

Annual General Meeting

29 November 2019



# Nation Building in Papua New Guinea



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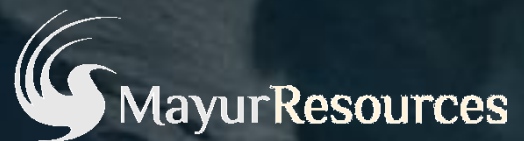
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# Company Profile





Mayur maintains a portfolio of projects under development in close proximity to world-class producing mines

# Company Overview

- Mayur Resources (**Mayur**) is an ASX-listed company focused on the development of natural resources in Papua New Guinea (**PNG**)
- Mayur seeks protection from commodity cyclicalities through product diversification and vertical integration
- A diverse portfolio of assets, including **Industrial Sands, Power Generation, Coal, Copper & Gold**, and the flagship project producing **Lime & Cement** (the **Project**)
- These projects are largely positioned in the lowest quartile of the cost curve for comparable projects globally

## Our Key Asset Groups



Lime &  
Cement



Industrial  
Sands



Power  
Generation



Coal



Copper &  
Gold



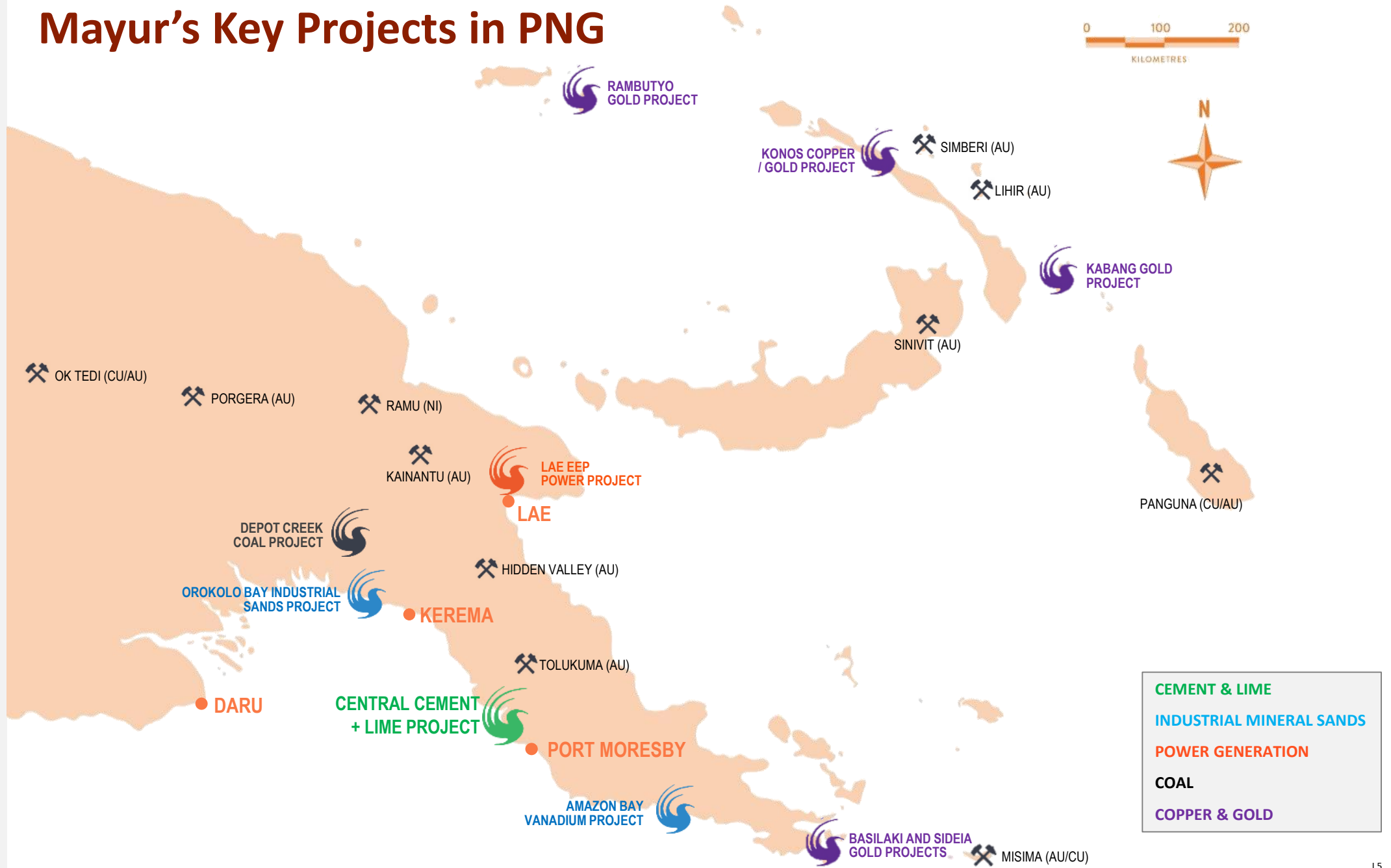
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# Mayur's Key Projects in PNG

All projects are coastal or in close proximity to the coast for easy development access and future access to sea borne markets



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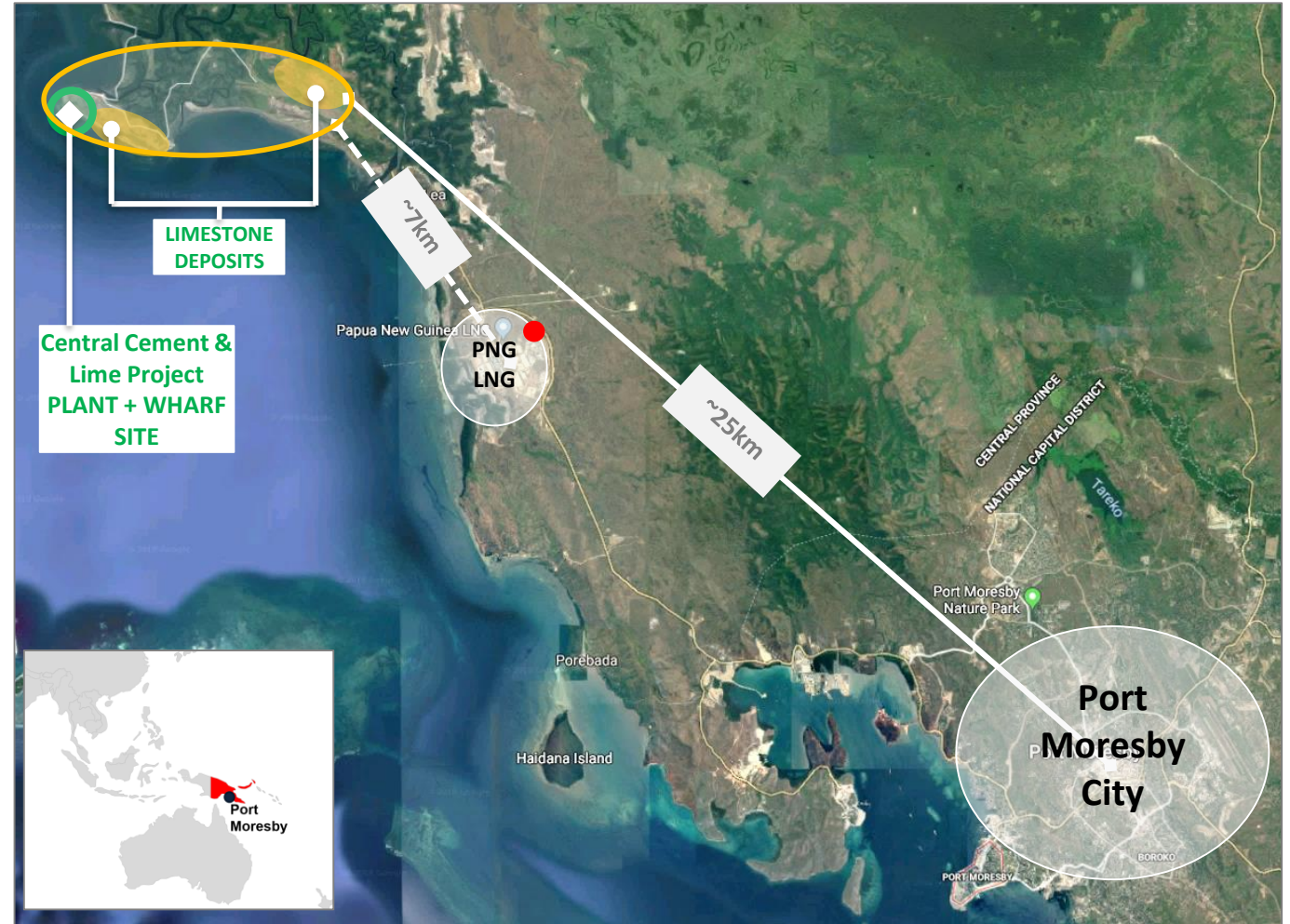
# Central Cement & Lime Project Overview



# Project Overview

The Project will serve as an import replacement and to service nearby growing Australian and Pacific import markets

- ✓ Project will produce 1.65 Mtpa of clinker (incorporating 907,500 tpa cement grinding capacity) and 198,000 tpa of quicklime
- ✓ High grade limestone deposits 25km from Port Moresby, and 7km from the Exxon PNG LNG Refinery
- ✓ 78 Mt of limestone Reserve supports 30-year project
- ✓ DFS completed in January 2019 with strong economics<sup>^</sup>
- ✓ 25 year Environmental Permit secured
- ✓ Mining Lease Application submitted
- ✓ Import replacement and export market penetration opportunities identified



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<sup>^</sup> for further detailed information on the DFS and associated JORC Resources / Reserve refer to ASX announcement dated 24 January 2019 – 'DFS complete for Central Cement and Lime Project' The company confirms it is not aware of any new information or data that materially effects the previously disclosed information and that all material assumptions and technical parameters underpinning the estimates in that information continue to apply and have not materially changed.

