to be incorporated into parkland design. The location and design of parks and open space areas should echo the relevant natural environment and the landscape qualities of the chosen sites.</p> <p>These areas can be designed to effectively manage noise, promote recreational activity, control access and distribution, encourage surveillance and create a comfortable micro-climate through the strategic use of shade and attractive landscaping.</p> <p>Consideration can also be made to creating a future public transport corridor connection to Bulgarra aligned with the proposed public transport spine developed as part of the Karratha City of the North Plan. The development of a ‘spur’ on this route may be worthwhile in years to come, so people can access the beach.</p>

Challenges	Opportunities
12. Responding to the Pilbara Climate and Landscape	
<p>Heat</p> <p>The Pilbara climate is harsh, beautiful and characterised by extremes. Average summer temperatures over 40C, annual cyclone risks and enormous precipitation events are commonplace.</p> <p>The development of Mulataga’s urban, housing and community facility design needs to take into account the realities of this unique environment.</p> <p>Whilst Karratha’s climate is extremely hot for the summer months, the winter is very pleasant and therefore conducive to outdoor life. This is the time when tourism in the Pilbara booms, as people escape from colder climes.</p> <p>Coastal & Riparian Protection</p> <p>There is environmental and cultural significance to the coastal environment and the riparian links, and community access will need to be managed delicately.</p> <p>There is evidence of four-wheel drive activity in the coastal area, which impacts on the mangroves.</p>	<p>Create People-friendly Environments</p> <p>In the summer months, evenings are more tolerable and the design of open spaces and recreation facilities should cater for night-time use via lighting and community events promoting activity in parks.</p> <p>The design of Mulataga can respond to the local climate via the provision of shaded areas, effective management of the micro-climate and the use of Pilbara-savvy building designs with breezeways, covered outdoor living spaces and appropriate building orientations.</p> <p>The provision of a wide range of climate-responsive housing typologies surrounded by well integrated public spaces will ensure that Mulataga provides diversity and choice for the people of Karratha.</p> <p>Minimising Environmental Impacts</p> <ul style="list-style-type: none"> • Riparian corridors and coastal landforms will need to be protected. This could include barriers to prevent beach access to four wheel drives and plenty of signage. • Access to the coast can be delivered through the use of boardwalks that will minimise impacts. • Facilities and open spaces should be designed to limit environmental impacts. Water-wise planting, the use of locally-sourced materials and minimising irrigation requirements should be incorporated into the design of parks as a minimum requirement. Other initiatives should also be considered, such as recycling bins, solar powered lighting, rainwater harvesting, wastewater recycling, and the innovative re-use of local industrial waste products in the landscape. Interpretive features could also form part of these initiatives.

Challenges	Opportunities
<p align="center">13. Tourism / Short-term</p>	
<p>The following is taken from: Shire of Roebourne Eco-Tourist Caravan Park Assessment and Determination of Need: RPS, February 2011.</p> <p>There is a drastic lack of affordable short-term tourist accommodation. Most has been used for workers in the local area, resulting in an estimated 95%+ occupancy rate for the caravan parks in Karratha that traditionally have been used for tourism. These are now taken up with transient worker accommodation, killing off most tourism opportunities in the town. In order to diversify the Shire of Roebourne economy and attract tourists to the region, it will be important to provide additional caravan parks that are dedicated to tourists.</p> <p>The three caravan parks in Karratha are likely to double in size from about 600 sites/cabins to 1,200 over the next five years. Half of this increase is already mooted and the overall scale and timing will be driven by the Council's Transient Workers Accommodation policy and the expansion of the region's resource industries. The Shire of Roebourne therefore currently caters to the business market, with the opportunity to capture more of the holiday/leisure market.</p> <p>The availability of cost-effective tourist accommodation of this type is considered essential to incubate the local tourist industry. However, it is important to consider that there is a very low occupancy rate for tourist-based caravan parks in the Pilbara during the cyclone season from November to April, with higher rainfall occurring and humid weather, detracting tourists from visiting the region during this time.</p> <p>While the number of caravan parks has decreased in both Australia and</p>	<p>Development of Short-stay Tourist Accommodation</p> <p>The provision of short term accommodation units in close proximity to the coastal node would likely be successful.</p> <p>Short term accommodation units in Point Samson (also with close access to the water) are well patronised and this would likely be the case if short term accommodation unites were provided at the Mulataga coastal node.</p>

<p>Western Australia, the number of campervan registrations has increased. There are bigger caravans and tourists are attracted to parks that provide a greater range of services than in the past. The expansion of the 'grey nomad' and related markets has generated a customer base that is more selective and this has resulted in an overall reduction in the number of parks, with some of the smaller operations not able to undertake the capital investment required to meet changing market expectations.</p>	
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Challenges	Opportunities
14. Seniors Facilities and Services	
<p>There are a low proportion of seniors and retirees in Karratha, with the town not being seen as a viable location to retire. This is may be due to the lack of seniors' services and amenities, or from the view by many that Karratha is a transitory place, rather than their true home.</p> <p>There is a need to diversify the provision of community facilities, programs and activities to meet the needs of older members of the community.</p>	<p>Mulataga provides the opportunity to develop a higher-class small-scale aged care facility that provides access to community amenities and the coastal environment.</p> <p>The development could be part of a higher density coastal development, with either single level villas or two/three storey secure apartments with lift facilities and secure balconies. It could consist mostly of Independent Living Units (ILU) with access to some shared facilities, though the majority of facilities could be accessed at the coastal node.</p>
15. Sustaining Community Facilities	
<p>A common community concern is how the level and quality of service provided by a developer can be transitioned effectively to the local government once handover of the development is completed.</p> <p>The Shire of Roebourne is experiencing exponential growth with the development of a range of new facilities and amenities, all of which require</p>	<p>Agreement with the Shire of Roebourne</p> <p>As part of developer contribution negotiations, commitments need to be sought from the Shire for how community facilities and amenity will be maintained to a high standard once the development is handed over.</p> <p>This agreement needs to be transparent and communicated clearly to potential</p>

Challenges	Opportunities
<p>recurrent funding to maintain.</p> <p>This has budgetary implications for the Shire and whatever is developed needs to be sustainable and not deteriorate once handed over to local government.</p>	<p>purchasers and the wider public.</p>

7.2. Economic

There are a range of potential development options available for the Mulataga coastal node.

Scenario A - No commercial activity

A range of community based activity developed around coastal recreation only. Commercial activity may be restricted to membership based hospitality as part of a recreation based facility (such as a boating or other water based club) This option has limited commercial risk but also reduces the attractiveness of the site for the community who don't have interest or membership of community based recreation activity.

Scenario B - Single business operator

Development of a coastal node around a single operator - The creation of a single business operator provides low risk in so far as the need to successfully attract a one business to the node – but it also creates a significant risk to establish the right business and the right operator. That risk can be significantly reduced by the installation of a brand operator.

Trade area and spending analysis indicates that a single operator could be developed up to 400 sqm floor area on 1,200 sqm land area. A successful operator would require less than 2% of total catchment cafe/restaurant spending

Scenario C - Small supermarket based local centre

Despite the introduction of a supermarket based centre as part of a larger Mulataga community. A smaller IGA operation could reinforce the coastal node activity and provide an alternative to the major operators. The risk associated with this option is whether a smaller operator is able to overcome the logistics costs of goods delivery in order to remain competitive. This has proven difficult for other smaller operators in the past although there are corporate IGA operators of successful regional location A small Supermarket based centre could comprise a total floor space of 2,000 sqm, and include:

- 1,000 sqm - supermarket (1/3 typical size)
- 600 sqm - 5 local shops/takeaway
- 400 sqm - cafe/restaurant

Trade area and spending analysis requires the capture of 15% of local spending, and 1% of district and visitor spending in the food/grocery category. The risk for this option is the ability for the smaller operator to achieve a viable transport logistics.

The shops would not be viable without the customer traffic generated by the supermarket operator.

Scenario D - Major supermarket based centre

The coastal node could provide the role of the neighbourhood centre (single supermarket based centre) planned in subsequent phases. Creating the centre as part of the coastal node reinforces the sustainability of activity in Mulataga by reducing the potential for duplication of activity (by the neighbourhood/district centre) and providing a single focal point for the community east of the Karratha Town Centre

A major Supermarket based centre could contain up to 5,000 sqm and include:

- 3,500 sqm full line supermarket – either operator
- 1,500 sqm - 15-20 specialty shops

A full line supermarket has no delivery logistics risk as the operator would already be delivering frequently to Karratha. Whilst this option has minimal risk to the supermarket operator, it remains uncertain whether the Karratha could sustain the duplication of the ancillary food/grocery and other convenience stores such as butcher/bakers/newsagent pharmacist etc. this would be true of the centre whether it were located at Mulataga costal node or at the planned Neighborhood/District node.

This scenario should only be considered at the expense of the planned Mulataga Neighborhood /District Centre.

The potential extent and nature of the coastal node will vary according to whether the Neighbourhood/District centre is planned.

1.2.1 Potential Economic Impacts

Potential Impact on Dampier

The site takes advantage of unique drivers of the vista, amenity associated with a coastal outlook. Commercial activity in this area should complement and reinforce the role and validity of other current uses – boating, mooring, fishing, and water recreation. Commercial and community activity in Dampier continues to struggle in the trade shadow of Karratha facilities. Dampier does have a competitive advantage over Karratha by virtue of access to high visual and physical access to the water front. The development of community or commercial facilities in a coastal node at Mulataga (Scenario A) may attract members and customers away from Dampier facilities and subsequently reduce the attractiveness viability and commercial efficiency of Dampier facilities.

Potential Impact on Karratha Town Centre

None of the scenarios offered as potential development at the coastal node will impact on the performance of the Karratha Town Centre.

The single operator scenario allows for the capture of 2% of the total cafe/restaurant spend across all markets, leaving 98% of spending to be captured by cafe and restaurant operators elsewhere in Karratha.

8. Urban Design Recommendations

8.1. Community-focused Design Recommendations

The following recommendations are primarily made only in relation to the urban design planning for the Mulataga project that relate to the development of community facilities and amenities.

However, it is recommended that these community-related strategies are developed as part of the project's development.

Note: Examples of community development opportunities and activation strategies are described in Section 5.

A. Develop a Community Engagement and Communications Plan

A community engagement and communications plan should be developed to guide public participation in all phases of the project's development. The first phase of this engagement has already commenced with the development of a community reference group and the planning for the Planning Design Forum. As the project progresses, there are many opportunities to expand the broader community understanding of, and engagement with, Mulataga's development.

B. Develop a Community and Economic Development Plan

To ensure a distinctive quality of life at Mulataga, it is recommended that a Community and Economic Development Plan (CEDP) be developed with a view to implementation during the next five to 10 years.

This CEDP will result from intentional social planning processes and be informed by collaboration with key stakeholders and the community. The role of the plan will be to provide a strategy through which the new residents are able to obtain the direction and resources necessary to become empowered to actively realise the lifestyle to which they aspire.

The design recommendations are:

8.1.1. Establish a High-class Coastal Node Development

The establishment of a vibrant coastal node provides a transformational opportunity for Mulataga and Karratha. It will deliver a key destination point for people from across the region. All attempts should be made to ensure the development of coastal facilities and amenities occur as soon as possible.

Key features that are recommended for consideration for development at the coastal node include:

- An ocean front main street, with up to 4-5 shops which would be no more than 350sqm – 500sqm retail and associated pedestrian cycling connections.
- Medium-density residential accommodation in a walkable catchment to the coastal amenity (though not restricting views to the coast). This could include a mix of residential; short-stay accommodation, high-class worker accommodation and aged-care accommodation.

