



COMMUNITIES AND INDUSTRIES FORUM (CIF)

A forum for communication between industry and the community – all welcome.

30 May 2017, 5.30pm
Ken Jackman Hall, Darius Wells Library & Resource Centre
Chisham Ave, Kwinana.

NOTES FROM MEETING

PRESENT

Kelly	Kent	BP Refinery Kwinana
Patrick	Peake	Perth Energy
David	Tomasich	LandCorp
Michelle	Chatfield	Coogee Chemicals
Russell	Madengle	Coogee Chemicals
Trish	Tippett	Kleenheat
Albert	Romano	Kleenheat
Craig	Reynolds	WesCEF
Karen	Boyce	BMT Mercury Technology
Trevor	Naughton	CSBP
Steph	Felstead	CSBP
Craig	Tulloch	BMT Mercury Technology
Karla	Hinkley	Ramboll Environ
Dion	Dennisaa	Tronox
Joseph	Gibson	Simms Metal
David	Burrows	Simms Metal
Tony	Dopheide	Tianqi Lithium
Phil	Thick	Tianqi Lithium
Gabe	van den Berg	Tronox
Shoba	Senasinghe	Coogee Chemicals
Sam	Chami	Toxfree
Tumith	Nangalla	Toxfree
Craig	Bromfield	Coogee Chemicals
John	Hackett	LandCorp
Patrick	Oliver	BOC
Colin	Powers	Cockburn Cement
Claudio	Di Prinzio	Tianqi Lithium
Elizabeth	Brockbank	Alcoa
Yvonne	Noack	KIC
Chris	Oughton	KIC

APOLOGIES

David	Honey	Alcoa
Mayor	Adams	City of Kwinana

1. WELCOME, ADMINISTRATION

Facilitator Chris Oughton, Director of Kwinana Industries Council welcomed everyone to the Forum. Apologies were received from KIC President, David Honey and Mayor Carol Adams.

Housekeeping matters were addressed and the location of the rest rooms and exit points were advised. Attendees were reminded to sign the Register to ensure an accurate record of attendance is maintained for the minutes. Questions may be asked after each presentation and those posing questions are requested to identify themselves and the name of the organisation they represent. Suggestions for future presentations or guest speakers can be directed to the CIF Coordinator or via a form in the Suggestion Box at the entry.

There are four presentations this evening:

- **Tianqi Lithium Australia, Operations in the KIA**
Phil Thick, General Manager
- **LandCorp, Latitude 32 industrial precinct**
David Tomasich, Senior Development Manager
- **BP Refinery (Kwinana), Update from their scheduled maintenance**
Kelly Kent, Communications & External Affairs Advisor
- **BMT Australia, A service to the oil and gas industry – removal of mercury from waste**
Karen Boyce, General Manager

2. PREVIOUS MEETING

Notes of the previous meeting held 5 December 2016 were available for reference. The March CIF was cancelled due to low attendance.

3. MATTERS ARISING FROM PREVIOUS MINUTES

In November 2016 the CIF Executive reviewed the future direction of the Forum. As a result, the CIF Executive decided to wind itself up and hand over the administration of the CIF Executive to Kwinana Industries Council (KIC). KIC currently manages and funds the Forums and the Forums will continue to follow the existing agenda and format.

In March 2017 a review of the CIF was undertaken by KIC to address attendance, industry requirements and current issues. As a result, the public Forums will be held twice a year.

4. PRESENTATIONS

4.1 Tianqi Lithium Australia - Operations in the Kwinana Industrial Area **Presentation by: Phil Thick, General Manager** **Claudio Di Prinzio, Operations Manager**

Tianqi Lithium General Manager, Phil Thick gave an overview of the global lithium market and production. Lithium is mined from the rich brine of salt lakes in South America and some hard rock areas in Asia. The hard rock (Spodumene) below the ground is mined through normal mining techniques. Lithium is mined globally with production in Chile, Argentina, US, China and Australia.

Traditional applications for lithium, both technical and chemical, include batteries, glass, ceramics, cosmetics, plastics, greases and pharmaceuticals. Emerging markets include battery storage systems, alloy production, armour plating, steel and iron castings.

The future demand for rechargeable battery production is increasing with the end use in 2014 at 30.1%. The demand for rechargeable battery end use in 2022 is expected to be around 58.6% - the rechargeable battery sector is quite high. Motor vehicles are big users and it is expected household use will increase with installed wall battery units complimenting solar panels. Expected demand forecast for global lithium production in 2025 is around 400k tonnes.

Tianqi Lithium is a leading global producer and supplier of lithium mineral concentrates and lithium chemicals. The company headquarters is in Chengdu, Sichuan Province, China. Chengdu has approx. 17m people and is a technical and innovation hub for China. It is viewed as one of the leading technology centres – about half the world's iPads are produced in Chengdu for Apple.

Current global LCE production of 33,000tpa is expected to expand to 57,000tpa in 2018. Tianqi operates in two key business segments: upstream lithium mining/ process; and downstream lithium chemical production.