# Investment Highlights

1

World Class Cement & Lime Project

2

First Mover Advantage in a Growing Economy

3

Proximity to Import Markets

4

Project De-risked with Strong Economics

5

Sound Commercial Structure

6

Highly Reputable and Proven Delivery Team



Project has attractive fundamentals for debt investors



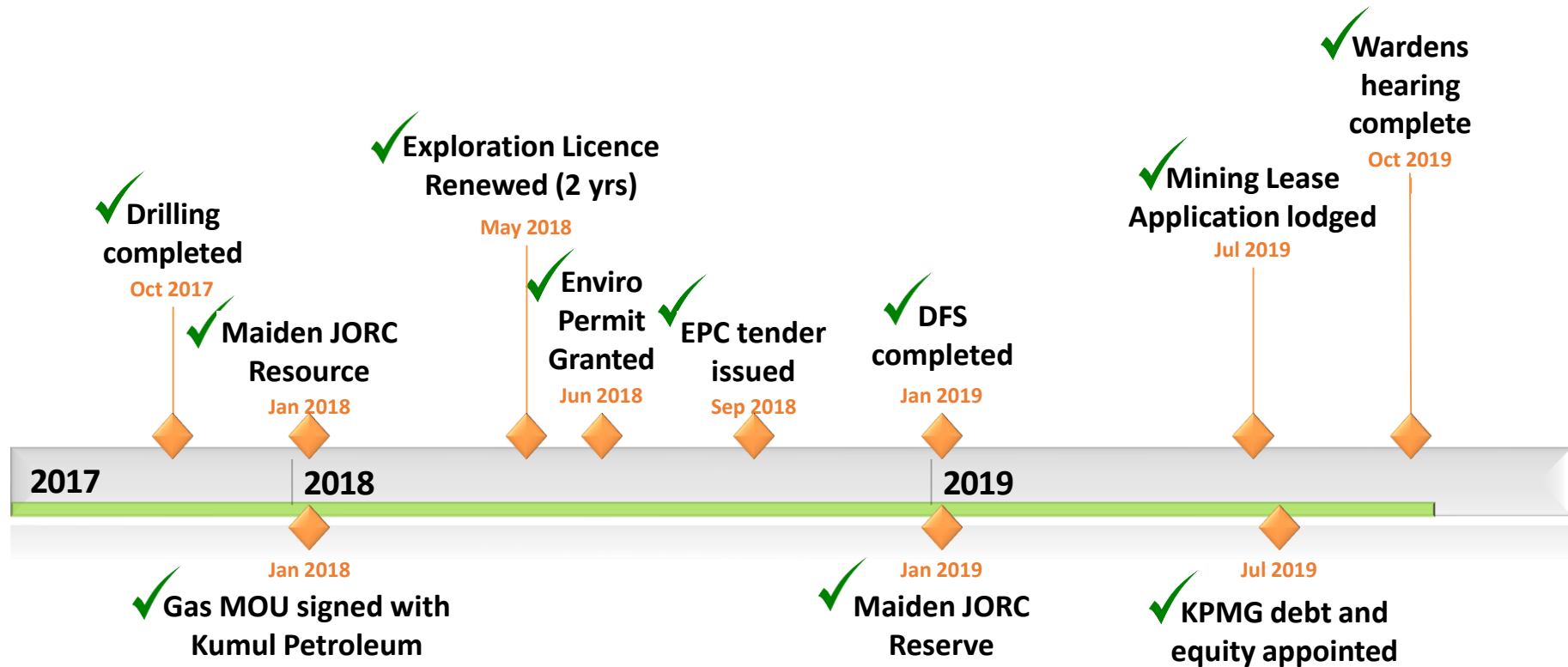
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# Progress – Major Milestones Achieved

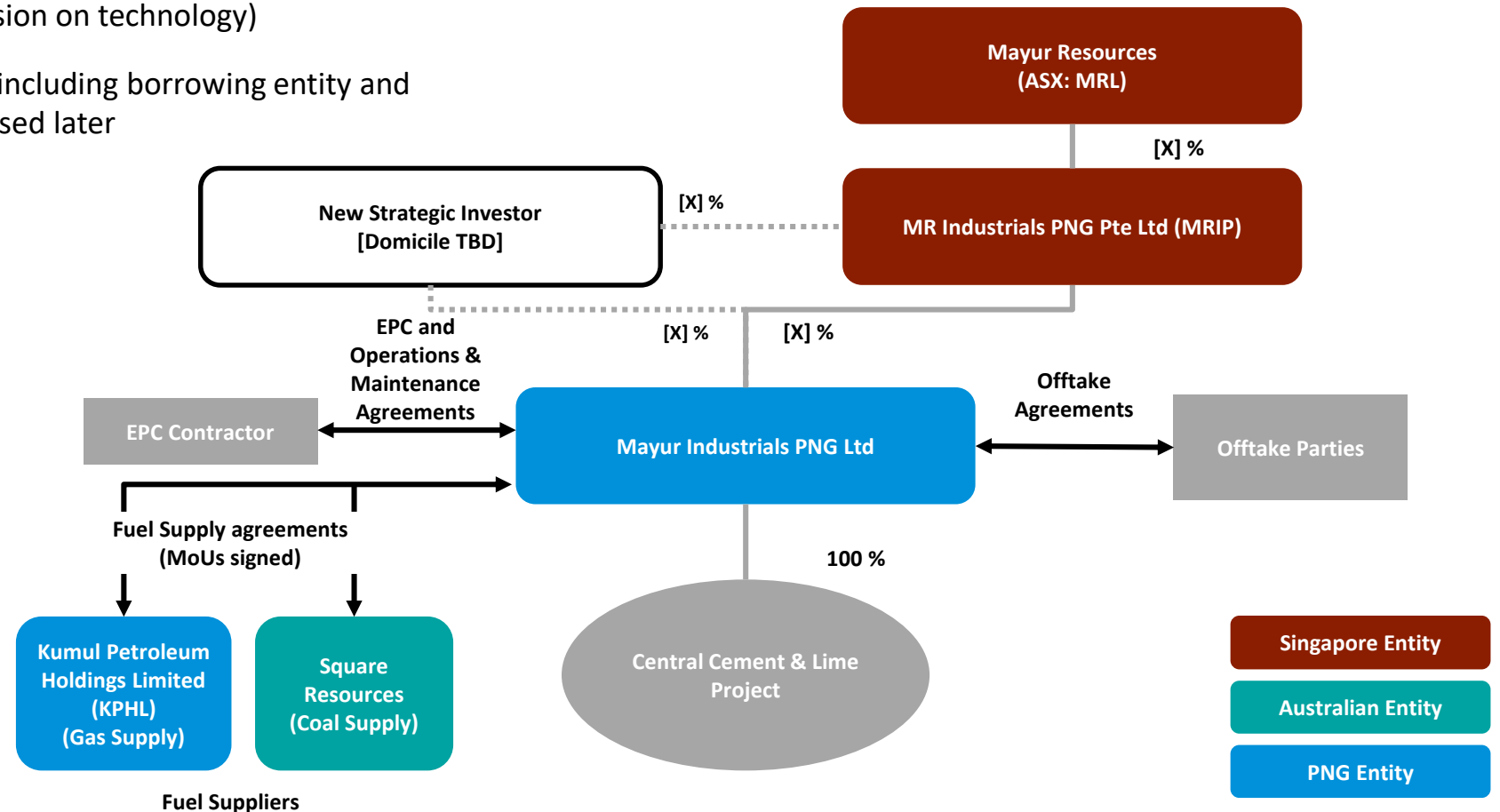
Mayur has already achieved several major milestones in development of the Project



# Project Ownership and Proposed Commercial Structure

Mayur is in discussions with potential strategic investors to invest at project level. MRL is also in commercial discussions as follows:

- EPC Contract discussions are ongoing with several Tier 1 Contractors
- Offtake discussions are ongoing with potential offtakers
- MOUs have been entered into for supply of coal or gas for power generation (pending a final decision on technology)
- Financing structure (including borrowing entity and obligor(s)) are discussed later