- Board walk and jetty that links to community facilities and integrates with a coastal walk.
- Recreational nodes of interest – with high-level amenity of attractive landscaping, BBQs, gazebos; seating etc).
- An integrated landmark coastal activation building, within the foreshore area - consisting of a two storey café/family-style hospitality venue, with outdoor area and balcony. The building could range from 500 - 1000 sqm 1,000sqm in size (inclusive of outdoor space). This place could be integrated with a community centre and provide catering services. (Examples include Port Hedland Yacht Club; Point Samson Tavern; Clancy's; Little Creatures, Matsos).
- A possible beachside pool or urban beach concept; or water play features.
- Imaginative and interactive playground that caters for a range of ages and includes innovative materials, coastal themes and passive and active amenity (e.g. passive – outdoor musical instruments; talking pipes, pullies and buckets); (e.g. active – carousel; spider climbers; climbing apparatus).
- Linkages to a cultural interpretive trail linking the Karratha Hills (Regals) to the ocean.
- Implementing outdoor fitness machines along the pedestrian links.

8.1.2. Provide a Unique Range of Recreational Facilities (in addition to Coastal Node facilities)

The provision of quality public open space and its associated amenity will be a hallmark of the development and contribute significantly to the quality of life for those living, working or visiting Mulataga. The focus on the development of public open space should be on the provision amenity that is usable, attractive, safe and accessible, and has the capacity to meet a broad range of recreational needs within close proximity to homes.

Possible facility developments include:

- A Senior Oval to cater for active sporting that can be co-located with the school and brought on earlier than the school, with the provision for associated change rooms to be located on site.
- Sharing of shaded outdoor courts with the new school.
- Lineal parks that connect the riparian links to key community nodes and other destination points, that may include drink fountains, seating, shade, tables, barbeques, bicycle lock ups, toilets, rubbish bins and dog dropping bags.
- Provision of fitness/walking/cycling route that links to the existing path that finishes in Bulgarra.
- Implementing outdoor fitness gear along the walking track as part of a wellbeing initiative.

8.1.3. Provide Culturally Responsive Facilities and Amenities

There is the opportunity to reflect the local culture via the following methods:

- Provide space to recognise and display local Indigenous heritage and the development of cultural/community activities.
- Develop an interpretive/cultural trail from the Karratha Hills (Regals) to the coast through public open space corridors that maps the history of the Indigenous community and the significance of the land. (This includes the provision of interpretive signage)
- Share the development of school-based facilities for arts and cultural activities outside of school hours.

8.1.4. Address the Key Cost of Living Impact – Housing Costs

The Mulataga development has the opportunity to address the cost of living via positively impacting on the local housing market by developing a diverse mix of accommodation choices that have a range of prices/affordability, tenures, densities, typologies and lot sizes.

There is also the opportunity to be innovative in housing design by creating 'flexible' housing options that may include separate living areas in the same house, with some shared amenity. This provides a different view of how to achieve higher density and would cater for the difficulties in accommodating single workers, couples and families, by providing interchangeable accommodation within the one abode. It could also open up opportunities for short term accommodation via bed and breakfasts.

This innovation could also include the provision of housing choice and design solutions that cater for the Pilbara lifestyle requirements of some residents (e.g. boat ownership, 4WDs, outdoor living).

8.1.5. Apply of Crime Prevention Through Environmental Design (CPTED) Principles

The Mulataga development should embrace CPTED principles including:

- Clear visibility to enhance natural surveillance.
- Good traffic and cycling routes that promote walking and decrease 'entrapment' spots.
- Provision of attractive streetscapes and public open spaces that encourage use by all sectors of the community to walk, cycle and recreate in public places, hence providing greater surveillance and an improved sense of safety.
- Provision of clear boundaries between public, private and limited-use space, through the use of low fencing, appropriate vegetation, permeable barriers, differing surface treatments and 'entry statements'.
- Provision of good lighting in public places, such as pathways and parks.
- Limited provision of lane ways or rear access to houses to prevent, access points for crime.
- No solid screen fencing at the front of houses, (which inhibit surveillance).

8.1.6. Consider a Range of Education Facility Options

The provision of a local school will be one of the key attractors to prospective residents. It therefore worth considering how education facilities will be planned for in the Mulataga development. One or more of the following options could be considered.

(Option 1) An Innovative Government Primary School

The government would require the provision of four-hectare site to develop a future government school. To obtain the critical mass to justify the building of a new school, an additional 1,500 lots would need to be developed.

In developing a cutting edge Government School the following could be considered;

- An innovatively designed school campus that challenges the current primary school design brief and facilitates the development of shared use facilities and innovation in the delivery of a locally responsive curriculum.

- Fast tracked development of an Early Learning Centre (ELC) – for early childhood and parenting partnerships, (e.g. in houses abutting the school site). When the school is ready the ELC would transfer to the permanent site, and the houses could be used for staff accommodation.
- Development of a 'full service' model school with adjoining multi use consulting rooms, providing integrated access to allied community and health services such as child health nurse, counsellors, occupational therapists, speech therapists, parenting courses.
- Development of multi-use facility - with a separate entrance to the main school buildings (for use by the school and community). The facility could include retractable inner walls providing modifiable spaces for key focus activities such as environmental studies, parenting/vocational classes, playgroup, out of hours child care, community arts (and should include a small kitchen space).
- Early development of a shared senior sized oval, (even before the school buildings are developed), to enable quick access to a local sporting and recreation space. The single senior oval would encompass a full AFL sized ground, with enough width to internally contain a soccer pitch (Note: normally a primary school only has a junior oval space).
- Provision of change rooms for community sport, which could be integrated with the multi use space described above.
- Shared use covered assembly/ meeting area for larger community functions.
- Possible shared use of library facilities (if not developed in the Neighbourhood/District centre in future).
- Shared hard court facilities for court sports (Including additional courts to the usual provision of a primary school).
- Integrated play space and community open space, with a high standard of landscaping and amenity e.g., BBQs, shelters; seating. This could include the provision of innovative and interactive playground facilities, clear pedestrian and cycling connections and the development of a shared use "kitchen garden" area that support the school health education curriculum and can be utilised by community groups. etc.).
- A multi-wheeled track with active elements at different points that enable varying ages and levels of competence to use the amenity with scooters, bikes, skateboards and rollerblades.
- Provision of facilities that enable the establishment of an environmental/sustainability focus through the use innovative environmental/sustainable practices including third pipe water re-use, use of solar panels and energy-saving devices. The retained use of existing vegetation and connections to riparian vegetation will enhance access and delivery of environmental education programs.
- Investigation into the potential provision of teacher accommodation within close proximity (or within the hub) for in unit/apartment-style accommodation to meet teacher housing shortages.
- Adjoining small café /shop

(Options 2 and 3) Non-Government School Options

Due to low enrolments at the neighbouring new Karratha Primary School, the development of a new school at Mulataga would take many years to come on stream. That being the case, there are two other opportunities for consideration.

1. The development of a site for the provision of an Anglican Schools Commission School (a moderate fee school system, who have indicated a high degree of interest in accessing a site in Karratha).

This would involve abutting the development boundary with an initial primary school site (4Ha) in Mirvac's current development area and then progressing to the development of a secondary site (another 6-8 Ha) in the future Mulataga development area. This staged approach would enable the expansion of the school initially from early childhood years to middle and upper primary years and then finally to secondary years. This would require a guarantee of access to land in the phase 2 Mulataga development within the required timeframe to develop the senior school as a co-joined site, enabling transition to the secondary school without interruption

from primary school. (Note: a secondary school site is notionally allocated in the Phase 2 Karratha City of the North Growth Plan and this is the site that could be accessed.)

2. The provision of a site for purchase by the Catholic Education Office for the development of a second feeder primary school to St Paul's. There is high demand for places and a waiting list to attend the other Catholic Primary School, and a second primary school campus would address this backlog. However as per the government school, a solution would need to be found to provide accommodation options for staff.

8.1.7. Develop Facilities that Cater for Youth

Key opportunities include the development of youth-based facilities such as a multi-wheeled track; access to arts/band jam places and social amenities in parks and open spaces.

8.1.8. Create a Seamless Connections Between Mulataga and Surrounding Areas

Creating clearly accessible and linked roads, pedestrian and cycling links as well as lineal parks will enable easy access to the beach, the hills or the city centre and encourage people to recreate in their community.

Align these connections with the unique natural settings such as the riparian links, to break the formality of the streets and connect the residential areas to the foreshore. Consideration should also be given to creating a future public transport corridor connection to Bulgarra, to align the proposed public transport spine developed as part of the Karratha City of the North Plan. The development of a 'spur' on this route may be worthwhile in years to come, so people can access the beach.

8.1.9. Provide Local Access to Medical Services

With the likelihood of a high proportion of young families to be residing in Mulataga, there is the opportunity to develop consulting rooms in close proximity to a full service school, which provide access to health services such as a GP, occupational therapy, dentist and child health nurse.

8.1.10. Respond Effectively to the Local Environment to Create People Friendly Environments

The design of Mulataga should respond to the local climate via the provision shaded areas, effective management of the micro-climate and the use of Pilbara-savvy building designs with breezeways, covered outdoor living spaces and appropriate building orientations.

8.1.11. Consider the Key Community Facility Requirements of a Future Neighbourhood/District Centre

The future Neighbourhood/District centre will include larger scale community and retail facilities.

These facilities could include:

- Integrated urban development with an innovative independent K-12 school
- Development of shared facilities with an integrated school including
 - Library
 - Playing fields

- Covered areas
- Meeting rooms
- Arts areas
- A multi-purpose community facility that includes a function area; meeting/seminar areas (for use by groups such as church groups, training and community meetings); day/childcare facility; community arts area; display area; kitchen; indoor/outdoor recreational grassed area; amphitheatre; bar facilities.
- Child care centre
- District Shopping centre

8.2. Commercial Design Recommendations

The following are key design considerations for the design of commercial spaces in Mulataga.

8.2.1. Single trading front

Development should where possible encourage a single trading front – where all commercial activity can be accessed and seen from a single point. This is especially important in smaller activity nodes where each offer has the potential to benefit the other. Development of facilities around corners has the potential to dilute the exposure and awareness of other activity and result in a poor economic outcome with higher vacancy and business turnovers.

8.2.2. Direct access

The highly transient nature of the labour force and visitors means that access to a new activity away from the centrality of the Karratha Town Centre should be possible without having to extensively 'way find'. The activity should be directly accessible via the continuation of the coastal route and directly via the inland route.

8.2.3. Create a strong sense of arrival

Physical integration of all community and commercial activity is imperative to creating a strong activity node

8.2.4. Flexibility

The development of activity servicing the local community will take time to become sustainable. The development of activity servicing the broader District and regional and visitor /tourist community may be developed earlier but may lack amenity if developed too early.

8.2.5. Alignment /Orientation of street and shops

An East West main street alignment with shops orientated north provides a single sided street allowing all shops to take advantage of the vistas primarily facing the coast. However this alignment also limits the ability for the group of shops to build a trading synergy that can occur when shops trade opposite one another.

A North South main street alignment with shops orientated east and west provides a double sided street (under larger centre options only). The northern most tenants could be café/restaurant based and still take advantage of the coastal vistas while the street creates a logical and strong sense of arrival.

9. Appendix 1 – Community Context

The follow appendix provides information relating to a range of community characteristics.

Note: Some of the demographic data was sourced for this report in April 2012, before the release of the 2011 Census data was released.

9.1. Literature and Information Review

Numerous documents, reports, plans and literature have been completed in relation to Karratha in the past few years.

The following documents and sources were considered in the preparation of this report.

