

REPORT

Bechtel

Pluto Train 2 Construction
Accommodation Village

SEPTEMBER 2019

**Creating
Communities**

Project Details

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1. INTRODUCTION

1.1 Project Rationale

Bechtel was selected by Woodside in December 2018 as their contractor to undertake front end engineering design (FEED) for their Pluto 2 Train project located on the Burrup (Murujuga), in the City of Karratha. If Pluto Train 2 progresses beyond FEED, the awarded contract also includes an option for Bechtel to undertake engineering, procurement and construction for this project in the execute phase activities.

While local hire opportunities from Karratha will be available, and positions will be advertised on the Karratha Local Jobs portal, Bechtel is mindful of the balance between providing local hire opportunities versus taking skilled labour from existing Karratha businesses. The current low unemployment rate and skills shortage coupled with highly specialised construction and engineering workforce means the locally sourced labour pool will need to be supplemented by a FIFO workforce. Therefore, Bechtel will require a temporary Construction Accommodation Village (CAV) to cater for 2,500 beds to supplement the local workforce. Considering this, Bechtel has commissioned a Social Impact Assessment (SIA) and Social Impact Management Plan (SIMP) to be conducted focused on the Madigan Road in Gap Ridge as their chosen site for a CAV to house their workforce for this project. A detailed assessment of the impacts that this proposed village may produce will be outlined as part of this report as proposed strategies to mitigate negative impacts and optimise benefits.

1.2 Purpose of this Report

Creating Communities were advised that Bechtel investigated a number of site options for the provision of future accommodation. This report is based on Bechtel's preferred site for the proposed accommodation being Gap Ridge site on Madigan Road, due to Woodside's Gap Ridge village previously being located on the site and its' proximity to the Pluto 2 Train project. Bechtel will submit a Development Application to the City of Karratha for the construction of the new village at the Gap Ridge site.

This report is also based on the proposed business case of delivering the construction project using predominant FIFO workforce, rather than a residential workforce.

According to the City of Karratha's Local Planning Scheme, all Development Applications within the 'Transient Workforce Accommodation' Zone must include a SIA and SIMP. The City of Karratha's *Local Planning Policy DP20: Social Impact Assessments (DP20)* provides guidance on considering the social impact of new developments. This interim report is a required supplement to the Development Application and provides an analysis that is specific to this proposed construction accommodation village.

The project scope that is summarised in this report includes:

- A review of key literature, policies and previous community and stakeholder engagement;
- A review of the Development Application;
- A predictive assessment of preliminary social impacts and management strategies;
- Current community and stakeholder engagement with the City of Karratha, local residents, community and sporting group representatives, and other key stakeholders;
- An assessment of impacts using the construction accommodation village SIA matrix; and
- Recommended social impact management strategies.

2. PROJECT BACKGROUND

2.1 Bechtel

Bechtel is a global engineering, procurement and construction company. Operating since 1898, Bechtel has completed more than 26,000 projects on all seven continents. Bechtel has worked in Australia for over 70 years and their projects have often been in remote locations, and under challenging conditions.

Bechtel's portfolio spans mines, minerals processing facilities, LNG installations, refineries, chemical plants, power stations, and telecommunications infrastructure. Recent projects that Bechtel have worked on include Wheatstone LNG in Onslow, Western Australia, the three Curtis Island LNG Projects – Queensland Curtis LNG, GLNG and Australia Pacific LNG – in Gladstone, Queensland and the Amrun Bauxite Mine in Weipa, Queensland. Current projects include the expansion of the Sydney Metro network and construction of the Western Sydney Airport, as well as government work for the Australian Defence Force in Canberra.

Bechtel have been executing significant LNG projects for more than five decades and have executed 33% of all global LNG capacity. Most recently, Bechtel executed 15 large-scale trains across five projects concurrently. In the last 13 years, Bechtel has constructed five of Australia's ten operating LNG facilities, representing 39 MTPA of LNG production and half of the nation's total LNG export market.

2.2 Woodside

Woodside is the largest Australian natural gas producer. Woodside has a global portfolio and is recognised for its world-class capabilities as an integrated upstream supplier of energy.

With more than 30 years of operations in Western Australia, the Company is progressing development of the Scarborough and Browse gas resources through its producing assets, the Woodside-operated Pluto LNG and North West Shelf (NWS) Project.

Woodside is the project proponent for Pluto Train 2. The project is part of Woodside's Burrup Hub vision, which represents more than A\$40 billion of capital expenditure to develop 20 to 25 trillion cubic feet of gross dry gas resources for customers in Western Australia and around the world.

In December 2018, Woodside awarded a contract to Bechtel for the front-end engineering and design (FEED) on Pluto Train 2. FEED includes activities required to finalise the costs and technical definition. The awarded contract also includes an option for Woodside to progress to a lump sum engineering, procurement and construction contract for execute phase activities. This option is subject to, among other conditions, a positive final investment decision (FID) being taken on the project in 2020.

2.3 Pluto Train 2

Woodside has operated the Pluto LNG facility since start-up in 2012. Gas from the offshore Pluto and Xena fields is delivered through a 180 km pipeline to Pluto LNG's single onshore LNG- processing train located on the Burrup Peninsula, near Karratha in Western Australia.

Woodside is proposing a brownfield expansion of Pluto LNG through the construction of a second LNG processing train and a domestic gas supply facility. Woodside's preferred development concept is to

process Scarborough gas through expanded facilities, which will have a capacity of about 5 million tonnes per annum (Mtpa) (100% Project). The Scarborough gas field would be developed through new offshore facilities connected by an approximately 430 km pipeline to the onshore facility (as part of the Scarborough project).

2.4 Development Application

Once approval to use the Gap Ridge site on Madigan Road has been achieved from the Department of Planning Lands and Heritage, Bechtel will submit a development application to the City of Karratha for approval to build a construction accommodation village. The application will be for the village to remain for up to five years and accommodate a maximum of 2,500 beds.

All social impacts and management strategies identified are informed by the content provided by Bechtel regarding its proposed development, as well as other research, stakeholder and community engagement and a literature review.

3. SUMMARY OF IMPACT AND OPPORTUNITY ASSESSEMENT

This section provides a summary of the key impacts and opportunities identified through the SIA process, and the overarching approaches recommended to either minimise the extent of the impact or maximise the benefit of the opportunity.

The management approaches included in the table below are a summary of the broad approaches only. For the specific commitments that Bechtel have agreed to as part of this project, please see Section 9 - Social Impact and Opportunity Assessment and Management Plan.

- MINIMISE IMPACT
- MAXIMISE OPPORTUNITY

POTENTIAL IMPACTS / OPPORTUNITIES	APPROACH	SUMMARY OF MANAGEMENT APPROACHES
Demographic and Population Change		
Increased population supports local business patronage	●	<ul style="list-style-type: none"> Embed a range of strategies (including shuttle buses, incentive packages and promotional materials) that encourage workers to engage with local businesses, organisations and services (See Section 9 for detailed commitments)
Key worker profile creating change in demographic	●	<ul style="list-style-type: none"> Bechtel and its contractors will encourage diversity in the recruitment of employees Where possible, use a local first, then regional, state, national and international recruitment strategy.
Increase in traffic congestion	●	<ul style="list-style-type: none"> Comprehensive Traffic Management Plan implemented Effective transport for all workers (e.g. bused to and from site) Staggered shifts with other Burrup Peninsula operators
Impact on perceptions of crime and safety	●	<ul style="list-style-type: none"> Security to work in collaboration with police to manage any antisocial behaviour issues.
Visual impact of additional FIFO workers	●	<ul style="list-style-type: none"> Comprehensive Communications and Engagement Plan delivered around the CAV development Implement policy that discourages workers wearing high-vis uniforms outside of the CAV when not in a work capacity
Accommodation and Housing		
Bechtel Management staff living residentially	●	<ul style="list-style-type: none"> Investigate the option of the City of Karratha providing initial capital for the build of 25 new houses that Bechtel could lease for a 4-year period. (NOTE: Housing would need to be ready to use at the commencement of the project for this to be feasible for Bechtel to pursue)
Support for FIFO camp as the City does not have capacity to house 2,500 beds	●	<ul style="list-style-type: none"> Development of the CAV model with strategies in place to minimise impact on housing market (as below)
Impact on the Karratha housing market (affordability and availability)	●	<ul style="list-style-type: none"> Regular engagement with Real Estate Agents to track and monitor housing availability and median market rates. Active monitoring of the housing market to track and monitor any construction related impacts on the housing market.

POTENTIAL IMPACTS / OPPORTUNITIES	APPROACH	SUMMARY OF MANAGEMENT APPROACHES
Initial influx of workers without camp capacity		<ul style="list-style-type: none"> Use existing TWA accommodation for the initial CAV construction workforce (those building the village) before using hotels, motels and other short stay accommodation. Where possible, no more than 50% of any one Karratha short stay accommodation will be used for workforce accommodation requirements.
Visual Impact of Village		<ul style="list-style-type: none"> Employ best practice built form CAV designs which is of a high standard to attract and retain employees
Additional FIFO Beds in the Market		<ul style="list-style-type: none"> Proactively communicate the purpose and short-term life of the proposed CAV to the community and the impact and opportunity management plan commitments.

Accessibility to Community Services and Facilities

Patronage of local community services and facilities		<ul style="list-style-type: none"> Numerous strategies to promote and support integration of workers into the community (e.g. regular shuttle bus service, dedicated Lifestyle Coordinator role, promotional campaigns etc.) (See Section 9 for detailed commitments) Ability for community members to access spare seats on Bechtel chartered flights where there is capacity
Patronage of medical services by FIFO workers (impact on delays/wait times)		<ul style="list-style-type: none"> Provision of onsite medical services including doctor, nurse, physiotherapist, x-ray machine and ambulance Monitor any additional use of health services by FIFO workers
Increased demand on community infrastructure (water, sewerage, rubbish)		<ul style="list-style-type: none"> Provision of onsite amenity including waste collection, water supply, communication infrastructure, and potable water
Legacy Infrastructure		<ul style="list-style-type: none"> Bechtel will continue to engage with the City of Karratha, and the Department of Lands, Planning and Heritage on infrastructure that could provide long-term positive impact for the Karratha community. Explore opportunities to leave the infrastructure – water, power, roads etc. in place to support future development of the area. Work closely with the City of Karratha to support them to develop an integrated planning process around the site. Work with City of Karratha to develop demobilisation plan which includes potential for community reuse of facilities.

Social Infrastructure

Patronage of and access to local recreational, sporting and community groups and clubs		<ul style="list-style-type: none"> Comprehensive induction and orientation program for workforce to introduce them to Karratha and the Pilbara Numerous strategies to encourage engagement with local sporting, recreational and cultural clubs and groups (e.g. welcome packs, “what’s on” calendars, partnering with City of Karratha officers to promote opportunities) (See Section 9 for detailed commitments)
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Cultural Values and Beliefs

Lack of recognition and respect for Aboriginal culture and heritage		<ul style="list-style-type: none"> • Comprehensive induction process including detail on local context, including cultural heritage and values • Provide an out-of-hours option for on-country cultural awareness training • Numerous strategies to recognise local Aboriginal culture through elements of the CAV design and initiatives at the village (See Section 9 for detailed commitments)
Lack of recognition of cultural values of Karratha		<ul style="list-style-type: none"> • Zero tolerance towards antisocial behaviour including strict adherence to Community Interface Code of Conduct
Alignment of local cultures and beliefs with non-local workforce		<ul style="list-style-type: none"> • Encourage workforce to volunteer and participate in community activities to encourage two-way relationships between FIFO workers and community

Community Values, Identity and Cohesion

Positive promotion of the city leads to future positive engagement with the area/potential relocation to Karratha to support growth		<ul style="list-style-type: none"> • Numerous strategies to promote Karratha as a great place to live and work via the Karratha is Calling campaign (See Section 9 for detailed commitments) • Provide ability for workers to stay in Karratha during their off swing if they choose to, to encourage them to explore Karratha and the region
Negative community perceptions of FIFO workforce behaviour		<ul style="list-style-type: none"> • Facilitate positive engagements between construction workforce and local community (e.g. volunteering opportunities and social events and activities that are promoted either onsite or in the community)
FIFO workers' perceptions of Karratha and the Pilbara region		<ul style="list-style-type: none"> • Orientation and induction offered for all new employees and contractors and to include information on expected behaviours, community expectations and opportunities to engage positively with the community. • Zero tolerance towards antisocial behaviour including strict adherence to Community Interface Code of Conduct
Impact of broader community integration		<ul style="list-style-type: none"> • Numerous strategies to promote and support worker engagement in the broader community (See Section 9 for detailed commitments)

Health and Wellbeing

Village construction impacts on neighbouring residents in Civeo Village and Madigan Estate		<ul style="list-style-type: none"> • Advance communication with neighbours regarding any works that may cause traffic, noise and/or dust impacts • Adherence to construction environmental management plan for dust and noise management. • Adherence to construction schedule.
Onsite access to medical support		<ul style="list-style-type: none"> • Provision of an ambulance, doctor, physiotherapist and paramedic for workforce use – minimising additional strain on local services
Additional strain on existing health and medical services		<ul style="list-style-type: none"> • Provision of onsite health, medical and emergency services • Continue to engage with local hospital and health providers to review use and demand from Bechtel workforce.

Impact on health and wellbeing of FIFO workers



- Workforce access to counselling and support services via EAP (can either be accessed via phone or face-to-face or in home towns).
- Partner with local providers to ensure there is local counselling/psychologist support to workforce if assistance is required beyond what the EAP service can offer.
- Delivery and facilitation of a range of initiatives and programs that support good physical and mental wellbeing (See Section 9 for detailed commitments)
- High level of occupational health and safety standards
- Quality and private living spaces and onsite amenity that promote good wellbeing

Crime and Public Safety

Perceived or actual increase in crime or antisocial behaviour



- Zero tolerance towards antisocial behaviour including strict adherence to Community Interface Code of Conduct
- Open and accessible communications channels for community to provide feedback to Bechtel
- Organise regular meetings with the police, neighbourhood watch, and local bar owners to conduct 'check-ins' on crime and anti-social behaviour in relation to the CAV
- Work with local police, City of Karratha and other stakeholders to support the Safer Communities Partnership and strategic plan

Potential impact of onsite tavern



- Controlled service allowances and opening times applied to the in-house tavern
- Compliance with liquor licensing laws and responsible service of alcohol training is required of all bar staff at the in-house tavern
- Bechtel to work with the Liquor Accord and local hoteliers to ensure the workforce behaviour in local establishments is in alignment with expectations

Potential for opportunistic crime at the village



- CAV to be fenced with 24/7 security and gated entrance

Economic Considerations

Impact on local businesses via supply and procurement



- Clear and consistent definition of 'local' business
- Bechtel and CAV operator to prioritise the use of local businesses for the provision of services and procurement, where possible
- Provide positive weighting for local businesses during contract tender process
- Explore opportunities to segment up supply chain contracts so that local enterprises can benefit from micro-contracts
- Provide clear communication on where local companies can register their services that can be provided to support the project
- Partner with organisations to develop appropriate Aboriginal business supply opportunities
- Ensure there is effective monitoring and evaluation of local procurement, including local ATSI procurement
- Continue local business forums and other events like 'business speed dating' to promote requirements to tender for work
- Explore training and upskilling opportunities, such as the adult apprenticeship program, and other programs that can build the pool of potential local employees

Impact on local businesses via Village workforce use



- Numerous strategies to support local businesses and encourage residents to engage with local businesses (e.g. distribution of local business directory, events such as 'food truck evenings', information included in welcome pack) (See Section 9 for detailed commitments)

Employment and Local Benefits

Impact on local employment		<ul style="list-style-type: none"> • Where possible, preference local recruitment, and then regionally and nationally. • Prioritise hiring low or no-skilled jobs locally (e.g. gardening, cleaning). • Conduct local employment roadshows. • All jobs to be advertised on the Karratha Local Jobs Portal www.karrathalocaljobs.com • Maintain a register of all interested local applicants for future opportunities as they arise
Impact on Aboriginal and Torres Strait Islander employment		<ul style="list-style-type: none"> • Develop Australian Indigenous Engagement plan to outline strategies to increase local indigenous employment and business participation • Support development of local Indigenous business database and work with Aboriginal corporations to identify potential employment and supplier opportunities • Develop, with local Traditional Owners, an Aboriginal and Torres Strait Islander training/mentoring/employment program or alternative work program
Opportunity to support a residential workforce		<ul style="list-style-type: none"> • Offer limited opportunity for staff to relocate to Karratha during construction period

Cumulative Impacts

Increased number of available FIFO beds and TWA facilities in Karratha		<ul style="list-style-type: none"> • Proactively communicate the purpose and short-term life of the proposed CAV to the community and the impact and opportunity management plan commitments. • Commitment for the CAV to not extend its short-term lease beyond the timeline included in the development application
Distinction between Woodside and Bechtel's workforces		<ul style="list-style-type: none"> • Continue to communicate about Bechtel and their role on the Pluto Train 2 project • Distribute a regular newsletter that provides updates, successes and a future view of the project. This could include stories on local employment/procurement achievements
The construction of a new village on a site where a TWA recently existed		<ul style="list-style-type: none"> • Employ best practice built form CAV designs • Exploration of legacy infrastructure in partnership with City of Karratha to deliver long-term positive impact
Confusion or comparison with other workforce accommodation development applications		<ul style="list-style-type: none"> • Continue to update the information page on the Bechtel website about the project • Hold community information sessions about the proposed CAV as necessary
Burrup Hub activities		<ul style="list-style-type: none"> • Continue to communicate about Bechtel and their role on the Pluto Train 2 project • Ensure communications around the potential economic and social benefit of the Pluto Train 2 project are included in communication materials
Potential for a coordinated approach		<ul style="list-style-type: none"> • Engage with City of Karratha, Rio Tinto, key industry and other stakeholders to build a forum where all TWA village providers can come together to discuss community trends, challenges, opportunities and collaborate on community programming and scheduling

4. BUSINESS SCENARIO

Understanding the future impact of a project is contingent upon having a clear picture of what the current context is like and how it is anticipated to change as a result of the project. This section outlines Bechtel’s business scenario of a new construction accommodation village with a life of up to five (5) years, accommodating up to 2,500 beds and being built on Madigan Road, Gap Ridge Karratha. The business scenario provides the detail against which the Social Impact Assessment (SIA) and Management Plan (SIMP) is developed.

4.1 Current Land and Site Use

Bechtel is proposing to build a short-term Construction Accommodation Village (CAV) to solely accommodate their construction workforce for Pluto Train 2. The preferred site identified for the village is at lot 525 Madigan Road Gap Ridge, which is located to the western boundary of the City of Karratha, Western Australia. The site is 47.6225ha in size and, while currently vacant, has previously been used for Woodside’s Gap Ridge Village Transient Worker Accommodation (TWA) facility until the site was rehabilitated in 2017. The site is located adjacent to the existing Civeo site, approximately 7.2kms from the Karratha City centre.

Figure 1 – Gap Ridge Site Map



The site’s previous facility, Gap Ridge Village, was constructed as a temporary facility to house Woodside FIFO employees between 2008 and 2017. Approval was not provided by the Minister for Regional Development; Lands for extension of the lease to continue the operation of the village. Woodside workforces have since been housed in other TWA facilities and in the future will be accommodated in the new Bay Village facility that is being developed.

The site was selected by Bechtel as the preferred location of the construction village due to:

- It being the site of a former operating TWA facility with some infrastructure in place, minimal environmental disturbance and clearing required.
- It is the appropriate size to support the accommodation requirements.
- It creates a separate area for a temporary facility and housing of a short-term transient workforce away from residential areas, while still providing accessibility to local services and facilities via transport if required.
- It is located within a reasonable proximity of the workplace for the residents, which will reduce travel times and minimise interface impacts to local road users.

The accommodation village will be temporary, with a life of up to five years to cater solely for Bechtel's Pluto Train 2 construction workforce.

The land is currently zoned 'Transient Workforce Accommodation' under Local Planning Scheme 8 (LPS 8). The proposed land use for the new facility is also 'Transient Workforce Accommodation' which means there is no change to the permitted land use.

The land use 'Transient Workforce Accommodation' is defined under LPS 8 as follows: 'dwellings intended for the temporary accommodation of transient workforces and may be designed to allow transition to another use or may be designed as a permanent facility for transient workforce and includes a contractor's camp and dongas.'

4.2 Village Construction and Capacity

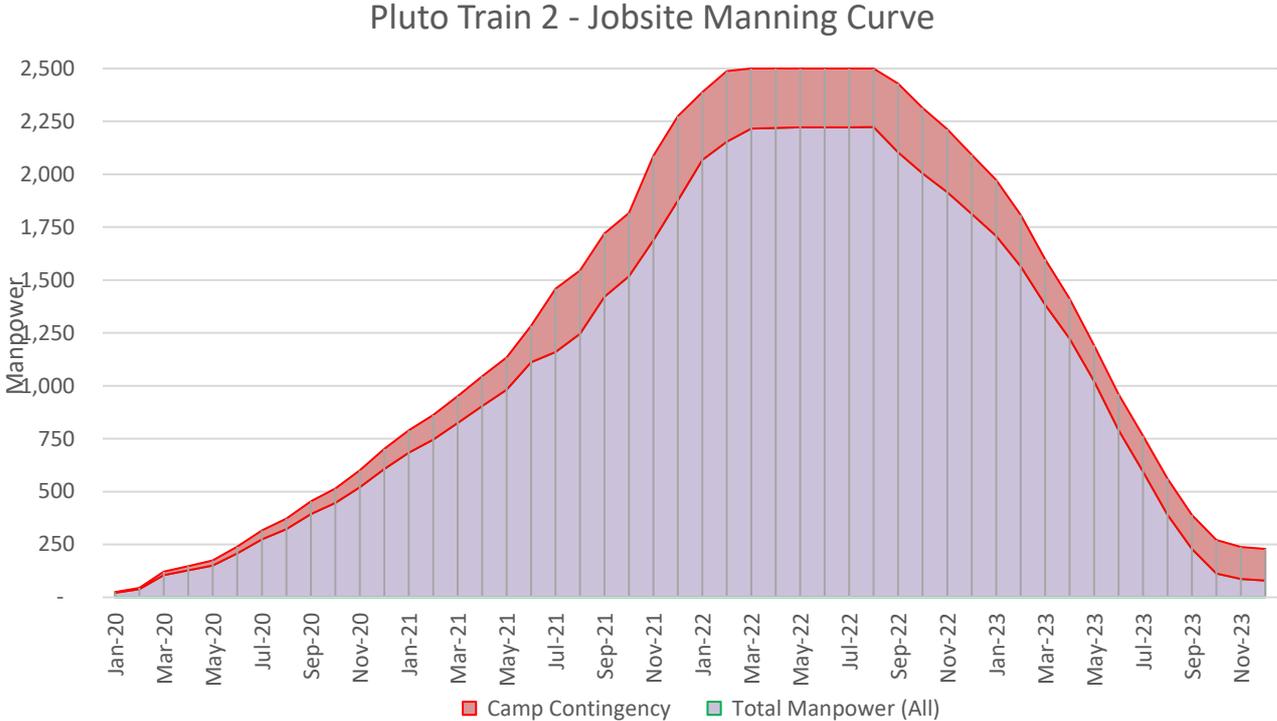
Construction of the village is dependent on securing a number of approvals, including leasing of the land, and development approval from the Joint Development Assessment Panel, as well as a final investment decision from Woodside. Without these in place, the CAV and Pluto Train 2 will not proceed. If the required approvals and investment is secured, the construction of the village would commence in 2020 taking approximately 12 months to complete. Construction of the village will be a staged process and residents will be mobilised to the village as rooms become available.

The proposed facility is being established as a temporary solution to accommodate a range of Bechtel construction workforces on shorter term contracts. The facility is intended to accommodate a total of 2,500 beds at its peak, and eligibility to stay at the village will be for non-local employees of Bechtel or their subcontractors only. Bechtel advises that the construction workforce numbers over a 48-month construction period are estimated to be as follows:

- Ramp up from 0 to 607 beds from month 1 to month 12
- Ramp up from 608 to 2,223 beds from month 13 to month 32
- Ramp down from 2,223 to 1,022 beds from month 33 to month 41
- Ramp down from 1,022 beds to 78 from month 42 to month 48

While the peak workforce could reach 2,223 beds, a total of 2,500 beds will be constructed at the village to allow for contingencies in the workforce. This is represented in Figure 2 – Bechtel Workforce Manning Curve.

