

FIRST ANNUAL REPORT
BELL BAY QUARRY PROJECT
EXPLORATION LICENCE 21/2012
For period from March 20th, 2017 to March 20th, 2018

Bell Bay, Tasmania, Australia

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ABSTRACT

Pacific Basin Bluestone Pty Ltd (PBB) was created in 2015 with a sole purpose of acquiring, exploring and undertaking economic studies on the Bell Bay Coastal Quarry Project located in Northern Tasmania. The Company's objective if the outcome of those studies continues to be positive is to develop the Project into a commercial venture exporting a diversified range of quarry products to both mainland Australia as well as regional international markets.

The project area covered largely by EL7/2015 (25Km²) and to a lesser extent EL21/2012 (2Km²), both tenements, whilst discontinuous, are inextricably linked having a number of standout criteria considered unique to a potential quarry's development being:

- A large high quality dolerite resource located at surface with negligible overburden
- Dolerite having demonstrated historically its outstanding physical characteristics through a small historical quarry operation (now no longer in use) developed for sourcing coastal rock/blocks for the development of the Bell Bay port
- The dolerite exceeding Australian Standards for aggregate and other products and deemed suitable for all Australian construction materials markets
- The proposed quarry being located in a zoned industrial area on land owned by Rio Tinto Australia
- An adjacent very high quality deep water port facility located at George Town which is currently under utilised
- Excellent supporting infrastructure including, available land at the port, very high quality roads, rail, nearby water and power
- An experienced industrial workforce to draw upon in the immediate vicinity of George Town

PBB has chosen a strategic approach, to initially look at the more niche product markets rather than standard aggregates, initially looking at the potential to supply the Eastern seaboard of Australia, South Australia, the Pacific Nation islands and New Zealand with *armour rock* for coastal defence purposes.

With the notable absence of "go-to" niche producers of armour rock in the region that exist in such an advantageous coastal location, located immediately adjacent to high quality road and port infrastructure, PBB is concentrating focus on this low capital intensive product area, whilst looking into further value add pre-cast concrete markets as a second phase 2 development potential in the future.

Based on consideration and assessment of two reports in 2016-17: The *Initial Study* and the *Phase 1 Actions Study* undertaken by GHD Australia's Launceston office, a number of key conclusions have been drawn on the potential for a quarry development located at Bell Bay in Northern Tasmania. PBB will take these key conclusions into consideration when planning the next steps to the economic assessment of the project.

In order to exploit natural competitive advantage (the unique position of being a coastal quarry with nearby access to existing port facilities), and provide the ability to meet market demand in a highly integrated industry, the quarry development, and subsequent studies will consider:

- A flexible plant operation and diversified product range, with a start-up focus on alternate rock products (armour rock and gabion stone) in addition to aggregate
- The use of leased plant in the initial operations to minimise upfront capital and time to commence operations
- Undertake a phased development approach to the project, with an initial small volume Phase 1 operation, growing through expanded Phase 2 and Phase 3, with commercially defined trigger points based on market size and realisation of product demand for quarry products
- Exploit the advantages of a small start-up volume with a low up-front capital cost requirement (through leased plant and use of existing berthing facilities) to establish a market presence, generate initial project cash flow, as well as minimise commercial risk exposure
- New identified aggregate markets in New Zealand, in addition to Melbourne and Sydney
- Target key strategic positioning opportunities for the supply of quarry products (and potentially value-add concrete products) for coastal protection and rehabilitation projects (for armour rock, coastal protection blocks, and gabion stones) on the Australian east coast.

Activities in the coming year will focus on establishing an understanding of both armour and gabion stone markets in addition to studies looking also into specialist pre-cast markets. Discussions with Tasports on the use of the Bell Bay port for export shipments as well as discussions around the existing quarry will also be undertaken and if successful MOU agreements entered into. The Company is also currently in discussions with a large international logistics and stevedoring firm. It is anticipated that an MOU will be entered into in the near term outlining cooperation between the two companies in providing figure estimates on the cost of transport to port, stevedoring and shipping from the port of Bell Bay to allow marketing to prospective customers to be undertaken with a higher level of accuracy than current.