- Creative Community: Creative Action, the Shire of Roebourne 2008-2013 Creative Community Culture Plan, Shire of Roebourne, 2008
- Draft Community Facilities Plan -Shire of Roebourne: Syme Marmion, August 2011
- Karratha - Regional Hot Spots Land Supply Update, WA Department of Planning, December 2010
- Karratha 2020 Vision and Community Plan, Shire of Roebourne, 2009
- Karratha Baseline Community Assessment, Rio Tinto, 2008
- Karratha City Centre Master Plan Vol. 3 document (14.2MB)
- Karratha City of the North Brochure document (743KB)
- Karratha City of the North Plan Summary document (7.2MB)
- Karratha City of the North: LandCorp and Shire of Roebourne, 2010
- Karratha City Wide Growth Plan Vol. 2 document (12.7MB)
- Karratha Developer Contributions Strategy - Shire of Roebourne, Syme Marmion, June 2011
- Karratha Implementation Plan Vol. 1 document (3.8MB)
- Karratha Locality Scan, LandCorp, 2009
- Karratha Primary Trade Area & Commercial Strategy: Department of Planning and Infrastructure, July 2009
- Karratha Primary Trade Area Retail and Commercial Strategy, Department for Planning and Infrastructure, 2009
- Karratha Purchaser Research, LandCorp, 2009.
- Karratha Revitalisation Brochure document (824KB)
- KDCCI – Business and Community Directory, 2011-2012
- Land Supply Update Karratha, Western Australian Planning Commission, 2008
- Open Space Strategy, Shire of Roebourne, 2008
- Pilbara Plan, Pilbara Area Consultative Committee Inc., 2008
- Pilbara Planning and Infrastructure Framework: Western Australian Planning Commission, January 2012
- Planning for Resources Growth in the Pilbara: Employment and Population Projections to 2020, Pilbara Industry's Community Council, 2008

- Regional Profile – Pilbara Framework, Western Australian Planning Commission, 2009.
- Shire of Roebourne Eco-Tourist Caravan Park Assessment and Determination of Need: RPS, February 2011
- Shire of Roebourne Website: <http://www.roebourne.wa.gov.au/>
- Shire of Roebourne: Community Survey: Prepared for the Shire of Roebourne by Geografia, 2011
- Strategic Community Plan 2011 – 2021, Shire of Roebourne, 2011
- Strategic Plan 2009-2013, Shire of Roebourne, 2009
- WA Tomorrow - Western Australia: WA Department of Planning, 2012

9.2. Social Context

9.2.1. History (Summary)

Key points regarding Karratha's history and heritage are as follows:

- | | |
|-----------|--|
| 1866 | Karratha was once a sheep station established in 1866 for its grazing potential by Dr Baynton and Harry Whittal-Venn. |
| 1968-1969 | Karratha was a joint State Government- Hamersley Iron development established in 1968-1969 to cater for the increased residential needs that couldn't be met in Dampier. |
| 1969 | Karratha was gazetted in 1969 and developed by the government to house the growing community supporting the Pilbara iron ore industry which started in 1960. |

Karratha is now is the largest urban centre in the Pilbara.

Karratha is an Aboriginal word meaning "good country".

9.2.2. Non Indigenous Heritage (Summary)

- Home to the Ngarluma and Yindjibarndi people for many generations, the locals acknowledge them as the region's traditional landowners.
- There are over 40,000 petroglyphs or rock engravings in the region, many of which are located on the Burrup Peninsula. Recognised as one of the most prolific Aboriginal rock art sites in the world, the peninsula was listed by the Heritage Council of WA in July 2007.
- Karratha is in the centre of land owned traditionally by the Jaburara tribe.
- Karratha has nine places listed on the WA Heritage Register; these are:
 - Karratha Fire Station, Welcome Road Karratha - Type 4 station.
 - Karratha Police Station and CIB, Welcome Road, Karratha. (Now replaced.)
 - Karratha Traffic Office & Licensing Centre, Balmoral Road, Karratha. Formerly the Karratha Traffic Office and Licensing Centre, now the Pilbara District Police Office. Building in good condition, renovated.
 - Karratha War Memorial, Welcome Rd, Karratha.
 - Manse, Padbury Way, Karratha.
 - Pegs Well (Ruins) (other name 'Old Well'), Hedland Place, Karratha. Construction date: 1933 to 1936.
 - Tambrey Centre, Lot 4227 Tambrey Drive, Karratha.

- Two Water Tanks - Stove Hill.
- Uniting Church, Padbury Way, Karratha.

9.2.3. Indigenous Heritage (Summary)

The key elements of the Indigenous context and heritage in Karratha are:

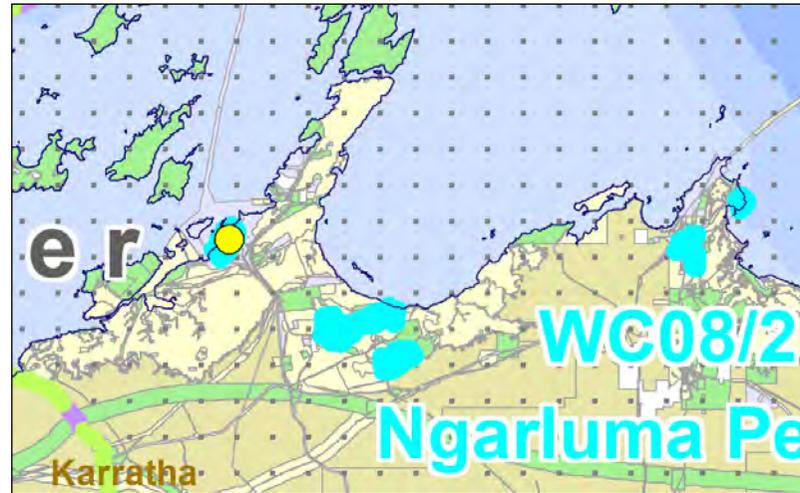
- There were 742 Indigenous people living in the Karratha urban centre locality (2006 ABS Census).
- The local Ngarluma and Yindibarndi people have called the region home for many generations.
- The Ngarluma people hold Native Title over Karratha and the surrounding towns of Wickham and Point Samson (as shown in

- **Figure).** This was determined in May 2004.
- The Aboriginal artists of the West Pilbara coast are nationally and internationally renowned. Two of these groups, the Roebourne Arts Group and the Yindjibarndi Arts Group, are located in Roebourne.
- There is no single recognised Aboriginal Corporation or Group that is located in Karratha. However, the following groups are located in the neighbouring town of Roebourne:
 - Ngarluma Aboriginal Corporation
 - Juluwarlu Aboriginal Corporation
 - Murujuga Aboriginal Corporation
 - Ngarliyarndu Bindirri Aboriginal Corporation
 - Ngarluma & Yindjibarndi Foundation Ltd

Other service providers include:

- Minurmarghali Mia Campus
- Mawarnkarra Health Service

Figure 2: Pilbara Native Title Applications and Determination Area (as per Federal Court 30 September 2009) ²



² National Native Title Tribunal, www.nntt.gov.au

9.2.4. Demographics

Town Overview

Karratha is the largest town in the Shire of Roebourne (SoR), comprising the suburbs of Bulgarra, Pegs Creek, Millars Well, Nickol, Nickol West, Baynton, Baynton West and Tambrey. Mulataga will become the newest suburb of Karratha in coming years.

As the main service centre in the West Pilbara, Karratha has a current estimated population close to 18,500 and an aspirational target of 50,000 via the Karratha City of the North Plan.

The town has a range of services and facilities including a regional hospital, major shopping centre, sports facilities, TAFE/high school campus, aquatic centre and key government agencies. The Karratha Industrial Estate (KIE), immediately south of the main township has a large tract of industrial zoned land, and a new industrial area, Gap Ridge Industrial Estate, comprising 114 lots, is also being finalised.

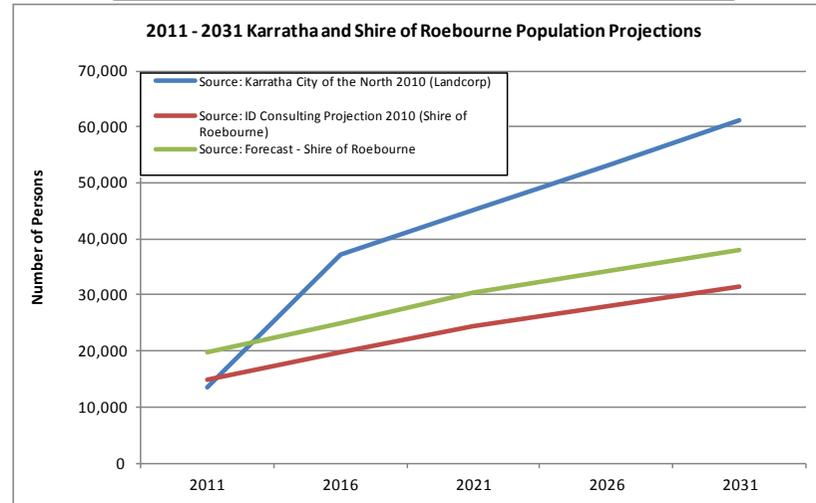
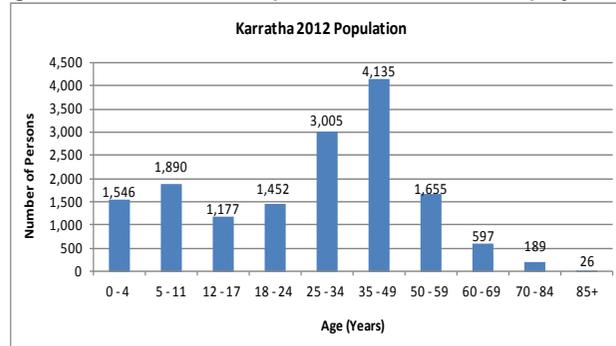
Karratha also has one of the busiest regional airports in Australia. Fuelled by the resource sector growth, the airport has experienced enormous growth over the last five years, with passenger numbers almost doubling from approximately 370,000 in 2006 to nearly 700,000 in 2011.

The airport is managed by the Shire of Roebourne and has undergone a significant airside and car park upgrade to cater for the growing passenger numbers.

Population

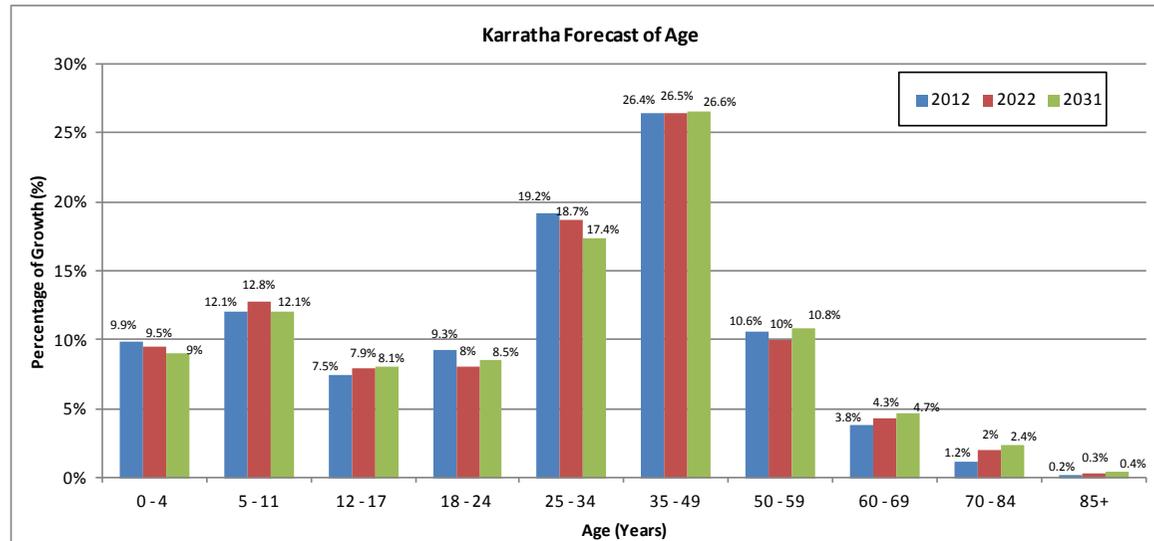
Current Population^{3 4}

Figures 3-5: 2006 – 2012 Population and 2011 – 2031 projections



3 Current Population data is sourced from Shire of Roebourne, Population forecast [web] <http://forecast2.id.com.au/Default.aspx?id=381&pg=5180>

4 Syme Marmion & Co, Shire of Roebourne Community Facilities Plan – Final Draft, August 2011



- There are a high proportion of children aged up to 11 years. This drops considerably at adolescent age and then rises again in the ages of 25–34 and 35–49 due the resource industry-related work opportunities.
- There are very few seniors residing in Karratha.
- Comparison of population demography between 2006 and 2031 indicates that the proportion of population between the age group of “25 to 34” is expected to decrease, while the “over 50” age group will increase.