Mayur proposes to jointly own the Project with a strategic investor

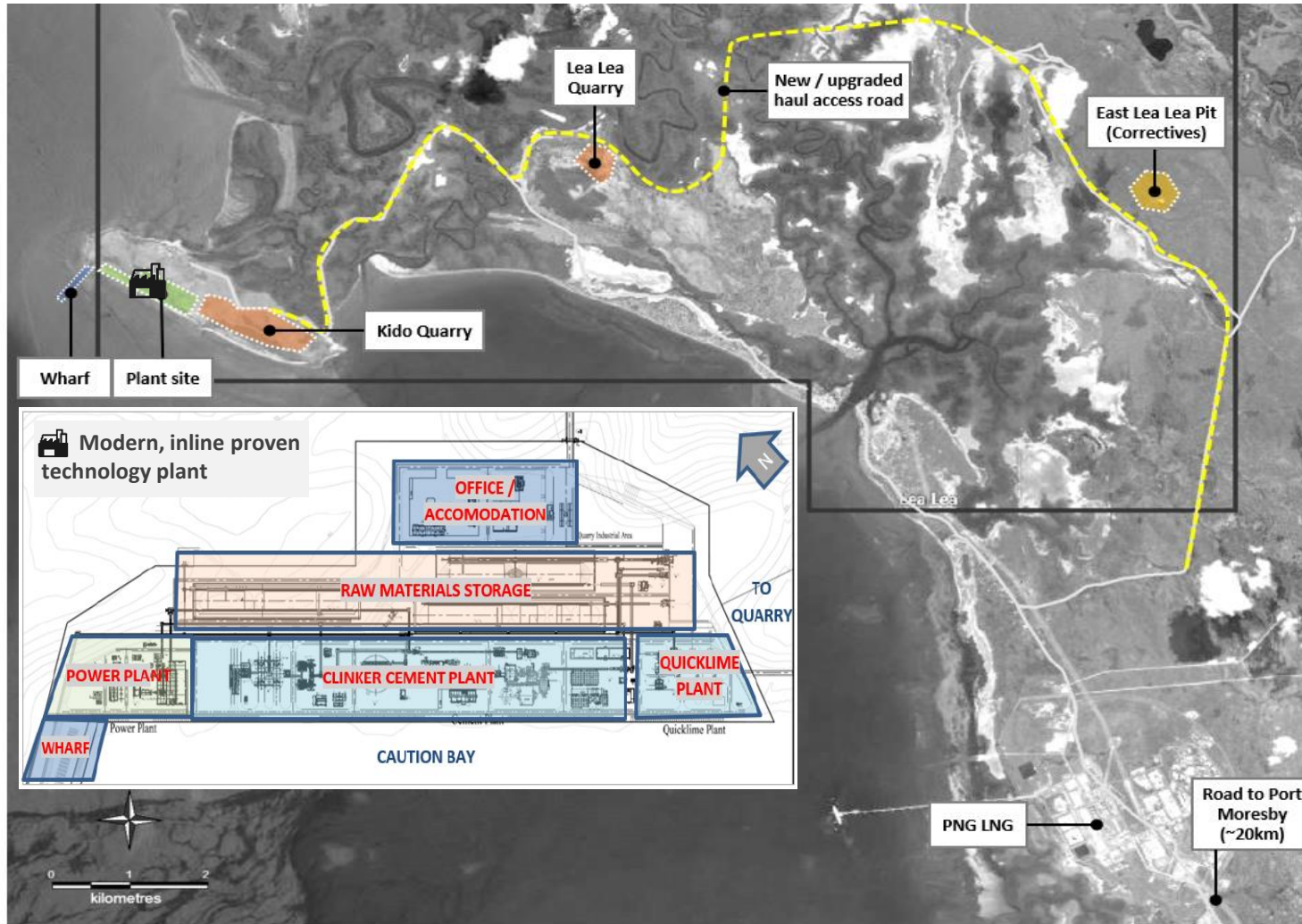


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# Project Site Layout

Purpose built facility, maximising the natural benefits of a coastal high quality resource adjacent to plant



The entire plant is laid out into six distinct zones according to functions as listed below:

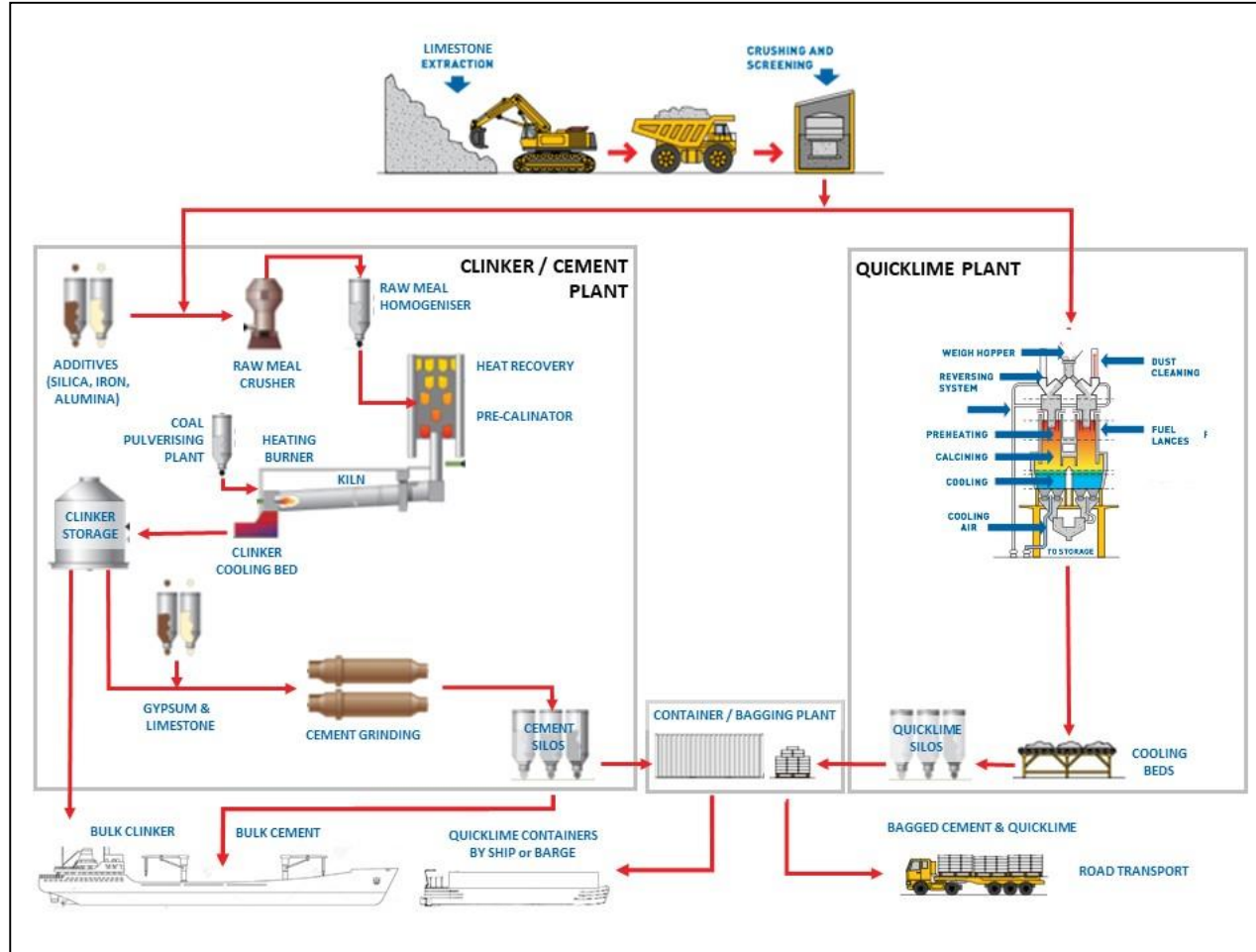
- clinker / cement plant;
- quicklime plant;
- power plant;
- accommodation / office area;
- raw material storage / industrial support sites;
- wharf area





# Project Flow Sheet

Flow sheet is simple and using proven technology



The production process is as follows:

- Limestone is crushed and sorted (highest purity for Quicklime and lower purity for Cement/Clinker).
- The Cement Plant production process:
  - Raw materials preparation
  - Main production (conversion of raw materials into clinker)
  - Cement grinding and dispatching
- The Quicklime Plant production process:
  - Limestone crushing workshop
  - Vertical Kiln for conversion of limestone to quicklime
  - Cooling and storage
- Product sent to container/bagging plant before transported via ship, barge, or road transport.