TABLE OF CONTENTS

ABSTRACT	2
1.0 INTRODUCTION	5
1.1 Licence Retention Rational	5
1.2 Regional & Local Geological Setting	6
1.3 Licence Tenure & Location	6
2.0 REVIEW OF PREVIOUS WORK	7
3.0 EXPLORATION COMPLETED DURING THE REPORT PERIOD	7
4.0 DISCUSSION OF RESULTS	9
4.1 Initial Study	9
4.2 Phase 1 Actions Study	11
4.2.1 Additional Market Locations	11
4.2.2 Alternate Products	12
4.2.3 Reducing Capital	13
4.2.3.1 Leased Plant	13
4.2.3.2 Single Ship Loader	13
4.2.3.3 Second Hand Transfer Conveyor	14
5.0 CONCLUSIONS	14
6.0 ENVIRONMENT	15
7.0 EXPENDITURES	15
8.0 REFERENCES	15

1.0 INTRODUCTION

1.1 Licence Retention Rational

Pacific Basin Bluestone Pty Ltd (PBB), now owned 100% by privately owned Bayrock Materials Pty Ltd (September 2016), was created in 2015 with a sole purpose of acquiring, exploring, undertaking economic studies, and if the outcome of those studies was positive, develop, what is referred to as the Bell Bay Coastal Quarry Project, in Northern Tasmania.

The project area (now covered by EL7/2015 and EL21/2012) had previously been identified by two previous owners the last being Delta Materials Pty Ltd (Delta) (between 2009-2014) as having a number of standout criteria considered unique to a potential quarry's development being:

- An outstanding large high quality dolerite resource located at surface with negligible overburden.
- Dolerite having demonstrated historically its outstanding physical characteristics through a small historical quarry operation (now no longer in use) developed for sourcing coastal rock/blocks for the development of the Bell Bay port
- The dolerite exceeding Australian Standards for aggregate and other products and deemed suitable for all Australian construction materials markets
- The proposed quarry being located in a zoned industrial area on land owned by Rio Tinto Australia.
- An adjacent very high quality deep water port facility located at George Town, which is currently under utilised.
- Excellent supporting infrastructure including, available land at the port, very high quality roads, rail, nearby water and power.
- An experienced industrial workforce to draw upon in the immediate vicinity of George Town.

Whilst PBB shares similar views to Delta in terms of all of the above, the Company is very different to Delta in terms of its business strategy and goals and how it envisages the prospectivity and potential of the Bell Bay Quarry Project's commercial development.

Delta (2009-2014) focused on a business plan targeting supply to the Sydney market with up to 5Mtpa of aggregate, and in turn developed its models and plans and proposed operation design to these requirements. PBB however, whilst recognising the validity of Deltas business approach in supplying Sydney with aggregate at times of high prices, also recognises that, like Delta, it does not currently have an integrated concrete business as part of its corporate structure to consume some or all of this production. Thus PBB has taken the initial view that to attempt to supply Sydney with large volumes of aggregate in the short to medium term would not only be a large initial undertaking in terms of capital requirements, but also inhibitive in terms of perceived market risk, emanating from both competitors actions and market conditions.

PBB has therefore chosen a more strategic approach, to initially look at the more niche product markets and initially look at the potential to supply South Australia, the eastern seaboard of Australia, the Pacific nation islands and New Zealand with *armour rock* for coastal defence purposes.

Noticing the notable absence of “go-to” niche producers of armour rock in the region that exist in such an advantageous coastal location, located immediately adjacent to high quality road and port infrastructure, PBB is concentrating its focus on this low capital intensive product area, whilst looking into further value add pre-cast concrete markets as a second phase 2 development potential in the future.

1.2 Regional & Local Geological Setting

The Tasmanian dolerites outcropping at Bell Bay and for the most part throughout Central and south eastern Tasmania are considered to be of Middle Jurassic age 175+/- 8Ma (Calver & Seymour, 1998). They are believed to be the result of and represent a minor fraction of the total amount of magma emplaced into the crust during the breakup of Gondwana land, which saw the separation of Tasmania from Antarctica completed during the Eocene.

In the Tasmanian basin the dolerites usually occur as large stratiform or discordant sills and cone sheets sometimes with stacked interstratified sills connected by feeder dykes (Leaman 2002).

The dolerite at the Bell Bay project is a coarse to fine grained ophiolitic textured sill with an apparent dip of 10-15 degrees to the southwest. The dolerite is cut by a series of steeply dipping NW-SE, E-W and NE-SW trending faults, which compartmentalise to a significant degree the generally massive nature of the dolerite intrusion. The true thickness of the pre-eroded sill is not known though it is noted (Delta 2014) that the sill exceeds 170 metres as defined by drilling activities in 2009 & 2010.

Delta (Coffey Mining NI43-101 in 2010) reported surface mapping and orientated core measurements indicating that five joint trends occur within the project area. Three of the joint trends parallel NW-SE, EW and NE-SW striking faults. The N-S joint trend was reported as being the dominant trend.

1.3 Licence Tenure & location

Exploration Licence 21/2012 is a single licence with a total area of 2km², located immediately behind the port of Bell Bay, within the Tippogoree Hills in the northeastern Tamar Valley, Tasmania, Australia. The licence was granted to Pacific Basin Bluestone Pty Ltd by Mineral Resources Tasmania on 20th March 2012, for a 5 year tenure ending on 20th March 2018. This annual report (the first under PBB) actually covers the period PBB has held the project between September 2016 and 20th March 2018.