Ethnicity and Birthplace

In Karratha:

- 69.7% of residents are born in Australia, of which 6.3% are Indigenous.
- 77.5% are Australian citizens.
- 80.2% speak English only.
- Top countries of both ethnicity and birthplace (excluding Australia) are England (3.8%), New Zealand (3.7%), Philippines (0.9%), India (0.8%) and South Africa (0.8%).

Karratha has a:

- Slightly higher proportion of Australia citizens compared to the Pilbara and regional WA.
- Lower proportion of Indigenous residents compared to the Pilbara and regional WA.
- Higher proportion of residents that only speak English compared to the Pilbara, but a lower proportion compared to regional WA.
- Similar profile of birth countries compared to the Pilbara.

Table 1: Ethnicity (ABS Census, 2006)

	Karratha	Pilbara	Regional WA	Perth Metro
Australian Citizen	77.5%	74.8%	76.0%	82.7%
Indigenous	6.3%	13.7%	7.3%	1.5%
Speak English Only	80.2%	72.7%	87.2%	79.9%

Table 2: Countries of Birth (ABS Census, 2006)

	Karratha	Pilbara	Regional WA	Perth Metro
Australia	69.7%	67.2%	76.0%	61.5%
England	3.8%	3.3%	6.1%	9.9%
New Zealand	3.7%	4.0%	2.4%	2.4%
Philippines	0.9%	0.7%	0.3%	0.4%
India	0.8%	0.5%	0.2%	1.0%
South Africa	0.8%	0.8%	0.6%	1.3%

Household Structure

In Karratha, half of all households (51%) are families with children, over one quarter (28%) are couples without children, 17% are lone person households, 4% are group/share households and 1% are other families (

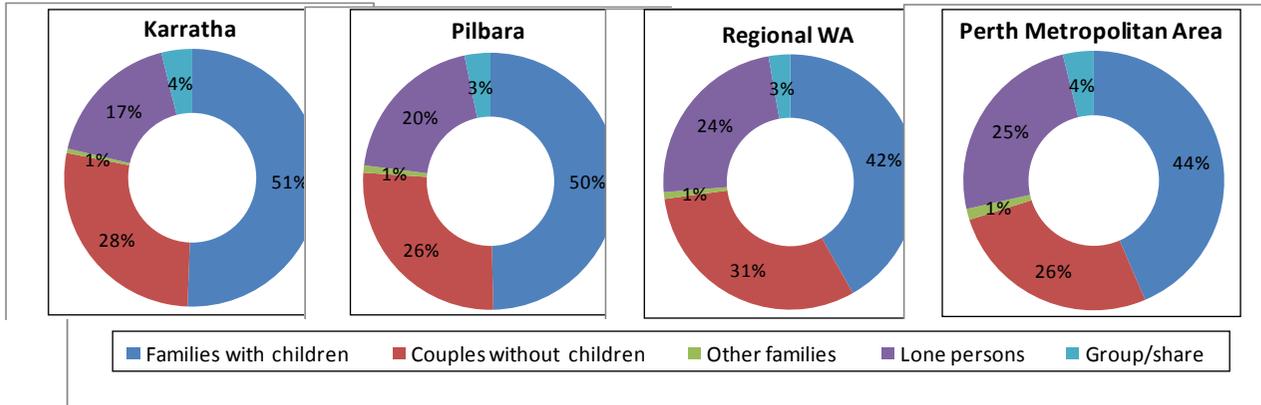
Figure). This is a very similar profile to the whole of the Pilbara.

In comparison to regional WA and the Perth metropolitan area, Karratha has a:

- Higher proportion of families with children.
- Lower proportion of lone person households.

The average household size is 2.8 persons; in comparison it is 2.9 persons in the Pilbara, 2.6 persons in regional WA and 2.5 in the Perth metropolitan area.

Figure 6: Household Structure (ABS Census, 2006)

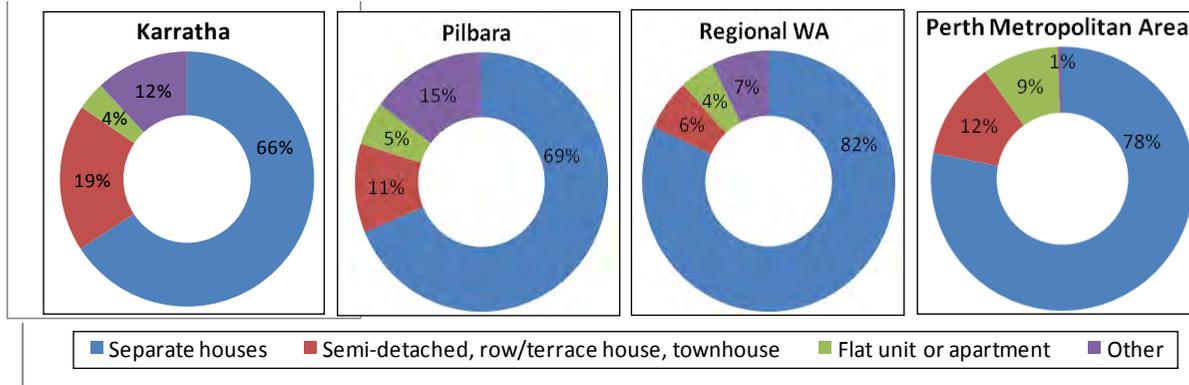


Dwellings

66% of all dwellings are separate houses, 19% are semi-detached/row/terrace houses or townhouses, 4% are flats, units and apartments and 12% are other dwellings. In comparison to the Pilbara, regional WA and the Perth metropolitan area, Karratha has a:

- Lower proportion of separate houses.
- Higher proportion of semi-detached/row/terrace or townhouses.
- Higher proportion of other dwellings.

Figure 7: Dwelling Types (ABS Census, 2006)



Income

The median weekly household income in Karratha is \$2,078; this is slightly higher than the Pilbara overall (\$1,969) and double regional WA (\$1,005) and the Perth metropolitan area (\$1,086).

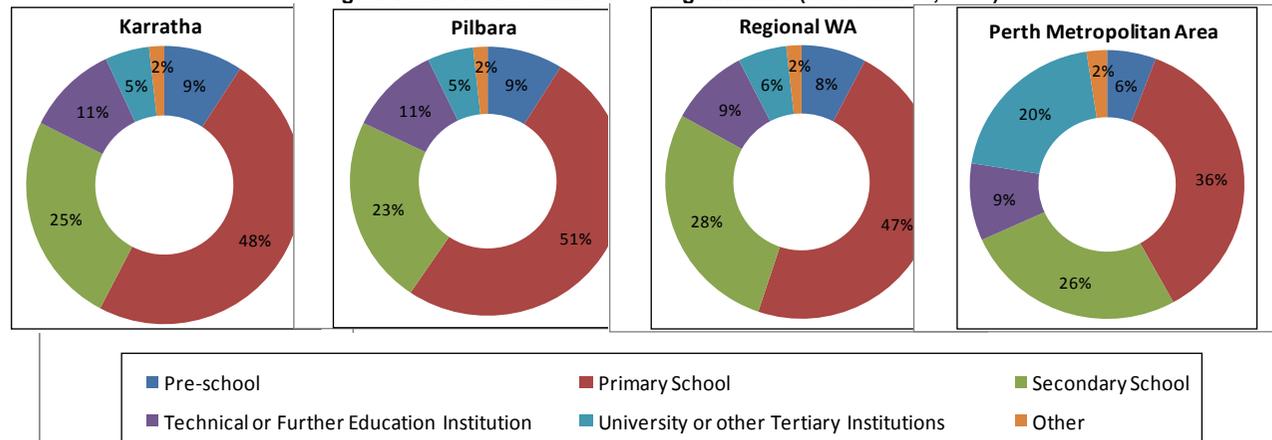
Table 3: Median Weekly Income (ABS Census, 2006)

	Karratha	Pilbara	Regional WA	Perth Metro
Individual	\$940	\$887	\$465	\$513
Household	\$2,078	\$1,969	\$1,005	\$1,086
Family	\$2,309	\$2,178	\$1,135	\$1,298

Education

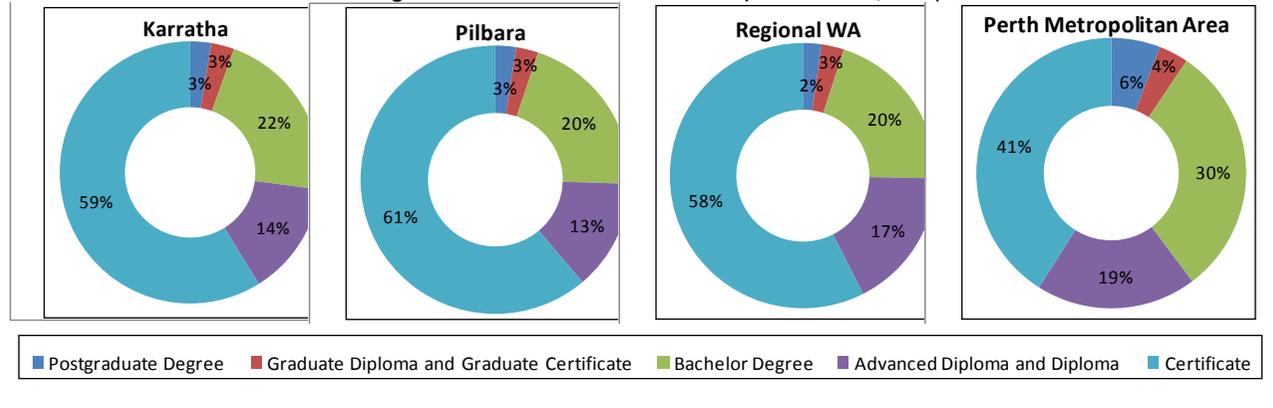
In Karratha, 48% of people attending an educational institution are at primary school, 25% are attending secondary school, 9% are at pre-primary school, 16% are undertaking further education and 2% are attending other education institutions. This profile is very similar to the Pilbara and regional WA.

Figure 8: Education Institution Being Attended (ABS Census, 2006)



Of the residents in Karratha who have a post-school qualification, the majority hold a certificate (59%), 22% hold a bachelor degree, 14% hold an advanced diploma, 3% hold a graduate diploma and graduate certificate and 3% hold a post-graduate degree. This is a similar profile compared to the Pilbara and regional WA. In Perth, a higher proportion of residents hold a bachelor degree and postgraduate degree.

Figure 9: Post-school Qualifications (ABS Census, 2006)



Employment

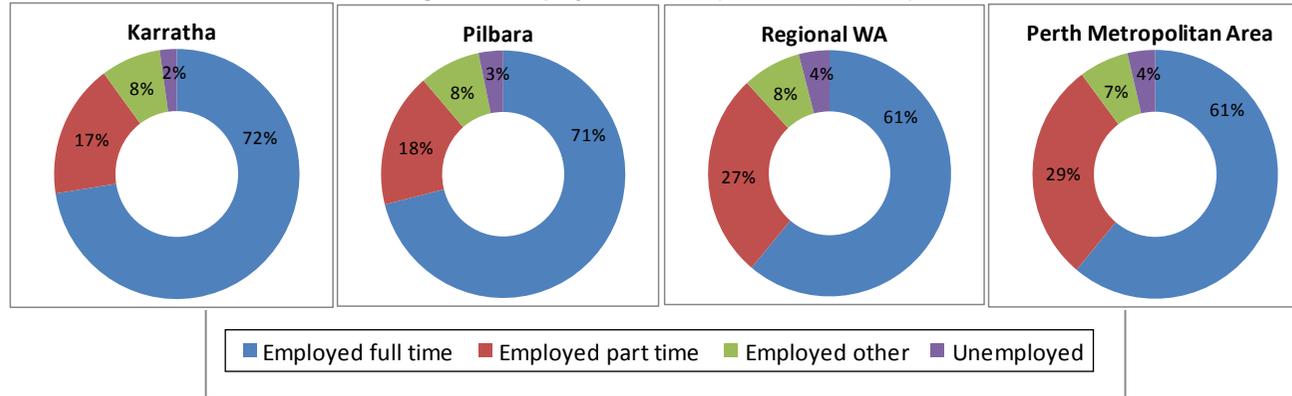
Karratha has a total labour force of just over 6,000 people, of whom 72% are employed full-time, 17% are employed part-time, 8% are employed in another capacity and 2% are unemployed. Further to this, approximately 1,100 people aged over 15 years (or the equivalent of 16%) are not in the labour force.