# Central Cement & Lime Project Products & Markets

# Overview of Cement and Lime Products

## CLINKER AND CEMENT

- Clinker is a dark grey nodular material made by blending raw materials (including limestone and clay), then heating to around 1450°C
- Cement is then made by grinding these nodules to a fine powder, along with a small amount of gypsum to control the setting properties
- Cement can be mixed with aggregate and water to produce concrete slurry, or moulded to produce a range of concrete pipes, box culverts, blocks, bricks, roof, floor and wall tiles.

## QUICKLIME

- Quicklime is a chemical compound, calcium oxide, made through the thermal decomposition of limestone or other materials containing calcium carbonate
- Quicklime is the product of the calcination of limestone in specialised kilns at temperatures up to 1000°C
- Quicklime can be produced in a number of sizes, which is used extensively in metallurgy to remove impurities and adjust final chemistry

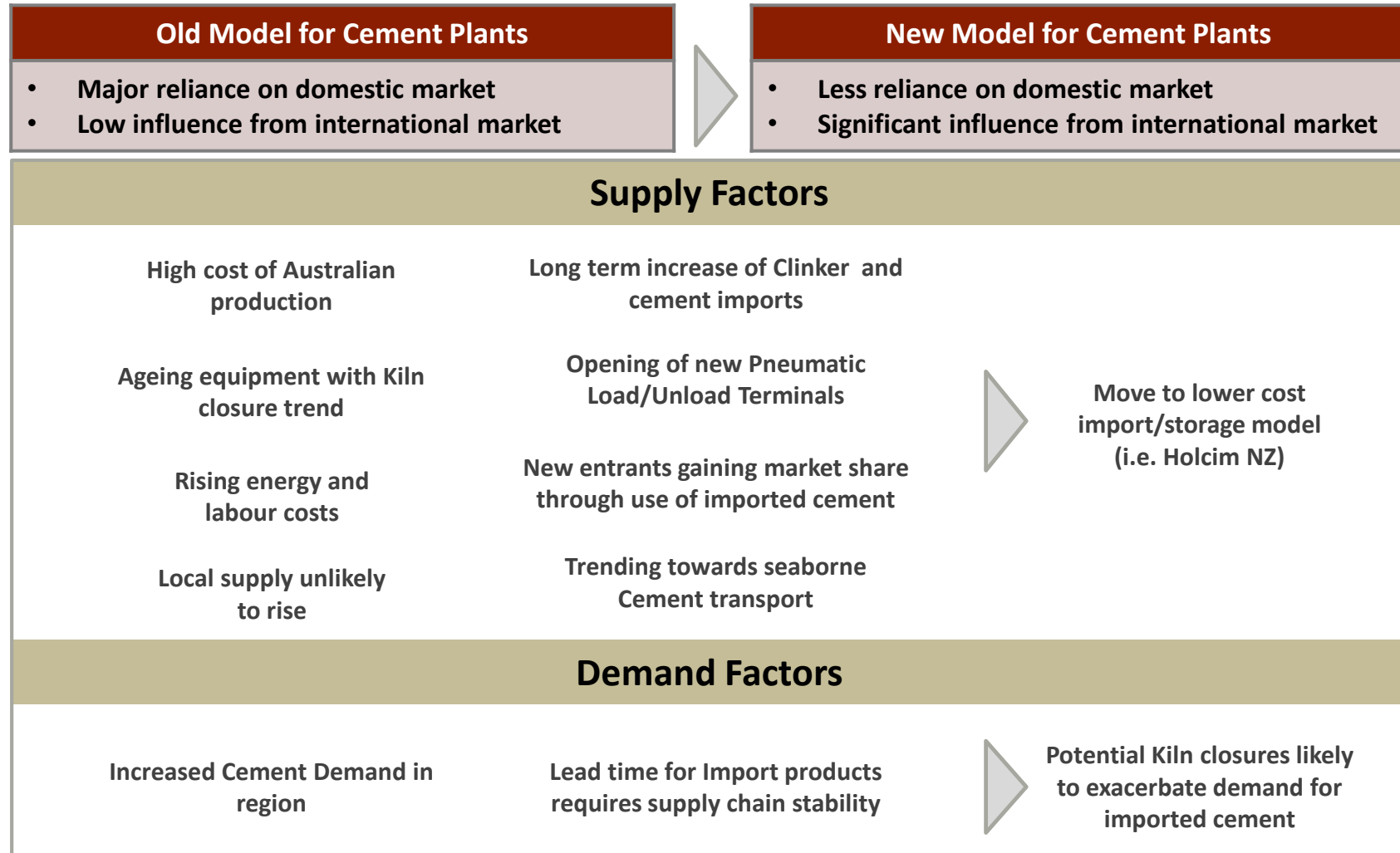




# Strategic Regional Opportunity

The Project is in an advantageous position for structural changes in the Oceania cement supply chain, specifically through:

The Project presents significant geographic and economic benefits

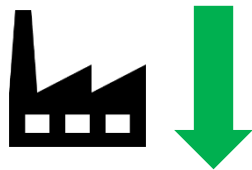


# Capitalising on Market Changes

The Project is well placed to become the preeminent supplier of Cement in Oceania by taking advantage of these structural changes, specifically through:

The Project has a significant opportunity to capitalise on the emerging trend of direct bulk cement imports

**1** Low cost production



**2** Increased import demand for Cement



**3** Improved transport, storage, handling methods



**4** Natural Freight Advantage compared to competitors



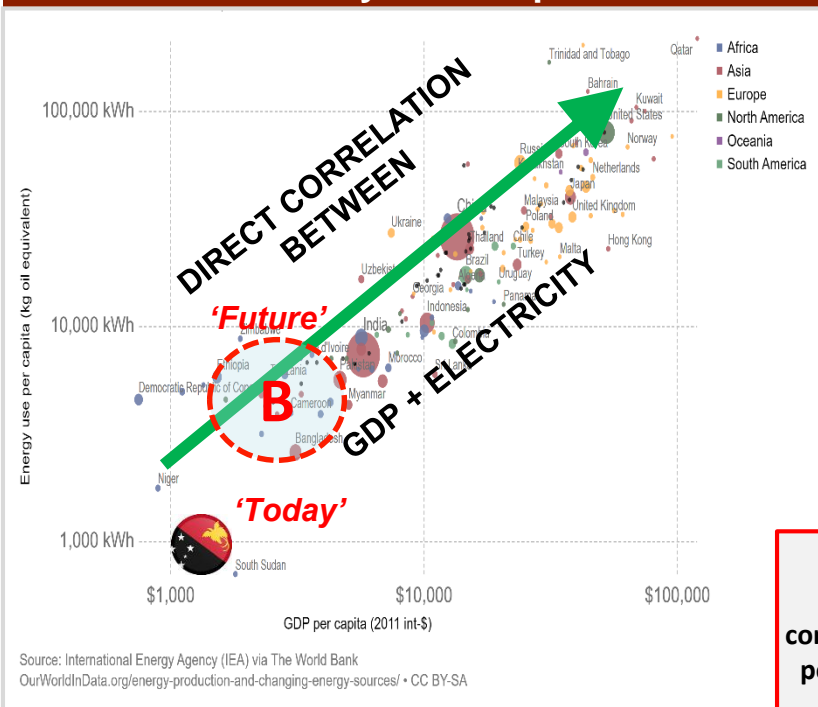
*Holcim Bulk Cement Storage Facility (Auckland, New Zealand) with pneumatic loading/Unloading.*



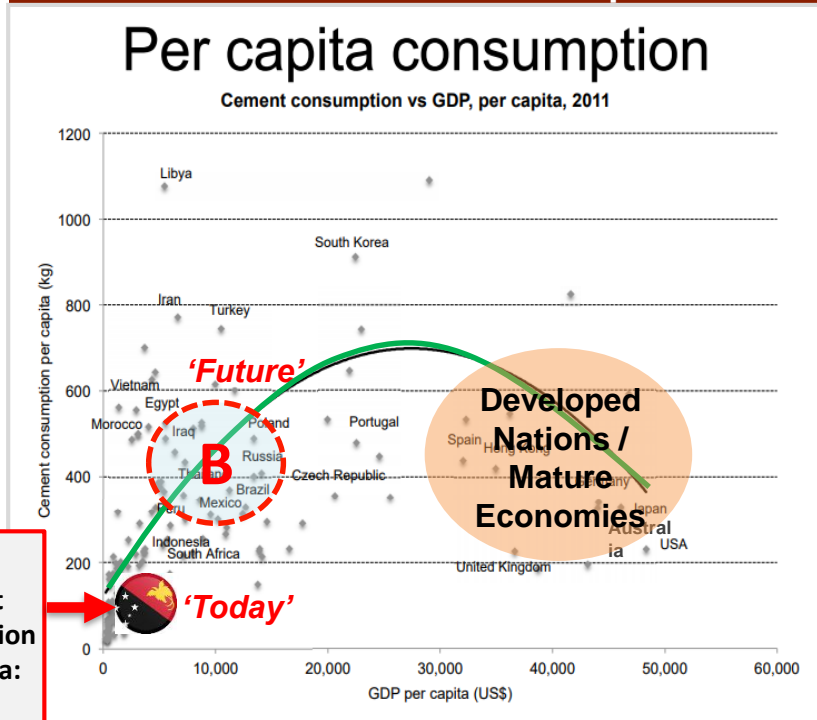
# Market Opportunity – PNG

The Project will serve as an import replacement and to service nearby growing Australian and Pacific import markets

## Relationship between increased GDP + electricity consumption



## Relationship between increased GDP + increased cement consumption



- **USD\$2bn Rural Electrification Program (US, Australia and Japan)**
- Target to increase electrification levels to 70% by 2030, **would lift gross national income by 12% and GDP by 10%**

- **USD\$14bn Papua LNG Project**
- **USD\$5bn Wafi-Golpu Project**
- **Belt and Road Initiative (BRI)** member with significant funding likely to follow.