Tianqi is the controlling shareholder of Talison, which owns the largest spodumene deposit in the world, accounting for approx. 31% of lithium supply globally. Tianqi owns two lithium chemical production plants, located in Sichuan and Jiangsu in China and is now constructing a third plant in Australia with a Lithium Hydroxide (LiOH) capacity of 24,000tpa.

This history of the Tianqi Group started when Shehong Lithium was founded in 1995. In 2007 the company was reorganized into Tianqi Lithium and in 2010 was listed on the Shenzhen stock exchange. In 2014 Tianqi completed the 51% acquisition of Talison Lithium, and in 2015 completed the acquisition of the Jiangsu lithium carbonate plant. Tianqi Lithium Australia Pty Ltd was founded in 2016 and commenced the Kwinana operations.

Tianqi Lithium has two world scale plants: the Shehong facility, Sichuan Province in China, commissioned in 1995; and the Zhangjiagang facility in Jiangsu Province in China, 100% acquired by Tianqi in 2014. Feedstock for both plants is sourced from Greenbushes and shipped from Bunbury WA.

Greenbushes WA, located south east of Bunbury Port, meets 31% of the world's Lithium Carbonyl Equivalent (LCE) supply. The mine has a life expectancy of approximately 60 years although the company has recently committed to expansion of that mine, which will reduce the life of the mine. This is a big step forward for the company.

Operations Manager, Claudio Di Prinzio spoke on factors taken into consideration for the Australian operations and plant in the Kwinana area: climate, geological territory, risk diversification, low environmental impacts, logistics and location - renowned industrial strip access to infrastructure and other facilities, skilled workforce, proximity to port access, and transit times.

Tianqi's strategy is to build new capacity for high quality lithium chemicals to ensure stable supply and pricing, providing new energy industries the confidence to invest and grow. Tianqi is constructing a world class battery grade Lithium Hydroxide Processing Plant (LHPP). The company has a \$400m commitment to WA, with around 500 construction jobs and approximately 120 permanent operations jobs when the plant is up and running. It is anticipated the LHPP capacity will be 24,000tpa of battery grade lithium hydroxide located in the KIA.

The EPC contract and approvals for the LHPP were finalised in September 2016 and earthworks commenced the following month. Construction is well underway and commissioning of the Plant is expected in the later-half of 2018.

It is anticipated the LHPP will produce the highest quality lithium hydroxide globally – the purity of the product will be higher, extending battery life. The target market of first class global power battery producers for electric vehicles and high technology battery applications.

Tianqi Group has a very strong commitment to Corporate Social Responsibility and will support WA and the Kwinana area with a focus on sponsorships that benefit the local area.

The company is committed to supporting local jobs in both construction and operations and will provide apprenticeship opportunities and training programs in an operational plant, creating jobs for Australians.

Tianqi has a clear mandate to build a local team and the CEO of Tianqi appreciates the need for local relationships, whilst building relations between China and Australia. Tianqi is strongly committed to supporting programs that provide an opportunity for cultural exchange between China and WA.

Questions & Answers

Discussion points:

- Lithium carbonate and hydroxide process/ production.
- Containerization of product and transportation to ports.
- The Chinese plants will continue to be supplied through the Bunbury port.
- Use of generated waste products, eg: Aluminium sulfate can be sold or gypsum be used in other products.
- Phase 2 of the plant expansion may occur in the next couple of years.

4.2 LandCorp - Latitude 32 Industrial Precinct

Presentation by: David Tomasich, Senior Development Manager

David Tomasich provided an overview of the Latitude 32 industrial area which is situated 25km south of Perth and covers an area of 1,400ha - the largest industrial estate in WA. Latitude 32 has key transport links – road rail and sea, in particular the Anketell Road connections and Rowley Rd, with proximity to the AMC and future outer harbour. The WTC produces \$15bn annually and employs 11,000.

Land use synergies include the AMC to the north – with marine and defence capacities and advanced manufacturing. As a result of numerous AMC activities, there are opportunities for anyone coming into the northern area to get into the supply chains.

At the centre of Latitude 32 is the proposed outer harbour that will have a close link to the Kwinana area with opportunities for transport and links. There are other significant businesses in the Kwinana area and Latitude 32 has the links and space for businesses to come into the area and connect with existing businesses and synergies. Latitude 32 was planned to be adaptable with variable lot design, freight village, logistics hub, fuel and chemical distribution and natural clustering. The KIA is the premier heavy industrial estate covering 270ha with uses including chemical and resource based processing, gas, bulk terminals, rail and future port. The RIZ is around 450ha with heavy and general industries, bulk jetty access, service corridor, dry and liquid chemical, petroleum and fertilizers.

A number of studies have been conducted and it is expected that by 2040, Latitude 32 will provide for more than 20,000 jobs for the Cities of Kwinana, Rockingham and Cockburn; it is expected there will be more than 750 businesses with more than \$5.7bn contributing to WA's economic output, with more than \$22 bn in private sector investment.