The labour force in Karratha has a similar make up to the Pilbara overall (as shown in

Figure). However, in comparison to regional WA and the Perth metropolitan area, Karratha has a:

- Higher proportion of people employed full-time.
- Lower proportion of people employed part-time.
- Lower proportion of people not in the labour force (34% in regional WA and 33% in Perth).

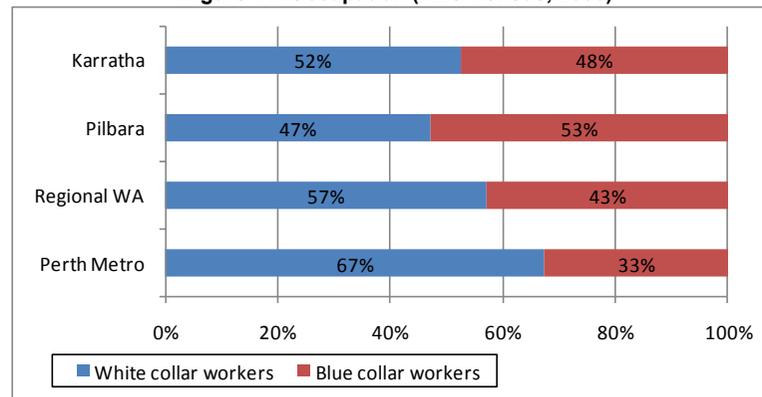
Figure 10: Employment Status (ABS Census, 2006)



Just over half of all employed residents in Karratha are white collar workers⁵ (52%); with the remaining being blue collar workers⁶ (48%). This is the opposite of the Pilbara, with 53% being blue collar workers and 47% being white collar workers. This difference is understandable given that Karratha is the service centre for the Shire of Roebourne (one of four local governments in the Pilbara).

Perth and regional WA have a higher proportion of white collar workers compared to Karratha, and a lower proportion of blue collar workers.

Figure 11: Occupation (ABS Census, 2006)



⁵ White collar workers include: professionals, managers, clerical and administrative workers, sales workers and community and personal service workers.

⁶ Blue collar workers include: technicians and trades workers, labourers and machinery operators and drivers.

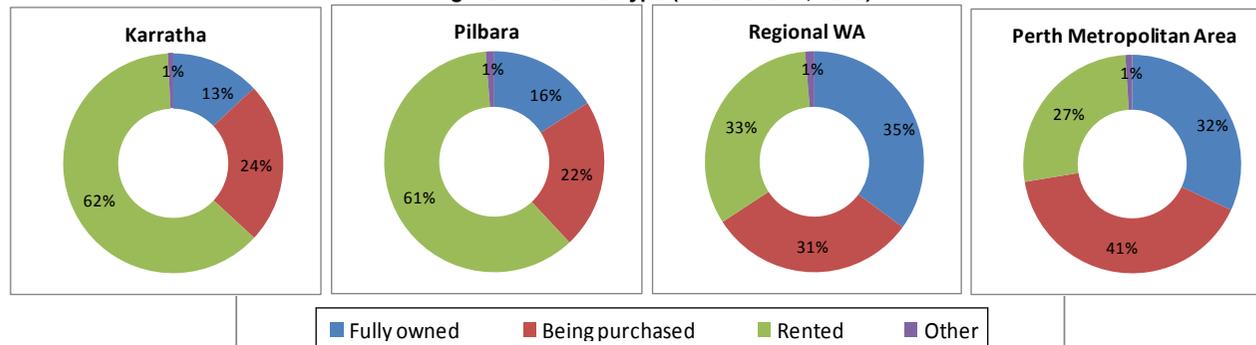
The top five employment industries of residents in Karratha are:

2. Metal ore mining (8.0%).
3. School education (5.4%).
4. Oil and gas extraction (5.4%).
5. Heavy and civil engineering construction (3.8%).
6. Building installation services (3.0%).

Housing Market

There is a high proportion of rental properties (62%); 37% that are owner-occupied. This is very similar to the rest of the Pilbara but very different from regional WA and the Perth metropolitan area where the majority of properties are owner-occupied (66% in regional WA and 73% in Perth). The high proportion of rental in Karratha and the Pilbara is probably due to the provision of housing for resource sector and government services workers by their employers.

Figure 12: Tenure Type (ABS Census, 2006)



In Karratha, 25% of all rentals are through a real estate agent, 22% are state housing authority rentals and the majority 53% are other rentals⁷. This is similar to both the Pilbara and regional WA; however, the Pilbara has a higher proportion of other rentals (64%).

⁷ 'Other' rentals comprises dwellings being rented through a 'residential park (includes caravan parks and marinas)', 'employer-government (includes Defence Housing Authority)' and 'employer-other employer' (private).

Figure 1: Rental Landlords (ABS Census, 2006)

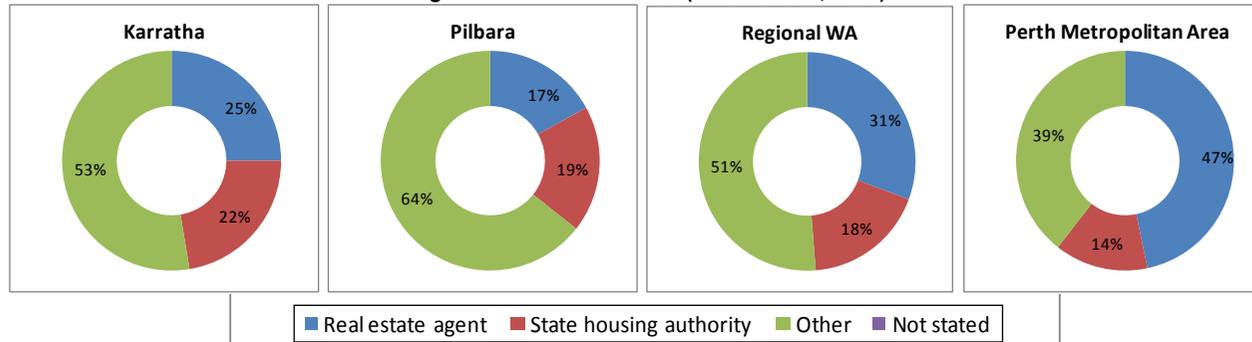


Figure compares the number of properties advertised for rent in Karratha during the June and December quarters of 2011. The majority of rentals available are three and four bedrooms properties. Figure 2 compares the average cost of advertised rental accommodation in Karratha during the same period. Between the June and December quarters in 2011, the average rental cost of a one bedroom property decreased by \$235.00 per week; however, the average rental cost of a 4+ bedroom house has increased by \$75.00 per week.

Figure 14: Advertised Rental Properties in Karratha⁸

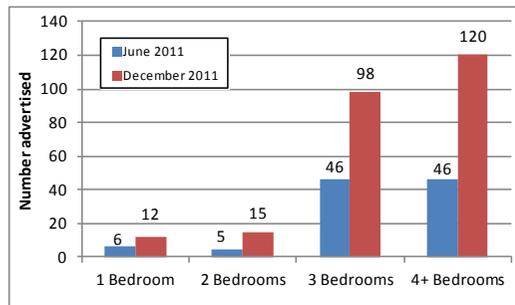


Figure 2: Average Cost of Advertised Rental Properties in Karratha⁸

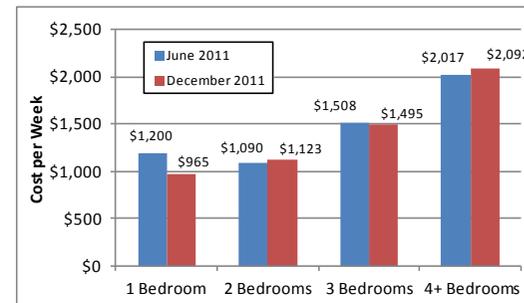


Figure illustrates the number of advertised dwellings for sale, while Figure 3 details the average cost of advertised dwellings for sale in Karratha for the June quarter 2011 in comparison to the December quarter 2011.

⁸ Pilbara Development Commission, Housing and Land Snapshot Karratha, Quarter ending December 2011

Figure 16: Dwellings and Land Advertised for Sale in Karratha

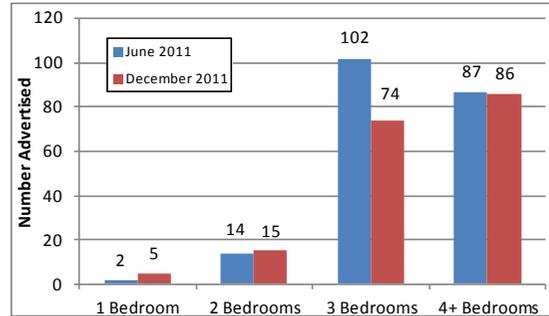


Figure 3: Average Advertised Cost of Dwellings and Land for Sale in Karratha

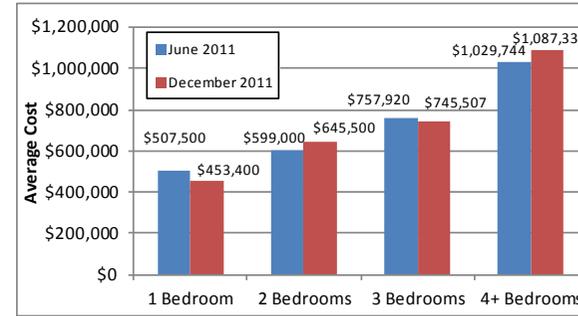
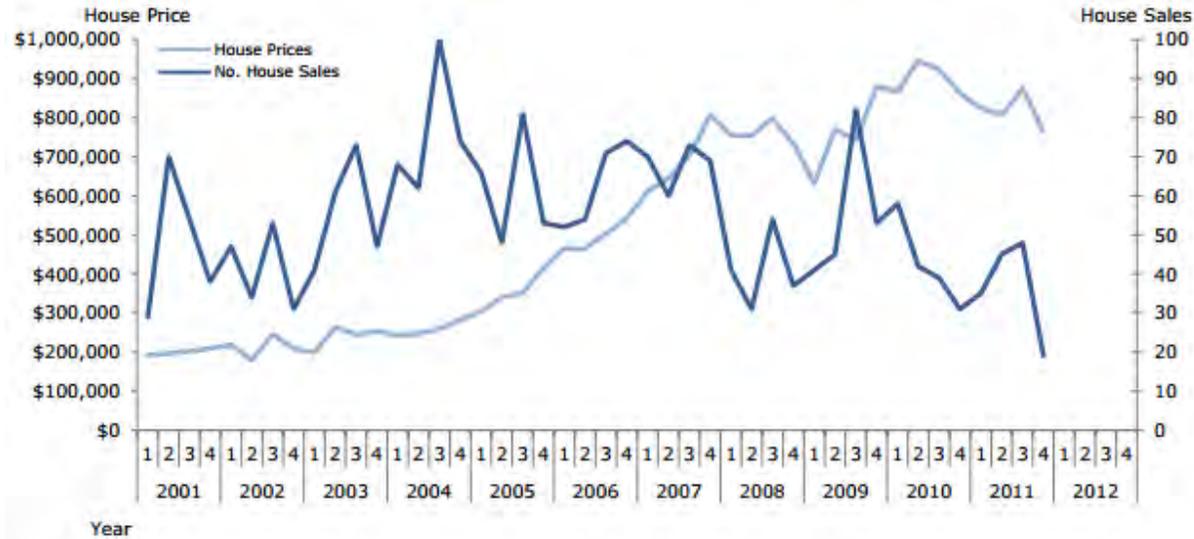


Figure 18 shows the trend of average house settlement prices and sales in Karratha. As the number of sales has decreased, the prices have increased.