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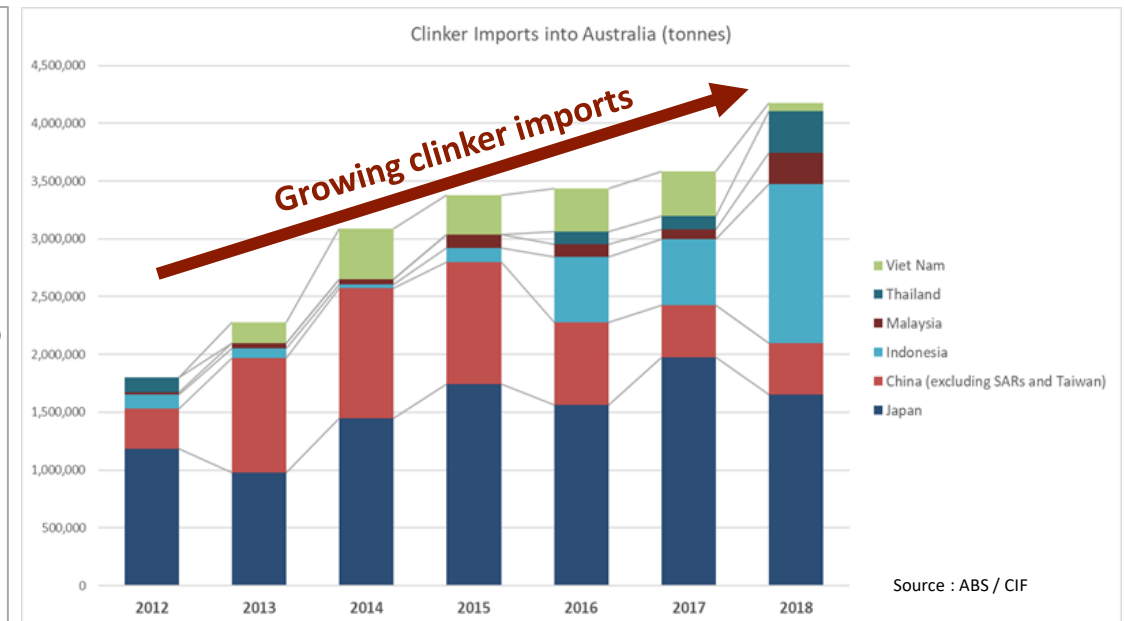
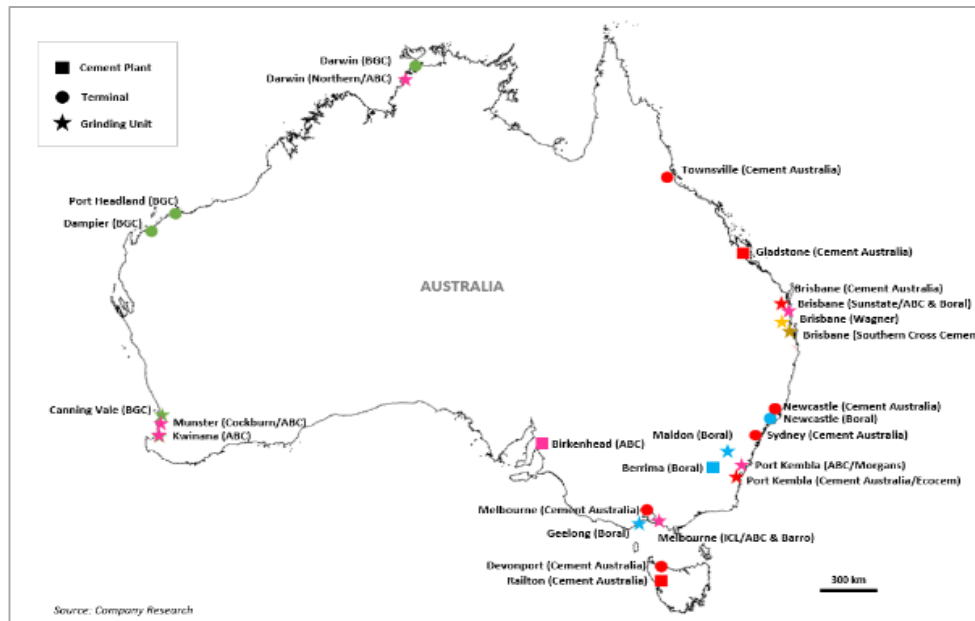
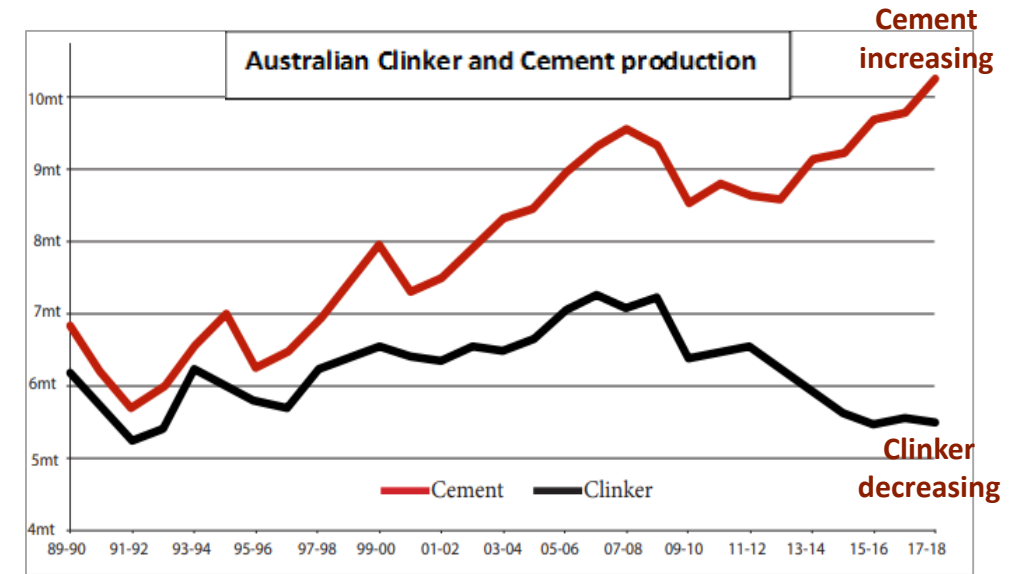


# Market Opportunity – Export

Whilst cement demand in Australia continues to grow in line with inflation (2%), domestic clinker production (supply) is declining with only 4 clinker kilns now operating in Australia.

The Australian market is supplied by **four** integrated cement plants as shown below, namely;

1. Gladstone operated by Cement Australia, (1.6 Mtpa)
2. Railton operated by Cement Australia (1.2 Mtpa)
3. Berrima operated by Boral (1.4 Mtpa), and
4. Birkenhead operated by Adelaide Brighton. (1.3 Mtpa)



Source : ABS / CIF

Australian kilns capacity is decreasing and opportunity exists to compete in the import market