Whilst most activities associated with The Bell Bay Coastal Quarry Project are currently centered on the Company's neighbouring EL 7/2015, EL 21/2012 is still very much considered very important to the Project. Not only is it a strategically important lease providing a substantial land holding located immediately adjacent to the port which may need to be looked at to establish infrastructure, in addition, the lease has potential to provide lower cost additional resources to the Project which are located closer to port than those located in EL 7/2015. Land title is partly privately owned freehold and partly State Forest. The freehold land is owned by Rio Tinto Alcan, who operate the Bell Bay aluminum smelter, located approximately 3km to the west. The State Forest portion falls within the Tippogoree Hills Forest Reserve and is managed by Forestry Tasmania. A gas pipeline corridor traverses the southern part of the lease.

Tasmanian Ports Corporation Pty Ltd (Tasports) currently hold a small 100m by 100m licence (ML 1117P/M) covering a dolerite outcrop named West Knob. West Knob is located approximately 500m east of Lauriston Reservoir and is now entirely surrounded by PBBs EL7/2015. Tasports have held the licence for approximately 12 years and originally established the small quarry to provide a nearby source of coastal armour rock for the Bell Bay port development and expansion at that time. The tenement has not been worked for a number of years and is currently the subject of an ongoing rehabilitation program. PBB views the current quarry as a prospective opportunity to re-establish production from the still current ML prior to eventually expanding the quarry boundaries into the surrounding EL7/2015 following the formal approvals process.

Alternatively, should proposed exploration and sampling on EL 21/2012 prove fruitful. PBB may consider applying to establish a quarry on the tenement, which, would have a significant proximity advantage to the current port facilities when compared to EL7/2015.

2.0 REVIEW OF PREVIOUS WORK

The ground relating to the area now covered by EL 21/2012 and EL7/2015 has seen historical exploration by Delta Materials between 2009-2014 (EL6/2009 and EL4/2012).

Prior to Delta, the ground was held under Exploration Licence by Tasmanian Hardrock Pty Ltd (H. J. Larry Harrington) between 1990 and 1997 as part of that company's Exploration Licence 10/1990. Delta reported in 2014 that a search for historical exploration results for this EL had been unfruitful within the Mineral Resources Archives.

In 1997 two portions of the expired EL 10/1990 were converted to Retention Licences 2/1997 and 3/1997 and subsequently title to RL 3/1997, located between the north and south parts of Deltas split tenement 6/2009 and transferred to B3 - (Bell Bay Bluestone) Pty Ltd. In March 2012, Retention Licence 3/1997 converted to an Exploration Release Area 887. Subsequently, Delta applied for the ERA and was granted EL4/2012.

Delta explored on EL 4/2012 up to late 2013 and in November 2013 relinquished the tenement citing in its relinquishment report the withdrawal of prospective project investors as its main reason for this. Delta continued on with EL 6/2009 however in February 2014 it relinquished the tenement and withdrew from the project entirely.

3.0 EXPLORATION COMPLETED DURING THE REPORT PERIOD

No on or in ground exploration was undertaken within the reporting period.

With a change of ownership completed only in September 2016, the new owners in this short period of time, have concentrated activities in assessing all available existing information from a desktop study perspective and applied this to current economic market conditions.

Despite no on site work being conducted for the year, PBB has however been active in funding two key market and logistics driven studies considered as being of sufficiently high quality to be identified as a Preliminary Economic Assessment (PEA) on the project.

During the month of May 2016 as part of strategic pursuit considerations, PBB engaged GHD Australia's Launceston office to undertake an options analysis aimed at increasing the understanding of product marketability to key demand centres (notionally Sydney, Melbourne, Brisbane, and Asia) from the development of a potential quarry and processing operation at Bell Bay.

Because of the low unit value and wide availability of construction materials, there has been no significant interstate or international trade of aggregates from Tasmania, although rising demand, decreased local (interstate) availability at key metropolitan centers and increasing quality and specification issues in Southeast Asia has raised interest in the opportunity to export hardrock from Tasmania.

The aim of the study was to provide PBB with an increased understanding of the potential delivered cost to market and product prices at these locations. In achieving the aim of this study, the scope of work included:

- Development of indicative extraction costs and processing operations
- Establishment of capability and potential capital expenditure to facilitate aggregate exports at Bell Bay
- Development of logistics costs (shipping and distribution costs) to identified potential markets of Sydney, Melbourne and Brisbane
- Analysis of the Dolerite resource at Bell Bay in terms of its market suitability
- Assessment of market competitiveness.