Figure 2 – Bechtel Workforce Manning Curve



The workforce to be accommodated at the facility will be predominantly Fly-in Fly-out (FIFO) and Drive -in Drive-out (DIDO) workers sourced from Western Australia. While local hire opportunities from Karratha will be available, and positions will be advertised on the Karratha Local Jobs portal, Bechtel is mindful of the balance between providing local hire opportunities versus taking skilled labour from existing Karratha businesses. There will also be opportunity for Bechtel management staff employees to relocate to Karratha as residential employees. It is expected that no more than 1% of the total workforce population (up to 25 households) will relocate to Karratha.

Specialty subcontractors will be required throughout construction and will be contracted through Bechtel on a direct-hire basis. Locally based suppliers will be offered opportunities to provide materials and services to the project.

Bechtel will manage the overall construction workforce, including their direct hire employees and subcontractors. Bechtel advises that the company and its sub-contractors will place a high priority on expecting appropriate behaviour in the local community by its workforce, with stringent behavioural protocols implemented. Any action that adversely affects the community, Bechtel and Woodside’s reputation will not be tolerated and appropriate disciplinary action will be taken.

Bechtel will subcontract the operations and catering of the village to a company experienced in the running of similar villages. The primary elements of the village operations and catering subcontractor roles and responsibilities include:

- Management services including supervision and management of the CAV operations
- Catering services including supply, preparation and provision of all food for the CAV
- Cleaning services including laundry, housekeeping, care and maintenance of the groups and waste collections services

- Concession services, including, ATM, vending services, running the convenience store, coffee shop and bar
- General maintenance including all utilities and fire protection

4.3 Facility Layout

A master layout plan of the proposed village is currently being finalised by Bechtel, in consultation with Woodside and the City of Karratha. The layout plan will show the access road into the site, bus parking and turning points, car parking area, accommodation unit and central facilities layouts.

Bechtel advise that the general guiding principles for the design, construction and operation of the facility are:

- Safe, healthy and environmentally appropriate accommodation for the non-local construction workforce
- A self-contained village, including accommodation, provision for catering and meals, leisure and entertainment facilities for the non-local construction workforce
- A village that is of a very high standard to attract and retain employees

Bechtel advise that they intend to construct the facility in a manner that provides a comfortable environment and has all the necessary amenities that will accommodate a workforce in their after-hours leisure time.

Accommodation units will be set out in clusters of 8 modular buildings set around a central rectangle of open space. Each accommodation building will have 4 ensuite rooms with overall dimensions of 4.2m x 14.4m, making each cluster capable of housing 32 people. Laundry facilities will be designed and laid out accordingly for use and convenient access. Each cluster of 8 buildings will have a fire hose reel, fire extinguisher and smoke detector.

It is envisaged that there will be 4 clusters to a pod, to allow for a total of 2,500 beds. As construction of the facility will be phased out, phase 1 will include:

- the construction of accommodation units,
- kitchen and dining facilities
- laundries,
- taverns and beer gardens
- gymnasiums,
- a pool,
- recreation areas,
- a medical centre,
- operations office,
- BBQ shelters,
- washrooms,
- waste collection areas,
- waste and sewer treatment plant,
- maintenance facilities,
- sufficient power supply,
- communication head end infrastructure,
- supply of potable water, and

- fire water sufficient for CAV infrastructure including booster pumps as required.

Provisions for disabled person access will be provided to all public facilities as per the Building Code of Australia (BCA). The includes the installation of curb ramps, loading areas for disabled access parking areas, providing entrance ramps to all public buildings. Bechtel advise that to ensure safety, security and workforce management and wellbeing, they do not intend that any of these facilities or amenities will be open for public use or access and will be utilised by Bechtel staff and subcontractors only.

Most of the buildings will be sourced from other projects, which is not uncommon for these types of facilities to be refurbished and reused on multiple projects. The accommodation will be professionally refurbished and inspected to ensure it is of a good standard and suitable for workers to live in.



Figure 3 – Preliminary Bechtel Site Landscape Concept Sketch

5. METHODOLOGY

The methodology for the SIA is based on desktop research allowing for a predictive impact assessment to take place. Predictive impacts have been qualified with the community through stakeholder interviews with key stakeholders and focus groups with local community organisations, local businesses, agencies and local residents to explore the feasibility and desirability of the proposed management planning strategies. Details of the methodology is as follows.

5.1 Phase 1: Background Research and Initial Briefings

5.1.1 City of Karratha Briefing

Prior to the start of the SIA a briefing to the City of Karratha was provided to outline the purpose, methodology and process. This briefing was conducted at

Time/Date: 2.30pm Monday 10 June 2019

Location: City of Karratha Council Chambers

A total of 14 City of Karratha Executive and Elected Members were present, in addition to representatives from Bechtel, Woodside and Creating Communities. The briefing outlined the proposed village, the purpose, preferred location, and life of the village. The City had a variety of questions about:

- Where the rooms will be sourced?
- Where the employees will be sourced from?
- If the use of existing villages had been considered?
- What other organisations will be included (i.e. Civeo and Woodside)?
- The relationship with The Ranges' development application?
- Who will be able to use the village?
- Details of determining and leasing the preferred site?
- How Bechtel will leave a positive legacy?; and
- If flights for the FIFO workforce will be chartered or commercial.

5.1.2 Background Research

A comprehensive review of existing data, research and consultation report relevant to the project was undertaken. This included:

- Socio-economic studies and other relevant reports
- Research reports from relevant Government departments or peak bodies
- Relevant TWA and FIFO Reports – including research undertaken previously by Creating Communities
- Previous community consultation findings and reports
- Data on planned future activity for the project (to be taken from internal Bechtel data)
- Data on key demographics, trends and projections for Karratha from the ABS, WA Crime Statistics PHIDU Social Health Atlas, and City of Karratha documents.

5.2 Phase 2: Predictive Assessment and Impact Management Plan

As per the City of Karratha's Town Planning Scheme No.8 Local Planning Policy DP20 a Social Impact Assessment is required for Bechtel's proposed Village. The impact areas that are required to be discussed in the social impact assessment are:

1. Demographic and Population Change
2. Accommodation and Housing
3. Accessibility to Community Services and Facilities
4. Social Infrastructure
5. Cultural Values and Beliefs
6. Community Values, Identity and Cohesion
7. Health and Wellbeing
8. Crime and Public Safety
9. Economic Considerations
10. Employment and Local Benefits

Based on Creating Communities knowledge of Karratha, as well as the background research conducted, and internal Bechtel documents Creating Communities has also included an additional impact area:

11. Cumulative Impact

Creating Communities has completed interim predictive impact assessments and suggested impact management strategies for each of these eleven areas which are outlined in Section 7 of this document.

5.3 Phase 3: Community Stakeholder Engagement

A series of interviews and workshops were conducted with stakeholders to familiarise them with the project process, and qualify the predictive impacts that were determined.

5.3.1 Principle Stakeholder Briefing

A stakeholder briefing was held on August 14th, 2019 to outline the purpose and process of the Bechtel CAV, the Social Impact Assessment and Management Planning Process and also offered an opportunity for stakeholders to ask questions of the project. Representatives from Creating Communities, Bechtel and Woodside were present.

5.3.2 Pop-Up Information Stall

A pop-up information stall was held on August 15th, 2019. The purpose of this stall was to provide information about the Bechtel CAV to the broader Karratha community, particularly those community members who may be less inclined to attend formal engagement activities.

5.3.3 Individual Interviews

A stakeholder list was determined by Creating Communities in consultation with Bechtel and Woodside. Individuals were invited to interviews via a letter / email, with a follow up phone call. Interviews were undertaken in Karratha between the dates of September 9th and September 12th, 2019. Stakeholders were also provided the option to undertake the interview over the phone at another time.

5.3.4 Community Focus Group Workshops

Six focus group workshops were advertised to the community via a variety of methods. This included:

- Advertisement in the Pilbara News
- Flyer delivered to all homes in the City of Karratha (town)
- Promotion at the Pop-up information stall and stakeholder briefings
- Posts on social media groups
- Information on the Bechtel Website

A FAQ booklet was also provided to stakeholder and neighbours involved in the engagement.

Over the two-day period of September 10th and September 11th, 2019, two workshops were held for residents, rate payers and community members and three workshops were held for Community Organisations and Local Businesses. A total of 16 participants were present across the focus group sessions.

More detail on the feedback from each of these engagement sessions is included in Section 8 of this report – *Engagement Findings*.

5.4 Phase 4: Final Social Impact Assessment and Management Plan

Information gained from the community workshops and interviews have been included in the predictive impact assessment and management strategies. An interim version of the Social Impact and Opportunity Management Tables was presented to the City of Karratha by Bechtel on September 20th.

Following all feedback from consultation and review of the interim and draft reports, the Social Impact and Opportunity Assessment and Management Plan has been finalised and will form part of Bechtel's final Development Application.

6. BACKGROUND RESEARCH AND LITERATURE REVIEW

6.1 Previous SIA and SIMP findings

6.1.1 Woodside: Bay Village – Social Impact Assessment and Management Plan

A Social Impact Assessment (SIA) and Management Plan (SIMP) was developed in October 2018 to assess potential impacts and mitigation strategies associated with the Bay Village Transient Worker Accommodation (TWA), which proposed to provide approximately 700 beds to support its operational workforce for Pluto LNG and the NWS Project, and future operational workforces for Scarborough and Browse¹.

The SIA and SIMP report adhered to the City of Karratha's *Local Planning Policy DP20: Social Impact Assessments*², and supplemented Woodside's Development Application as an assessment of the potential social impacts and associated management strategies of constructing, operating and managing the TWA.

Key impacts identified through the SIA and SIMP process are outlined below:

Demographic Population Change

- Shift in the gender and demographic balance of the local area
- Traffic congestion in local streets
- Visual impact of higher proportion of FIFO workers in the community

Accommodation and Housing

- Impacts on other TWA providers' capacity
- Perception of empty Woodside residential houses
- Co-location of Woodside workforce on one site

Accessibility to Community Services and Facilities

- Increased patronage of local community services and facilities
- Additional use or demand of medical and GP services

Social Infrastructure

- Increased access to and use of local recreational, sporting and community groups and clubs
- Potential for increased pressure on local volunteers, or to bring workforce on as volunteers

Cultural Values and Beliefs

- Appropriate recognition and respect for local and Aboriginal culture and heritage
- Effective integration of any cultural diversity in the workforce

Community Identity and Cohesion

- Negative community perceptions of FIFO workers
FIFO workers' perceptions of Karratha and Pilbara region and their understanding of the local community context

¹ Creating Communities Australia Pty Ltd, Woodside Bay Village Social Impact Assessment and Management Plan, 2018

² City of Karratha, Town Planning Scheme No. 8, Local Planning Policy DP20, Social Impact Assessments

Health and Wellbeing

- Effect on local community's health and wellbeing via community access to onsite services and amenities
- Effect on FIFO workers' health and wellbeing as a result of workforce co-location and offering two-way integration activities
- Increased mental health and drug and alcohol consumption due to increased income and extended working hours

Crime and Public Safety

- Potential for increased opportunistic crime
- Potential for perceived or actual increased antisocial behaviour in the community

Economic Considerations

- Impact on TWA accommodation providers and local procurement opportunities
- Local economic contribution as a result of Village residents accessing local businesses and services (e.g. local Tambrey Tavern, food and beverage outlets, convenience stores)

Employment and Local Benefits

- Benefit for local businesses via Village resident expenditure and local supply opportunities
- Benefit for local employment and training opportunities for construction and management of facility

Built Form Considerations

- Operational impacts of the construction phase
- Visual impacts of the built form
- Impact of sustainability design elements

A range of mitigation strategies were provided as recommendations to either minimise the potential impacts identified or maximise potential opportunities. The SIA and SIMP report was accepted by the City of Karratha as a requirement of the broader Joint Development Application Panel (JDAP) process.

6.2 Recent SIMP and SIA

6.2.1 Woodside Social Impact and Opportunity Assessments

Woodside commissioned a Social Impact and Opportunity Assessments (SIOAs) and Social Impact Management Plans (SIMPs) for each of its proposed Burrup Hub projects in 2018, along with a cumulative social impact assessment for the Burrup Hub concept, and a review of current operational social impacts.

The SIOAs have been undertaken in line with Woodside's Scope of Work for the Provision of Social Impact and Community Perception Services.

Potential social benefits and impacts arising from the projects have been assessed in terms of how Project activities may interact with communities and stakeholders that are likely to be affected. The SIOA methodology included targeted stakeholder engagement. Key stakeholders were consulted and provided input into the identification and assessment of impacts as well as the understanding of local and regional

dynamics. Stakeholders involved in the process included local community representatives, business, government and local councils and other service providers.

Identified impacts and opportunities have been rated and ranked according to a tailored scoring tool. This process facilitated an understanding of the overall magnitude and significance of each issue.

Following this process, mitigation and management measures to enhance Project opportunities and minimise potential impacts for the local communities were proposed. Proposed measures are aligned with regional planning initiatives to maximise outcomes for communities and were tested with stakeholders as part of the second round of engagement in 2019.

6.2.2 'The Ranges' Karratha Development – Social Impact Assessment and Management Plan

A report was prepared by Element Advisory Pty Ltd (element) in May 2019 in support of a Development Application to the Pilbara Joint Development Assessment Panel (JDAP) for the development of Stage 2 of Greenvalley Asset Pty Ltd ('Greenvalley') 'The Ranges' development, located in Stove Hill, Karratha³. The Ranges development is proposed to comprise of 73 accommodation units and associated amenities, managed and operated by Best Western Plus for short-term tourist accommodation. Stage 2 of the proposed development will provide an additional 322 accommodation units, within a resort style landscaped setting that incorporates communal facilities and amenities.

The Ranges Development Application identified the construction of Pluto Train 2 and Bechtel's associated workforce accommodation requirements as the demonstrated need for the proposed development. At this stage, Bechtel does not intend to utilise The Ranges for its construction accommodation requirements and is pursuing the feasibility of its own CAV at the Gap Ridge site.

Key issues and themes collated from the literature review and engagement process for The Ranges SIA/SIMP were highlighted as:

Local employment and economic impacts

- Opportunities for jobs and training, including direct jobs during construction and operations and indirect jobs through the supply chain
- Opportunities for local businesses, including Indigenous enterprises through supply of goods and services
- Impacts on local businesses through loss of workers to related projects
- Potential benefits to businesses and communities from economic development and improved infrastructure, such as roads
- Conflict over aspects of the project, including who benefits

Demographic and population impacts

- Implications for municipal services through any increase in population or loss of workers to related projects
- Rapid growth in population caused by resources booms and general change related concerns about cycles of boom and bust
- Indirect impacts on community cohesion and resilience from higher disposable incomes
- Impacts to tourist and local traffic due to more frequent vehicle movements

³ Element Advisory Pty Ltd, 'The Ranges' Karratha Development Application, 2019

- Community and any increase in crime and antisocial behaviour
- Whether the effect of growth will generate positive or negative impacts or further marginalise

Impacts on community services and facilities

- Implications for local government services, in particular access to public housing and health
- Ability to meet regional planning and sustainability objectives
- Pressure from FIFO workforces on local flights and accommodation and interaction with nearby communities
- The capacity of local emergency services to respond and provide protection from bushfires
- Changes to local social infrastructure, community safety, health and wellbeing and other sectors from external workers (including tourism)
- A relative net loss in community service and benefit as a result of short-term workforce living compared to town-based living
- Increased demand for police services arising from interactions between workers and the local community

Cultural heritage impacts

- Indigenous people and increase existing social inequalities, creating serious negative impacts

Operational impacts

- Concern about impacts on the amenity of areas around the project footprint during all stages of the project – noise, dust, pollutants, lights, traffic, air and water emissions, vibrations

Cumulative impacts

- Cumulative impacts from other resource projects in the region
- Cumulative impacts from multiple short-term accommodation developments on the sustainability and liveability of local towns and the City in general

The Ranges SIA and SIMP was included as part of its Development Application for the project in May 2019.

6.3 Local Government Policy

6.3.1 City of Karratha Local Planning Policy DP20: Social Impact Assessments

The City of Karratha’s Social Impact Assessment Policy was used as the basis for drafting the impact areas against which Bechtel’s Construction Accommodation Village (CAV) development was assessed. The Social Impact Assessment Policy is intended to provide guidance to future applicants around the impacts which should be considered prior to any significant development, particularly transient worker accommodation. An SIA is a required attachment for a development application within the City of Karratha.

The potential impacts and scoping questions outlined by the City of Karratha relate to:

- Demographic and population change
- Accommodation and housing
- Accessibility to community services and facilities
- Social infrastructure

- Cultural values and beliefs
- Community values, identity and cohesion
- Health and wellbeing; crime and public safety
- Economic consideration
- Employment and local benefits

These impact areas and the relevant scoping questions are captured in the SIA tables in Section 9 – Social Impact Management Plan. The City of Karratha’s Social Impact Assessment Policy also provides a general outline for completing a SIA process. The approach taken for the SIAs in this report was based upon the City of Karratha’s process.

6.3.2 Local Planning Policy DP10: Transient Workforce Accommodation

The City of Karratha’s Transient Workforce Accommodation Policy⁴ is especially relevant to the assessment of social impacts associated with integration of village facilities with the community.

The Transient Workforce Accommodation Policy acknowledges the importance of villages for resource companies and reflects the trend towards regional government bodies supporting integration between transient workers and residential communities within an urban area.

6.4 Previous Relevant Reports

In 2013, Creating Communities Australia and FIFO Families collaborated to conduct *the FIFO Life Worker Survey*⁵. This independent, self-funded research targeted individuals who commuted long distance for their work. Over 800 transient workers were surveyed across Western Australia (67% of respondents), Queensland (23% of respondents) and other States and Territories (10%). The objective of the study was to help inform companies and community stakeholders about the workforce and how they might better support these workers to lead healthy, fulfilling and productive lives.

In 2014, Creating Communities Australia, FIFO Families and the Department of Sport and Recreation collaborated to conduct the *FIFO Partner and Family Online Survey*. 1,216 family members of transient workers were surveyed across Western Australia and Queensland. This research targeted partners of individuals who commute long distance for their work. The objective of the study was to help inform government, companies and community stakeholders of the characteristics, behaviours, views and challenges that face partners and children of FIFO workers. This information has been used to develop initiatives to help support this group.

Findings from these two studies that are particularly relevant to the Bechtel construction accommodation village SIA and SIMP are summarised below.

Productivity

Respondents think their productivity at work might be improved by:

- Shorter rosters and shifts

⁴ City of Karratha, Town Planning Scheme No. 8, Local Planning Policy DP10, Transient Workforce Accommodation

⁵ Creating Communities and FIFO Families, FIFO Life Survey: A survey of the long distance commuting workforce, 2013

- Facilities altered or improved
- Improved quality of village staff (including managers and leadership)
- Improved systems and procedures (including less paper work and meetings)

Inductions for Transient Workers

- The majority of respondents strongly agree or agree that an induction into FIFO lifestyle, accommodation and town should be provided to assist employees to:
 - adapt to FIFO work and lifestyle;
 - to make them more welcome and to support their transition to living there;
 - to help them have a greater understanding of the City in which they will be living;
 - assist workers in being more productive and safer; and
- that an induction into FIFO lifestyle should be provided to partners and family members of FIFO workers in order to better understand and effectively manage their lifestyle

Factors Influencing Workers to Remain FIFO

- The majority of respondents (92%) believe that quality of accommodation is highly important (46%) or of medium importance (46%) for them to remain in FIFO work
- The largest proportion (42%) of respondents rate their ability to communicate with partner while he/she is away on roster as difficult (35% somewhat difficult, 7% very difficult)

6.5 Other FIFO and TWA related studies

In 2012, Creating Communities produced the report “A Matter of Choice: Capturing the FIFO Opportunity in Pilbara Communities”, which was funded by the Chamber of Minerals and Energy (CME) and Pilbara Industry’s Community Council (PICC) member companies⁶. This document examines FIFO trends in Western Australia, relevant literature, trends and current practices. The document was presented to the Australia Parliament’s House of Representatives inquiry into the use of FIFO workforce practices in regional Australia in 2012.

The report focuses on the goals, principles and strategies required to guide these companies in optimising the benefits that flow to communities from in-City FIFO practices.

The *Matter of Choice Report* identifies eight principles which represent best practice management of how FIFO workers and villages interact with the surrounding community which have informed the impact management and recommendations sections of this Report:

1. Conduct research and consult with community and stakeholders to identify economic, social and environmental opportunities and challenges for host communities.
2. Develop understanding, respect and tolerance of differences, between FIFO workers and externally with community members.
3. Undertake impact management strategies to optimise economic, social and environmental benefits.
4. Explore ways of working together to mutually benefit the community, FIFO employees, owners, operators and resource companies.

⁶ Creating Communities Australia Pty Ltd, A Matter of Choice: Capturing the FIFO Opportunity in Pilbara Communities, 2012

5. Locate and integrate village accommodation with local neighbourhoods, where appropriate, and investigating the potential for shared use of facilities.
6. Ensure a safe environment, with access to high-quality amenities and services that will enhance the health and wellbeing of FIFO workers.
7. Foster mutual respect, cooperation and connection between the FIFO employees and the host community.
8. Assist FIFO employees and their families to understand and appreciate the lifestyle that may result from FIFO work.

6.5.1 Fostering Positive Mental Health of FIFO / DIDO Workers

There has been significant focus in recent years on the mental health of workers, with this issue being highlighted and addressed in the inquiry into mental health impacts of FIFO work arrangements conducted by the WA Parliament's Education and Health Standing Committee in 2014⁷.

"The impact of FIFO work practices on mental health" is a report produced by the Education and Health Standing Committee which responds to concerns about the impact of FIFO work practices on workers' mental health.

The report recognises that FIFO work is a significant aspect of Western Australian work culture. At the time of writing the report (June 2015), there were approximately 60,000 FIFO workers in Western Australia and therefore 60,000 families impacted by FIFO work. The report estimated (based upon the assumption that each FIFO worker has three direct family members) that approximately 240,000 Western Australians and, therefore, 9.3% of the state's population is directly impacted by FIFO.

The report found that FIFO workforces are at a higher risk of mental health problems and suicide than the broader population. The demographic profile of the FIFO workforce (predominantly males aged between 25 and 44) coincides with the groups within society with an increased risk of mental illness. This demographic, which most closely reflects members of the FIFO workforce, mirrors the demographic with the highest rate and risk of suicide: males aged between 15 and 44 years.

The Education and Health Standing Committee called for the development of a Code of Practice on FIFO work and its impacts on mental health because FIFO work arrangements may be a contributing factor to the mental health of workers. The Committee suggested that the resource industry needed to employ standard practices to accommodate the mental health needs of workers.

The Committee propose that a Code of Practice on FIFO work would address a range of issues including the planning of accommodation facilities. These and other factors are key considerations for Bechtel in planning for the accommodation of its workforce into the future to ensure it has a safe, healthy and productive workforce.

⁷ Education and Health Standing Committee, The Impact of FIFO Work Practices on Mental Health, 2015

7. SOCIAL BASELINE SUMMARY

This section summarises current and recent demographic data relevant to potential social changes, advantage, disadvantage and wellness.

Key areas compared are:

- Madigan Estate and Baynton West (SA1: 5127229)
- Karratha (SA2)
- West Pilbara (SA3)
- The 'Rest of WA'⁸ (FTE)

Demographic data is based on individuals whose primary place of residents is at these locations and does not the transient or temporary population that includes Fly-in Fly-out workers.

Key datasets analysed to inform these comparisons are:

- 2011 Census – Community Profiles (Australian Bureau of Statistics 2011)
- 2016 Census – Community Profiles (Australian Bureau of Statistics 2016)
- 2018 Social Atlas of Health
- Australian Early Development Census, 2012; 2015
- WA Crime Statistics⁹

7.1 Madigan Estate / Baynton West Demographic Summary

Compared to all of Karratha, the demographics of Madigan Estate / Baynton West has a higher proportion of young families. This is demonstrated through the lower number of people over 65 and high number of 0-14-year olds residing in the area, as well as the higher number of family households.