The planning framework encompasses a number of areas as per the following documents: the Fremantle Rockingham Industrial Area Strategy (2000); Hope Valley Wattleup Redevelopment Act (2000); Hope Valley Wattleup Redevelopment Project Master Plan; Economic and Employment Lands Strategy (2012); Draft Perth and Peel @3.5m and Draft Transport @ 3.5m (2015); and Ministerial Conditions/ Strategies/ Policies/ Guidelines. The Perth and Peel @3.5m document recognises the importance for industrial expansion. LandCorp's role is to plan and promote the Latitude 32 area and to create and maintain the area.

Implementation - how do we make this happen? Objectives; costing of key infrastructure items; Developer Contribution Plan; and identifying staging drivers.

There are a number of objectives: activate private investment; attract private investment and development; coordinate delivery of key enabling infrastructure to keep costs low and maintain commercial viability.

Costing infrastructure: the Master Plan requires common infrastructure and environmental management; such as sub-station sites; waste water pump stations; major dual carriageways; road upgrades; and biodiversity strategy.

The Developer Contribution Plan is a mechanism for cost apportionment – it ensures equitable cost sharing; it is useful for fragmented ownership; and provides certainty.

Identifying staging driver includes land tenure and landowner development needs, models and partnerships; timing of quarry operations, scheduling and managing finished levels; accessibility to existing and future trunk service infrastructure; exposure to existing major roads; proximity to established industrial precincts; outer harbour and intermodal terminal timing; and the economy.

Questions & Answers

Discussion points:

- It was noted a lot of work has been done.
- Overall opportunities around the intermodal, potential port configuration, road rail network and boundaries can be determined once more information is available.

4.3 BP Refinery, Kwinana – Update on completed maintenance work Presentation by: Kelly Kent, Communications and External Affairs Advisor

In February 2017, the Refinery conducted its largest turnaround as the process units underwent required maintenance over a six–eight week period. Logistically it was a challenge; ensuring tasks were executed safely was a priority, as well as keeping up with community engagement.

The Refinery has previously conducted shutdowns every two years, however we have now moved to a four year cycle with the next one scheduled for 2021. This puts us in a better position to produce fuel over a longer period of time.

The maintenance operation went well. We catered for the infrastructure for an increased workforce – villages, catering, parking and traffic management. Traffic controllers assisted with the flow of traffic, Main Roads assisted with traffic lights and Police kept tabs on activities.

Improved safety systems were implemented to identify personnel and equipment. New radio frequency and safety technology was used during the shutdown, enabling the tracking of critical equipment, and ensuring the safety of personnel.

There were dedicated teams of engineers and investigators and daily leadership engagement with specific work crews. There were an addition 1800 personnel on site - fatigue was a number one priority with regular breaks and hydration

Thank you to our neighbours who assisted with various aspects. We are happy to receive any feedback.

Questions & Answers

Discussion points:

- Neighbors appreciated the communications and information provided.
- A note of thanks to LandCorp the City of Kwinana and Sims Metal who assisted with the opening of the Donaldson Rd extension – an essential element to the flow of extra traffic.

4.3 BMT Mercury Technology (BMT)

A service to the oil and gas industry - removal of Mercury from waste Presentation by: Karen Boyce, General Manager

BMT General Manager, Karen Boyce spoke on her role and gave an overview of the Dutch based company. BMT commenced its operations in the Netherlands in 1991 where it developed a gravitational separation method for removing mercury from sand.

The company went to patent a vacuum distillation method for purifying specific waste substances with mercury – with the technique becoming fully operations in 1996. BMT holds all patents to the technology and currently three companies globally have these processes.

BMT is a leading solution provider for the management, stabilization and disposal of hazardous waste in a safe operating environment and has a number of high profile global clients. BMT is a significant authority in the purification market specifically for waste substances containing mercury.

Mercury (Hg) occurs in various forms in natural gas and is brought to the surface during gas extraction.

Mercury presents a number of problems – potential contamination by mercury is a growing international problem. In most forms it is toxic and contributes to health, safety and environmental risks and is subject to a number of environmental regulations. Unlike other contaminated waste where 'dilution is the solution' mercury requires stabilization and permanent, sealed storage to protect the environment from its effects.

BMT is a mercury specialist and is in a position to handle all types of mercury contaminated waste effectively and safely. BMT purifies, treats and recycles mercury contaminated waste substances which are hazardous by-products of the oil and gas industry. BMT uses thermal technology and a distillation process. The waste cycle comprises waste generation; waste collection and storage; transportation of waste; waste treatment; and mercury and waste, residue disposal.

BMT services include Hg waste sampling; waste repacking, storage and transport; and cleaning. For example, mercury can form an amalgam inside pipes and the pipe has to be treated to remove the mercury.

BMT's head office is location in Rotterdam, with production facilities in the Netherlands, Thailand. A third facility is being built in Kwinana, Western Australia. Construction is expected to commence mid 2017 with commissioning of the plant expected mid-2018. This will create local employment opportunities. The project has an estimated capital cost of \$8-\$10m with a throughput of 1000tpa.

Questions & Answers

Nil.

5. GENERAL BUSINESS

Nil items.

6. CLOSE/ NEXT MEETING

As there was no further business, the Facilitator thanked everyone for their attendance and invited them to stay for refreshments. The meeting closed at 7.00pm.

The next CIF meeting is scheduled for Tuesday 24 October 2017.