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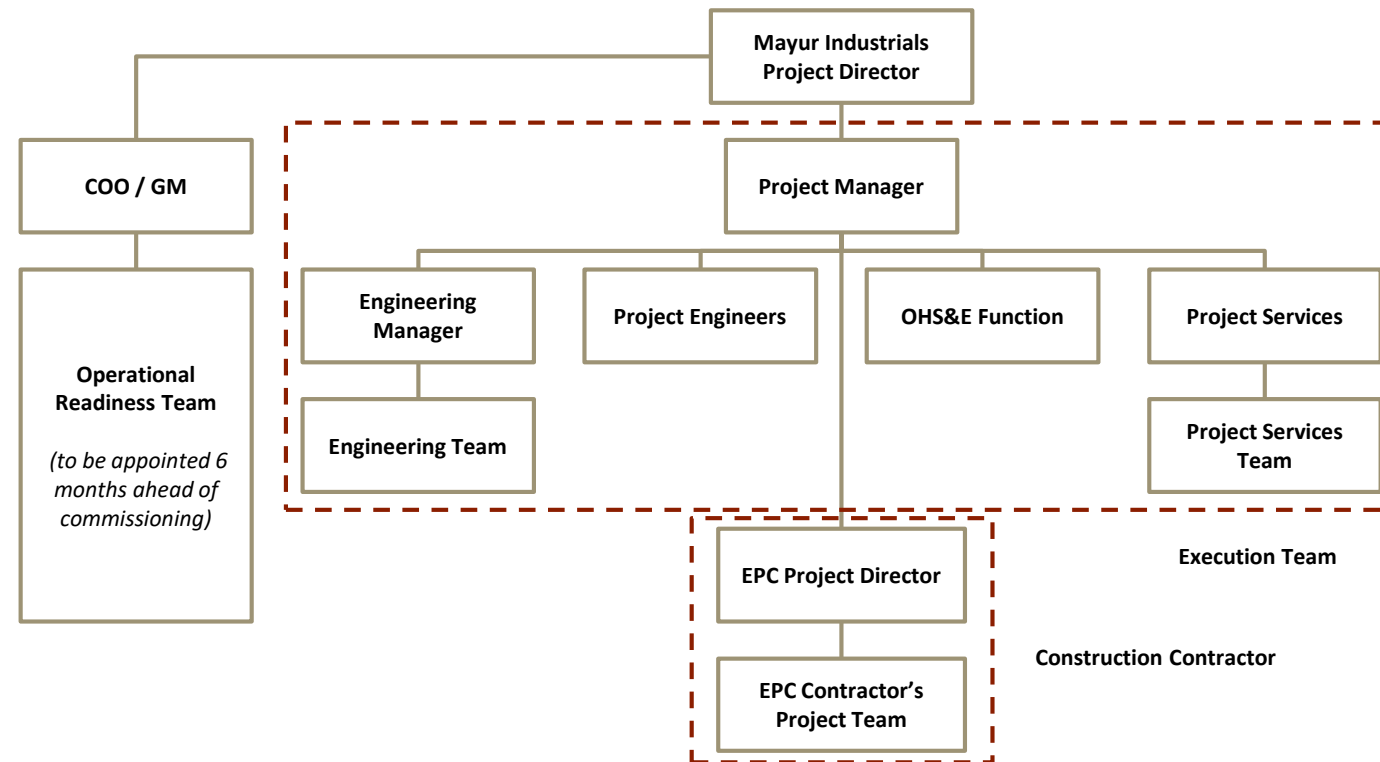


# Central Cement & Lime Project Delivery Strategy

# Project Execution Strategy

- Mayur will develop all aspects of the Project under one single turnkey EPC Contract with fixed price and fixed time.
- Mayur will maintain supervisory control throughout the construction phase, with the project execution team responsible for contract management (see indicative team structure below)
- Operations & Maintenance (O&M) services will initially be provided by the EPC Contractor with the option for the Mayur Project to undertake O&M in house when ready to do so in future.

Project Execution Team Structure

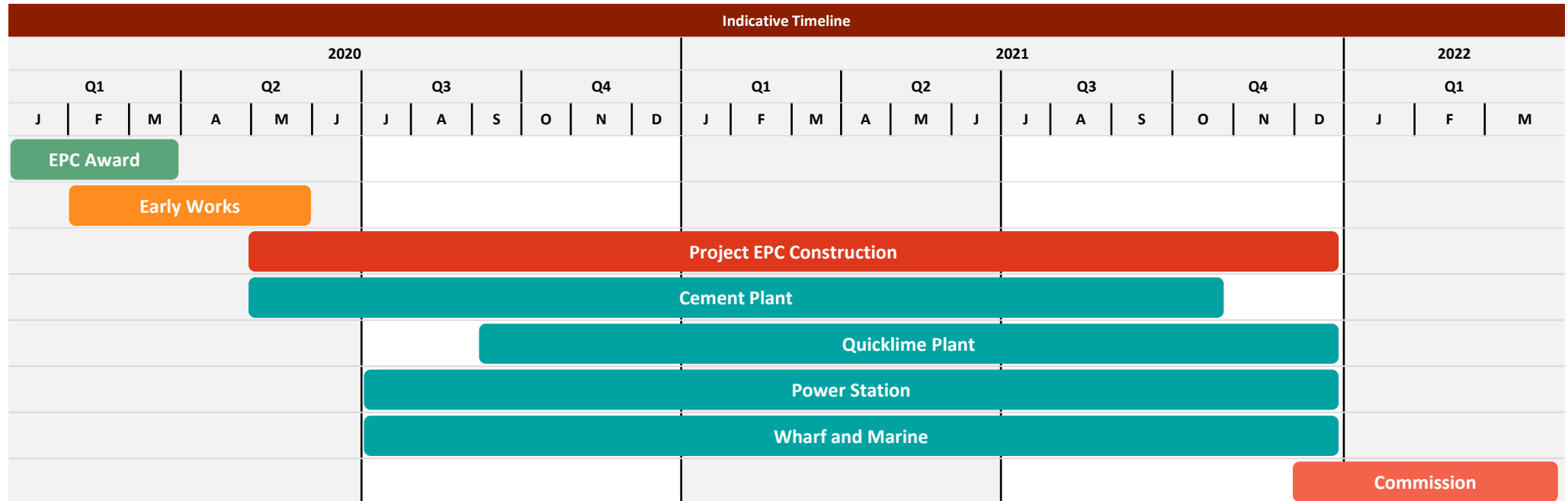




# Project Schedule

Contingent on individual work stream completion, the development of the Project is expected to adhere to the below schedule:

The Project is expected to be constructed by the end of 2021



# Power Generation Options

Two power generation options are being actively explored

## POWER GENERATION OPTIONS

### Option 1 - FLUIDISED BED COAL

- Installed capacity of 36MW, rated output of 30MW, plus 6MW waste heat
- Circulating fluidised bed combustion technology (latest technology)
- Letter of intent signed with Square Resources for coal supply
- Condenser cooling water to be drawn from the sea, in order to preserve fresh water. Discharge back to the sea in compliance with environmental requirements
- Fly ash by-product can be used in cement production process, either added to the kiln feed, or added to the cement mill system (Reuse/recycle)

### Option 2 - COMBINED CYCLE GAS TURBINE

- 30MW nameplate capacity, consisting of 2 x 15MW gas-fired turbines plus 7.5MW waste heat
- Natural gas supply MOU signed with Kumul (PNG National Petroleum Company)
- Final negotiations in progress for a Gas Sales Agreement (GSA) securing a life of project fixed price arrangement for gas supply.
- CCGT option optimal from an environmental perspective, subject to finalising project economics, and fuel supply negotiations

- DFS base case assumes the use of coal, however Mayur has request EPC bidders to consider that the Project may use coal or gas as a fuel source for the power plant and kiln facilities.
- Trade-off study is currently underway to determine if gas remains a viable option.



# Environmental & Social Impact Management

Environmental and Social requirements at an advanced stage

## ENVIRONMENTAL

Progress made with the Conservation and Environmental Protection Authority (CEPA):

- ✓ Environmental Permit for the Project issued by CEPA
- ✓ Draft Environmental Management and Monitoring Plan (EMMP) prepared, submitted and approved by CEPA
  - EMMP provides a framework for management of identified environmental impacts and implementation of measures to effectively avoid, reduce or offset these impacts.
  - EMMP is an evolving document that adapts as environmental and social baseline information becomes available, the significance of potential impacts is determined, and the design process for the Project continues.
  - The project produces no solid waste, no tailings and uses no chemicals. Clinker kilns are also very effectively used to burn both industrial and municipal waste.

## SOCIAL

The main settlements impacted by the Project are:

- **Kido Village** is located on the northern end of Kido headland, near the proposed site for the quicklime and cement/clinker plants, power station and wharf.
- **Lea Lea Village** is the closest community to the Lea Lea limestone deposit. Villagers sometimes frequent the area for hunting, with two water wells in the nearby area being used intermittently during this activity.
- Extensive landownership studies have been completed across the project area that includes the villages of Kido and Lea Lea.
- In conformance with the requirements of its Mining Lease (ML), the Company is in the process of finalising the benefits package and compensation arrangements with the identified land owners.
- No requirement for re-settlement of the local community and the project area
- ML wardens' hearing completed with strong community support