The area has a low unemployment rate, with a high proportion of people employed in the Iron Ore industry, and higher median incomes in the area compared to all of Karratha, as well as the rest of WA. The level of tertiary education achievement in the area is lower than all of Karratha.

The socio-cultural demographic of the area is fairly consistent with all of Karratha, with the key difference being a much lower proportion of Aboriginal and Torres Strait Islanders residing in the area. Police report statistics from 2017 – 2018 show that crime in the area made up 16% of the total family assaults in all of Karratha during this year.

7.2 Karratha Demographic Summary

Compared to the Rest of WA Karratha is a relatively young, affluent region, with slightly more cultural diversity. The median age in Karratha is eight years younger than the rest of WA, and the area has a significantly lower proportion of the population who are aged 65+. This indicates that the area has a high

⁸ Area is comprised of Western Australia, excluding the Greater Perth region.

⁹ Crime Statistics are based on the number of reported criminal incidences in West Australian suburbs. The data does not differentiate between residential and non-residential offenders. Further information on crime incidences committed by non-residents will be gained through stakeholder interview data with the Karratha Police Force.

proportion of the population who are of school and working age, but few people remain in the area for retirement.

The area is slightly more culturally diverse than the Rest of WA, with a slightly lower proportion of individuals born in Australia, as well as a higher Indigenous population. Median rents and mortgages in Karratha are more than the Rest of WA, and a smaller proportion of residents own their own home either with a mortgage or outright, indicating a more expensive housing market in Karratha than the Rest of WA.

In line with the higher rents and mortgages, incomes in Karratha are typically higher than the Rest of WA.

Police report statistics from 2017 – 2018 show that drug related incidences in Karratha made up 4% of all drug related offences in regional Western Australia in that period.

7.3 Madigan Estate / Baynton West and Karratha Demographics Overview

	Madigan Estate / Baynton West (SA1: 5127229)	Karratha (SA2)
POPULATION	The population of Madigan Estate / Baynton West is 2,340, which is 15% of the total population of Karratha (SA2)	The total population of Karratha in 2016 is 15,828 which is 3.9% decrease in population since 2011
	The median age is 29 which is lower than both Karratha (31) and the Rest of WA (36)	The median age is 31 which is higher than both Madigan Estate / Baynton West (29), but lower than the Rest of WA (39)
	The Indigenous population of Madigan Estate / Baynton West (5.1%) is significantly lower compared to all of Karratha (10.1%).	The Indigenous population of Karratha (10.1%) is higher than the Rest of WA (8.4%), but in line with the West Pilbara region (11.1%)
	Madigan Estate / Baynton West has a high proportion of those aged 0-14 years (30.0%) and a lower portion of those aged 65+ (1.0%) compared to all of Karratha (26.2% and 2.2% respectively)	There is a significantly lower proportion of those aged 65+ in Karratha (2.2%) compared to Rest of WA (14.6%). However, this number is in line with the West Pilbara region (2.2%)
CULTURE AND ETHNICITY	Madigan Estate / Baynton West has a slightly higher proportion of people born outside of Australia (36.7%) compared to all of Karratha (34.3%).	There is a slightly greater proportion of people born outside of Australia in Karratha (34.3%) than in the Rest of WA (28.3%). However, this proportion is less than the West Pilbara (37.3%).
	The top four most common ancestries are the same in Madigan Estate / Baynton West as all of Karratha (Australian, English, Scottish and Irish).	The top four most common ancestries in Karratha are the same as the West Pilbara region and the Rest of WA (Australian, English, Scottish and Irish).
	Tagalog is the most commonly spoken language other than English in Madigan Estate / Baynton West, which is the same as all of Karratha	Tagalog is the most commonly spoken language other than English in Karratha which the same as the wider West Pilbara area and the Rest of WA.

	Over one third (34.1%) of people in Madigan Estate / Baynton West have 'No Religion'. This is in line with the all of Karratha (35.3%)	The top five most common religions in Karratha are the same as the West Pilbara and Rest of WA.
	There is a significantly higher proportion of family households (83.3%) in the Madigan Estate / Baynton West area compared to all of Karratha (76%).	Karratha has a higher proportion of group households (4.1%) compared to the West Pilbara (3.2%) and the Rest of WA (2.9%).
FAMILIES AND HOUSEHOLDS	A greater proportion of people rent (81.2%) in the Madigan Estate / Baynton West area compared to all of Karratha (76.9%).	Only 20.1% of people in Karratha own their homes outright or with a mortgage. This is higher than the West Pilbara (18.0%), but lower than the Rest of WA (31.0%)
	Both median weekly rents (\$300) and median monthly mortgage repayments (\$3,630) are larger in the Madigan Estate / Baynton West area compared to Karratha (\$260 and \$2,500 respectively)	Median weekly rents in Karratha are significantly higher than the West Pilbara area (\$150). Between 2011 (\$132) and 2016 (\$260) median weekly rents increased 97%.
	A greater proportion of people in the Madigan Estate / Baynton West area are employed in Iron Ore Mining (9.3%) compared to all of Karratha (6.8%).	Iron Ore Mining (6.8%) is the main industry of employment in Karratha. This industry is in line with the West Pilbara area; however, the smaller proportion of those employed in this area indicated that Karratha has greater diversity in employment areas compared to the West Pilbara (20.7%).
INCOME AND EMPLOYMENT	Median weekly individual incomes are +\$251 greater in Madigan Estate / Baynton West (\$1,569) compared to all of Karratha (\$1,318). This difference is even more pronounced in household incomes with a difference of +\$653.	The median weekly individual income in Karratha (\$1,318) is lower the West Pilbara area (\$1,763); however, it is significantly greater than the Rest of WA (\$1,415).
	A greater proportion of households (+13.1%) earn more than \$3,000 gross weekly income (56.3%) compared to all of Karratha (43.2%)	A significantly greater proportion (+27.7%) of people in Karratha earn more than \$3,000 gross weekly income (43.2%) then the Rest of WA (15.5%).
	Unemployment in Madigan Estate / Baynton West is lower (-1.6%) then all of Karratha (5.6%)	Unemployment is slightly lower (-0.8%) in Karratha (5.6%) compared to the Rest of WA (6.4%)
EDUCATION	Fewer people are currently attending a technical or further education institution in Madigan Estate / Baynton West (4.5%) compared to all of Karratha (5.3%).	4.3% of people in Karratha are currently attending a technical or further education institution. This is approximately in line with both the West Pilbara area (4.1%) and the Rest of WA (4.4%).
	A smaller proportion of people (-3.8%) in Madigan Estate / Baynton West have completed a bachelor's degree (18.9%) compared to all of Karratha (22.7%).	A significantly higher proportion of people have completed a bachelor's degree in Karratha (22.7%) compared to the West Pilbara (12.6%) or the Rest of WA (11.6%).

	Fewer people (-1.5%) in Madigan Estate / Baynton West have completed voluntary work for an organization or group in the last 12 months (18.9%) compared to all of Karratha (20.4%).	20.4% of the Karratha population of competed voluntary work for an organization or group in the last 12 months. This is higher than the West Pilbara are (18.3%), but lower than the Rest of WA (23.3%).
COMMUNITY	The total number of crimes in the suburb of Baynton between 2016 – 2017 and 2017 – 2018 increased. This trend looks to continue in 2018 - 2019.	The total number of crimes in Karratha has decreased since 2016-2017.
	The top three most common types of crimes in the suburb of Baynton are: stealing, property damage and assault (family).	The top three most common types of crimes in Karratha are: drug offences, stealing and property damage.

7.4 Demographic Overview Table

TABLE 1: DEMOGRAPHIC OVERVIEW TABLE

		SA1 Area 5127229 (Madigan Estate / Baynton West) 2016	Karratha (SA2) 2011	Karratha (SA2) 2016	West Pilbara (SA3) 2016	Rest of Western Australia (FTE) 2016	Source
POPULATION	Population	2,340	16,476	15,828	34,497	508,025	(Australian Bureau of Statistics, 2011; 2016)
	Median age	29	32	31	33	39	(Australian Bureau of Statistics, 2011; 2016)
	% Male	50.3%	57.8%	53.2%	61.9%	51.7%	(Australian Bureau of Statistics, 2011; 2016)
	% Aboriginal and Torres Strait Islander	5.1%	5.3%	10.1%	11.1%	8.4%	(Australian Bureau of Statistics, 2011; 2016)
	% aged 0 - 14 years	30.0%	22.3%	26.2%	20.3%	20.2%	(Australian Bureau of Statistics, 2011; 2016)
	% aged 65+ years	1.0%	1.5%	2.2%	2.2%	14.6%	(Australian Bureau of Statistics, 2011; 2016)
CULTURE AND ETHNICITY	% of people born outside of Australia	36.7%	20.4%	34.3%	37.3%	28.3%	(Australian Bureau of Statistics, 2011; 2016)
	Most common ancestries	Australian (29.3%) English (23.7%) Scottish (6.2%) Irish (5.3%) Indian (2.6%)	Australian (27.8%), English (23.6%), Scottish (6.1%), Irish (5.9%), German (2.4%)	Australian (30.7%), English (23.5%), Scottish (5.8%), Irish (5.7%), Filipino (2.5%)	Australian (28.5%), English (23.3%), Irish (6.3%), Scottish (6.1%) German (2.3%)	Australian (29.7%) English (29.3%) Scottish (6.6%) Irish (6.5%) Italian (2.7%)	(Australian Bureau of Statistics, 2011; 2016)
	Top 5 languages (other than English) spoken at home	Tagalog (1.2%) Mandarin (1.2%) Afrikaans (1.0%) Filipino (0.8%) Malayalam (0.7%)	Tagalog (1%), Filipino (0.8%), Thai (0.4%), Hindi (0.4%), Urdu (0.4%)	Tagalog (1.7%), Filipino (1.1%), Afrikaans (0.8%), Australian Indigenous Languages (0.7%), Mandarin (0.7%)	Tagalog (1.3%), Yindjibarndi (1.0%), Filipino (0.9%), Mandarin (0.8%), Afrikaans (0.5%)	Tagalog (0.6%) Afrikaans (0.5%) Italian (0.5%) Kriol (0.4%) Filipino (0.4%)	(Australian Bureau of Statistics, 2011; 2016)
	Religion	No Religion, so described (34.1%) Not stated (19.4%) Catholic (19.1%) Anglican (12.8%) Uniting Church (2.0%)	No Religion (26.3%) Catholic (21.7%) Anglican (13.9%) Uniting Church (2.5) Christian, nfd (2.3%)	No Religion, so described (35.3%) Catholic (22.0%) Not stated (14.6%) Anglican (11.7%) Christian, nfd (2.5%)	No Religion, so described (34.6%) Catholic (20.9%) Not stated (17.1%) Anglican (11.7%) Christian, nfd (2.6%)	No Religion, described (33.8%) Catholic (19.3%) Anglican (16.4%) Not stated (12.9%) Christian, nfd (3.3%)	(Australian Bureau of Statistics, 2011; 2016)

		SA1 Area 5127229 (Madigan Estate / Baynton West) 2016	Karratha (SA2) 2011	Karratha (SA2) 2016	West Pilbara (SA3) 2016	Rest of Western Australia (FTE) 2016	Source
FAMILIES AND HOUSEHOLDS	% couple family without children	30.8%	36.9%	33.3%	32.8%	42.5%	(Australian Bureau of Statistics, 2011; 2016)
	% couple family with children	61.0%	53.9%	54.7%	55.1%	41.6%	(Australian Bureau of Statistics, 2011; 2016)
	% one parent family	7.7%	8.2%	10.7%	10.7%	14.6%	(Australian Bureau of Statistics, 2011; 2016)
	Family households	83.3%	77.5%	76%	75.6%	71.5%	(Australian Bureau of Statistics, 2011; 2016)
	Single (or lone) person households	13.0%	17.6%	19.9%	21.2%	25.6%	(Australian Bureau of Statistics, 2011; 2016)
	Group households	3.7%	4.9%	4.1%	3.2%	2.9%	(Australian Bureau of Statistics, 2011; 2016)
HOUSING	% of occupied dwellings either owned outright or owned with a mortgage by their occupants	17.2%	23.2%	20.1%	18.0%	31.0%	(Australian Bureau of Statistics, 2011; 2016)
	% of dwellings rented	81.2%	72.7%	76.9%	78.8%	34.7%	(Australian Bureau of Statistics, 2011; 2016)
	Average household size (people)	3.1	2.9	2.8	2.8	2.5	(Australian Bureau of Statistics, 2011; 2016)
	Median weekly rent	\$300	\$132	\$260	\$150	\$240	(Australian Bureau of Statistics, 2011; 2016)
	Median monthly mortgage repayments	\$3,630	\$3,059	\$2,500	\$2,600	\$1,700	(Australian Bureau of Statistics, 2011; 2016)
INCOME AND EMPLOYMENT	Largest employing industry (%)	Iron Ore Mining (9.3%)	Heavy and Civil Engineering Construction (11.9%)	Iron Ore Mining (6.8%)	Iron Ore Mining (20.7%)	Iron Ore Mining (4.8%)	(Australian Bureau of Statistics, 2011; 2016)
	Median weekly individual income	\$1569	\$1,543	\$1,318	\$1,763	\$713	(Australian Bureau of Statistics, 2011; 2016)
	Median weekly household income	\$3,296	\$2,870	\$2,643	\$2,936	\$1,415	(Australian Bureau of Statistics, 2011; 2016)
	Households earning less than \$650 gross weekly income	3.0%	N/A	4.8%	6.4%	21.0%	(Australian Bureau of Statistics, 2011; 2016)
	Households earning more than \$3,000 gross weekly income	56.3%	38.2%	43.2%	42.0%	15.5%	(Australian Bureau of Statistics, 2011; 2016)
	Labour Force Participation Rate	70.2%	73.8%	72.9%	72.2%	60.0%	(Australian Bureau of Statistics, 2011; 2016)
	% Unemployed	4.0%	1.9%	5.6%	4.3%	6.4%	(Australian Bureau of Statistics, 2011; 2016)

		SA1 Area 5127229 (Madigan Estate / Baynton West) 2016	Karratha (SA2) 2011	Karratha (SA2) 2016	West Pilbara (SA3) 2016	Rest of Western Australia (FTE) 2016	Source
EDUCATION	% of children developmentally vulnerable on two or more domains of the AEDC	N/A	9.9% (2012) ¹⁰	17.6% (2015) ¹⁰	N/A	N/A	(Australian Early Development Census, 2012; 2015)
	% of people completed a Certificate III or IV	22.5%	35.1%	23.9%	27.4%	20.3%	(Australian Bureau of Statistics, 2011; 2016)
	% of current students attending a technical or further education institution	4.5%	5.1%	5.3%	5.0%	5.4%	(Australian Bureau of Statistics, 2011; 2016)
	% of current students attending a university or tertiary institution	4.4%	3.5%	4.3%	4.1%	4.4%	(Australian Bureau of Statistics, 2011; 2016)
	% of people completed Bachelor's Degree level and above	18.9%	18.4%	22.7%	12.6%	11.6%	(Australian Bureau of Statistics, 2011; 2016)
COMMUNITY	% of persons that completed voluntary work for organisation or group (in the last 12 months)	18.9%	15.9%	20.4%	18.3%	23.3%	(Australian Bureau of Statistics, 2011; 2016)
	Estimated number of people aged 18 years and over who felt very safe/safe walking alone in local area after dark (modelled estimates) (ASR per 100)	N/A	N/A	50.8 (2014)	N/A	53.8 (2014)	(Social Atlas of Health, 2018)
	Estimated number of people aged 18 years and over who disagree/strongly disagree with acceptance of other cultures (modelled estimates) (ASR per 100)	N/A	N/A	4.3 (2014)	N/A	6.4 (2014)	(Social Atlas of Health, 2018)

¹⁰ Uses the local community area Karratha/Pegs Creek rather than Karratha (SUA). The Pegs Creek data may skew the Karratha data towards developmental vulnerability.

	SA1 Area 5127229 (Madigan Estate / Baynton West) 2016	Karratha (SA2) 2011	Karratha (SA2) 2016	West Pilbara (SA3) 2016	Rest of Western Australia (FTE) 2016	Source
Estimated number of people aged 18 years and over who, in the past 12 months, felt that they had experienced discrimination or have been treated unfairly by others (modelled estimates) (ASR per 100)	N/A	N/A	27.2 (2014)	N/A	22.5 (2014)	(Social Atlas of Health, 2018)
Total number of criminal offences	N/A	1,689 (2011 – 2012)	2,500 (2016 – 2017)	N/A	183,841 ¹¹ (2016 – 2017)	(West Australian Crime Statistics 2019)

¹¹ Data for all of WA, including the Greater Perth Region

8. ENGAGEMENT FINDINGS

Two periods of community and stakeholder engagement were undertaken by Creating Communities with support from the Bechtel Communities team. The initial engagement included a principal stakeholder briefing with key local stakeholders and a pop-up engagement stall hosted at the Karratha Shopping Centre, undertaken on August 14th and 15th. The second engagement session included individual interviews with key local stakeholders and focus groups sessions; which included three sessions with residents and ratepayers and three sessions with local businesses, undertaken between September 9th – September 12th, 2019.

Promotion of each of these engagement sessions were distributed as per the below:

- **Principal Stakeholder Briefing:** individual email invites and follow-up phone calls to key stakeholders (database of stakeholders was co-developed by Creating Communities and Bechtel)
- **Pop-up Engagement Stall:** advertisement in the Pilbara News newspaper and promotion via Bechtel, Woodside and City of Karratha social media sites
- **Stakeholder Interviews:** individual email invites and follow-up phone calls (a large database of stakeholders was co-developed by Creating Communities and Bechtel)
- **Focus groups:** hardcopy flyer distributed to every household in Karratha; advertisement in the Pilbara News newspaper; promotion via Bechtel, Woodside and City of Karratha social media sites; email invite distributed to database of community, sporting and recreational groups based in City of Karratha.

This section includes a brief summary of the key themes that came out of each of the engagements. All feedback from the engagement sessions have been included for consideration in determining the impact ratings for each of the areas assessed.

8.1 Principal Stakeholder Briefing

A briefing was held with principal stakeholders to inform them of the Bechtel CAV project and the Social Impact Assessment and Management Plan process. The briefing provided an overview of Bechtel as an organisation, a summary of the CAV proposal, and an overview of the SIA/SIMP process, including informing stakeholders of key engagement dates. Participants then had an opportunity to ask the project team any questions relating to the proposal or project process. Participants included representatives from:

- Pilbara Ports Authority
- Murujuga Aboriginal Corporation
- Karratha Health Care Campus
- Pilbara Development Commission
- Karratha Community Association
- Karratha and Districts Chamber of Commerce and Industry
- Local businesses

8.2 Pop-Up Engagement Stall

A pop-up engagement stall was hosted at the Karratha Shopping Centre on August 14th, 2019. The stall was hosted by members of the Creating Communities, Woodside and Bechtel teams to provide the

general public with information about and field any questions on the Bechtel Construction Accommodation Village. Those that engaged with the stall were a mix of:

- Neighbours (who live/own a property close to the site)
- Residents of the local area
- Residents of another area in Karratha
- Current FIFO workers in the area

A tally of the number of times key themes were mentioned as people engaged with the stall was:

Theme	Positive Mentions	Negative Mentions	Neutral Mentions
Jobs	30	-	1
Camp	7	3	1
Supply	3	-	-
Environment	-	1	-
General	10	-	-

The key themes that were raised in discussion with people who engaged with the stall were:

Positives

- The possibility of more local jobs in the area
- Positive impact on the economy
- Pluto Train 2 is positive for Karratha

Concerns

- Impacts on dust
- Impact on Aboriginal heritage
- Lack of available housing in City of Karratha

Other comments/suggestions

- Need to ensure jobs are offered to locals first
- Provide opportunities for local construction/contractors
- Should never have demolished Gap Ridge

8.3 Stakeholder Interviews

A total of 11 stakeholder interviews were undertaken with 15 key local stakeholders (some interviews had more than one stakeholder present). The stakeholders interviewed represented the following groups:

- City of Karratha
 - Elected members (3)
 - Executive staff
- Pilbara Ports Authority
- St John Ambulance
- Karratha Leisureplex

- Karratha Community Association
- Karratha Health Campus
- Murujuga Aboriginal Corporation
- Ngarluma Yindjibarndi Foundation Ltd (NYFL)
- Karratha Chamber of Commerce and Industry
- Member for Pilbara (WA Parliament)

Note: many other stakeholders were invited to take part in interviews, including WA Police, but declined.

The below table provides a **summary of the feedback** received during these interviews. The feedback has been coded and themed in line with the impact areas outlined in the City of Karratha’s DP20 Policy.

Impact Area	Positive	Negative
General Impacts (unprompted)	<ul style="list-style-type: none"> • Positive economic impact • Greater participation in local groups, clubs, and organisations • Positive local employment and training benefits/opportunities • Creates corporate investment opportunities for the town • Understand/support the need for a construction camp to support the broader Pluto 2 Project • Supports the growth of the City/may encourage people to move to Karratha in the future • Opportunities for potential long-term use of the site 	<ul style="list-style-type: none"> • Impact on housing availability and affordability • Physical and mental health and wellbeing of workers • Poor integration/engagement with the community / no community contribution • FIFO/TWA Villages are unsustainable for the town/don’t promote population growth • Antisocial behaviour (predominantly as a result of alcohol consumption) • Access to/strain on services and amenity (predominantly medical and health) • Perception of FIFO workers/perception of Karratha as a “FIFO town” • Potential for village to overextend its lease • Road and traffic safety • Physical amenity/location of the village • Potential environmental impacts (e.g. rubbish; items coming from moving vehicles)
Demographic and Population Change	<ul style="list-style-type: none"> • No/minimal impact expected • Increased population will have positive impact on local businesses • Increased population supports local jobs/training opportunities 	<ul style="list-style-type: none"> • Increased population may enhance antisocial behaviour • Potential for increased traffic congestion/incidents • Poor community integration • Predominantly male population increase
Accommodation and Housing	<ul style="list-style-type: none"> • Positive impact of up to 25 Bechtel Management staff living residentially • Potential for Bechtel to add to the local housing stock • FIFO village is required as the City does not have capacity to house 2,500 construction workers • No impact / impact is unpredictable 	<ul style="list-style-type: none"> • Housing availability and affordability – possibility that Bechtel takes up stock and increases prices • Impact on the availability and affordability of short-stay accommodation
Accessibility to Community Services and Facilities	<ul style="list-style-type: none"> • Minimal impact as village will be self-contained • Some positive use of community services and facilities – however will require good access to transport 	<ul style="list-style-type: none"> • Impact on delays/wait times to see doctor/medical support • No onsite access to oval space

		<ul style="list-style-type: none"> • Potential for onsite amenity to not meet the needs of the workforce
Social infrastructure	<ul style="list-style-type: none"> • Community groups/clubs will benefit from additional participation • No/minimal impact expected 	<ul style="list-style-type: none"> • No community contribution/benefit
Cultural Values and Beliefs	<ul style="list-style-type: none"> • Positive promotion of the city leads to future positive engagement with the area / potential relocation to Karratha to support growth 	<ul style="list-style-type: none"> • Lack of appreciation/respect for the City • Lack of appreciation/respect for Aboriginal/cultural heritage
Community Values, Identity and Cohesion	<ul style="list-style-type: none"> • Positive promotion of the city leads to future positive engagement with the area/potential relocation to Karratha to support growth 	<ul style="list-style-type: none"> • Lack of understanding/respect for the City
Health and Wellbeing	<ul style="list-style-type: none"> • Provision of medical/health services for workforce • No/minimal impact 	<ul style="list-style-type: none"> • Mental health concerns for the workers/lack of appropriate resources and services to support good mental health outcomes • Impact on wait times for GPs/hospital and capacity for GPs/hospital to service overflow workforce requirements • Negative community sentiment if GP is based onsite with no community access
Crime and Public Safety	<ul style="list-style-type: none"> • No/minimal impact – perception of crime is worse than reality 	<ul style="list-style-type: none"> • Concern is more around antisocial behaviour than crime • Drug and alcohol use – particularly ‘pre-loading’ before going into the City • Road/traffic safety • Lack of forward planning from key services (e.g. Police) around additional population
Economic Considerations	<ul style="list-style-type: none"> • Positive impact - dependent on local businesses/contracts being preferenced 	<ul style="list-style-type: none"> • Could create negative sentiment in the City if not managed well • Potential for Bechtel to monopolise trades in the City/increase prices and decrease availability • Village operator using “national supply chains” to reduce costs and prevent local businesses from being competitive
Employment and Local Benefits	<ul style="list-style-type: none"> • Support for preferencing local employment 	<ul style="list-style-type: none"> • Potential for Bechtel to take employees away from local workforce/local SMEs • FIFO model supporting the employment of workers from outside Karratha
Cumulative Impacts	<ul style="list-style-type: none"> • No/minimal impact • Longer-term legacy of the project • Potential for a coordinated approach with the City of Karratha leading a collaboration of villages/companies 	<ul style="list-style-type: none"> • Needs to remain a short-term lease • Visual impact of FIFO villages on the local amenity • Cumulative impact on housing and accommodation availability and affordability • Cumulative impact of antisocial behaviour

8.4 Focus Groups

A total of five focus group sessions were held in Karratha on September 10th and 11th, 2019. Two of these focus group sessions were facilitated with local residents and ratepayers and three were facilitated with local businesses and community organisations. A total of 16 participants took part in the focus group sessions. The below table provides a **summary of the feedback** received during these sessions. The feedback has been coded and themed in line with the impact areas outlined in the City of Karratha's DP20 Policy.