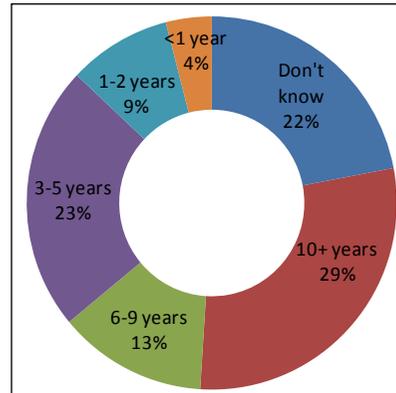
Figure 18: Average House Prices and Sales in Karratha, 2001-2011



Population Movement

As part of the consultation for Karratha 2020,⁹ an internet survey was conducted to ascertain people's time intentions to remain in the Shire of Roebourne (Figure 419). Responses showed that 36% of people only intend on staying in the Shire for up to five years, 13% intend to stay between six to nine years, 29% intend to stay more than 10 years and 22% were unsure of their intentions.

Figure 4: Time Intentions to Remain in the Shire of Roebourne

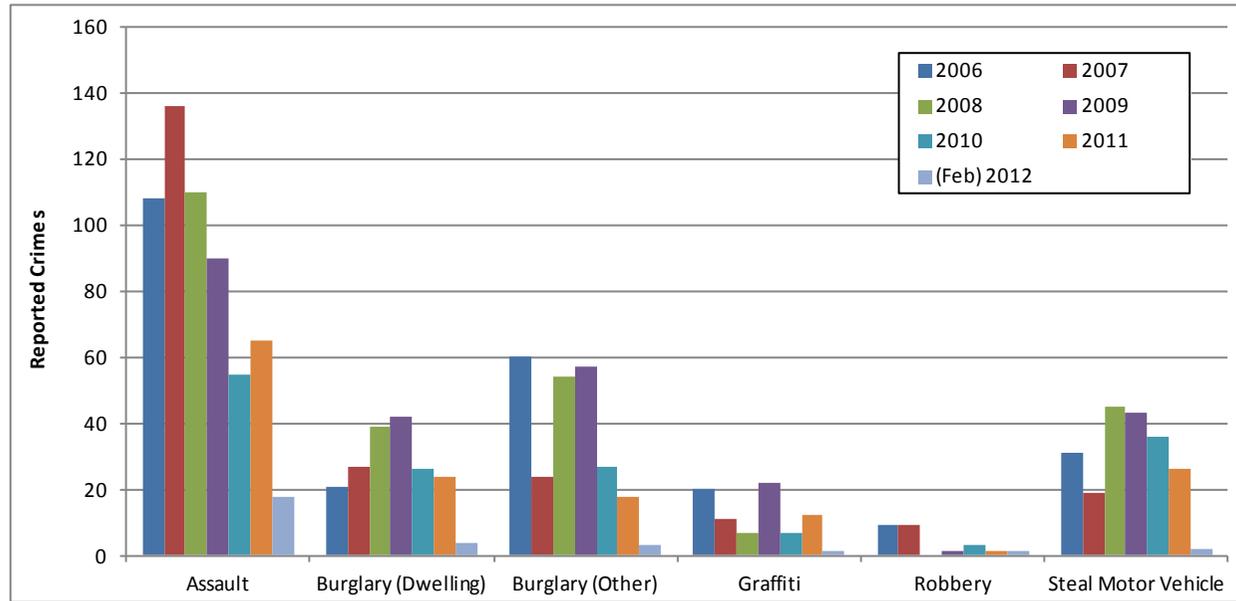


Crime Statistics

⁹ Shire of Roebourne, Karratha 2020 Vision and Community Plan, 2009

Figure 5 shows the number of reported crimes in the Karratha town site between 2006 and to February 2012. The most commonly reported crimes are assault and burglary (other). There has been a downward trend in assaults, from 108 in 2006 to 65 in 2011, while burglary (other) declined from 60 in 2006 to 18 in 2011. There has been a slight increase in graffiti over this time period.

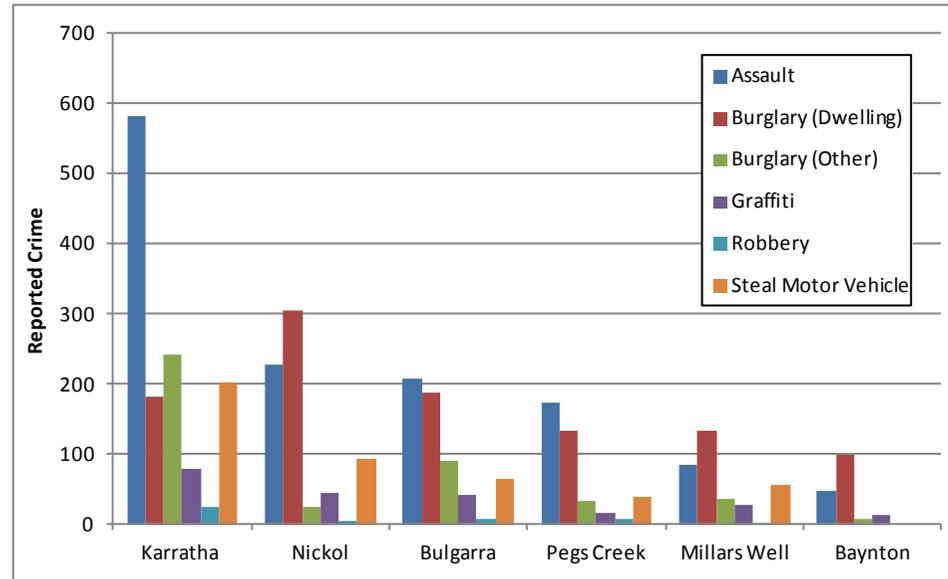
Figure 5: Reported Crimes in Karratha Town Site¹⁰



¹⁰ WA Police, Crime Statistics, <http://www.police.wa.gov.au/ABOUTUS/Statistics/SearchCrimeStatistics/tabid/998/Default.aspx>

Figure shows the number of reported crimes by Karratha suburb between January and September 2009. In Bulgarra and Pegs Creek, the most commonly reported crime is assault, while in other suburbs; dwelling burglary is the most common.

Figure 21: Reported Crimes by Suburb of Karratha January 2006 – February 2012



9.2.5. Facilities

This section documents facilities in Karratha and Dampier, updated to March 2012.

Sporting / Recreation

Facility	Notes/Names
Playing fields	<ul style="list-style-type: none"> 5 existing, 5 new. (Need for 4 additional active sport playing fields in western suburbs - St Luke's, sites within Nickol and Baynton West – set aside for playing fields). Bulgarra Bowling Green Country Club.
Outdoor sporting complex	<ul style="list-style-type: none"> Bulgarra Reserve.
Indoor recreation centres	<ul style="list-style-type: none"> Karratha SHS. Karratha Entertainment Centre (may be replaced by a new centre at new high school). Opportunity exists to replace these facilities with a new joint DET/Shire-developed recreation centre at the new high school.

Facility	Notes/Names
Aquatic centres	<ul style="list-style-type: none"> A pool complex located in town centre
Golf courses	<ul style="list-style-type: none"> Karratha Golf Course - has sand greens.
Boat launch facilities	<ul style="list-style-type: none"> Need upgrading, improved signage and on-site facilities.
Playgrounds	<ul style="list-style-type: none"> Bulgarra Reserve - Regional (existing). Cattrall Park Baynton West Tambrey Neighbourhood Playground – local.
Parks	<ul style="list-style-type: none"> Andover Way Park. Gregory Way Park. Richardson Way Park. Shakespeare Street Park. Central Park. Dodd Court Park. Waters Park. Michael Lewandowski Park. Malsters Place Park. Straker Park. Church Way Baynton Park. Calliance Way Park. Hillcrest Estate Park. Miles Loop Park. Apex Park. Hutton Court Park. Smith/Delambre Park. Dampier Lions Park.
Ovals	<ul style="list-style-type: none"> Bulgarra Oval. Pegs Creek Oval. Hampton Oval and Recreation Pavillion. Windy Ridge Oval. Millars Well Oval. Tambrey Oval. Kevin Richards Memorial Oval.

Community/Recreation

Facility	Notes/Names
Entertainment centres	<ul style="list-style-type: none"> Karratha Entertainment Centre - used for gymnastics. Use might change in the future.
Recreation clubs	<ul style="list-style-type: none"> Karratha Recreation Club. Karratha Golf Club. Karratha Bowling Club.
Theatre	<ul style="list-style-type: none"> Walkington Theatre – cultural and learning space providing community information, conference and entertainment space. Internal audio and outside projector in need of upgrade. (Upgrade issues currently evident.)
Churches	<ul style="list-style-type: none"> Church of Jesus Christ of Latter-day Saints. St Peters Catholic Church – Dampier. Jehovah Witnesses.

Facility	Notes/Names
	<ul style="list-style-type: none"> • St Pauls Catholic Church. • Karratha Anglican Church. • Karratha Baptist Church. • Northwest Christian Fellowship. • Salvation Army Family Church. • Seventh Day Adventists.
Community buildings	<ul style="list-style-type: none"> • Salvation Army. • Masonic Lodge.
Library	<ul style="list-style-type: none"> • Karratha Community Library (currently in temporary accommodation – future location not yet identified).
Visitor centre	<ul style="list-style-type: none"> • Operating as subsidised information centre with little immediate potential to be profitable and is in need of upgrading.
Public transport	<ul style="list-style-type: none"> • There is a community bus - an initiative of the Shire of Roebourne with funding proudly provided by the Public Transport Authority of WA, Rio Tinto Iron Ore and the Shire of Roebourne. <ul style="list-style-type: none"> ○ The bus stops at Point Samson, Wickham, Roebourne, Karratha and Dampier. ○ The bus operates on Saturdays and Sundays.
Youth facilities	<ul style="list-style-type: none"> • Salvation Army Youth Facility (Bond Place Pegs Creek) - has restricted access. • New Youth Centre (Youth Shed) Developed in 2011. • The Shire of Roebourne's brand-new indoor play centre offers four different party options and play areas for children of all ages.

Education & Child Care

Facility	Notes/Names
Primary schools/Early Years Centres	<ul style="list-style-type: none"> • St Paul's Primary. • Karratha State Primary (\$26m redevelopment 2010). • Peg Creek Primary (possible redevelopment). • Millars Well Primary. • Tambrey Primary. • New primary school proposed for Baynton West (completion 2012/13). • Early Learning and Care Centre associated with the Tambrey Primary School in Karratha was completed in

	2010. The centre support families and integrate childcare with early childhood education.
Secondary schools	<ul style="list-style-type: none"> • The Year 11 and 12 students are on the Senior School campus, which is co-located with Pilbara TAFE on the Karratha Education and Learning Precinct site (KELP) on Dampier Highway). Dual campus school operating until 2012, when years 8-10 will move to the KELP and link to TAFE. • St Luke's Catholic College (years 8-12). Note: College looking to expand, but require additional teacher accommodation.
Further education facilities	<ul style="list-style-type: none"> • TAFE - likely to become a fee-for-service provider in the future. • Curtin University annex. • Australian Technical College. • Plans to relocate high school to be adjacent to TAFE, Curtin & ATC to create 'education precinct' (2011 – due for completion). • Pindan College (TAFE Equivalent).
Other education facilities	<ul style="list-style-type: none"> • Karratha Education Support Centre (for Students with Intellectual Disabilities). • Pilbara Camp School.
Childcare	<ul style="list-style-type: none"> • Bulgarra. • Millars Well. • Karratha Out of School Care. • Children's Services Support Unit WA. • Yandina Child Care centre (Tambrey Centre). • Karratha Occasional Care Centre. • Embracing Children Before, After Kindy/ School & Saturday Care.