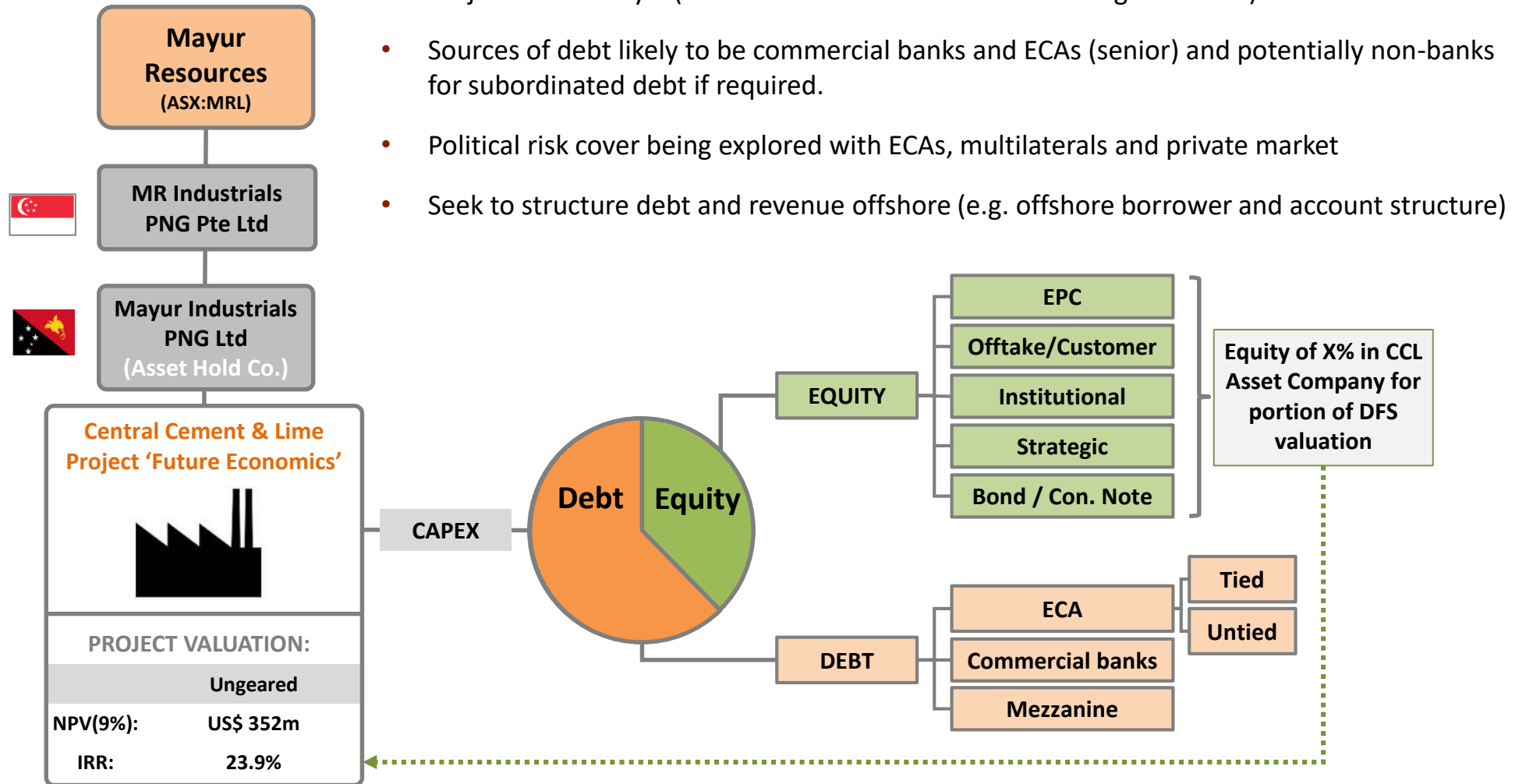


# Central Cement & Lime Project Proposed Funding Plan



# Funding Plan

New equity from Strategic investor and non-recourse debt will be contributed at project level



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^ for further detailed information on the DFS and associated JORC Resources / Reserve refer to ASX announcement dated 24 January 2019 – 'DFS complete for Central Cement and Lime Project' The company confirms it is not aware of any new information or data that materially effects the previously disclosed information and that all material assumptions and technical parameters underpinning the estimates in that information continue to apply and have not materially changed.



# Other Projects



## Industrial Sands

### Orokolo Bay Project

100% owned

~USD\$60m in annual revenue once in full production



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### PROJECT UPDATE:

- Finalising equipment procurement and mobilisation plans for bulk sampling pilot plant
- Land owner agreements signed for bulk sampling area
- Targeting Bulk sampling pilot plant construction in Q1 2020
- Completed infill drilling and commenced updating Resource model to feed into Reserves planning and Definitive Feasibility Study (DFS)
- Mobilisation for airborne Lidar survey in December 2019 as part of DFS



Bulk sampling pilot plant indicative 3D image

\* For further information on the Orokolo Bay JORC and PFS refer to Prospectus dated 21 July 2017 and Statement of Various confirmations dated 19 September 2017. The Company confirms it is not aware of any new information or data that materially affects the previously disclosed information and that all material assumptions and technical parameters underpinning the estimates in that information continue to apply and have not materially changed





## Coal

### Depot Creek Coal Project

Tenure covering  
>200km strike

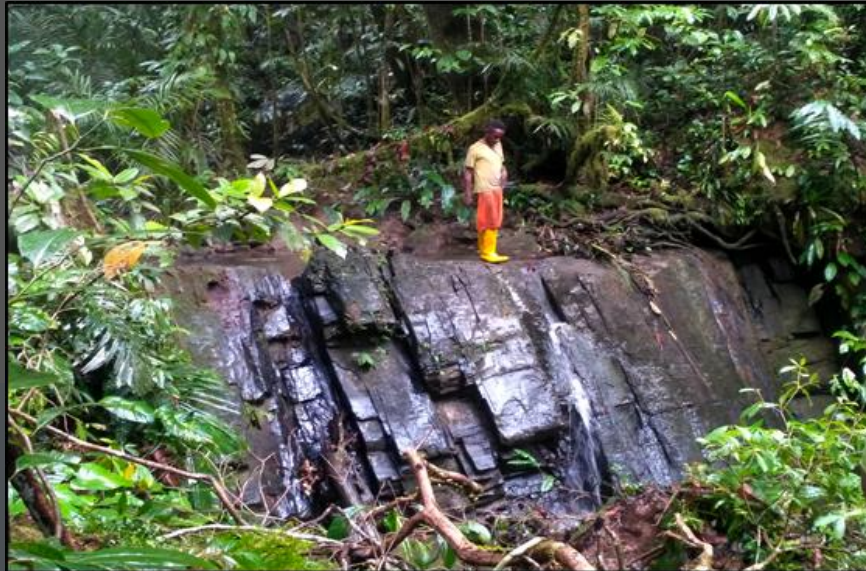


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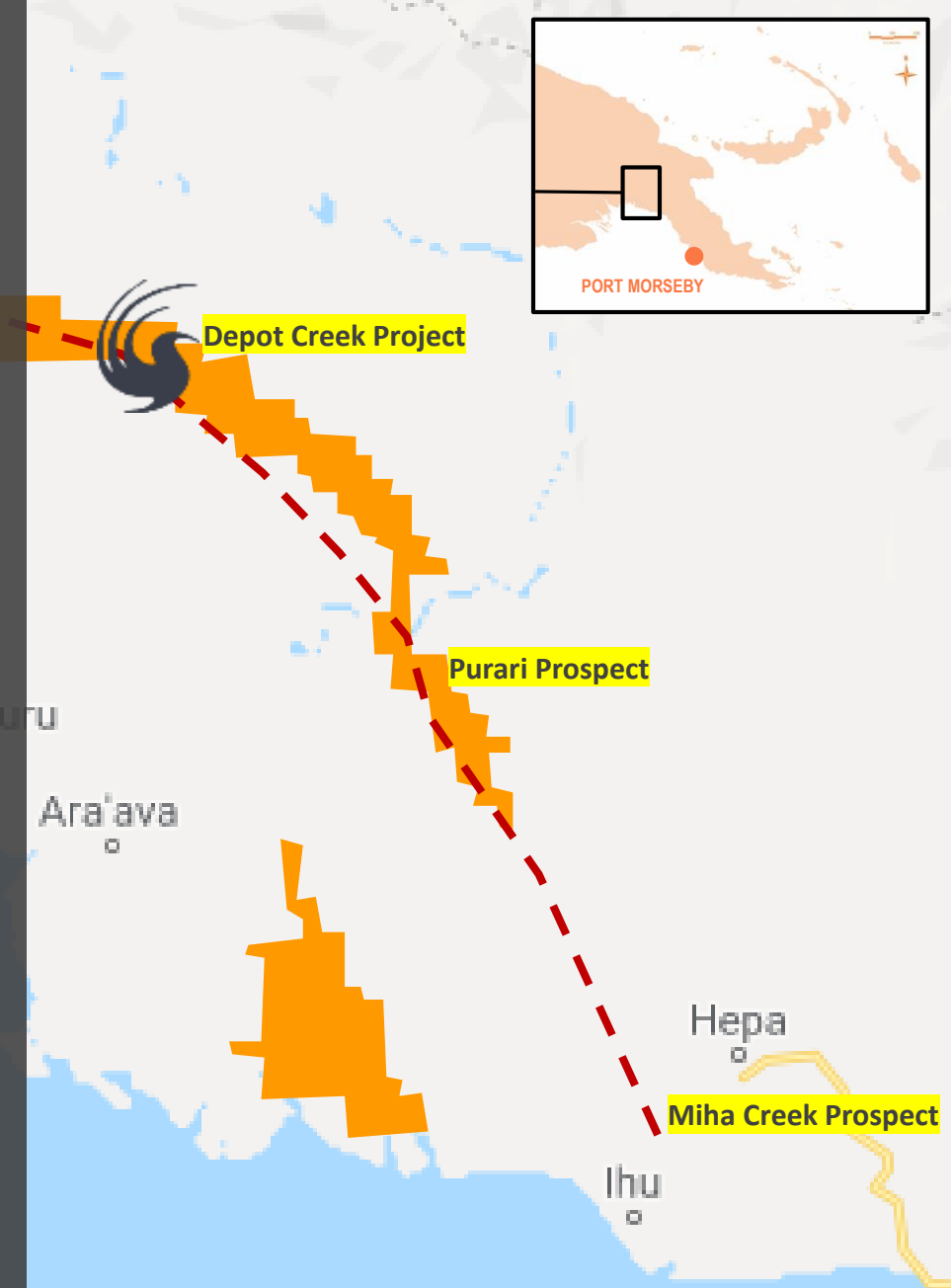
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### PROJECT UPDATE:

- Completed 28 drill holes (back pack drilling) of a planned 40 hole infill drill programme of the current Depot Creek JORC Resource\*
- Drilling continuing through December 2019 and January 2020 with objective to delineate further resources and upgrade to reserves
- +210Mt regional Exploration Target



\* For further information on the Depot Creek Resource and Exploration Target refer to Prospectus dated 21 July 2017. The Company confirms it is not aware of any new information or data that materially effects the previously disclosed information and that all material assumptions and technical parameters underpinning the estimates in that information continue to apply and have not materially changed







## Power Generation

### Lae Enviro Energy Park (EEP) Project

100% owned  
52.5MW power station with future scalability to 200MW



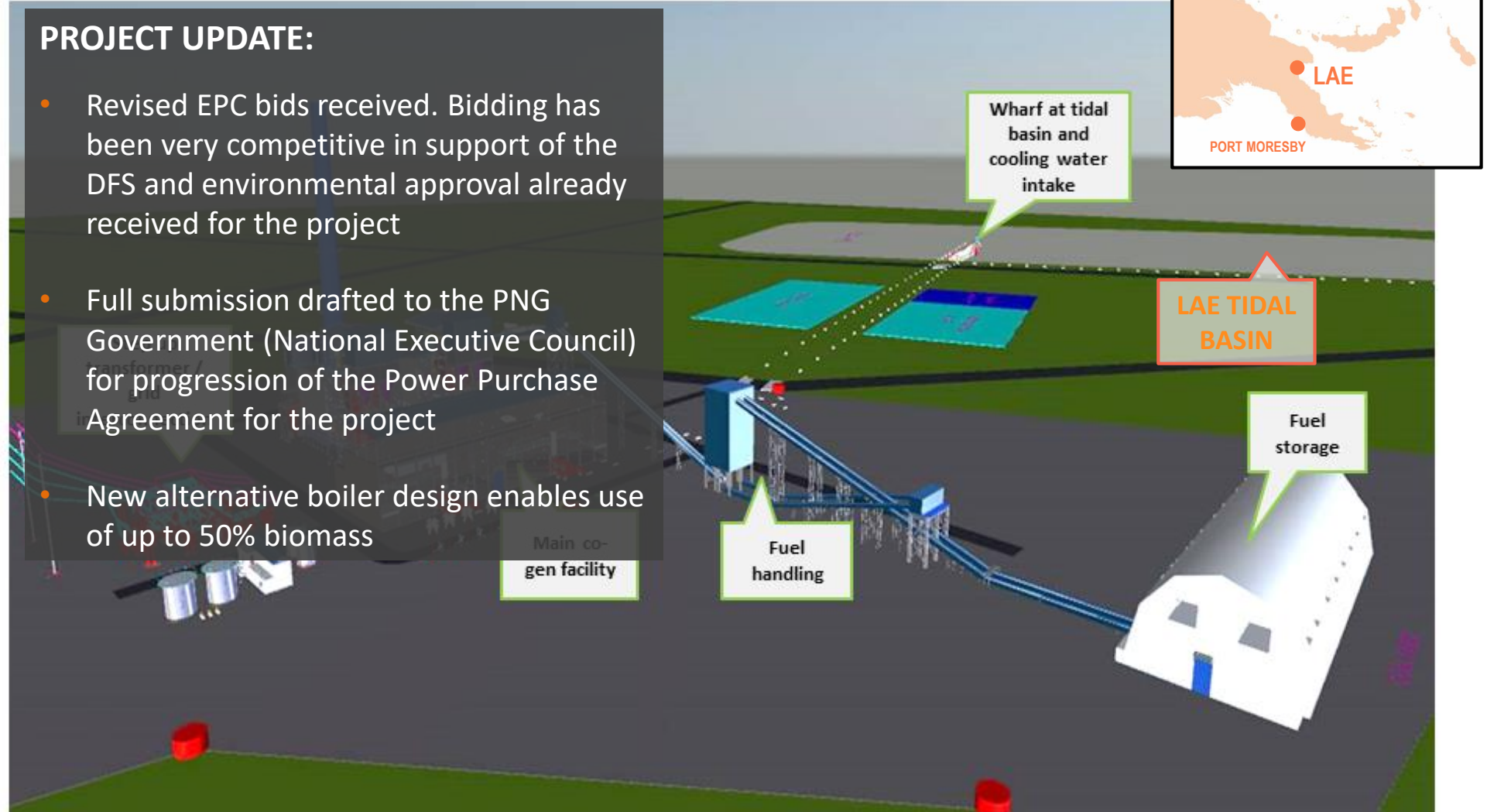
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## Lae EEP – A modern Power Station at Lae Tidal Basin

### PROJECT UPDATE:

- Revised EPC bids received. Bidding has been very competitive in support of the DFS and environmental approval already received for the project
- Full submission drafted to the PNG Government (National Executive Council) for progression of the Power Purchase Agreement for the project
- New alternative boiler design enables use of up to 50% biomass



Plant takes solar, biomass woodchip, coal and produces steam by-product



## Copper & Gold

Geological rationale based on finding and developing epithermal (volcanic arcs setting) and porphyry systems



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## PROJECT UPDATES:

### BASILAKI & SIDEIA

- Geophysics data from the Sideia aeromagnetic and radiometric survey being reprocessed

### KONOS

- Completed regional geochemical sampling program and awaiting lab results

### KABANG (FENI)

- Ongoing liaison with landowners and the Mineral Resources Authority as part of tenement renewal process

### RAMBUTYO

- No further updates



## Competent Person's Statements

Statements contained in this presentation relating to Mineral Resources and Ore Reserves estimates for the Central Cement and Lime Project are based on, and fairly represents, information and supporting documentation prepared by Mr. Rod Huntley, who is a member of the Australian Institute of Geoscientists. Mr. Huntley has sufficient and relevant experience that specifically relate to the style of mineralisation. Mr Huntley qualifies as a Competent Person as defined in the Australian Code for Reporting of Identified Mineral Resources and Ore Reserves (JORC) Code 2012. Mr Huntley is an employee of Groundworks Pty Ltd contracted as a consultant to Mayur Resources and consents to the use of the matters based on his information in the form and context in which it appears. As a competent person Mr Huntley takes responsibility for the form and context in which this initial Ore Reserves Estimate prepared for the Central Cement and Lime Project appears.

Statements contained in this presentation relating to Mineral Resource estimates for the Orokolo Bay Industrial Sands Project and the Feni Gold project are based on, and fairly represents, information and supporting documentation prepared by Mr. Simon Tear, who is a member of the Australian Institute of Geoscientists. Mr. Tear has sufficient and relevant experience that specifically relate to the style of mineralisation . Mr Tear qualifies as a Competent Person as defined in the Australian Code for Reporting of Identified Mineral Resources and Ore Reserves (JORC) Code 2012. Mr Tear is an employee of H&S Consultants Pty Ltd contracted as a consultant to Mayur Resources and consents to the use of the matters based on his information in the form and context in which it appears. As a competent person Mr Tear takes responsibility for the form and context in which the Mineral Resource Estimate prepared for the Orokolo Bay Project and Feni Gold Project appears.

Statements contained in this presentation relating to Mineral Resource estimates for the Depot Creek Coal Project are based on, and fairly represents, information and supporting documentation prepared by Mr. Neill Biggs, who is a member of the Australian Institute of Geoscientists. Mr. Biggs has sufficient and relevant experience that specifically relate to the style of mineralisation. Mr Biggs qualifies as a Competent Person as defined in the Australian Code for Reporting of Identified Mineral Resources and Ore Reserves (JORC) Code 2012. Mr Biggs is an employee of Resolve Geo Pty Ltd contracted as a consultant to Mayur Resources and consents to the use of the matters based on his information in the form and context in which it appears. As a competent person Mr Biggs takes responsibility for the form and context in which the Mineral Resource Estimate prepared for the Depot Creek Coal Project appears.