Area	Positive	Negative
Demographic and Population Change	<ul style="list-style-type: none"> Capacity to adapt to change – the community has seen it before so are more prepared this time around Benefits of community integration More people may see what Karratha has to offer and choose to move and live residentially 	<ul style="list-style-type: none"> Antisocial behaviour of increased population Lack of community integration/engagement Barriers to local employment Larger male population
Accommodation and Housing	<ul style="list-style-type: none"> Positive impact of Bechtel Management staff living residentially Increase of housing costs may be a positive for those who bought houses at the bottom of the market 	<ul style="list-style-type: none"> Limited housing availability / will create extra strain on market which is already at capacity No external accommodation for workers if they need to be pulled offsite (e.g. during disaster)
Accessibility to Community Services and Facilities	<ul style="list-style-type: none"> Support Bechtel having their own doctor/ambulance TWA villages generally have limited requirement for doctor so don't expect significant impact 	<ul style="list-style-type: none"> Potential to add to strain for appointments (e.g. medical, hairdresser, dentist) Potential additional strain on existing internet services
Social Infrastructure	<ul style="list-style-type: none"> Potential to support/integrate with existing groups/amenity 	<ul style="list-style-type: none"> Lack of community integration (due to rosters or ineffective Lifestyle Coordinators)
Cultural Values and Beliefs	<ul style="list-style-type: none"> No/minimal impact 	<ul style="list-style-type: none"> Potential for workers to not respect the community and land (particularly the Burrup Hub which is National Heritage Listed)
Community Values, Identity and Cohesion	<ul style="list-style-type: none"> Potential for positive integration/support of the area if managed well 	<ul style="list-style-type: none"> Negative behaviour of groups of workers coming into the City for shared RDOs Antisocial behaviour
Health and Wellbeing	<ul style="list-style-type: none"> No/minimal impact 	<ul style="list-style-type: none"> Mental health concerns for the workers Impact on local health services
Crime and Public Safety	<ul style="list-style-type: none"> No/minimal impact expected as workforce are all drug/alcohol tested and taverns have appropriate RSAs 	<ul style="list-style-type: none"> Potential for opportunistic crime at the village Road safety/traffic incidents Incidents at licensed premises
Economic Considerations	<ul style="list-style-type: none"> Increase in activity for local businesses Supply opportunities for local businesses (e.g. local catering) 	<ul style="list-style-type: none"> Potential for cost of living to increase as a result of increased activity Potential for additional strain on local businesses (e.g. wait times for mine spec car hires) Limited spend compared to residential population

Employment and Local Benefits	<ul style="list-style-type: none"> • Support the FIFO model as a necessary requirement for Pluto Train 2 • Local employment opportunities 	<ul style="list-style-type: none"> • Low unemployment rate – there is limited pool of workers to draw from (including ATSI workforce) • Potential to take employees away from local SMEs
Cumulative Impacts	<ul style="list-style-type: none"> • Potential to leverage impact through creating a coordinated approach 	<ul style="list-style-type: none"> • Lack of coordination between industry players in City

9. SOCIAL IMPACT AND OPPORTUNITY ASSESSMENT AND MANAGEMENT PLAN

9.1 Impact Assessment Description

The Impact Assessment is a descriptive section that analyses each social impact area and includes:

- A broad overview of the impact area.
- The evaluation of the degree and likelihood of an impact using an Impact Assessment Rating Matrix.
- A rating for each impact and description that outlines the rationale (i.e. engagement and data findings) for the rating provided.
- An overall average impact rating for the impact area.
- A discussion of the current and potential future impact management approach.
- An overall average impact rating for the impact area if management strategies are implemented.

Using the Impact Assessment Rating Matrix (see figure 1 below), the rating of an impact has been evaluated. The rating for each impact was calculated by considering the degree of benefit or detriment and likelihood of the impact where:

For degree of benefit (positive) or detriment (negative) of impact the following values were assigned:

- High Benefit = 3
- Medium Benefit = 2
- Low Benefit = 1
- Neutral = 0
- Low Detriment = -1
- Medium Detriment = -2
- High Detriment = -3

For likelihood of impact the following multipliers were assigned:

- Almost Certain / Always = 5
- Likely / Mostly = 4
- Possible / Sometimes = 3
- Unlikely / Seldom = 2
- Rare / Never = 1

The key inputs used to establish the degree and likelihood of an impact includes: qualitative data from the community and stakeholder engagement; quantitative data (e.g. demographic statistics etc.) and expert opinion.

In regard to the discussion of current and future potential impact management approaches, the following was considered:

- Impacts in the positive (blue) areas should be realised or enhanced where possible.
- Impacts in the negative (red) areas should be mitigated or avoided where possible.
- Impacts in the neutral (light orange) area of the assessment rating matrix are unlikely to be significant or can be more easily managed.

The overall average rating of an impact area was calculated by obtaining the average of the scores for each impact included in the impact area.

FIGURE 2: IMPACT ASSESSMENT RATING MATRIX USED FOR IMPACT RATINGS

		Degree of Benefit or Detriment						
		High Benefit	Medium Benefit	Low Benefit	Neutral	Low Detriment	Medium Detriment	High Detriment
Likelihood / Prevalence	Almost Certain /Always	HP (15)	HP (10)	LP (5)	N (0)	LN (-5)	HN (-10)	HN (-15)
	Likely/ Mostly	HP (12)	MP (8)	LP (4)	N (0)	LN (-4)	MN (-8)	HN (-12)
	Possible/ Sometimes	MP (9)	LP (6)	MP (3)	N (0)	MN (-3)	LN (-6)	MN (-9)
	Unlikely/ Seldom	LP (6)	LP (4)	MP (2)	N (0)	MN (-2)	LN (-4)	LN (-6)
	Rarely/ Never	MP (3)	MP (2)	N (1)	N (0)	N (-1)	MN (-2)	MN (-3)

FIGURE 3: IMPACT RATING SCALE

SCORE	IMPACT RATING
12 to 15	High Positive
8 to 11	Medium Positive
4 to 7	Low Positive
2 to 3	Minor Positive
1 to -1	Neutral
-2 to -3	Minor Negative
-4 to -7	Low Negative
-8 to -11	Medium Negative
-12 to -15	High Negative

9.2 Impact Area 1: Demographic and Population Change

9.2.1 Overview

Although communities are always changing, a significant change in the total population or its characteristics can fundamentally alter a community's identity and needs. Understanding population impacts, particularly of workforce changes, is essential to predict a range of other social impacts.

The current project is exploring the potential for a construction village with 2,500 beds. This entails an accommodation requirement curve for workforce numbers over a 48-month construction period. The facility will increase the temporary population of the area which may have some resulting impacts on the immediate locality and its population. Population increases may be of particular concern given the project will be supporting a transient construction workforce. However, the intended location of the construction accommodation village is on the Gap Ridge site which was previously used to accommodate transient workers for the construction of the Pluto LNG foundation project.

Bechtel anticipates no more than 1% of their total workforce population (up to 25 households) will relocate to be residential staff. These staff will most likely be management staff with accompanied status. Secondary economic benefits may be felt by local businesses due to the increase in the temporary population in the area. This may result in businesses requiring additional staff. These staff are mostly likely to be pulled from the existing residential workforce. However, this will depend on the business and skill set required, and may result in local businesses recruiting non-local individuals who will then become residential, resulting in an increase to the City's population.

Overall, these changes are not expected to have a significant impact on the permanent resident population in the immediate or broader locality or result in any displacement of current residents.

Current State

Since Woodside's Gap Ridge development was demolished in 2017 and the site was rehabilitated to its original state, the site has remained unoccupied. The site lies directly adjacent to the Civeo's Karratha Village, which currently accommodates 208 standard rooms.

More broadly, the site is located within the area of Madigan Estate / Baynton West. As outlined in *Section 6 – Social Baseline Summary*, the key distinctions of the Madigan Estate / Baynton West demographic in comparison to the broader Karratha (SA2) area is a younger population, lower proportion of Aboriginal and Torres Strait Islander people, a higher proportion of young families, high median weekly incomes and a lower unemployment rate.

Anticipated Change

Construction workforces tend to typically consist of a majority male workforce, aged between 20 – 45 years. As this project is utilising a FIFO and DIDO workforce, it is likely that most workers will not have partners or families in City.

The peak construction workforce of the Bechtel village project is estimated at 2,223. Workforce numbers will vary throughout the 48-month construction period, with the following schedule for numbers employed:

- Ramp up from 0 to 607 beds from month 1 to month 12
- Ramp up from 608 to 2223 beds from month 13 to month 32
- Ramp down from 2223 to 1022 beds from month 33 to month 41

- Ramp down from 1022 from month 42 to approximately 78 in month 48

The village would have a peak capacity of up to 2,500 beds as a contingency to accommodate additional workforce in case it is required.

It is likely that the higher temporary population may have some impact on the local area, which it is anticipated will be centred around shifting the demographic of the of the local area and a potential for increased traffic congestion. As the CAV will be largely self-contained, however, it is expected that this impact will be minimal.

9.2.2 Impact Assessment

IMPACT CONSIDERATION	CURRENT ASSESSMENT			IMPACT CONSIDERATIONS – ENGAGEMENT AND DATA FINDINGS
	LIKELIHOOD / PREVALENCE	DEGREE OF BENEFIT OR DETRIMENT	IMPACT RATING	
Increased population supports local business patronage	LIKELY / MOSTLY (4)	LOW BENEFIT (1)	LOW POSITIVE (4)	Due to the increased temporary population of the area, there is likely to be a positive impact on the surrounding local businesses which workers are likely to access during their time off or before and after their shifts. Throughout consultation stakeholders specifically reference the upcoming development of Tambrey Village, which is expected to accommodate an IGA supermarket, pharmacy, medical centre, service station, fast food and retail businesses. Its proximal location to the Gap Ridge site (approximately 1.5km away) will provide convenience access for the workforce.
Key worker profile creating change in demographic	LIKELY / MOSTLY (4)	LOW DETRIMENT (-1)	LOW NEGATIVE (-4)	With the increase of a temporary population via the Bechtel workforce, there is a high likelihood that the demographics of the local region will be altered. This will likely see an increase in the key worker profile. While at this stage it is difficult to predict the exact demographics of Bechtel’s workforce, previous projects of a similar type have generally seen a predominance in single males, aged between 20 – 45, without partners or family in City. This will temporarily change the demographics of the localised community, which has a high proportion of younger families. Given the CAV is largely self-contained, however, it is anticipated that the impact will be minimal.

IMPACT CONSIDERATION	CURRENT ASSESSMENT			IMPACT CONSIDERATIONS – ENGAGEMENT AND DATA FINDINGS
	LIKELIHOOD / PREVALENCE	DEGREE OF BENEFIT OR DETRIMENT	IMPACT RATING	
Increase in traffic congestion	POSSIBLE / SOMETIME	LOW DETRIMENT	MINOR NEGATIVE (-3)	<p>Increased traffic and transport in the local area has been identified as a potential impact. In particular, the transportation of employees and equipment may lead to traffic congestion, access to local services and the impact on road infrastructure.</p> <p>Bechtel is producing a Traffic Management Plan that provides a range of mitigation strategies to alleviate traffic congestion and maximise road efficiencies around the village accommodation and will be producing.</p> <p>Employees will be bused between the CAV, worksite and airport. At peak four busses will undertake two runs between CAV and Airport per weekday- one in the morning and one in the evening.</p> <p>It is currently predicted that at peak there will be up to 50 coaches and 50 light vehicles moving between the site and CAV each day. In order to minimise congestion to and from the project site, Bechtel will be liaising with other operators on the Burrup Peninsula to determine if shift change times can be staggered. This will reduce the amount of traffic congestion along this route.</p> <p>Bechtel will also require its local workforce to commute to the CAV. The local workforce will then be bused to the site to minimise the number of light vehicles travelling the route.</p> <p>Provision of a bus service from the CAV to Karratha, for employees to access local businesses, shopping centres, restaurants and sporting and recreation facilities, is also expected to minimise the use of employees' personal vehicles outside of working hours.</p>
Impact on perceptions of crime and safety	POSSIBLE / SOMETIME (3)	LOW DETRIMENT (-1)	MINOR NEGATIVE (-3)	<p>An increase of population is often associated with a perception of increased crime and safety concerns. Strict workforce management plans will need to be developed and embedded as part of Bechtel's employees' contracts to minimise any potential crime and safety issues.</p> <p>The past Gap Ridge village, that primarily housed the workforce for the construction of Pluto 1, appears to have had a minor impact on crime during its operation between 2008 and 2017. Since 2009 - 2010, crime in Baynton reached its' peak in 2017-2018, with a total of 323 offences committed, during the period in which Gap Ridge village was closed.</p> <p>While there is unlikely to be a substantial increase in actual crime, the perception of increased crime as a result of more workers in the area may still have a minor impact.</p> <p><i>This is explored further in the 'Crime and Public Safety' impact sheet.</i></p>

IMPACT CONSIDERATION	CURRENT ASSESSMENT			IMPACT CONSIDERATIONS – ENGAGEMENT AND DATA FINDINGS
	LIKELIHOOD / PREVALENCE	DEGREE OF BENEFIT OR DETRIMENT	IMPACT RATING	
Visual impact of additional FIFO workers	LIKELY / MOSTLY (4)	LOW DETRIMENT (-1)	LOW NEGATIVE (-4)	<p>It was noted by stakeholders throughout the consultation process that the additional presence of construction workers during the previous boom period had a negative visual impact on the community. The construction workforce was particularly visible due to their ‘high-vis’ clothes that were often worn in the local community.</p> <p>Implementing policies around restricting the wearing high-vis work clothes out of the village when not in a work capacity may assist in decreasing the visual separation between the FIFO workforce and local residents.</p>
DEMOGRAPHIC AND POPULATION CHANGE – OVERALL CURRENT IMPACT RATING				MINOR NEGATIVE (-2)
DEMOGRAPHIC AND POPULATION CHANGE – OVERALL IMPACT RATING WITH MITIGATIONS IMPLEMENTED (SEE BELOW)				NEUTRAL (0)

9.2.3 Demographic and Population Change – Impact and Opportunity Management Strategies

Impact Area	Description	Strategy	Commitments	Intended Impact
Demographic and Population Change	<p>The peak requirement for accommodation at the CAV is 2,500 beds.</p> <p>Workforce numbers will vary throughout the 48-month construction period, with the following schedule for numbers employed:</p> <ul style="list-style-type: none"> Ramp up from 0 to 607 beds from month 1 to month 12. Ramp up from 608 to 2500 beds from month 13 to month 32. Ramp down from 2500 to 1022 beds from month 33 to month 41. Ramp down from 1022 beds from month 42 to approximately 78 beds in month 48. 	Proactive approach to workforce diversity	Bechtel and its contractors will encourage diversity in the recruitment of employees	Supporting diversity in the workforce
		Traffic management due to increased local population	<p>A comprehensive Traffic Management Plan developed for the project, which will address the following potential issues:</p> <ul style="list-style-type: none"> Minimise impact on the local community and road infrastructure; Reduce the potential for accidents and minimize driving time for employees; Minimise usage of vehicles in and around local community; Minimising the risk of transportation arrangements causing frustrations that can lead to industrial disputation or third-party interventions; Providing, where reasonable, buses, that are safest in class, are robust and are suitable to the environment and the journey times required; Minimize travel time where practicable to enable employees to maximize work/life balance; Ensure flexibility of services to enable transportation of Construction Workforce employees who are local residents. The development of bus and flight schedules will align with the working hours and roster cycles of employees. 	Negative impacts of increased traffic are minimised.
		Require all employees to travel to the worksite from the CAV either on a provided bus or in an authorised company vehicle.		
		Provide a bus for employees residing in Roebourne, Wickham and Point Sampson, when sufficient numbers warrant the provision of transportation		
		Liaise with other operators on the Burrup Peninsula to ensure that shift change times are not aligned in order to reduce congestion.		
		Encourage police to monitor traffic out to the plant and dangerous driving from vehicles trying to pass buses.		
		Encourage bus providers have dashcams and report dangerous driving.		
		Manage perception of FIFO population increase	<p>Ensure there is a comprehensive communications and engagement plan delivered around the CAV development, intent of the development, operation and decommissioning. This process will include:</p> <ul style="list-style-type: none"> Comprehensive FAQ booklet available to all Karratha residents A project website containing all relevant project information Opportunity for input and participation at SIA/SIMP Focus Group Sessions Newspaper ads and a flyer promoting opportunity for input. 	Negative perceptions of FIFO workers from the broader community, particularly in the area of crime and antisocial behaviour, are managed.
		Establish external communications program around FIFO life and community contribution.		
		Establish opportunities for FIFO workforce to pursue active, healthy lifestyles and provide positive contributions to the local community.		
Work with KDCCI and Pilbara Development Corporation to promote Karratha as a great place to stay post construction employment.				
Implement policy that discourages workers wearing high-vis uniforms outside of the CAV when not in a work capacity to reduce the visual presence of Bechtel FIFO construction workers in the local community.				
Stagger Bechtel shifts with Woodside shifts to limit impact of road traffic at one time				
Explore opportunity to stagger rosters so that all RDOs are not taken on the same day to limit large influx of workers going into the City at the same time				
Security to work in collaboration with police to manage any antisocial behaviour issues.				
Recruit local where possible	Where possible, use a local first, then regional, state, national and international recruitment strategy.	Minimise demographic change by recruiting from local residents		

9.3 Impact Area 2: Accommodation and Housing

9.3.1 Overview

As one of the largest investments or expenses a resident or visitor can incur, and particularly given the fluctuation of the housing market in the Pilbara as a result of the mining industry, it is important to understand impacts in this area as a vital element of wellbeing, functioning economics and stable communities.

In assessing the potential impact of the Bechtel CAV on housing and accommodation in Karratha, there is the potential for there to be an impact on housing availability and affordability as the current availability of houses in Karratha is low. Bechtel anticipates approximately 1% of their total workforce population (up to 25 households) may relocate as residential staff who will require housing. Feedback from local real estate agent stakeholders has indicated that as of September 2019 there are only 30 – 40 available houses on the market in Karratha. Bechtel's requirement for up to 25 houses, therefore, is likely to create strain on the housing availability and may increase house prices.

The proposed village will accommodate a specific and short-term construction workforce only. The reactivation of disused land may have some impact for residents in the locality, and there may be a perceived impact of making additional FIFO beds in the market available.

Current State

The majority of existing housing in the Madigan Estate / Baynton West locality is made up of separate houses (92%), with a small section of flats or apartments (6%). Most of these houses are larger in size, containing at least three or more bedrooms (93%). The majority of houses are rented (81%), with a small proportion being owned with a mortgage (15%) and an even smaller proportion being owned outright (2%). The houses of the area have an 82% occupancy rate, which is lower than the state average (87%), but higher than the Karratha average (74%).

Overall, house prices in Karratha have experienced an upswing since 2017. Median house prices in the suburbs of Baynton, Pegs Creek, Bulgarra and Millars Well have all seen an increase between 2017 and 2019. The median house price for Baynton is currently \$457,500, and the area has seen a 4% growth in the last 12 months.

The City of Karratha published a Transient Workers Accommodation Policy in May 2015, which outlines several principles for the provision of TWAs within the City of Karratha. The policy acknowledges the critical role that village accommodation plays during the construction phase of major resource projects and to accommodate short-term workforce requirements, such as those associated with maintenance shut-downs or specific remote projects.

While the City preferences residential-based accommodation for operational workforces, it also recognises that there needs to be a base-level supply of village beds to accommodate temporary workforces. As of 2018, there were approximately 3,325 beds in existing village facilities within the City of Karratha. In addition, an extra 3,132 beds were proposed through development applications, including the most significant expansions at Civeo, Bay Village and Peninsula Palms (in Dampier).

Anticipated Change

The Bechtel CAV proposes to utilise the vacant land upon which former transient workforce accommodation facilities were located.

Phase 1 of the village facility provision will include, but are not limited to, accommodation units, kitchen and dining facilities to house 1,850 persons, laundries, taverns and beer gardens for 600 persons, gymnasiums, a pool, recreation areas, medical centre, operations office, BBQ shelters, washrooms, waste collection areas, waste & sewer treatment plant, maintenance facilities, sufficient power supply, communication head end infrastructure and the supply of potable water.

Accommodation at the village will only be provided to Bechtel or Bechtel’s direct contractors associated with Pluto Train 2 construction, with no third-party accommodation options available.

Additionally, Bechtel intends to offer the opportunity for management staff to relocate to Karratha residentially. It is anticipated that no more than 1% of the total workforce will relocate residentially (approximately 25 houses).