Health

Facility	Notes/Names
Hospital/Medical	<ul style="list-style-type: none"> • Nickol Bay Hospital, Millstream Road. (To be undergoing \$500m + upgrade from Karratha City of the North/Pilbara Cities Program.) • Karratha Medical Centre. • Prime GP Medical Centre.
Dental	<ul style="list-style-type: none"> • Karratha Dental Centre. • Karratha Medical Centre. • School Dental Therapy. • Pilbara Dental Clinic. • Nickol Bay Dental Clinic.
Child health	<ul style="list-style-type: none"> • Millars Well Child Health Clinic. • Hedland Place Child Health Clinic. • Child Australia (previously RUCSN). • Yaandina Youth and Family Support. • The Smith Family.
Health - specialists/other	<ul style="list-style-type: none"> • Hedland Place Child Health Clinic. • Karratha Allied Health mob • Karratha Cancer Support Group. • Karratha Physiotherapy Centre. • Karratha Speech Pathology Clinic. • Kid Speak Speech Pathology. • Kinetic Health Clinic East (formally Gemini Medical Centre). • Kinetic Health Clinic West (formally Prime Health Group). • Pilbara Mental Health & Drug Service. • Western Diagnostic Pathology. • Pilbara & Kimberley Care Inc. • North West Mental Health. • Standby Response Service. • Medibank Health Solutions. • Just Spectacles. • North West Podiatry. • Pathology Centre.

Facility	Notes/Names
Disability	<ul style="list-style-type: none"> • CRS Australia (Rehabilitation Services). • Disability Services Commission. • Pilbara & Kimberley Care Inc.
Population Health	<ul style="list-style-type: none"> • Karratha - Pilbara Population Health (Warambie Health Services). • WACHS Pilbara.

Public / Group Housing

Facility	Notes/Names
Government Regional Officers Housing GROH housing	<ul style="list-style-type: none"> • Two largest clients – DET (42%) & police (22%). • Police currently have about 40 GROH houses. • DET houses district office staff (about 30) and teachers (over 100). • 50-60% leased from private housing market.
Seniors accommodation	<ul style="list-style-type: none"> • Karratha Seniors' Village, Basset Rd Seniors Accommodation facility.

Community Groups and Associations (Karratha and Dampier)

Category	Notes/Names
Arts and Crafts	<ul style="list-style-type: none"> • Anglican Church Ladies Craft Group. • Karratha Arts and Learning Centre.
Cadets/ Reserves/Scouts	<ul style="list-style-type: none"> • Australian Army Cadet Corps (Pilbara Regiment). • Australian Army Reserves (Pilbara Regiment). • 508 Army Cadet Unit Karratha. • 3rd Karratha Scout Group.
Community Associations and Organisations	<ul style="list-style-type: none"> • Karratha Community Association. • Pilbara Music Association. • Apex Club of Karratha. • Rotary Club of Karratha. • Karratha and Districts Returned Services League (RSL). • Lions Club of Karratha/Dampier. • Lions FeNaCLING Festival Committee. • Soroptimists International of Karratha and Districts. • RSL Bingo. • Karratha Back beach Association.

Category	Notes/Names
Cultural Groups	<ul style="list-style-type: none"> • Kotahitanga Maori Culture Group.
Business Groups	<ul style="list-style-type: none"> • Karratha District Chamber of Commerce and Industry. • Karratha Small Business Assoc. West Pilbara
Recreation Clubs	<ul style="list-style-type: none"> • Karratha Aero modellers. • Karratha Nickol Guides. • 3rd Karratha Scout Group. • Karratha Autumn Club (seniors). • Karratha and Districts Kennel and Training Club. • Karratha Baptist Church Kids Club. • Karratha Baptist Church Youth Club. • Karratha Youth Theatre.
Sporting Clubs	<ul style="list-style-type: none"> • Bulgarra Glory Soccer Club. • Burrup Mountain Bike Club. • Cycle on Mountain Hash. • Dampier Bowling Club. • Dampier Community Gym. • Dampier Junior Football Club. • Dampier Netball Club. • Dampier Pistol Club. • Dampier Red Dogs Soccer Club. • Dampier Sharks Football Club • Dampier Softball Association (Women). • Dampier Sports Club. • Dampier Squash Club. • Dampier Taekwondo. • Dampier Tennis Club. • Dance FX. • Deckarts Studio. • Estelle's Dance and Performance Academy. • Hampton Harbour Boat & Sailing Club. • Hip Hop XS. • Karratha & Districts Junior Soccer Association.

Category	Notes/Names
	<ul style="list-style-type: none"> • Karratha & Districts Kennel & Training Club. • Karratha (Kats) Football & Sporting Club. • Karratha / Dampier Teeball Association. • Karratha Amateur Basketball Association. • Karratha Amateur Swimming Club. • Karratha and Districts Senior Soccer Association. • Karratha and Districts Soccer Association. • Karratha and King Bay Horse and Pony Club. • Karratha BMX Club. • Karratha Bowling Club. • Karratha Broncos Rugby League Club. • Karratha Country Club. • Karratha Cycle Club. • Karratha Dampier Running Club. • Karratha District Eight Ball Association. • Karratha Dive School. • Karratha Enduro and Motocross Club. • Karratha Falcons Football & Sporting Club. • Karratha Falcons Junior Football Club. • Karratha Gymnastics Club Inc. • Karratha Indoor Cricket Association. • Karratha Kart Club. • Karratha Kats Football and Sporting Club. • Karratha Ko Tora Kai Karate Do. • Karratha Golf Club • Karratha Little Athletics. • Karratha Netball Association. • Karratha Rifle Club. • Karratha Rockers. • Karratha Roosters Rugby League Club. • Karratha Seishikan Goju Ryu Karate Do. • Karratha Shotokan Karate. • Karratha Softball Association. • Karratha Squash Club.

Category	Notes/Names
	<ul style="list-style-type: none"> • Karratha Storm Junior Rugby League Club. • Karratha Taekwondo. • Karratha Tennis Club. • Karratha Touch Association. • Karratha/Dampier Darts Association. • King Bay Game Fishing Club. • Nickol Bay Hockey Association. • Nickol Bay Indoor Hockey Association. • Nickol Bay Speedway Club. • Nickol Bay Sport Fishing Club. • Nickol Bay Triathlon Club. • Karratha Seniors Autumn Club. • Nickol Cricket Club. • Nickol Junior Soccer Club. • Nickol Soccer Club. • Nor-West Jockey Club. • Pilbara Darts Council. • Pilbara Regional Football Development Office. • Pilbara Rugby League Association. • Red Dog 4WD Club Inc. • Salt Junior Soccer Club. • Sierras Netball Club. • Sporting Shooters Association. • Tambrey Indoor Cricket Association. • West Pilbara Cricket Association. • West Pilbara Junior Cricket Association. • West Pilbara Junior Football Association. • West Pilbara Softball Organisation Inc.
Playgroups	<ul style="list-style-type: none"> • First Steps Playgroup. • Karratha Community House Inc. • Karratha Family Centre. • Dampier Family Playgroup. • Pam Buchanan Centre, Baynton West

Category	Notes/Names
Youth Groups	<ul style="list-style-type: none"> • Karratha Kids (K K'S) • Shire of Roebourne Youth Council

9.2.6. Service Providers in Karratha / Dampier

Government Agencies

- Centrelink
- CRC Australia (formerly Commonwealth Rehabilitation Service)
- Department of Defence
- Maritime Safety Authority
- Quarantine and Inspection Services
- Department of Agriculture and Food
- Department of Attorney General
- Department of Child Protection
- Department of Commerce
- Department of Corrective Services
- West Pilbara Community Health Service
- Disabilities Services Commission
- Department of Education and Training
- Department of Environment and Conservation
- Fire and Emergency Services Authority
- Department of Fisheries
- Horizon Power
- Department of Housing
- LandCorp
- Department of Mines and Petroleum
- Pilbara TAFE
- Police Service, WA Northern Region
- Department of Sport and Recreation
- Tourism WA
- Department of Transport
- Department of Water
- Water Corporation
- Shire of Roebourne
- Pilbara Development Commission
- Pilbara Cities Office

Other Service Providers in Karratha / Dampier

- St John Ambulance
- Pilbara Community and Aged Care Services
- Pilbara Community Council
- Australian Breastfeeding Association
- Cancer Council of WA
- Lifeline
- Link Parenting Information Service
- Pilbara Regional Domestic Violence Council Inc.
- Pilbara Individual and Family Support Association
- Karratha Volunteer Fire & Rescue Service
- Karratha & Districts Returned Services League (RSL)
- Karratha Community House
- Karratha and Districts Chamber of Commerce and Industry
- Pilbara Area Consultative Committee
- Pilbara Community Legal Service
- West Pilbara Communities for Children Initiative
- Pilbara and Kimberley Care Inc.
- Karratha Youth Housing Project

9.2.7. Karratha Cultural and Community Events

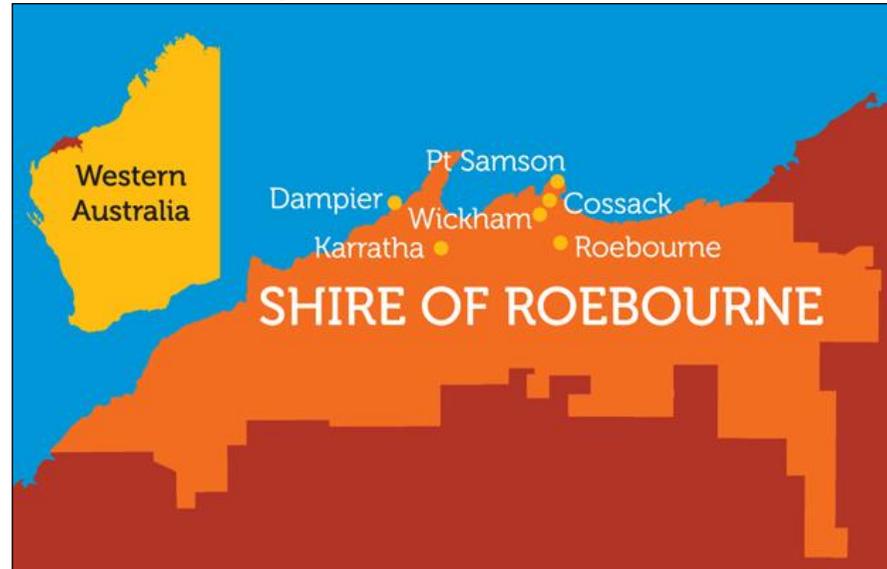
The following cultural and community events in Karratha have been identified

- FeNaClING- (pronounced fee-nack-al-ling). The Karratha-based festival is of such importance locally that a public holiday has been declared (normally held on the first Saturday and Sunday of August). The name, FeNaClING comes from the chemical symbols of the three main production and export commodities in Karratha and Dampier: Iron Ore-Fe, Salt-NaCl and Natural Gas-NG. FeNaCling is similar to an agricultural show without the agriculture! This is a free event.
- Red Earth Arts Festival - This Festival was launched in 2010 by the Shire of Roebourne. It aims to engage local arts and cultural groups, offer opportunities to showcase local talent from towns and support the development and growth of the arts and culture industry in the region. The Red Earth Arts Festival incorporates creative and professional development workshops, quality performances from local arts and cultural groups, as well as high calibre entertainment from across the country, and aims to engage the participation of each of all communities.
- Karratha Community Celebration - This was also launched in 2010 by the Shire of Roebourne. The event was designed to shine the spotlight on Karratha's plans for a revitalised town centre and WA Premier Colin Barnett and his Cabinet Ministers visited Karratha for a Regional Cabinet sitting. The Karratha Community Celebration is a street festival event, designed to showcase a vibrant Karratha: City of the North vision, celebrate progress towards this vision and celebrate the region's growing arts and cultural scene. The Karratha Community Celebration takes place on the closing day of the Red Earth Arts Festival (REAF) and offers a line-up of high-calibre entertainment in the form of bands, performing arts, comedy, visual arts, roaming street theatre, BBQ master chef competition, street parade, quality street stalls, food and drink stalls and displays by developers involved in the town centre.
- Twilight Tunes - The Shire of Roebourne holds eight Twilight Tunes annually, which are planned in different locations including Karratha. They are all outdoor, low key events held in the cooler months, and entertainment always involves a quality line-up of talented musicians.