9.3.2 Impact Assessment

IMPACT CONSIDERATION	CURRENT ASSESSMENT			IMPACT – ENGAGEMENT AND DATA FINDINGS
	LIKELIHOOD / PREVALENCE	DEGREE OF BENEFIT OR DETRIMENT	IMPACT RATING	
Bechtel Management staff living residentially	LIKELY / MOSTLY (4)	LOW BENEFIT (1)	LOW POSITIVE (4)	<p>The relocation of up to 25 Bechtel management employees is largely perceived by stakeholders to have a positive impact on the community, despite it adding strain to a tight housing market. Feedback from stakeholders through the consultation period noted that the relocation would not only bring the workers to live residentially but they would likely also bring families to the City. This would have a positive flow-on effect for services and amenities such as local schools and local businesses who may benefit from increased numbers. It was also perceived that the number of houses that Bechtel may take up in the market (up to 25) may assist in the process of stabilising the housing market.</p> <p>In addition to this, many stakeholders noted that Bechtel could create even greater positive impact by supporting or contributing to a small parcel of houses that could be built and then leased out by Bechtel for the duration of the project. It was perceived that this would have a substantially positive impact by allowing those houses to then free up for broader community use once the project is complete.</p> <p>Bechtel has advised that it does not construct houses for temporary projects, but are willing to work with the City of Karratha and other stakeholders to fund longer leases that can contribute to the underwriting of the construction of residential accommodation.</p>

<p>Transient Worker Accommodation positive accommodation model - as the City does not have capacity to house 2,500 workers</p>	<p>LIKELY / MOSTLY (4)</p>	<p>LOW BENEFIT (1)</p>	<p>LOW POSITIVE (4)</p>	<p>While there is typically a community desire to see more permanent and residential workforces in Karratha, feedback from engagement has suggested that, in this instance, the short-term and FIFO nature of the Bechtel CAV is a positive, as the City currently does not have the capacity to accommodate 2,500 workers residentially and any significant increase in the residential population would result in significant detrimental impacts on the housing market, which were experienced in the previous boom. It was generally acknowledged by stakeholders that to provide permanent housing for 2,500 workers for the short term 4-year project, and to then remove them from housing after the project's completion, would also potentially have a significant negative impact on the area's housing market. The CAV is therefore seen as a positive model to use to house workers needed to construct Pluto Train 2.</p>
<p>Impact on the Karratha housing market (affordability and availability)</p>	<p>LIKELY / MOSTLY (4)</p>	<p>LOW DETRIMENT (-1)</p>	<p>LOW NEGATIVE (-4)</p>	<p>It is anticipated that 1% of the total Bechtel workforce will become residential (up to 25 households). Due to the tight housing market and low availability of vacant houses, this is likely to have an impact on housing availability for the broader community and increase house prices.</p> <p>To house any additional employees that are either beyond the capacity of the village or who chose to reside in Karratha, Bechtel will have limited access for employees to access community housing outside of the CAV. Bechtel will have oversight over the housing management for all Bechtel and subcontract employees. A cap will be set for rental properties in alignment with median market rates and, where possible, transitional housing and overflow accommodation needs will be placed in existing TWA facilities.</p> <p>To ensure this is regularly monitored and regulated, Bechtel will conduct regular engagement with local real estate agents to track and monitor housing availability and median market rates. If additional accommodation is required, no more than 50% of any local accommodation will be used for workforce accommodation. Accommodation facilities will be notified 24-hours in advance of any cancellations so that any held rooms can be released back into the open market.</p>
<p>Initial influx of workers without existing TWA capacity</p>	<p>UNLIKELY / SELDOM (2)</p>	<p>LOW DETRIMENT (-1)</p>	<p>MINOR NEGATIVE (-2)</p>	<p>There is a project risk that if the construction of the village facility does not adhere to its construction schedule then there may not be the required capacity to house workers as they arrive. If this does occur, there is likely to be an impact on the broader Karratha housing and accommodation market, as external facilities will need to be utilised. Bechtel have a number of mitigation strategies, including a facility construction schedule that is mapped to the workforce curve, in place to help mitigate this potential. Bechtel is also investigating the potential use of a self-sufficient "fly camp", should it be required as a short-term solution.</p>

<p>Visual Impact on local amenity</p>	<p>POSSIBLE / SOMETIMES (3)</p>	<p>LOW BENEFIT (1)</p>	<p>MINOR NEGATIVE (-3)</p>	<p>The village development may have a visual impact on the community, particularly in the Madigan Estate or the suburbs of Baynton and Nickol, which neighbour the Gap Ridge site. Due to the site being set back from Dampier Highway, which is the main road between Karratha Airport and the Karratha City, it is unlikely to have a major aesthetic impact from those traveling along this main road. If there is a perceived or actual impact, the quality of the impact may be either negative or positive depending on how the facility is developed, screened and integrated with its surrounds.</p> <p>The facility is planned to be developed with donga-style rooms. There was concern expressed by stakeholders throughout the engagement process that the non-permanent donga facilities have a negative visual impact on the City and there was general support for more permanent-looking facilities. There was also a desire for village facilities to be integrated as best as possible into the surrounding neighbourhood.</p>
<p>Additional FIFO Beds in the Market</p>	<p>LIKELY / MOSTLY (4)</p>	<p>LOW DETRIMENT (-1)</p>	<p>LOW NEGATIVE (-4)</p>	<p>Should Bechtel proceed with building its CAV, it may be perceived that a higher number of beds will be available for FIFO worker use by other resource companies, or that temporary workforces are being favoured over residential workforces. This perception may be exacerbated by development applications made by other proponents, and accommodation villages currently under construction. To manage this, it will be important for Bechtel to clearly communicate with the community and relevant stakeholders that the facility will cater for Bechtel or direct Bechtel contractors working on the construction of Pluto Train 2 only, with no third-party accommodation options available. It will also be important to communicate the facility is temporary only and will not be retained following the completion of the construction of Pluto Train 2.</p> <p>While there are currently spare rooms in other villages, the market is tightening and vacancies reducing considerably. However, there are also other development applications being made to increase TWA capacity. With Peninsula Palms (Rio Tinto) and Bay Village (Woodside) to open in coming year/s this will provide additional capacity in the region.</p>
<p>ACCOMMODATION AND HOUSING – OVERALL CURRENT IMPACT RATING</p>				<p>NEUTRAL (- 0.09)</p>
<p>ACCOMMODATION AND HOUSING – OVERALL IMPACT RATING WITH MITIGATIONS IMPLEMENTED (SEE BELOW)</p>				<p>NEUTRAL (1)</p>

9.3.3 Accommodation and Housing - Impact and Opportunity Management Strategies

Impact Area	Description	Strategy	Commitments	Intended Impact
Accommodation and Housing	<p>The Bechtel CAV proposes to utilise the vacant land upon which former transient workforce accommodation facilities were located.</p> <p>Accommodation at the CAV will only be provided to Bechtel or Bechtel's direct contractors associated with Pluto Train 2 construction, with no third-party accommodation options available.</p> <p>Additionally, Bechtel intends to offer the opportunity for management staff to relocate to Karratha residentially. It is anticipated that no more than 1% of the total workforce will relocate residentially (up to 25 houses/apartments).</p>	Minimise impact on Karratha housing market and positively contribute to Karratha's housing market	Regular engagement with Real Estate Agents to track and monitor housing availability and median market rates.	Karratha housing market remains stable with no major fluctuations in affordability or availability of housing as a result of the project.
			Active monitoring of the housing market to track and monitor any construction related impacts on the housing market.	
			Limited access for employees to community housing outside of CAV.	
			Bechtel to provide oversight of housing management for all Bechtel employees.	
			Residential housing requests require Project management sign off.	
			A cap will be set for rental properties in alignment with Bechtel policy and median market rates.	
			Investigate the option of the City of Karratha providing initial capital for the build of up to 25 new houses that Bechtel could lease for a 4-year period. (NOTE: Housing would need to be ready to use at the commencement of the project for this to be feasible for Bechtel to pursue)	
		Minimise impact on Karratha short stay and Transient Worker accommodation market	Where possible, no more than 50% of any one Karratha short stay accommodation will be used for workforce accommodation requirements.	Minimise impacts to existing short stay, village or temporary accommodation providers.
			Any Karratha accommodation with held bookings will be notified 24-hours in advance of any cancellations so that any held rooms can be released back into the open market.	
			Plan for CAV incorporates buffer to account for unanticipated additional staffing requirements and maintenance.	
Proactive communication approach around the purpose and timeline of the CAV	Use existing TWA accommodation for the initial CAV construction workforce (those building the village) before using hotels, motels and other short stay accommodation.	Manage the perception that the CAV will result in additional long-term FIFO presence in Karratha.		
	Proactively communicate the purpose and short-term life of the proposed CAV to the community and the impact and opportunity management plan commitments.			

9.4 Impact Area 3: Accessibility to Community Services and Facilities

9.4.1 Overview

The construction accommodation village is proposed to be located at Gap Ridge, Karratha, in accordance with the City of Karratha Town Planning Scheme No. 8, Local Planning Policy DP10. The Gap Ridge site is located approximately 7km from the Karratha townsite, where the majority of local services, amenities and facilities are located. The increased temporary population may have an impact on the existing services and facilities in the City for those that are not incorporated into the village's internal offerings. In addition, there may be an impact on the local community infrastructure.

Current State

The proposed site for the village, Gap Ridge, was formally the site of a TWA, and currently the site is vacant with no facilities, buildings or infrastructure.

Existing community services that are nearby to the site (in the Nickol / Baynton West area) include Baynton West Primary School, Tambrey Primary School, and Pam Buchanan Family Centre. The majority of other social and community services and facilities are located in Karratha City centre, approximately 7.5 kilometres from the Gap Ridge site. The Karratha airport is located approximately 6.9 kilometres from the site.

Services that the village residents are most likely to have a potential impact on include local medical services (hospital, General Practitioners, Physiotherapist, etc.), airport, and community infrastructure (e.g. Leisureplex).

Anticipated Change

Bechtel's temporary construction village will have up to 2,500 beds. The village is intended to be self-contained. The design of the village will to promote workforce wellbeing and appropriate integration with the local community. A range of facilities will be built in the village to minimise impacts on the local community's ability to access local facilities and services. The in-house facilities and services that will be offered at the village include:

- In house tavern and beer garden
- Kitchen and dining facilities
- Laundries
- Gymnasium
- Pool
- Recreational area
- Medical Centre
- BBQ shelters
- Waste collection area
- Waste and Sewer treatment plant
- Sufficient power supply
- Communication head end infrastructure
- Supply of potable water

- Supply of fire water including booster pumps

It is not anticipated that the proposed village will impact on the local community's ability to participate in community affairs and other social interactions.

9.4.2 Impact Assessment

IMPACT CONSIDERATION	CURRENT ASSESSMENT			IMPACT – ENGAGEMENT AND DATA FINDINGS
	LIKELIHOOD / PREVALENCE	DEGREE OF BENEFIT OR DETRIMENT	IMPACT RATING	
Patronage of local community services and facilities	LIKELY / MOSTLY (4)	MEDIUM BENEFIT (2)	MEDIUM POSITIVE (8)	<p>The services and facilities included when considering whether the workforce is likely to create any additional strain or demand typically include services and facilities such as health and medical services, childcare, public transport, use of the airport, family services and schools. Due to the self-contained design of the village, the temporary workforce accommodated in the village is unlikely create increased demand for community support services and facilities.</p> <p>Due to no families being accommodated at the Village, it is unlikely that there will be any impact on areas such as child care, family services and schools. To manage any potential impacts around increased use of the airport, Bechtel will provide a dedicated subcontracted bus service which will provide transport direct between the airport and the village, and between the village and the job site. In addition, the development of flight schedules will align with the working hours and roster cycles of employees, in an effort to minimise the impact of broader community use of the airport.</p> <p>As Bechtel will be chartering their own flights to transport their workforce to and from Perth, there will be opportunity for community members to access any spare seats on the flights if there is additional capacity. This has the potential to have quite a significant positive impact if these opportunities do arise, as flight costs to and from Karratha are currently very high and are often cited by community members as a major barrier to either traveling outside of Karratha or inviting guests to the City.</p>

IMPACT CONSIDERATION	CURRENT ASSESSMENT			IMPACT – ENGAGEMENT AND DATA FINDINGS
	LIKELIHOOD / PREVALENCE	DEGREE OF BENEFIT OR DETRIMENT	IMPACT RATING	
Patronage of medical services by FIFO workers (impact on delays/wait times)	POSSIBLE / SOMETIMES (3)	MEDIUM DETRIMENT (-2)	LOW NEGATIVE (-6)	<p>Previous stakeholder engagement in Karratha has found that there is a perception that Karratha is lacking in sufficient numbers of GPs. Stakeholders view that residents can sometimes be waiting 2 – 3 days to see a doctor, which can increase during shut time periods. It was also acknowledged that there is currently no after hours and no home-visiting doctor in Karratha. As such, the construction of the Bechtel village and the workforce it will accommodate may support and exacerbate the perception that the workers will take up GP resources in the City.</p> <p>Throughout consultation, the potential impact on wait times and additional strain on health and medical services in the City was consistently referenced by stakeholders as a key concern. It was noted by many stakeholders that the emergency facilities at the hospital are already operating near capacity and there is limited access to any specialist health or medical services which, if they are available in the City, have long wait-times for residents. To manage this, Bechtel will be providing all specialised medical facilities and emergency services contained within the CAV and project location. Despite this, it was viewed by stakeholders that the workers may still need to access either more specialist medical services or the hospital in the City other than just GP services and this may impact on an already stretched system.</p>
Increased demand on community infrastructure (water, sewerage, rubbish)	UNLIKELY / SELDOM (2)	NEUTRAL (0)	NEUTRAL (0)	<p>As the village is being designed to be self-contained, a number of services and infrastructure will be included in the village as part of its internal operations. This includes the site's own waste collection area, waste and sewer treatment plant, sufficient power supply, communication head end infrastructure and supply of potable water. As a result, it is not expected that there will be significant negative impact in this area.</p>
Legacy infrastructure	LIKELY / MOSTLY (4)	MEDIUM BENEFIT (2)	MEDIUM POSITIVE (8)	<p>Potential infrastructure (e.g. roads, sewerage, power supply, etc) could be retained and repurposed for future use following decommissioning of the village, which may provide benefits for the local community. This would be subject to the Department of Lands, Planning and Heritage (DPLH) as the land owner, and the City of Karratha.</p> <p>Planning for this would need to be undertaken in conjunction with the City of Karratha.</p>
ACCESSIBILITY TO COMMUNITY SERVICES AND FACILITIES – OVERALL CURRENT IMPACT RATING				MINOR POSITIVE (2.5)
ACCESSIBILITY TO COMMUNITY SERVICES AND FACILITIES – OVERALL IMPACT RATING WITH MITIGATIONS IMPLEMENTED (SEE BELOW)				LOW POSITIVE (4)

9.4.3 Accessibility to Community Services and Facilities – Impact and Opportunity Management Strategies

Impact Area	Description	Strategy	Commitments	Intended Impact
Accessibility to Community Services and Facilities	<p>Bechtel's CAV will have 2,500 rooms and is planned to be self-contained. The design of the CAV will be to promote workforce wellbeing and to encourage integration with the local community.</p> <p>A range of facilities will be built in the CAV to minimise impacts on the local community's ability to access local facilities and services.</p>	Provide access to and promotion of community integration	Dedicated subcontracted bus service for workforce to provide transport between the airport, CAV and access to community facilities	Supports frequent access to local services and facilities to bolster worker wellbeing and community integration and local business.
			Investigate potential partnerships with local service provider (e.g. local mountain biking club) to provide bikes and bike tours to the CAV	
			Advocate for the City of Karratha to install pedestrian and cycle way from the CAV to the Tambrey Centre and Leisureplex, which can provide access and better connection for all residents in the villages (CIVEO and Bechtel) and local residents from Madigan Estate and Bayton West	
			Partner with the City to investigate the best/most appropriate route for a jogging track and advocate for the City to provide funding for its development	
Provide services and install infrastructure internally onsite			Bus service from the CAV to Karratha to access local businesses and facilities such as the shopping centre, restaurants, recreational facilities and key events happening in the City. Develop a map of drop off locations with the City of Karratha. Buses to run hourly until 9.00pm each night.	Minimises impact and strain on local services.
			Lifestyle Coordinators employed by the operations and catering subcontractor to be responsible for encouraging healthy active lifestyles for the residents including promoting community events, organisations and facilities. (NOTE: Where possible, this role should be a local position, to enable a person with local networks to engage workers in community activities)	
			Supply of facilities and services in the CAV to reduce impact on existing services and facilities outside of the CAV, ensuring internal facilities are of an appropriate scale for the CAV, including:	
			<ul style="list-style-type: none"> In house tavern and beer garden Kitchen and dining facilities Laundries Gymnasium Pool Recreational area Medical Centre BBQ shelters Waste collection area Sufficient power supply Communication head end infrastructure Supply of potable water Supply of fire water including booster pumps Shelter in Place for CAV residents 	
Provision of onsite emergency services and collaboration with local emergency services			Bechtel to provide their own emergency services and response teams contained with the CAV and worksite. This is to include an ambulance, doctor and trained paramedics.	Minimise any additional strain on Karratha emergency services.
			Development and adherence to an Emergency Preparedness and Response Plan and Crisis Communications Plan.	
			Ensure there is clear signage onsite to demarcate access point and evacuation areas, particularly for the purposes of emergency services accessing the site.	
			Explore opportunities to collaborate with medical service providers to share resources and cross train to broaden experience and capacity in the local community	
			Local employees provided access to onsite medical facilities	
Incentivise participation in external facilities and businesses and support positive engagement with the community			Once finalised, send CAV Emergency Plan to relevant emergency services which clearly identifies each building and access points.	Opportunities for accessing community facilities, amenities and businesses are maximised and workers are better welcomed to the City and integrated in the community.
			Work with local organisations and businesses to incentivise use of local facilities and amenities and support the KDCCI "Try Local" campaign	
			Promote activities and events in the local community through a variety of mediums. Ways in which activities could be promoted and communication of information could occur include:	
			<ul style="list-style-type: none"> A workforce app A calendar of events Posters Advertisements on television screens in rooms and common spaces SMS announcements. 	
			Promote CAV resident engagement in the local community. This can be done through strategies such as:	
			<ul style="list-style-type: none"> Promote activities, facilities, amenities and areas of interest (such as tourist locations) Support existing campaigns promoting local businesses and use of local establishments Develop a community integration program to ensure a cohesive approach to resident and community integration Provide information to residents on local businesses, facilities, amenities and tourist/cultural locations to promote the community Provide overview of local community as part of orientation Include on the CAV app a quick survey of workers' areas of interests in order to target local community activities to relevant residents Have welcome note and information package in room, welcoming residents to the CAV and outlining upcoming events in the community. 	

		<ul style="list-style-type: none"> In partnership with the City of Karratha and other local stakeholders, create a "Welcome to Karratha" induction video that can be played to all new employees of the CAV. There is an option to develop this in a generic way which the City could then use for other TWA villages in the area. 	
	Provide opportunity for community members to access any excess seats on Bechtel chartered flights	Bechtel will: <ul style="list-style-type: none"> Implement chartered flights in alignment with workforce schedule Make surplus seats on chartered flights available for purchase by community through the airline carrier Coordinate chartered flight schedules in consultation with Karratha airport. 	Reduce impacts of FIFO workforce on residents and tourists travelling and from Karratha via plane. Potential opportunity for community to access cheaper flight costs.
	Monitor any additional use of health services	Assess medical facility capacity and incorporate findings into CAV planning.	Manages any additional strain in local health and medical services
	Engage with relevant stakeholders on legacy infrastructure	Bechtel will continue to engage with the City of Karratha, and the Department of Lands, Planning and Heritage on infrastructure that could provide long-term positive impact for the Karratha community. A key focus area may include planning infrastructure on the site so it can be retained and transitioned for use for future development post decommissioning. This remains subject to agreement between DPLH and the City of Karratha.	Repurposing of infrastructure to provide long-lasting positive impact that supersedes the life of the project.
Explore opportunities to leave the infrastructure – water, power, roads etc. in place to support future development of the area. Work closely with the City of Karratha to support them to develop an integrated planning process around the site.			
Work with City of Karratha to develop demobilisations plan which includes potential for community reuse of facilities.			

9.5 Impact Area 4: Social Infrastructure

9.5.1 Overview

The development of the village facility may have some implications on community and social infrastructure and services, though it's expected that this impact will be minimal. Positive impacts may be enhanced by employing strategies that will increase promotion and accessibility of social and sporting events and activities to Bechtel employees and subcontractors. Due to the workforce being predominantly construction, meaning it is typically short-term in nature, it's expected that workers will have limited time to engage with social and sporting activities outside of the village facility.

9.5.2 Impact Assessment

IMPACT CONSIDERATION	CURRENT ASSESSMENT			IMPACT – ENGAGEMENT AND DATA FINDINGS
	LIKELIHOOD / PREVALENCE	DEGREE OF BENEFIT OR DETRIMENT	IMPACT RATING	
Patronage of and access to local recreational, sporting and community groups and clubs	POSSIBLE / SOMETIMES (3)	LOW BENEFIT (1)	MIOR POSITIVE (3)	<p>In addition to the use of local services, there may be a slight increase in the uptake and use of recreational and community facilities, such as sporting amenities, in the local area. For example, the Karratha Leisureplex (the City's major sporting and recreational hub) is located approximately 7.5kms from Gap Ridge.</p> <p>As part of its community integration plan, Bechtel will be offering the provision of a bus service from the village to Karratha, local organised events and predetermined locations to access local businesses such as the shopping centre, restaurants and the Leisureplex on a regular schedule after work hours. This will be managed by the Lifestyle Coordinators, who may also offer organised tourist activities in partnership with local tourism providers. These coordinators will ensure that any impact to normal community access is minimised.</p> <p>Due to the short-term nature of the construction workforce, 21 days on/7 days off rosters and 10-hour shifts, it is acknowledged that workers only have a very small window in which to access these amenities. It would also be necessary for workers to have good accessibility to these facilities and amenities, including sufficient transport and promotion of the options on offer, in order to enhance the potential positive impact of this uptake in participation.</p>
SOCIAL INFRASTRUCTURE – OVERALL CURRENT IMPACT RATING				MINOR POSITIVE (3)
SOCIAL INFRASTRUCTURE – OVERALL IMPACT RATING WITH MITIGATIONS IMPLEMENTED (SEE BELOW)				LOW POSITIVE (5)

9.5.3 Social Infrastructure – Impact and Opportunity Management Strategies

Impact Area	Description	Strategy	Commitments	Intended Impact
<p>Social Infrastructure</p>	<p>The development of the CAV may have some implications on community and social infrastructure and services, though it's expected that this impact will be minimal.</p> <p>Positive impact may be enhanced by employing strategies that will increase promotion and accessibility of social and sporting events and activities to Bechtel employees and subcontractors.</p> <p>Due to the workforce being predominantly construction, meaning it is typically short-term in nature, it's expected that workers will have limited time to engage with social and sporting activities outside of the CAV.</p>	<p>Support engagement with local social infrastructure</p>	<p>Where possible, engage/hire a local person (or contract staff from City of Karratha) to undertake the role of Lifestyle Coordinator / Community Engagement Officer at least three months prior to the CAV opening so that activities/program can be in place as the first employees arrive</p> <p>Train lifestyle coordinators / and or Community Engagement Officer to develop social interaction and community engagement strategies (rather than just sport and fitness)</p> <p>Lifestyle Coordinators employed by the operations and catering subcontractor will be responsible for encouraging healthy active lifestyles for the residents including promoting community events, organisations and facilities. This may include working with the City of Karratha officers to facilitate special-timed events or activities that are targeted for FIFO workers.</p> <p>Dedicated subcontracted bus service to provide transport between the airport and the CAV. Bus service from CAV to access local businesses and facilities such as the shopping centre, restaurants, Karratha Leisureplex and key events.</p> <p>Provide a compendium in each CAV room which includes printed materials on all local sporting, cultural, community, church, and art groups, as well as local businesses and recreational opportunities. Continue to update and promote this information via Table Talkers around the CAV and at the dining hall, as well as details on an onsite TV channel.</p> <p>Bechtel representative to join any local working groups that are present in the City to ensure they are up to date with local events, activities and trends. This should include library, art, cultural and community groups as well as sporting and recreational organisations.</p> <p>Bechtel to encourage workforce to support fundraising opportunities for local community groups.</p> <p>Support local artists and art groups to display their works in the CAV with items being available for sale.</p>	<p>Increased uptake of social, sporting and recreational activities has positive impact on social infrastructure.</p>
		<p>Comprehensive orientation and induction</p>	<p>Where possible, distribute induction information to workers prior to their arrival in Karratha (e.g. about the local businesses, services, organisations etc. on offer)</p> <p>Engage with residents at the CAV during orientation to convey:</p> <ul style="list-style-type: none"> behavioural expectations in the community, information about the local community (including facilities, businesses, amenities, and local tourist attractions), information about the CAV. <p>This could be delivered via a video that Bechtel can create in collaboration with the City of Karratha and other key stakeholders</p> <p>All employees will be required to complete a Project Orientation and Induction prior to access to the Jobsite. The Orientation includes an out-of-hours option for Cultural Awareness Training with local Traditional Owners (on country) and Community Relations training.</p> <p>Liaise with the City's Club Development Officer and local sporting and recreation groups to align opportunities for CAV residents to participate, where possible.</p> <p>Develop and distribute communications around 'What's On' in Karratha to promote local activities, events and sporting or volunteering opportunities to workers.</p> <p>Provide questionnaire to residents at induction to determine what activities they like to engage with or their areas of interest in order to target promotion of 'What's On' in Karratha.</p> <p>Encourage CAV residents to engage with local casual sporting competitions.</p> <p>Bechtel to establish a community integration plan to encourage workforce participation in community organisations.</p> <p>Bechtel to commit to supporting local initiatives where appropriate and only for the duration of the life of the CAV. This commitment to have clear guidelines on what will be supported and what won't. Any initiatives supported should not require recurrent support once the CAV has ceased operation. This may include for example - supporting local clubs and organisations for uniforms; score boards; shade shelter and other items that will last.</p> <p>Promote the details of each club and what they have to offer in the welcome pack.</p>	<p>Bechtel workforce and contractors have a sound understanding of the community and surrounds.</p>

9.6 Impact Area 5: Cultural Values and Beliefs

9.6.1 Overview

Historically Karratha has been built on the resource sector. This has produced a community with a deep understanding of both the benefits and challenges that emerge with the additional of FIFO workforce. However, over the last decade the community had rapidly grown and evolved beyond its' resource sector roots. Between 2006 and 2016 the population of Karratha (SA2) has increased by 35%. With this population increase has come a diversification in the economy, and an increasingly urbanised / cosmopolitan community. The Pilbara Cities program, established in 2009, has also played a significant part developing Karratha, investing in the region and building facilities to service the growing population. Today, the City of Karratha is home people from a variety of cultural backgrounds, and the city also has a strong Aboriginal and Torres Strait Islander (ATSI) culture and heritage.

Considering this, respect of the local cultures and traditional owners that reside in the City of Karratha as well as the cultural diversity of the city is essential to minimising the impact that the construction FIFO workforce has on the City of Karratha community. Additionally, respect of the cultures and beliefs of the Bechtel construction workforce is essential to building an employee base that engages with all cultures and faiths in a respectful manner.

Current State

A diverse and balanced community is a key part of the City of Karratha's vision for the City. This includes Recognition of Diversity (1.e) and Connected Communities (1.f)¹². The City of Karratha is a multicultural city with a total of 34.3% of people born outside of Australia. This is 6% greater than the proportion of those born outside of Australia in the 'Rest of WA'. In addition to this the City of Karratha has an Aboriginal and Torres Strait Islander population of 10.1%. This is 2.7% greater than the ATSI population in the 'Rest of WA'.

There are several traditional owner groups that exist in the City of Karratha including Ngarluma Yinjibarndi Foundation Ltd (NYFL), Murujuga Aboriginal Corporation and Yindjibarndi Aboriginal Corporation. These groups play an important role in the creation of sustainable futures for their members and beneficiaries across the social, cultural, economic, health, business and education opportunities within the region. The groups work closely with industry partners to identify opportunities and to elevate local Aboriginal outcomes in the area.

The City of Karratha has a long history of accommodating FIFO or DIDO workforces into the local community. There are currently 19 village facilities in the City of Karratha owned by Rio Tinto, Woodside and Independent operators. Recent development, including the revitalisation of the city centre, has been completed to transform Karratha from its early status as a resource town, to a regional city with aspirations of more than 50,000 people.

Anticipated Change

The proposed new Village will result in the addition of 2,500 beds and associated residents to the area. This temporary workforce represents ~6% of the City of Karratha permanent resident population. It is therefore important to carefully manage the behaviour of the temporary construction workforce to ensure that it does not have a negative impact on the community.

¹² City of Karratha 2016, *Strategic Community Plan*, City of Karratha.

9.6.2 Impact Assessment

IMPACT CONSIDERATION	CURRENT ASSESSMENT			IMPACT – ENGAGEMENT AND DATA FINDINGS
	LIKELIHOOD / PREVALENCE	DEGREE OF BENEFIT OR DETRIMENT	IMPACT RATING	
Lack of recognition and respect for Aboriginal culture and heritage	POSSIBLE / SOMETIMES (3)	LOW DETRIMENT (-1)	MINOR NEGATIVE (-3)	<p>It is essential that the culture of Aboriginal people in the City of Karratha is recognised and respected. The proposed village at Gap Ridge will be located on Ngarluma/Yindjibarndi land, as is the development that the construction workforce will be working on.</p> <p>Feedback from community members indicate that there have been incidents of where this respect hasn't been shown by some transient workers coming to the City.</p> <p>Using variety of strategies, Bechtel can build understanding and respect between staff and local ATSI. These strategies could include: Cultural Awareness and Community Relations training for staff on induction, using volunteering to help staff better understand the community context and ongoing engagement with TOs and key Aboriginal Corporations in the City of Karratha in order to build an open and respectful relationship.</p>
Lack of recognition of cultural values of Karratha	POSSIBLE / SOMETIMES (3)	LOW DETRIMENT (-1)	MINOR NEGATIVE (-3)	<p>The City of Karratha is home to people from a variety of cultural and diverse background. As the majority of the Bechtel construction workforce will be coming from outside of the Karratha region, there is a potential for workers to not recognise, understand or interact appropriate with the cultural diversity inherent in the community. Building Bechtel employees respect of the local environment includes building respect of this diversity. Strategies to assist could include volunteering in the local community and a comprehensive induction strategy that speaks to the local context.</p>
Alignment of local cultures and beliefs with non-local workforce	POSSIBLE / SOMETIMES (3)	LOW DETRIMENT (-1)	MINOR NEGATIVE (-3)	<p>As a global company, Bechtel has a culturally diverse workforce and this is supported by their company visions, values and covenants. While Bechtel is planning for an Australian workforce, some employees may not be accustomed to working in a remote regional Pilbara community.</p>
CULTURAL VALUES AND BELIEFS – OVERALL CURRENT IMPACT RATING				MINOR NEGATIVE (-3)
CULTURAL VALUES AND BELIEFS – OVERALL IMPACT RATING WITH MITIGATIONS IMPLEMENTED (SEE BELOW)				MINOR POSITIVE (2)

9.6.3 Cultural Values and Beliefs – Impact and Opportunity Management Strategies

Impact Area	Description	Strategy	Commitments	Intended Impact
Cultural Values and Beliefs	<p>Historically Karratha has been built on the resource sector.</p> <p>Over the last decade the community had rapidly grown and evolved beyond its' resource sector roots. Between 2006 and 2016 the population of Karratha (SA2) has increased by 35%. With this population increase has come a diversification in the economy, and an increasingly urbanised / cosmopolitan community.</p> <p>Today, the City of Karratha is home people from a variety of cultural backgrounds, and the city also has a strong Aboriginal and Torres Strait Islander (ATSI) culture and heritage.</p> <p>The proposed CAV will result in the addition of 2,500 beds and associated residents to the area. This number of employees represents ~6% of the City of Karratha permanent resident population. It is therefore important to carefully manage the behaviour of the construction workforce to ensure that it does not have a negative impact on the community.</p>	Develop and distribute communications strategy	Develop consultation and engagement strategy to increase understanding of the CAV and provide opportunities for feedback	Community members are well-informed of the project, its intended stages and measures being taken to minimise impacts and optimise opportunities.
		Ensure induction process includes detail on local context, including cultural heritage and values	<p>All employees are required to complete a Project Orientation and Induction prior to access to the Jobsite. The Orientation includes Cultural Awareness and Community Relations training.</p> <p>Ensure that worker inductions include the following:</p> <ul style="list-style-type: none"> • An online introduction to the local context and history prior to arrival, with an on-country introduction when employees arrive in Karratha • Cultural awareness induction provided by Traditional Owners • Overview of Karratha region • How to interact with and respect the local flora, fauna and sacred sites • Promotion of respect and inclusion of the diversity within the Bechtel workforce. <p>Provide an out-of-hours option for on-country cultural awareness training which incorporates introductions, historical overviews and information on how to interact with key cultural sites in Karratha and the broader region. This could include Murujuga National Park, rock art, Millstream, Roebourne, Cossack, and Python Pool.</p>	Workers are well-informed of the local Karratha context, including Indigenous history and protocols – leading to higher incentives to become advocates for the area.
		Zero tolerance towards anti-social behaviour	<p>A Community Interface Code of Conduct will be signed by all Construction Workforce employees and is a condition of employment. This document will detail the rules and expectations of the Construction Workforce with respect to behaviour in and interaction with the local community and the consequences of failing to comply with those rules and expectations.</p> <p>Zero tolerance policy to inappropriate behaviour will be implemented, with workers terminated from their role for any breaches of the Code of Conduct.</p> <p>Residents who engage in serious misconduct and whose services have then been terminated will continue to be accommodated at the CAV until they can be repatriated to their point of origin.</p>	Enforce strict behaviour codes of conduct to minimise anti-social behaviour.
		Use volunteering as mechanism for promoting and understanding the community context	<p>Encourage workforce to volunteer and participate in community activities, where schedule allows and in alignment with Fatigue Management policy.</p> <p>Have a volunteering section on the employee app with volunteer activities / groups to promote opportunities for volunteering in the local community.</p>	Integration in the community via volunteering opportunities promotes strong understanding of local context.
		Appropriate recognition of Aboriginal culture and heritage	<p>Work with Ngarluma to highlight local indigenous culture and incorporate cultural elements in CAV development and design. Host a naming ceremony with Elders when the CAV is opened.</p> <p>Engage local ATSI artists to design art pieces for common spaces in the CAV.</p> <p>Flying ATSI flag at the CAV, to be raised the first time by a local Elder at an appropriate ceremony.</p> <p>Celebrate and recognise Indigenous culture during NAIDOC week, Reconciliation Day and other cultural functions that occur throughout the year.</p> <p>Offer trips to the CAV residents to visit key Aboriginal heritage sites such as the rock art on the Burrup Peninsula as part of recreational activity schedule.</p>	Bechtel employees and contractors have a high level of awareness and appreciation for the local cultural context and, as a result, a greater respect for the local social and natural landscape.
		Build/maintain relationships with TOs and key Aboriginal Stakeholders	Organise to hold regular meetings with Traditional Owners in order to build an on open and ongoing relationship and support the delivery of the Australian Indigenous Engagement Plan.	
		No barriers to cultural and faith practices	Remove any barriers to cultural and faith practices for the construction workforce.	CAV residents are able to practice and celebrate their culture and faith.

9.7 Impact Area 6: Community Values, Identity and Cohesion

9.7.1 Overview

The cohesion, values and identity of a community has a significant impact on the perceived 'liveability' of a local community. Historically, Karratha's identity has been of a resource town that was built on activities of companies such as Woodside. However, over the last decade the City of Karratha has grown significantly. With this population increase initiatives such as the Pilbara Cities program have resulted in additional facilities and an increasingly cosmopolitan and economically diversified locale.

The construction workforce that will be accommodated at Bechtel's proposed village has the potential to impact community cohesion, identity and values of the City of Karratha. While these impacts can typically be seen as negative, positive impacts can also emerge if Village residents are appropriately integrated into the community. Considering this, it is important that the village's impacts on the City of Karratha community are properly evaluated.

Current State

The sense of community that exists in the City of Karratha has been consistently rated as one of the best three things about living in the City between 2015 – 2016. This speaks to the strong sense of community identity and cohesion that exists amongst residents of the City of Karratha¹³.

Madigan Estate is located on the opposite side of Madigan Road to the proposed village site. As discussed in 'Demographic Population and Change' Madigan estate has a higher proportion of family households (83.3%) compared to Karratha (76%), suggesting that the area is made up of a high proportion of young families.

Based on previous engagement in the City of Karratha there are legacy issues around the perception of construction workforces. During the boom period construction workforces were perceived by the community as engaging in anti-social behaviour resulting in a decrease in community cohesion. This has created a legacy issue around the perception of construction workforces by the local community.

Additionally, the temporary nature of the construction workforce is seen to contrast with the City's aspiration for a stable permanent population. The Pilbara Cities initiative seeks to facilitate the development of cities and towns in the Pilbara where people choose to settle on a permanent basis¹⁴. However, it is typically understood that due to the temporary nature of construction work, villages are necessary for short-term projects.

Anticipated Change

The proposed Bechtel village will have a total of 2,500 beds at its peak. This poses a significant addition to the City's population from people residing temporarily in the City, and could result in significant impacts to the cohesion of the community. The workforce population is predicted to be predominately male, which will result in a change to the City's demographics. Historically, areas with dramatic increases in male populations may result in an increase in anti-social behaviour. Additionally, the influx of the construction workforce may suffer from the negative legacy left by prior construction workforces in the

¹³ City of Karratha 2015, *Community Perception Survey*, City of Karratha
City of Karratha 2016, *Community Perception Survey*, City of Karratha

¹⁴ City of Karratha, 2014 Transient Workforce Accommodation – Town Planning Scheme No.8, City of Karratha, p.3

City. Considering these issues, it is important to manage the integration of the construction workforce with the culture, values and identity of the City and ensure they receive a comprehensive community induction.

9.7.2 Impact Assessment

IMPACT CONSIDERATION	CURRENT ASSESSMENT			IMPACT – ENGAGEMENT AND DATA FINDINGS
	LIKELIHOOD / PREVALENCE	DEGREE OF BENEFIT OR DETRIMENT	IMPACT RATING	
Positive promotion of the city leads to future positive engagement with the area/potential relocation to Karratha to support growth	POSSIBLE / SOMETIMES (3)	LOW BENEFIT (1)	MINOR POSITIVE (3)	<p>Throughout consultation it was generally accepted by stakeholders that Bechtel’s CAV and its supporting FIFO workforce is necessary to support the broader Pluto Train 2 project. It was acknowledged by a number of stakeholders that a potential flow-on effect of this is that workers can be positively introduced to the City and the broader Pilbara region. If this is managed well and workers are well-inducted into the area, it has the potential to lead to more people looking favourably upon relocating to Karratha as a permanent resident into the future. This supports the City’s vision for a sustainable and permanent population.</p> <p>Some stakeholders also recognised that the community and key stakeholders have a responsibility to welcome people to the City if they want them to contribute positively to the community.</p>
Negative community perceptions of construction FIFO workforce behaviour	LIKELY / MOSTLY (4)	LOW DETRIMENT (-1)	LOW NEGATIVE (-4)	<p>Due to the transient nature of FIFO workforces there is a perception that FIFO workforces do not positively contribute to regional communities. This perception has been derived from past experiences of Karratha residents during previous boom/upturn phases in the City.</p> <p>Standards of behaviour for Bechtel employees will be clearly set in the orientation and induction that will occur at the village training facilities and the Community Interface Code of Conduct. These behaviour standards (also discussed in Crime and Public Safety) will help to ensure that Bechtel’s construction workforce will participate in the City of Karratha community in a respectful way that aligns with the community’s values.</p> <p>These codes of conduct will also assist in reducing anti-social behaviour both within the village and in the local community. The reduction and management of anti-social behaviour is essential to maintaining community cohesion.</p>

IMPACT CONSIDERATION	CURRENT ASSESSMENT			IMPACT – ENGAGEMENT AND DATA FINDINGS
	LIKELIHOOD / PREVALENCE	DEGREE OF BENEFIT OR DETRIMENT	IMPACT RATING	
FIFO workers’ perceptions of Karratha and the Pilbara region	POSSIBLE / SOMETIMES (3)	LOW DETRIMENT (-1)	MINOR NEGATIVE (-3)	<p>Due to the transient nature of FIFO workforces it can be challenging for individuals to feel connected with the local community.</p> <p>Considering this it is important that the workforce develops a positive perception and respect of the local community in order to support connection to and integration with the local area.</p> <p>This could be achieved by inductions that include welcoming the workforce to the local community and providing access to local places of interest (i.e. recreation centre, City centre, tourist attractions on RDOs), or through support of the City of Karratha’s ‘Karratha is calling’ campaign.</p>
Impact of broader community integration	RARELY / NEVER (1)	LOW PBENEFIT (1)	NEUTRAL (1)	<p>Although the self-contained design of the village will ensure that additional strain on existing community amenity is minimised, the contained nature of the village runs the risk of also minimising opportunities for integration with the broader community.</p> <p>Bechtel could promote this integration with the broader community by supporting volunteering opportunities and events happening in the local community by their employees. This will allow local Karratha residents to interact with Bechtel construction employees in a productive manner, Additionally, this will allow Bechtel employees to contribute to the community, potentially building a sense of connection and pride with their efforts in the local community.</p>
COMMUNITY VALUES, IDENTITY AND COHESION – OVERALL CURRENT IMPACT RATING				MINOR NEGATIVE (-3)
COMMUNITY VALUES, IDENTITY AND COHESION – OVERALL IMPACT RATING WITH MITIGATIONS IMPLEMENTED (SEE BELOW)				NEUTRAL (0)

9.7.3 Community Values, Identity and Cohesion – Impact and Opportunity Management Strategies

Impact Area	Description	Strategy	Commitments	Intended Impact	
Community Values, Identity and Cohesion	<p>The proposed CAV will have a total of 2,500 beds. This poses a significant addition to the City's population and could result in significant impacts to the cohesion of the community.</p> <p>It is important to manage the integration of the construction workforce with the culture, values and identity of the City.</p> <p>In addition to potential impacts, there is opportunity to use the project to positively promote the City of Karratha and its surrounds as a vibrant community in which to work and live, which would positively support the City's vision for long-term growth and sustainability.</p>	Manage negative or anti-social behaviour by construction workforce	Orientation and induction offered for all new employees and contractors and to include information on expected behaviours, community expectations and opportunities to engage positively with the community.	Ensure behaviour standards are well-managed and maintained.	
			Behaviour standards are detailed in induction process. Bechtel will have a zero-tolerance policy towards antisocial behaviour.		
			A Community Interface Code of Conduct will be signed by all Construction Workforce employees and is a condition of employment. This document will detail the rules and expectations of the Construction Workforce with respect to behaviour in and interaction with the local community and the consequences of failing to comply with those rules and expectations.		
			Zero tolerance policy to inappropriate behaviour in the local community implemented as part of employment conditions.		
			Residents who engage in serious misconduct and whose services have then been terminated will continue to be accommodated at the CAV until they can be repatriated to their point of origin		
		Regularly engage with the police and other relevant stakeholders to monitor and manage behaviour standards of the construction workforce in the community			
		Promote community values and behavioural expectations	<p>Promote CAV resident engagement in the local community. This can be achieved through strategies such as:</p> <ul style="list-style-type: none"> Promote activities, facilities, amenities and areas of interest (such as tourist locations) Support local businesses campaigns encouraging use of local establishments Map a community integration program to ensure a cohesive approach to resident and community integration Provide information to residents in induction on local businesses, facilities, amenities and tourist/cultural locations to promote the community to CAV residents Work with the City of Karratha to provide a welcome to the workforce by the City of Karratha Mayor via video as part of orientation Have welcome note and information package in room, welcoming residents to the CAV and outlining upcoming events in the community 		Build respect and value of the local community.
		Facilitate positive engagements between construction workforce and local community	Promote community volunteering opportunities on workforce app.		Construction workforce has a positive impact on the community. Local community experiences the construction workforce in a positive manner.
		Promote the Pilbara and City of Karratha as a vibrant community and great place to live	Promote Karratha to families of residents by providing employees with Karratha is Calling postcards and marketing materials to send home.		Bechtel employees and contractors are positively introduced to the numerous assets of Karratha and the Pilbara region more broadly, which is intended to have a positive impact on improving workers' perceptions of Karratha and encouraging a larger residential workforce into the future.
			Positively promote the Karratha lifestyle by integrating the City of Karratha's "Karratha is calling" campaign into induction packages, compendiums in the rooms, onsite TV channel and send home to families.		
Promote the region and activities such as history tours to Cossack and Roebourne, turtle nesting season and whale season to encourage workforce family tourism.					
	Provide ability for workers to stay in Karratha during their off swing if they choose to, to encourage them to explore Karratha and the region.				

9.8 Impact Area 7: Health and Wellbeing

9.8.1 Overview

Access to healthcare is essential and has a high impact on the perceived 'liveability' and quality of life in an area. Additionally, the access to lifestyle facilities and services such as sports and recreation, social events, and peer networks also have a significant impact on an individual's well-being. The addition of Bechtel's construction workforce has the potential to place pressure on existing health and well-being services, resulting in a negative impact on the community. However, there is also scope for Bechtel to have a positive impact in this area based on their management of this impact, and their level of collaboration with the community.

Current State

There are a range of recreational facilities in the City of Karratha which support good health and wellbeing. The closest recreation facility to the proposed village will be Baynton West oval located at Baynton West Primary School. The largest recreation facility in Karratha is the Karratha Leisureplex which includes a gym, ovals and reserves, sports courts, a swimming pool; and is approximately 7km away from the proposed CAV.

Currently there are currently three medical clinics / general practices in Karratha, one hospital, as well as a variety of other health services including psychologists and mental health services, a cosmetic clinic, a dentist, physiotherapy clinics and pharmacies.

The Karratha Health Campus (Hospital) was completed in July 2018. The hospital has an emergency department, surgical centre, maternity wing and delivery suites, helipad and outpatient facilities, a new CT scanner, Telehealth services, and essential services such as child health and medical imaging. The campus also has integrated health services such as physiotherapy, speech therapy, counselling, community health nursing and community mental health.

Anecdotal feedback from local stakeholders has suggested that local medical and health services are currently operating at, or near capacity, with wait times of up to 5 – 6 days to see a GP. The current capacity of health and medical services in the City, and their ability to manage any additional strain, is considered a key concern for local stakeholders.

Anticipated Change

Potential impacts in the health and wellbeing space may relate to the impact of any additional strain on existing health and medical services based locally, impacts as a result of the construction of the facility (e.g. operational impacts for direct neighbours to the site), and impacts on the health and wellbeing of the workers themselves.

The construction of the village will likely result in noise, dust and increased traffic concerns for neighbours in the adjacent Civeo Karratha Village and the Madigan Estate. These construction impacts may result in health and wellbeing impacts on residents in these areas if not managed effectively.

Bechtel has assessed the current level of health and well-being services capacity in the City, to understand local capacity of existing services. Based on this assessment Bechtel will have a 24-hour in house medical centre at the construction accommodation village and construction site accessible to Pluto Train 2 construction employees. The medical centres will have:

- A doctor

- Nurses
- Physiotherapist
- X-ray machine
- Ambulance

9.8.2 Impact Assessment

IMPACT CONSIDERATION	CURRENT ASSESSMENT			IMPACT – ENGAGEMENT AND DATA FINDINGS
	LIKELIHOOD / PREVALENCE	DEGREE OF BENEFIT OR DETRIMENT	IMPACT RATING	
Village construction impacts on neighbouring residents in Civeo Village and Madigan Estate	POSSIBLE / SOMETIMES (3)	LOW DETRIMENT (-1)	MINOR NEGATIVE (-3)	Due to the close proximity of the Gap Ridge site to neighbouring residents, there may be some operational impacts in relation to the construction of the facility itself, such as dust, noise or vibrations. Careful monitoring and planning to minimise construction impacts of the village on neighbours will be required. This should include monitoring of noise and dust levels. Additional noise, particularly during the day may have negative impacts on shift workers residing at Civeo village. Having clear communication processes with neighbours identifying processes for complaints and informing neighbours of major key times where disruptions are most likely is essential. Additionally, producing a comprehensive noise and dust management plan may be necessary.
Onsite access to medical support	ALMOST CERTAIN / ALWAYS (4)	NEUTRAL (0)	NEUTRAL (0)	It is anticipated that Bechtel village employees will have a need to access medical services. Due to a doctor, nurse, physiotherapist, x-ray machine and ambulance being available on site for the workforce, it is anticipated that any actual impact on broader community services and facilities would be minimal. Stakeholders viewed the provision of a doctor and medical support services onsite at the village as a positive. However, there will be no benefit to the community other than there being no increase in demand for GP services from the provision of a GP. Community benefit will only be generated if the community is provided access to the GP services to take up any vacant appointments.
Additional strain on existing health and medical services	UNLIKELY / SOMETIMES (2)	HIGH DETRIMENT (-3)	LOW NEGATIVE (-6)	Despite medical services being available onsite at the CAV, there remains some concern from stakeholders and community members about the Bechtel workforce adding to the wait times to access services in the City. While it was acknowledged that a doctor, nurse, physio and ambulance service would be available to workers onsite, there remained a concern that if the workers required additional attention (ie. they had to be transferred from the onsite doctor to the hospital/emergency room) then this would add to the strain of services that are already operating at or close to capacity.