9.2.8. Karratha's Neighbours

Karratha is the key service centre for towns in the Shire of Roebourne that include Dampier, Wickham, Roebourne, Point Samson and Cossack.

Figure 6: Map of the Shire of Roebourne



Dampier

Population: 1,370 (2.1% Indigenous) (ABS Census, 2006).

Location: 19 kilometres north-west of Karratha.

- Developed in 1963 when Hamersley Iron (Rio Tinto) entered into a State Government agreement to develop an iron ore mine at Tom Price and a port in the Burrup Archipelago.
- Dampier's proximity to the ocean, Dampier Archipelago and Burrup Peninsula make it a focus for tourism and recreational activities such as sailing, boating and fishing.
- Location of the main port.
- Private home ownership is high compared to Karratha - primarily through Rio Tinto's home purchasing scheme.
- A number of residences and community facilities are dated, due to them originally being established for impermanent use.

- Plans are mooted for revitalising FIFO accommodation
- As the residential population growth outgrew the existing town site, new residents were redirected to the then new settlement of Karratha.

Roebourne

Population: 857 (61.1% Indigenous) (ABS Census, 2006).

Location: 39 kilometres east of Karratha.

- Sporting facilities include covered basketball courts and public swimming pool.
- Historic buildings and pioneering history.
- Settled in 1866 – WA's oldest surviving town north of Geraldton.
- Administrative base for the Shire until 1975, when operations transferred to Karratha.
- Location of all significant Aboriginal organisations in the region.
- Aboriginal population proportion significantly increased over time as government services relocated to Karratha and the provision of housing for resource sector workers was only provided in Karratha.
- Location of regional prison (between Roebourne and Wickham).

Wickham

Population: 1,825 (15.8% Indigenous) (ABS Census, 2006).

Location: Eight kilometres north of Roebourne.

- Wickham was established in 1970 by Cliffs Robe River Iron Associates (Robe's) and named after JC Wickham, the captain of HMS Beagle, who surveyed the north-west coast in 1840. Robe's aim was to create a processing plant for the iron ore mined at nearby Pannawonica, a port (at Cape Lambert) from which to ship the product, and a town to house the associated employees.
- The town is undergoing revitalisation and expansion to cater for increased residential requirements for Rio Tinto Iron Ore, including increased residential development, FIFO accommodation developments, and new sport and recreation precinct.
- Full range of services offered.

Point Samson

Population: 274 (1.1% Indigenous) (ABS Census, 2006).

Location: 15 kilometres north of Roebourne.

- Caravan park and camping facilities, quality restaurants, boutique accommodation.
- Popular holiday resort.

- Recreation centre for Wickham and Karratha, with attraction to seaside attractions.
- Point Samson was developed initially as the port for Roebourne in 1910.

Cossack

Population: N/A.

Location: Three kilometres east of Wickham.

- Eight restored buildings and a cemetery – all listed by the National Trust.
- Cossack was officially declared a town in 1872. Hub for pastoral, gold and pearling industries.
- 1910 – Harbour silted up and community became a ghost town.
- Currently a tourist destination with facilities managed by the Shire of Roebourne.

10. Appendix 2 – Planning Design Considerations and Recommendations

The following provide a summary of findings that were elicited from the Planning Design Forum held in Karratha from Wednesday 11 April to Friday 14 April 2012.

10.1. Key Development Phases – Community Focus

The development of Mulataga provides the unprecedented opportunity for Karratha to embrace the water and beauty. It provides the canvas to create the notion of “an outdoor living room” albeit in a hot and dry climate.

There are opportunities to create destinations for the people of Karratha as well as visitors, while creating a lifestyle that encourages local residents to develop the feeling of being “at home.”

The other theme that should permeate thinking is the notion of 24 hours per day 7 days per week 52 weeks of the year.

The provision of spaces, facilities and amenity provides the skeleton upon which community can be built.

The key phases of development can be characterised as:

Design	Neighbourhood	Skeleton
Engage	People	Flesh and Blood
Live	Community	The breath and spirit of life

10.1.1. Embracing Nickol bay

Without doubt the single most important physical aspect of Mulataga is the potential to interface with Nickol Bay.

The creation of two, interdependent hubs is seen as an enormous opportunity to bring life to the suburb.

The “first,” more informal hub, on the ocean should provide a multiplicity of connections to the water. The mixture of facilities could include:

- A tidal, ocean pool
- A “splash” water play ground
- Water recreation (including equipment hire)
- A jetty
- A “surf” club

- A family pub/café in the mode of Clancy's or Matsos'
- Shade, walkways, play areas
- Beach access

The "second," more formal hub could be set inland from the informal hub but be intimately connected. This hub could include:

- Retail (e.g. Rottnest General Store mode)
- Retail connected to community activity
- Commercial – medical, office
- High end residential, higher density residential
- Short term accommodation – backpackers, hotel
- Café/restaurants

The potential of a third hub, which could be an adjunct to the formal hub could be the development of a "community hub" based on the provision of education, joint use community facilities, playing fields and the like.

10.1.2. Built Form - Establishing the Standard

The development of the hubs should also herald the establishment of the standard of built form. The opportunity exists to design exceptional buildings that both acknowledge the climate of Karratha and also create a vernacular that could become recognised as a statement of the area.

10.1.3. Making Mulataga (Karratha) Home

The other layer of provision relates to making this place "home." Such a strategy needs to consider the population types that pervade Karratha currently plus the aspiration of having Karratha develop into a multi-generational city.

The notion of "feeling at home" implies, inter alia, being connected to community.

Getting people out of their houses and into their neighbourhood and into community activities is the Karratha climate means: Shade during the day (green shade) and Lighting at night (after 6:00pm).

Getting children out of their houses means the provision of paths, shade and parks (playing spaces) near to home.

Getting young families (mothers) out of their houses requires the same plus a wider range of destination options than currently exists. This underlines the need for diverse, vibrant hubs, activated in various ways as well as green oases close to home.

The provision of continuous linkages is essential as would the development of public transport.

Other specific opportunities in this sphere include:

- A 10km walk, run, cycle track around the town
- Connection of the existing heritage trail to the ocean through Mulataga
- Provision of walkways, with shaded rest areas, along the coast, and perhaps, to the hills
- Provision of private spaces at the back of houses but encouraging the front of houses to bleed into the public realm
- Provision of interpretative points along walkways
- Provision of playing fields, collocated with education facilities, connected through to the Bulgara sporting precinct
- Provision of community spaces collocated with the education hub
- Signage on walkways
- Tying the “old” Karratha to the “new”
- Maximising views to the water

10.1.4. Leadership

Of considerable concern to participants in the Design Forum was the determination of which organisation is responsible for ensuring that all the different requirements for the transformation of Karratha, with Mulataga an important catalyst into a multi-generational city. There is no doubt that a fragmented approach where issues and components are addressed separately will not progress this aspiration but could lead to its demise as agencies and stakeholders working at cross-purposes as they individually fulfill their requirements.

The development of integrated planning and governance approaches that address key issues and opportunities is required.

Some of the other elements that will require attention include:

- Provision of aged care and seniors services
- Increased education options
- Increased range of medical services

10.1.5. The Social Fabric

Of equal importance to the development of this skeleton is the development and implementation of strategies that ensure that people are hardy enough to cope with constant change and that the social fabric of Karratha is strong enough to allow people to connect with each other.

Furthermore, as Karratha has always been and will continue to be a transient community, strategies need to be devised and implemented to ensure that people have the skills and opportunities to link with others.

10.2. Key Development Phases – Commercial Focus

10.2.1. Beach Front/Coastal Node

The main purpose for the commercial activity is to reinforce the demand for a stronger connection to the Karratha water front. The commercial analysis suggests insufficient demand and greater commercial risk if the coastal node commercial activity is developed to a size and nature that potentially duplicates and confuses the role between it and the Neighbourhood / District centre planned for Millstream Road. It is also important from a social context that the coastal node is designed as a community hub available to all parts of the community and not just as an economic hub.

The design outcome has created a robust balance between commercial and community activity at the node. A major attractor such as a micro-brewery would expect to trade successfully in the location subject to it benefitting from uninterrupted sweeping views to North West. This can only seemingly be achieved through a leasehold opportunity.

It will be important to create a critical mass of vibrant and vital activity in order for the community and commercial activities to feed off one another for exposure. The design challenge will be to integrate the facilities visually without unduly impacting the ability of each to satisfy their objectives independently.

The street around the node can expect to support some boutique community based retail activity - up to 4-5 shops which would be no more than 350-500 sqm. The majority of the space would be retail although some community space could be incorporated. The retail floor space would involve other food/beverage venues – either café or takeaway and cultural gift wares. The latter would need to be developed within a clear business plan but could provide a significant economic development opportunity for local indigenous groups.

This floor space does not include the hospitality venue which may include anywhere from 500 - 750 sqm may be as large as 1,000sqm (inclusive of outdoor space). The retail space should be viewed as complementary to the hospitality venue planned on the beach side.

In order to maximize potential for the retail space there will need to be some design exposure synergy with the hospitality activity. There will also need to be some ongoing commitment to the activation of these tenancies, especially in regard to potential indigenous /cultural retail activity as a community activity rather than as a commercial concern at least in the short to medium term.

This node will need to develop over time along a north south road - but standard local convenience retail will struggle to survive in this location given the provision of a

well located supermarket based centre less than 1.5km to the south on Millstream Road. For this reason a supermarket based centre is not considered to be the best use for the beach front node.

The other commercial activity will not be sustainable until the development of the brewery/food beverage entity is established and trading successfully and the community facilities are established. These facilities will be the catalyst for the customer traffic from across the broader Karratha catchment and provide the smaller retailers the opportunity to capitalise on this traffic to trade successfully in their own right.

The street based commercial activity should trade either exclusively to the beach front or trade to each other on the main north south road. Four to five shops doesn't warrant a significant number of tenants and is not sufficient to create a main street environment. They will therefore achieve better exposure from trading to the beach front. This orientation may present some design challenges due to climate conditions including wind.

10.2.2. Neighbourhood/District centre

Karratha will ultimately need another major centre east and west of the existing town centre in the future as the population heads toward 50,000 residents. The Mulataga community will benefit from a major supermarket based centre with 15-20 shops and full line supermarket similar to those available in the town centre.

This centre will only be commercially sustainable once the Mulataga community is developed.

There will be sufficient retail spending on food/grocery goods within the Mulataga community to sustain a new supermarket based centre without impacting the performance of the town centre.

The location on Millstream Road creates the best access and exposure to the immediate and longer term Mulataga community and could easily be developed along a small Main street environment. The location of the centre at the opposite end of the north south road linking the coastal node also acts as a strong way finder for residents and visitors looking for the beach front node from Millstream Road.

Because of the small nature of the centre, it is doubtful that it could be developed in stages. The centre will be unlikely to attract a major supermarket chain until the Mulataga community is well populated. The centre will therefore remain undeveloped for a considerable period – similar to that of the Tambrey site west of the Karratha Town Centre.