IMPACT CONSIDERATION	CURRENT ASSESSMENT			IMPACT – ENGAGEMENT AND DATA FINDINGS
	LIKELIHOOD / PREVALENCE	DEGREE OF BENEFIT OR DETRIMENT	IMPACT RATING	
Impact on health and wellbeing of FIFO workers	POSSIBLE / SOMETIMES (3)	MEDIUM DETRIMENT (-2)	LOW NEGATIVE (-6)	<p>Mental health concerns for the workers themselves was acknowledged as one of the biggest areas of concern by almost all stakeholders interviewed throughout the consultation period. . It was communicated that any significant health/wellbeing issues within a workforce create a ripple effect throughout the community, making it critical to manage these issues effectively.</p> <p>However, previous FIFO research undertaken by Creating Communities also shows that when workers and families have a well-planned approach to FIFO lifestyle and have sufficient support services, they tend to embrace the lifestyle</p> <p>Bechtel will manage these impacts through a range of programs and initiatives that support both the physical and mental wellbeing of the workforce. These will include access to the Employee Assistance Program (EAP) and access to local services and supports where applicable, as well as a range of onsite initiatives that encourage healthy and active lifestyles.</p>
HEALTH AND WELLBEING – OVERALL CURRENT IMPACT RATING				LOW NEGATIVE (-3.75)
HEALTH AND WELLBEING – OVERALL IMPACT RATING WITH MITIGATIONS IMPLEMENTED (SEE BELOW)				NEUTRAL (0)

9.8.3 Health and Wellbeing – Social Impact and Opportunity Management Strategies

Impact Area	Description	Strategy	Commitments	Intended Impact
Health and Wellbeing	<p>The addition of Bechtel’s construction workforce has the potential to place pressure on existing health and well-being services, resulting in a negative impact on the community. However, there is also scope for Bechtel to have a positive impact in this area based on their management of this impact, and their level of collaboration with the community.</p> <p>Bechtel has assessed the current level of health and well-being services capacity in the City, to understand local capacity of existing services.</p> <p>Based on this assessment Bechtel will have a 24-hour in house medical centre at the CAV and construction site accessible to Pluto Train 2 construction employees. The medical centres will have:</p> <ul style="list-style-type: none"> • A doctor • Nurses • Physiotherapist • X-ray machine • Ambulance 	Onsite provision of health and medical services for access by Bechtel workforce and contractors	Provision of an ambulance, doctor, physiotherapist and paramedic for workforce use.	Mitigating any additional strain on local health and medical services
			Continue to engage with local hospital and health providers to review use and demand from Bechtel workforce.	
			Partner with local providers to ensure there is local counselling/psychologist support to workforce if assistance is required beyond what the EAP service can offer.	
		Provision of onsite programs and facilities that support positive mental and physical health	Workforce access to counselling and support services via EAP (can either be accessed via phone or face-to-face or in home towns).	Employees have ample opportunities to address health and wellbeing through socialisation, recreation and community development, while minimising impacts on the local residential community.
			Delivery and facilitation of a range of recreational pursuits onsite at the CAV, delivered by the Lifestyle Coordinators which may include for example: <ul style="list-style-type: none"> • Individual sporting competitions • Facilitated team-on-team competitions (either sporting or ‘quiz night’ nature) • National sports competitions watched on big screen TV • Quiz nights • Special theme/meal nights at the mess • Health programs, such as gym-based fitness, weight loss, diet assistance, walking groups, running groups, stretching groups; • A shuttle bus will operate between the CAV and key locations in Karratha. 	
			Integrate existing mental and physical health initiatives such as R U Ok Day, Act Belong Commit etc. into CAV programming.	
			Investigate resident interest in establishing a buddy-system to support individuals to adjust to the FIFO lifestyle and integration with their new CAV community.	
			Provision of communal rooms for social activities such as music; games; clubs to enable socialisation other than at the tavern, dining area and sporting facilities.	
			Ensure internal landscaping is done in a way that provides green spaces and promotes good health and wellbeing for residents. This includes the provision of shelters and social gather spaces.	
			Promote community organisations and services that support wellbeing, such as the local men’s shed being developed in Millars Well	
			CAV Operator to develop a comprehensive Management Plan for promoting healthy eating/dietary habits in the dining area, (e.g. proposed health promotion actions; maximum servings per person etc.).	
		Limit any construction impacts to neighbours	Provision of advance notice of any works that may cause traffic, noise and/or dust impacts.	Create understanding of upcoming construction activities
			Adherence to construction environmental management plan for dust and noise management.	
			Adherence to construction schedule.	
			Keep local neighbours informed of the construction schedule including any potential impacts from traffic, noise or dust.	
High level of occupational health and safety standards	Bechtel and its subcontractors have in place effective strategies that foster positive behaviours and healthy, active lifestyles for FIFO workers.	Minimise risk of potential health or safety hazards, including those relating to employee fatigue		
Quality and private living spaces and onsite amenity that promote good wellbeing	The guiding principles for design, construction and operations of the CAV are: <ul style="list-style-type: none"> • Safe, healthy and environmentally appropriate accommodation for the non-local Construction Workforce. • Self-contained CAV, including accommodation, provision for catering and meals, leisure and entertainment facilities for the non-local Construction Workforce. • The CAV is of a very high standard to attract and retain employees. • Provision of a secure living environment for residents. 	Health, safety and comfort of workers are ensured whilst at the facility and during work hours, minimising potential risks for health or safety incidents		
	Develop a professionally engineered and designed facility with a focus on residential wellbeing to enable restful sleep, access to recreational services and social engagement.			
	Employ best practice built form CAV designs to facilitate better mental health outcomes – e.g. shared communal spaces, smaller clusters of rooms, separate night shift clusters.			
	Operate the CAV only for Pluto Train 2 construction employees.			
	CAV designed to blend with into the surrounding environment including landscaping, with any fencing to be unobtrusive			

9.9 Impact Area 8: Crime and Public Safety

9.9.1 Overview

As a result of the influx of a new and temporary workforce in the City there is the potential for an increase in crime and/or antisocial behaviour in the area. A lack of cohesion and integration between the FIFO workforce and the broader community can drive either incidents of antisocial behaviour or the perception that FIFO workers are the perpetrators of antisocial behaviour.

Current State

Safety and security are a key concern for those living in the City of Karratha. The past construction accommodation village of Gap Ridge, that primarily housed the workforce for the construction of Pluto 1, appears to have had a minor impact on crime during its operation between 2008 and 2017.

Between 2015 – 2019, the safety and security of Karratha was ranked by residents in the top three worst things about living in Karratha each year. For period from July 2018 to April 2019 a total of 2169 criminal offences have occurred in Karratha (SA2). This is on track to be an increase from the total number of criminal offences in 2017-2018 financial year (total of 2366). Anecdotal reports from stakeholders, however, generally indicate that Karratha is a relatively safe City, and that higher crime statistics may be due to more community confidence in reporting crimes and incidents.

Anticipated Change

The most significant anticipated changes are the potential for opportunistic crime at the village, an increase in antisocial behaviour (particularly at licensed venues), and the potential for road or traffic incidents as a result of more vehicles on the road.

As the City of Karratha has accommodated a number of previous TWA developments, there is a perception that crime and antisocial behaviour increase as a result of a FIFO workforce. Often this concern is in relation to workers engaging in behaviours such as: excessive drinking, lack of respect for local groups, services and amenities, litter and poor language in public areas. The community perception of this behaviour is that it largely stems from a lack of cohesion and integration between the FIFO workforce and the broader community.

9.9.2 Impact Assessment

IMPACT CONSIDERATION	CURRENT ASSESSMENT			IMPACT – ENGAGEMENT AND DATA FINDINGS
	LIKELIHOOD / PREVALENCE	DEGREE OF BENEFIT OR DETRIMENT	IMPACT RATING	
Perceived or actual increase in crime	LIKELY / MOSTLY (4)	LOW DETRIMENT (-1)	LOW NEGATIVE (-4)	<p>It is anticipated that the perceived increase in crime will be more of a perceived issue than any actual spike in criminal activity. Crime statistics gathered for the area local to Gap Ridge during its years of operation showed that the presence of the village had very little impact on the number of crimes reported in the local area. Anecdotal feedback from stakeholders during consultation noted that instances of antisocial behaviour during the previous construction boom were more common but often didn't escalate to reported crimes.</p> <p>Madigan Road provides a physical divide between the proposed village and the existing residential estate; potentially reducing the perceived impact of the village on the residential area.</p> <p>In order to mitigate the perceived or actual increase in crime Bechtel will be implementing a zero-tolerance policy around the behaviour of their construction employees in the local community and village.</p> <p>Bechtel will be employing a Security Manager and engage a security subcontractor to provide security at the village. The Security Manager will regularly communicate with the local police around incidents that arise in the village or local community related to Bechtel staff.</p>
Potential impact of onsite tavern	POSSIBLE / SOMETIMES (3)	LOW DETRIMENT (-1)	MINOR NEGATIVE (-3)	<p>A decrease in safety may be felt if the construction workforce engages in negative behaviour at the local pubs/bars. The proposed village will include an in-house tavern that will enable village residents to purchase and consume beverages onsite, with the intent of managing alcohol consumption at the village. Community raised concerns about previous experience of some workers "pre-loading" at the tavern before leaving the village and travelling to the City and behaving inappropriately in other venues due to intoxication.</p> <p>This will need to be managed effectively.</p>
Potential for opportunistic crime at the village	POSSIBLE / SOMETIMES (3)	LOW DETRIMENT (-1)	MINOR NEGATIVE (-3)	<p>The number of staff and residents who transit through the village throughout the day will result in increased potential for opportunistic crime in the village by both occupants of the village and those external to the village. The safety of the occupants and their belongings within the village will need to be considered.</p>

IMPACT CONSIDERATION	CURRENT ASSESSMENT			IMPACT – ENGAGEMENT AND DATA FINDINGS
	LIKELIHOOD / PREVALENCE	DEGREE OF BENEFIT OR DETRIMENT	IMPACT RATING	
Road/traffic safety	POSSIBLE / SOMETIMES (3)	LOW DETRIMENT (-1)	MINOR NEGATIVE (-3)	<p>There was some concern from stakeholders that the additional number of vehicles on the road may create either increased traffic congestion in the local area or the possibility for a higher number of road incidents. In particular, stakeholders referenced the need to ensure that all Bechtel trucks or vehicles are using secure loads, and that Bechtel employees are engaging in safe driving behaviour, particularly between the worksite and the CAV.</p> <p>Bechtel will implement a comprehensive Traffic Management Plan to mitigate any potential traffic issues and will ensure stagger Bechtel shifts with Woodside shifts to ensure there is minimal cumulative impact of additional vehicles being on the road at the same time.</p>
CRIME AND PUBLIC SAFETY – OVERALL CURRENT IMPACT RATING				MINOR NEGATIVE (-3.25)
CRIME AND PUBLIC SAFETY – OVERALL IMPACT RATING WITH MITIGATIONS IMPLEMENTED (SEE BELOW)				NEUTRAL (0)

9.9.3 Crime and Public Safety – Impact and Opportunity Management Tables

Impact Area	Description	Strategy	Commitments	Intended Impact
Crime and Public Safety	<p>Safety and security are a key concern for those living in the City of Karratha.</p> <p>As the City of Karratha has accommodated a number of previous TWA developments, there is a perception that crime and antisocial behaviour increase as a result of a FIFO workforce. Often this concern is in relation to workers engaging in negative social actions such as: excessive drinking, lack of respect for local groups, services and amenities, and other anti-social behaviour.</p>	Strict employee and contractor behavioural standards	Implementation of a zero tolerance to poor behaviour in the CAV, workplace and community. Behaviour of employees in the community will be actively monitored and disciplinary measures undertaken to combat poor behaviour.	Enforcement and adherence to strict behavioural standards to limit opportunities for crime and risks to public safety.
			All employees and subcontractors will be required to undertake pre-employment drug and alcohol screening. All employees and subcontractors will also be subject to daily random and for cause drug and alcohol testing.	
			All employees are required to sign Accommodation Rules and Code of Conduct, outlining expected behaviour while employed on the project.	
			Explore opportunity to stagger rosters so that all RDOs are not taken on the same day to limit large influx of workers going into the City at the same time	
		Effective onsite management, including management of in-house tavern	Bechtel to employ a Security Manager and engage a security subcontractor to provide security service to both the project site and CAV. The Security Manager will be in close communication and cooperation with local Police for any security incidents that may arise within the CAV boundaries or community.	Strict management of access to alcohol and safety in the tavern to enforce a high standard of behaviour.
			Controlled service allowances and opening times applied to the in-house tavern.	
			Compliance with liquor licensing laws and responsible service of alcohol training is required of all bar staff at the in-house tavern.	
			Bechtel to work with the Liquor Accord and local hoteliers to ensure the workforce behaviour in local establishments is in alignment with expectations.	
			Bechtel will meet on a regular basis with the local police and the Liquor Accord to proactively manage any emerging issues.	
			CAV will be fenced with 24/7 security to ensure no contraband is able to be brought into the rooms.	
		Safety and security of the broader community	Bechtel will provide work uniforms that identifies and distinguishes their workforce from other construction and operations workforces.	Minimises any crime, harm or antisocial behaviour from Bechtel employees or subcontractors to the broader community.
			Transportation to the project from the CAV will be provided. With the exception of DIDO workers, no parking will be provided for CAV residents vehicles.	
			Open and accessible communications channels for community to provide feedback to Bechtel.	
			Include material on crime prevention behaviour to workforce. This could include emergency numbers (both internal and external), information on how to report an incident in the community and prevent theft, etc.).	
			Organise regular meetings with the police, neighbourhood watch, and local bar owners to conduct 'check-ins' on crime and anti-social behaviour in relation to the CAV.	
			Refuse bus service to any workers seeking to accessing the community from the CAV who are visibly intoxicated.	
		Improve safety and security of CAV residents	Include crime prevention elements in the design of the CAV including fencing, sufficient lighting, appropriate screening and pathways, CCTV, and screening.	
Support the Safer Communities Partnership	Work with local police, City of Karratha and other stakeholders to support the Safer Communities Partnership and strategic plan, with a representative from the Bechtel to be part of the Safer Communities Committee.	Engaging in existing partnerships provides a collaborative and community-wide approach to crime and safety.		

9.10 Impact Area 9: Economic Considerations

9.10.1 Overview

Both the construction and operations of the proposed village, as well as the spending of the residents of the proposed village, can have an impact on local businesses. The use of local contractors and the additional patronage that could emerge from an additional 2,500 beds has the potential to increase turnover of local businesses. However, as the proposed village and construction workforce is temporary, careful management of the village's economic impact on the local community is needed to ensure the viability of businesses beyond the life of the village.

Current State

As of June 2018, there were 955 businesses in operation in the City of Karratha. The number of businesses in the City of Karratha has decreased by 3.5% between June 2016 and June 2018. Ninety-six per cent of the businesses in the City of Karratha are small businesses (19 employees or less). The proportion of small businesses has remained steady between June 2016 and June 2018.

As of June 2018, most businesses in the City of Karratha (53%) had a turnover of less than \$200k. Only 10% (91) of businesses in the City of Karratha had a turnover of \$2m or more.

Almost a quarter (23%) of all businesses in the City of Karratha are construction businesses as of June 2018. However, the proportion of construction businesses in the City of Karratha has decreased by 9% between June 2016 and June 2018. As of June 2018, the other most common types of businesses are rental, hiring and real estate services (13%), and 'other services' (9%).

Anticipated Change

If well managed there is a possibility for the proposed village to have a beneficial impact on local businesses.

During the construction and operations of the village businesses will be needed to assist with the construction of some infrastructure on site, such as the roads, electricity, sewerage/plumbing, and any other associated onsite building.

Following construction of the CAV, the appointed contractor who runs the village will require ongoing support in a variety of areas including:

- General staffing
- Linen / Laundry
- Catering
- Waste disposal
- Cleaning
- Maintenance and grounds-keeping
- Running of concession services
- Bus transport to and from local businesses

In addition to contracting and supply opportunities, Creating Communities' past research of operational workforces in Karratha indicates that FIFO employees situated within walking distance to the City centres spend approximately \$80 per week on food and drink, personal products, restaurant or takeaway meals, among other items.

When calculating the potential spend that village residents may make in the local community, the CAV capacity estimates across the life of the CAV between Q1 2020 and Q1 2024 need to be considered. The number of residents has been taken from 4.2 Village Capacity and Workforce Requirements Figure 2, based on an estimate of \$50¹⁵ weekly spend, assuming that residents spend 39 weeks (75% of the year) in the community¹⁶. This results in a total spend over a 4-year period of \$7.79M in the local community.

Additional temporary economic impacts may also be felt if Bechtel’s potential 1% of the total population workforce relocates to the City of Karratha. This could represent a significant temporary addition to the City of Karratha economy.

9.10.2 Impact Assessment

IMPACT CONSIDERATION	CURRENT ASSESSMENT			IMPACT – ENGAGEMENT AND DATA FINDINGS
	LIKELIHOOD / PREVALENCE	DEGREE OF BENEFIT OR DETRIMENT	IMPACT RATING	
Impact on local businesses via supply and procurement	POSSIBLE / SOMETIMES (3)	MEDIUM BENEFIT (2)	LOW POSITIVE (6)	<p>Bechtel has committed to where possible, sourcing labour local first, regional second, national third and international as a last resort. This approach should also be applied to the sourcing of sub-contractors and suppliers for the construction and running of the village.</p> <p>The prioritisation of local businesses and suppliers will assist in capitalising on the positive economic impacts that the Bechtel village will bring to the City of Karratha. As also discussed in the ‘Employment and Local Benefits’ sheet, Bechtel and their sub-contractors need a clear consistent definition of local. This will ensure that impacts on the local economy can be clearly measured.</p> <p>Implementing local sub-contractor and procurement targets will assist in ensuring benefits from the construction and operation of the village flow on to local businesses, without overextending local businesses and creating a strain on locals needing to access labour and services.</p> <p>Additionally, it is recommended that Bechtel work with their Village operator to set local employment and procurement targets to ensure additional economic benefits to the City of Karratha community that emerge from the ongoing operations of the village.</p>

¹⁵ Reduced amount from previous research due to predicted smaller spend in the community due to difference between construction and operational staff.

¹⁶ Based on a roster of three weeks on and one week off.

IMPACT CONSIDERATION	CURRENT ASSESSMENT			IMPACT – ENGAGEMENT AND DATA FINDINGS
	LIKELIHOOD / PREVALENCE	DEGREE OF BENEFIT OR DETRIMENT	IMPACT RATING	
Impact on local businesses via Village workforce use	LIKELY / MOSTLY (4)	MEDIUM BENEFIT (2)	MEDIUM POSITIVE (8)	<p>Easing Village residents' access to local businesses and services in the City of Karratha will assist them in spending money in the local economy. Conversely, it is important that the village residents are not reliant on, or limit locals' access to local businesses and services.</p> <p>Considering this, Bechtel's is planning on having a variety of services in house such as a tavern, concession services, medical services, gym, and other fitness facilities. This will ensure that the village residents use of local services does not put excess pressure on local services.</p> <p>Additionally, Bechtel has committed to running a bus service that will drop village residents at predetermined locations to access local Karratha businesses, such as: the local shopping centre, restaurants and Lesiureplex on a regular schedule after work hours. This will allow Village residents to access services and businesses in addition to what is provided at the village, easing the village residents' ability to purchase local goods and services adding to Karratha's economy.</p>
ECONOMIC CONSIDERATIONS – OVERALL CURRENT IMPACT RATING				LOW POSITIVE (7)
ECONOMIC CONSIDERATIONS – OVERALL IMPACT RATING WITH MITIGATIONS IMPLEMENTED (SEE BELOW)				MEDIUM POSITIVE (9)

9.10.3 Economic Considerations – Impact and Opportunity Management Strategies

Impact Area	Description	Strategy	Commitments	Intended Impact
Economic Considerations	<p>If well managed there is a possibility for the CAV to have a beneficial impact on local businesses.</p> <p>During the construction and operations of the CAV businesses will be needed to assist with the construction of some infrastructure on site. During operations ongoing support will also be required.</p> <p>The CAV will have the possibility of positively benefitting existing local retail businesses. Creating Communities past research indicates that FIFO employees situated close to town centres spend on average approximately \$80 per week on food and drink, personal products, and restaurant or takeaway meals, among other items in Karratha</p> <p>Additional economic impacts may also be felt if Bechtel’s anticipated 1% of the total population workforce relocates to the City of Karratha. This represents a significant addition to the City of Karratha economy.</p>	Support local businesses and encourage residents to engage with local businesses	Provision of busses to and from the CAV to predetermined locations to access Karratha local businesses.	Increased patronage of local businesses by Bechtel employees and subcontractors.
			Provide only a small offering at onsite store (e.g. personal conveniences) to encourage employees to access most goods from local businesses.	
			Create a local business directory and provide access on the workforce app.	
			Promote ‘What’s on in Karratha?’ and neighbouring towns to CAV residents through multiple means including a calendar of local events, programs and initiatives, including those organised by: <ul style="list-style-type: none"> • City of Karratha; • Karratha Districts Chamber of Commerce and Industry (KDCCI); • Karratha Community Association; and • Sporting Associations. 	
			Explore opportunities to organise a ‘food truck evening’ where local food trucks operate at the CAV.	
			Explore opportunities for supporting local business supply chain in operation of the CAV.	
			Provide information on the City of Karratha key tourism locations, attractions and businesses.	
			Ensure information on local businesses are included in the welcome pack provided to new employees.	
			Inform local businesses (such as pubs, restaurants) and local police when shift changes are expected so that they can plan ahead (e.g. roster on appropriate number of staff)	
			Support and preference local procurement	
		Support local business, including Aboriginal businesses, and explore opportunities to build capacity of local supply chain by using local businesses for just in time delivery or supply agent.		
		Bechtel and CAV operator to prioritise the use of local businesses for the provision of services and procurement, where possible.		
		Provide positive weighting for local businesses during contract tender process.		
		Explore opportunities to segment up supply chain contracts so that local enterprises can benefit from micro-contracts.		
		Provide clear communication on where local companies can register their services that can be provided to support the project.		
		Develop list of local trades that can be used for maintenance at the CAV.		
		Partner with organisations such as REFAP or NYFL and MAC to develop appropriate Aboriginal business supply opportunities.		
		Ensure there is effective monitoring and evaluation of local procurement, including local ATSI procurement.		
		Continue local business forums and other events like ‘business speed dating’ to promote requirements to tender for work.		
		Establish clear processes for local procurement – including a management plan and measurement of performance.		
Explore training and upskilling opportunities, such as the adult apprenticeship program, and other programs that can build the pool of potential local employees. This may include supporting education and training programs, for example VET courses, to develop training and career pathways for local youth and to retain families in Karratha.				
Clear communications around Bechtel’s commitment to local procurement	Ensure that Bechtel’s commitments and achievements around local procurement are clearly identified and communicated to the community through a variety of means including: <ul style="list-style-type: none"> • Newspaper advertisements • Website • Social media • Sponsored events 	Supports positive perception of Bechtel’s construction to the Karratha community and local economy. Decreases misunderstandings around potential economic benefits of the project to the local community.		

9.11 Impact Area 10: Employment and Local Benefits

9.11.1 Overview

Both the Bechtel village and the Woodside Pluto 2 Train project represent a significant number of new jobs that will be available in the City of Karratha. Employment in these projects have the potential to have both positive (local supply in the operation of the village and employment) and negative (impacts on supply of labour for local businesses, local supply of resources) impacts on the local community dependent on the number of opportunities are provided to local employees. Understanding the scope in which these employment opportunities and local benefits and impacts could flow on to the City of Karratha is key for both the residents of the City and the City Council.

Current State

One of the key themes in the City of Karratha's 2016 – 2026 Strategic Community Plan is a well-managed and diversified economy. This includes the prioritisation of local procurement (2.a.3)¹⁷. Despite a focus on a diversified economy the top two industries of employment in Karratha (SA2) are the Iron Ore mining industry (6.8%) and the Oil and Gas extraction industry (5.6%), while the top two occupations of employment are Technicians and Trades workers (23%) and Professionals (14.9%).

Overall, there are relatively high levels of employment in Karratha. As of March 2019, the unemployment rate in the City of Karratha was 3.3% which, although has risen slightly since its lowest rate in the last three years (1.7% in June 2017), is still considered low. There is also greater (9.8%) full-time employment in Karratha (SA2) (69.3%) when compared to the Rest of WA (59.1%). The City of Karratha is the fifth largest LGA economy in Australia with a Gross Regional Product (GRP) of \$27.363B. As of 2015 there were 946 businesses operating in the City of Karratha.

Anticipated Change

Bechtel is committed to ensure that some classifications of employees are sourced as local hires from the Karratha region where possible; however, Bechtel is also mindful of not taking skilled labour from existing Karratha businesses.

The workforce will be predominately sourced from Western Australia and Australia; however, some key staff roles will be sourced from overseas. Additionally, Bechtel intends to offer the opportunity for management staff to relocate to Karratha residentially. It is expected that up to 1% of the total workforce will relocate residentially during construction. Locally based contractors and suppliers will be encouraged to provide day to day services and supplies for the project.

¹⁷ City of Karratha 2016, *Strategic Community Plan*, City of Karratha

9.11.2 Impact Assessment

IMPACT CONSIDERATION	CURRENT ASSESSMENT			IMPACT – ENGAGEMENT AND DATA FINDINGS
	LIKELIHOOD / PREVALENCE	DEGREE OF BENEFIT OR DETRIMENT	IMPACT RATING	
Impact on local employment	POSSIBLE / SOMETIMES (3)	MEDIUM BENEFIT (2)	LOW POSITIVE (6)	<p>Both the Bechtel CAV and Pluto Train 2 projects will offer opportunities for local employment. When asked about the main positive impacts of the project (without being prompted by any impact areas) opportunities for local employment and the local economic benefits were consistently raised by stakeholders and community members as one of the key positives of the project,</p> <p>It was noted, however, that due to the low unemployment rate there would only be a small pool of potential local workers that Bechtel and their village operator could draw from. There was some concern from stakeholders that Bechtel’s larger wage offerings may take workers away from local small and medium businesses, however this was typically seen to be an inevitable outcome and there was generally strong support for Bechtel to recruit locally.</p> <p>To help leverage positive impact, it is important that the balance of a local and FIFO workforce is clearly communicated to the local Karratha community. This will help to mitigate any potential misunderstandings around Bechtel’s impacts on the community and their commitments to the community.</p> <p>A clear definition of local will be needed across Bechtel and their sub-contractors in order to effectively measure the impact that Bechtel and the village are having on the Karratha community.</p> <p>Where possible, labour will be sourced locally to the area to fill required positions. This should then expand out to regional recruitment, then national recruitment and finally international recruitment.</p> <p>Advertisement of positions will be promoted locally on websites such as www.karrathalocaljobs.com. Employment roadshows in the local community could provide an additional way to recruit local individuals.</p> <p>Local benefits could also be derived through investment in apprenticeships and training opportunities. Bechtel should explore opportunities to invest in training and carer pathways for Adult apprenticeships and Aboriginal and Torres Strait Islanders.</p>

IMPACT CONSIDERATION	CURRENT ASSESSMENT			IMPACT – ENGAGEMENT AND DATA FINDINGS
	LIKELIHOOD / PREVALENCE	DEGREE OF BENEFIT OR DETRIMENT	IMPACT RATING	
Impact on Aboriginal and Torres Strait Islander employment	POSSIBLE / SOMETIMES (3)	MEDIUM BENEFIT (2)	LOW POSITIVE (6)	<p>Where possible, it is recommended that Bechtel support local and Pilbara Aboriginal and Torres Strait Islander to engage them in local employment opportunities. At previous Bechtel sites (Curtis Island and Wheatstone) Bechtel developed a variety of programs that enhance Australian local and indigenous employment and business.</p> <p>It is recommended that a local Aboriginal and Torres Strait Islander employment or mentoring program be developed for Pluto Train 2 construction. Additionally, opportunities for meaningful participation for both Aboriginal and Torres Strait Islander procurement and employment should be identified in consultation with the relevant Corporations, Bechtel and the village operator.</p>
Residential workforce	POSSIBLE / SOMETIMES (3)	LOW BENEFIT (1)	MINOR POSITIVE (3)	<p>Bechtel has stated that they may offer the opportunity for management staff to relocate to Karratha residentially. Beyond offering the opportunity, it is suggested that Bechtel actively promote the liveability of the Karratha community to appropriate staff members who could relocate to be residential post construction. This could be through partnership with Woodside’s Community Welcome Strategy that is currently being developed.</p>
Local supply	POSSIBLE / SOMETIMES (3)	MEDIUM BENEFIT (2)	LOW POSITIVE (6)	<p>In line with Bechtel’s Australian Industry Participation Framework plan, all opportunities over \$1m to supply services and products for Bechtel’s work are promoted on ICNWA. Bechtel will work with KDCCI to promote smaller scopes of work as they become available.</p> <p>The running of the village provides a clear opportunity for a positive impact on local employment for non-specialist roles. It is recommended that the village operator prioritise the provision of services (e.g. waste management, cleaning, laundry) and products (e.g. food) from local suppliers as well as prioritisation of local employment.</p>
EMPLOYMENT AND LOCAL BENEFITS – OVERALL CURRENT IMPACT RATING			LOW POSITIVE (5.25)	
EMPLOYMENT AND LOCAL BENEFITS – OVERALL IMPACT RATING WITH MITIGATIONS IMPLEMENTED (SEE BELOW)			MEDIUM POSITIVE (8)	

9.11.3 Employment and Local Benefits – Impact and Opportunity Management Strategies

Impact Area	Description	Strategy	Commitments	Intended Impact
Employment and Local Benefits	<p>The Bechtel CAV is intended to have 2,500 beds. Some classifications of employees will be sourced as local hires from the Karratha region; however, Bechtel is mindful of not taking skilled labour from existing Karratha businesses.</p> <p>The workforce will be predominately sourced from Western Australia and Australia.</p> <p>It is expected that no more than 1% of the total workforce will relocate residentially. Locally based contractors and suppliers will be encouraged to provide day to day services and supplies for the project.</p>	Prioritise residential workforce	Offer limited opportunity for staff to relocate to Karratha during construction period.	A residential workforce supports City of Karratha’s vision for a stable permanent population.
		Preference local recruitment	Where possible, preference local recruitment, and then regionally and nationally.	Supports positive impact on the local workforce and economy.
			Prioritise hiring low or no-skilled jobs locally (e.g. gardening, cleaning).	
			Ensure Lifestyle Coordinator roles are hired as local residents where possible to ensure access is provided to local knowledge and networks	
			Conduct local employment roadshows.	
			All jobs to be advertised on the Karratha Local Jobs Portal www.karrathalocaljobs.com .	
			Develop a definition of ‘local’ to be used by Bechtel and their sub-contractors that clearly identifies the area being the City of Karratha or Pilbara.	
			Use the Bechtel project social media, and local communication methods such as local newspapers to communicate Bechtel’s commitments to local employment and achievements.	
			Clearly promote and advertise Project commitments to and achievements of local procurement.	
		Maintain a register of all interested local applicants for future opportunities as they arise.		
		Support ATSI employment and businesses	Develop Australian Indigenous Engagement plan to outline strategies to increase local indigenous employment and business participation.	Supports positive impact on local Aboriginal employment.
			Support development of local Indigenous business database and work with Aboriginal corporations to identify potential employment and supplier opportunities.	
			Develop, with local Traditional Owners, an Aboriginal and Torres Strait Islander training/mentoring/employment program or alternative work program.	
Engage CAV Operator in local recruitment and procurement commitments	<ul style="list-style-type: none"> Advertise all roles locally; Maintain a register of all interested local applicants for future opportunities as they arise; and Provide flexibility in rostering to suit requirements of local employees. 	Supports positive impact on the local workforce and economy.		

9.12 Impact Area 11: Cumulative Impacts

9.12.1 Overview

Changes across multiple projects can have a cumulative impact effect on the City of Karratha. Although these impacts might not be the direct result of Bechtel's proposed village, the addition of this proposal to the current climate in the City of Karratha may result in extenuating the existing circumstances.

Current State

The City of Karratha is currently in a state of change. Over the last few years there have been several proposals and changes in relations to FIFO workers and Village accommodation. This includes the building of Woodside's Bay Village, the proposed shifting of Rio Tinto's workforce from Sea Ripple in Karratha to Peninsula Palms in Dampier. The current preferred site for Bechtel's proposed village is also the site where Woodside's past 'Gap Ridge' village was located, then closed and the structures on the site completely removed. Additionally, Greenvalley Asset have recently submitted a development application to build 'The Ranges' a permanent development that would function as both a hotel and Village accommodation.

These ongoing changes to the transient worker village landscape in the City of Karratha have resulted in some confusion by the local community about what the differences are between these developments and why there is a need for additional villages. Beyond this, Woodside's Pluto/Burrup hub expansion project and the role that Bechtel will be playing in this development adds another layer of information and potential confusion for the local community.

Anticipated Change

Without proactive and ongoing clear communication about these changes it is likely that the community will continue to not fully understand the differences between each of these projects. Conflation of these projects and Bechtel's construction workforce accommodation needs may result in negative community sentiment around the construction of another village when Woodside is currently constructing the new Bay Village.

The construction of a new village on a site where a previous village existed but was subsequently removed may appear to be a waste of resources to the community. Additionally, the construction of a village when 'The Ranges' proposes a longer term and more permanent development that could be turned into resort style accommodation¹⁸ may also result in negative community sentiment as the construction of a village would appear to be out of sync with the City's aim for a stable permanent population.

¹⁸ Element 2019, The Ranges Karratha Development Application, Perth.

9.12.2 Impact Assessment

IMPACT CONSIDERATION	CURRENT ASSESSMENT			IMPACT – ENGAGEMENT AND DATA FINDINGS
	LIKELIHOOD / PREVALENCE	DEGREE OF BENEFIT OR DETRIMENT	IMPACT RATING	
Increased number of available FIFO beds and TWA facilities in Karratha	ALMOST CERTAIN / ALWAYS (5)	LOW DETRIMENT (-1)	LOW NEGATIVE (-5)	As of April 2019, a total of 3,838 beds were available in TWA facilities within the City of Karratha ¹⁹ . With a City of Karratha population of 21,473, the TWA bed capacity represents approximately 30% of the City of Karratha population. Adding Bechtel’s proposed 2,500 beds into this assessment, this would increase the proportion of FIFO TWA beds to the residential population to 41.7%. While not necessarily a negative impact, there may be a negative community perception around increasing the number of FIFO beds in the Karratha market (as opposed to supporting permanent residential accommodation).
The difference between Woodside and Bechtel’s workforces	LIKELY / MOSTLY (4)	NEUTRAL (0)	NEUTRAL (0)	<p>This project forms part of Woodside’s broader Pluto / Burrup Hub expansion. As Woodside is an established member of the Karratha community, and Bechtel will be a new entity, there is likely to be some conflation around the two companies.</p> <p>This may result in any negative or positive sentiment towards Woodside also being experienced by Bechtel (and vice versa).</p>
The construction of a new village on a site where a TWA recently existed	ALMOST CERTAIN / ALWAYS (5)	LOW DETRIMENT (-1)	LOW NEGATIVE (-5)	<p>Building the new proposed village on Bechtel’s preferred location at Gap Ridge may have both positive and negative effects. The local community will have realistic expectations, based on experience, of what the impact of the village will be on the local area. This will mean that they may be able to more quickly adjust to the village’s presence.</p> <p>However, if the previous Village’s impact on the local area was negative, this will result in community resistance and negative perceptions of the proposed new Village.</p> <p>Additionally, the building of a new Village on the same site that a Woodside village was recently demolished on may appear to be a waste of resources to the community. Particularly if the community does not clearly understand the difference between Bechtel’s and Woodside’s workforces.</p>

¹⁹ Figure of current TWA beds in City of Karratha provided by City of Karratha Planning Officers in September, 2019

IMPACT CONSIDERATION	CURRENT ASSESSMENT			IMPACT – ENGAGEMENT AND DATA FINDINGS
	LIKELIHOOD / PREVALENCE	DEGREE OF BENEFIT OR DETRIMENT	IMPACT RATING	
Confusion or comparison with other workforce accommodation development applications	LIKELY / MOSTLY (4)	LOW DETRIMENT (-1)	LOW NEGATIVE (-4)	A number of FIFO/TWA developments have recently had development applications considered by the City of Karratha and JDAP – including Bay Village, The Ranges development and Perdaman. Due to the high number of these applications being considered in quick succession, there is the potential for negative community sentiment in response to more FIFO accommodation being considered in lieu of any additional urban development increase. In addition, some community members throughout consultation expressed confusion about the various applications and a desire to understand how Bechtel’s CAV fit into the broader vision. ‘
Woodside Pluto LNG Expansion	LIKELY / MOSTLY (4)	MEDIUM BENEFIT (2)	MEDIUM POSITIVE (8)	Bechtel’s construction workforce will be working on delivering the plant required for Woodside’s Pluto LNG expansion. This expansion will result in additional benefits to the Karratha economy through direct and indirect measures such as local procurement, employment, training, population increase and social investment. The Woodside SIA / SIMP for the project predicts that this will have a minor to medium impact on the Pilbara region. However, it may also have a negative impact by increasing the cost of living in the region, placing additional stress on lower-income earners in the region.
Potential for a coordinated approach	POSSIBLE / SOMETIMES (3)	MEDIUM BENEFIT (2)	LOW POSITIVE (6)	It was acknowledged by a number of stakeholders during the consultation process that there is potential to utilise the existing FIFO/TWA villages as a shared resource to develop a coordinated approach to community integration and access to services and amenities within the City of Karratha. Stakeholders felt there was opportunity to collaborate with other industry partners and TWA providers in the area to deliver a collective approach that could leverage positive impact by aligning and streamlining community activities and investment. It is recommended that this could be led by the City of Karratha, with operators such as Bechtel providing support and participation in the partnership.
CUMULATIVE IMPACTS – OVERALL CURRENT IMPACT RATING				NEUTRAL (0)
CUMULATIVE IMPACTS – OVERALL IMPACT RATING WITH MITIGATIONS IMPLEMENTED (SEE BELOW)				LOW POSITIVE (4)

9.12.3 Cumulative Impacts – Impact and Opportunity Management Strategies

Impact Area	Description	Strategy	Commitments	Intended Impact
Cumulative Impacts	<p>The City of Karratha is currently in a state of change. Over the last few years there have been several proposals and changes in relations to FIFO workers and TWA accommodation.</p> <p>These ongoing changes to the transient worker village landscape in the City of Karratha have resulted in some confusion by the local community about what the differences are between these developments and why there is a need for additional villages.</p>	Engage with the community in a proactive manner	Continue to communicate about Bechtel and their role on the Pluto Train 2 project.	Alleviate any confusion in the community around the purpose and requirements of the proposed CAV.
			Continue to update the information page on the Bechtel website about the project.	
			Hold community information sessions about the proposed CAV as necessary.	
			Distribute a regular newsletter that provides updates, successes and a future view of the project. This could include stories on local employment/procurement achievements.	
		Commit to short-term facility	Commitment for the CAV to not extend its short-term lease beyond the timeline included in the development application.	Ensures than any cumulative impacts in relation to multiple TWA villages can be managed within a specified timeline.
Support collective/coordinated approach to TWA village manage and community integration	Engage with City of Karratha, Rio Tinto, key industry and other stakeholders to build a forum where all TWA village providers can come together to discuss community trends, challenges, opportunities and collaborate on community programming and scheduling. Encourage City of Karratha to take the lead on this and integrate TWA community programming into their existing activities and events.	Ensures sustainability of community events and provides a more streamlined approach to community integration for TWA villages.		

10. APPENDICES

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10.2 Engagement Materials



CITY OF KARRATHA BRIEFING
10 June 2019

Pluto Train 2
Proposed Transient Worker Accommodation
SIA & SIMP Process



Creating Communities



About Bechtel

- Privately owned, global engineering, procurement and construction company.
- Since 1898, we've completed more than 25,000 extraordinary projects across 160 countries on all seven continents.
- Operate through four global businesses: Infrastructure; Nuclear, Security & Environmental; Oil, Gas & Chemicals; and Mining & Metals.
- Australian presence for more than 70 years; 500+ projects; 50% of Australian LNG facilities.
- 50 years LNG experience; built more than 33% of global capacity.



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Pluto Train 2

- Bechtel awarded contract to undertake Front End Engineering and Design (FEED) for the proposed second LNG train at the Pluto LNG facility.
- FEED includes activities required to finalise the costs and technical definition.
- The awarded contract also includes an option for Woodside to progress to a lump sum engineering, procurement and construction contract for execute phase activities.
- This option is subject to, among other conditions, a positive final investment decision (FID) being taken on the project.
- One of the key risks identified during the FEED is workforce accommodation in Karratha.



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TWA Proposal

- Bechtel is proposing the construction of a dedicated, temporary Transient Workforce Accommodation (TWA) Facility to accommodate the Bechtel and Subcontractor workforce.
- Engaged consultants to assist with Department of Planning, Lands and Heritage and City of Karratha development approval process – Rowe Group and Creating Communities.
- TWA dependant on positive FID and Notification to Proceed (NTP) from Woodside.

Proposed facility:

- Capacity - 2,500 beds.
- Location - Lot 525 Madigan Road, Gap Ridge, Karratha.
- Timeline including construction and decommissioning - 2020 – 2023 + 1 + 1 + 1.
- Site remediation at conclusion of project



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Social Impact Assessment

- A Social Impact Assessment (SIA) will identify and understand the ways that the proposed development is likely to impact on the community.
- The social impacts of this TWA will be assessed through a thorough external review of Bechtel's proposal.
- It will be done in accordance with City of Karratha Local Planning Policy DP20 – Social Impact Assessment
- A review of relevant State and local policies, previous research and feedback from community members and other stakeholders will be undertaken.
- This assessment will be performed during mid-2019 and will inform the Social Impact Management Plan.



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Social Impact Management Plan

- A Social Impact Management Plan (SIMP) will expand upon the SIA to ensure that the future development minimises and mitigates negative impacts, while taking advantage of opportunities to increase any positive impacts.
- The management strategies outlined will be reviewed and then implemented throughout the development of this new TWA and its short-term operational lifespan.



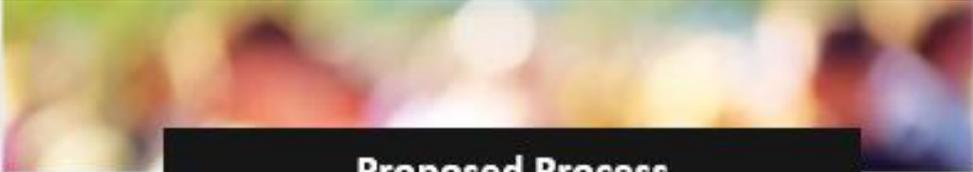
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Proposed Process

Action	Description
Context, Scoping, Profiling and Literature Review	<p>Undertake a comprehensive review of previous data, research and consultation reports relevant to the project. This will include a review of:</p> <ul style="list-style-type: none"> • Socio-economic studies and other relevant reports • Research reports from relevant Government departments or peak bodies • Relevant TWA and FIFO Reports – including research undertaken previously by Creating Communities • Previous community consultation findings and reports • Data on planned future activity from Bechtel (i.e. workforce numbers; facility details etc) • Data on key demographics, trends and projections for Karratha
Predictive Assessment	<p>Confirm impact areas that will be used as the basis for the update of the SIA and the key areas for identification of mitigations</p>

Proposed Process

Action	Description
Communications	<p>Provide details on Bechtel Website for community to access</p> <p>Develop an information sheet/booklet that contains the following:</p> <ul style="list-style-type: none"> • Background to the proposed TWA development • Details on what a SIA/SIMP are – and how people can have input into them • FAQs and answers <p>This booklet would be provided to stakeholders involved in the engagement and made available to other interested parties.</p>
Draft Management Strategies	<p>Identification of potential management strategies and mitigations that seek to minimise impacts and optimise benefits</p>
Stakeholder Interviews	<p>'Road test' and validate proposed management planning strategies through interviews with key stakeholders. Use local, on-the-ground knowledge to identify, detail and understand the feasibility and desirability of the proposed management planning strategies.</p> <p>Letters of invite to be sent to key stakeholders to meet.</p>



Proposed Process

Action	Description
Focus Groups	<p>'Road test' and validate the proposed management planning strategies through focus groups with community organisations, local businesses, agencies, as well as local residents to explore the feasibility and desirability of the proposed management planning strategies.</p> <p>These will be advertised across the community via letter drop, newspaper advert and social media.</p>
Report and Presentation	Prepare the full SIA and the SIMP report including process for implementing, monitoring and evaluating mitigation strategies



**Creating
Communities**



INFRASTRUCTURE
MINING & METALS
NUCLEAR, SECURITY & ENVIRONMENTAL
OIL, GAS & CHEMICALS

Proposal for development of a short term Construction Village for Pluto Train 2

INFORMATION AND FREQUENTLY
ASKED QUESTIONS

Letter of confirmation to City

31 May 2019

Ryan Hall

Director of Development Services
City of Karratha

PO Box 219
Karratha WA 6714

C/- email: ryan.hall@karratha.wa.gov.au

Dear Ryan,

RE: Bechtel Temporary Constuction Accommodation Village Social Impact Assessment and Social Impact Management Plan

As you are aware, Bechtel (Western Australia) Pty Ltd is lodging a development application for a new temporary Construction Accommodation Village (CAV) near Madigan Road in Gap Ridge, Karratha. The village is being proposed to house Bechtel employees and contractors during the proposed construction of Woodside's proposed Pluto Train 2. The CAV is being planned to accommodate up to 2,500 Bechtel construction workers for a period of up to five years.

In accordance with the City of Karratha Local Planning Policy DP20 – Social Impact Assessment, Bechtel has engaged our company Creating Communities Australia Pty Ltd to undertake a Social Impact Assessment (SIA) and Social Impact Management Plan (SIMP) to assess how this proposal may impact the community and identify mitigations that can be implemented to limit negative impacts and optimise any positive impacts for the community.

Thank you for the opportunity for the project team to provide a briefing to Elected Members and City of Karratha Executive Officers on Monday 10 June 2019 at 4:30pm.

Below is an overview of the SIA and SIMP process that we propose to present and discuss at the briefing.

SIA and SIMP Methodology

Creating Communities has extensive experience in social research and community engagement, with specific experience in SIAs and SIMPs.

Our methodology and timeline for this project can be summarised as follows:

Action	Description
Context, Scoping, Profiling and Literature Review	Undertake a comprehensive review of previous data, research and consultation reports relevant to the project. This will include a review of: <ul style="list-style-type: none">Socio-economic studies and other relevant reports

	<ul style="list-style-type: none"> • Research reports from relevant Government departments or peak bodies • Relevant TWA and FIFO Reports – including research undertaken previously by Creating Communities • Previous community consultation findings and reports • Data on planned future activity for the project (to be taken from internal Bechtel data) • Data on key demographics, trends and projections for Karratha
Predictive Assessment	Confirm impact areas that will be used as the basis for the update of the SIA and the key areas for identification of mitigations
Information and FAQ Booklet	<p>Develop an information sheet/booklet that contains the following:</p> <ul style="list-style-type: none"> • Background to the proposed CAV development • Details on what an SIA/SIMP are – and how people can have input into them • FAQs and answers <p>This booklet would be provided to stakeholders and neighbours involved in the engagement and made available to other interested parties.</p>
Briefing to City of Karratha	A briefing to the City of Karratha to outline the SIA and SIMP processes before any face-to-face engagement with other stakeholders and community members commences
Interim Impact Analysis and Mitigation Planning	<p>Provision of a basic report from collated previous research and consultation findings to confirm potential impacts</p> <p>Use the data to develop initial management planning strategies</p>
Stakeholder Interviews	'Road test' and validate proposed management planning strategies through interviews with key stakeholders. Use local, on-the-ground knowledge to identify, detail and understand the feasibility and desirability of the proposed management planning strategies.
Focus Groups	<p>Road test' and validate the proposed management planning strategies through focus groups with community organisations, local businesses, agencies, as well as local residents to explore the feasibility and desirability of the proposed management planning strategies.</p> <p>These will be advertised across the community.</p>
Final Report and Presentation	Prepare the full SIA and the SIMP report including process for implementing, monitoring and evaluating mitigation strategies

We look forward to engaging with the City of Karratha as part of the process of informing our SIA and SIMP. Please contact me if you have any questions or queries at andrew@creatingcommunities.com.au or (08) 9284 0910.

Sincerely,



Andrew Watt
Director
Creating Communities Australia

Creating Communities

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