Based on the outcome of this Initial study, potential market opportunities were identified for further investigation in subsequent more detailed studies and market sounding. A copy of the report is provided in the appendices.

In June 2016 following the delivery of the first report see Appendix 1, the results of which are discussed in section 4 below, a second report was commissioned. The purpose of the second report was to address the “Phase 1 Next Steps” identified in the first report “Preliminary Analysis Options for the potential processing and export of aggregates from Northern Tasmania” prepared by GHD in May 2016 which is considered the *Initial Study*.

This second report, as an extension of to the Initial Study work, provides extended consideration of additional target markets, alternative product options and key changes to plant assumptions. Key further analysis included the following tasks:

- Brief investigation into the market, pricing and competitive position for both Auckland, New Zealand and Adelaide, South Australia
- Brief investigation into the market pricing and competitive position for Armour Rock and Gabion Stone
- Brief investigation into the market, pricing and competitive position for pre-casting coastal defence blocks and or concrete slabs
- A high level cost assessment of the change from owned plant to leased mobile crushing and screening equipment (limited to 5Mtpa)
- A high level description and assessment of the potential for, and resulting cost savings from the reconfiguration of the berth to a single loader operation
- Brief discussion on the potential gains and challenges associated with sourcing and installing a second hand transfer conveyor from the quarry to the ship loading terminal.

4.0 DISCUSSION OF RESULTS

4.1 Initial Study

Based on the approach adopted in assessing options for the processing and export of quarry products from Northern Tasmania, numerous key findings and next steps were identified, these are:

- Assessment on the dolerite resource at Bell Bay primarily meets the Australian, Philippines, Indonesian, Malaysian and Thai standards, therefore presenting a range of potential market opportunities
- To meet benchmark production rates, the options of a 1,200tph and 2,400tph plant provided the ability to meet 2.5Mtpa to 10Mtpa through the use of single and double shifts
- The level of capital required to establish an owner operated quarry operation is approximately \$100M to achieve 5mtpa operation, and \$179M to achieve

10mtpa

- The resulting cost of quarry operations (extraction) is estimated at \$9-11 per revenue tonne based on a 24 hour operation – with a \$2 per tonne cost premium to operate 12 hours per day. Under the 10Mtpa scenario, the double shift operations generated the lowest cost of production, at approximately \$9.50 per tonne
- Based on a review of potential terminal locations on the Tamar River, the initial preferred location was considered to be directly adjacent to the existing Woodchip Berth 1 facility formerly operated by Gunns Timber. However after subsequent site visits and further discussion with Tasports Management and prospective transport logistics & stevedoring groups, the actual port of Bell Bay is now considered the most desirable site.

The ultimate location of the ship loading terminal and berth will depend on negotiations with infrastructure owners and the status of current agreements; however, there are potential alternatives nearby, including the former H.E.C. oil berth, to the North, but the potential for remediation works and associated costs and risks may be prohibitive

- To export product from Bell Bay to external markets, a ship loading terminal will need to be constructed. This will include a conveyor system from mine site to the terminal area, a stockpile and reclaimer, a ship loading conveyor, a replacement wharf structure and new ship loaders
- Potential capital costs for the berth and ship loaders range from \$60M to \$90M, excluding any required dredging. In consideration of these costs, the terminal and ship loading infrastructure will need to minimise dust, and the ship loading system will need to be enclosed
- The cost of terminal operations is estimated at between \$3 and \$8 per tonne, driven by the economies of scale achieved in the terminal operation. At 10 Mtpa terminal cost, is estimated to be approximately \$2.70 per tonne. However, the high utilisation of a single berth operation may result in queuing or system stress due to a range of operational factors, such as weather or breakdowns
- Contamination mitigation through dust suppression will be a critical consideration for the storage and loading of product at the berth and the need to minimise environmental impact on the Tamar River
- To maximise shipping economies of scale, the maximum class vessel that can be handled at the facility is a Supramax of approximately 52,000 DWT. However, channel access restricts vessels to a draught of 11.5 meters. As a result, light loaded vessels will have a payload in the order of 47,500 cargo tonnes, and restricted to tidal movements only
- The volatility of the vessel charter rate will have a greater impact to the overall cost to deliver quarry products to market, and the cost premium of using

Australian crew for domestic shipping increases the charter rates paid for domestic markets as a result of Cabotage Law

- A comparison of the researched prices for 20 mm aggregates indicates that the Australian price for aggregates is 3 to 5 times that of Asian sourced product. Enquiries to date have identified that 20 mm aggregate in South East Queensland are in the order of \$25 to \$35 a tonne, with pricing ex bin in Sydney at approximately \$50 per tonne; however, there are likely to be significant discounts for large volume sales, with further savings, which are likely to be significant for the larger integrated concrete businesses
- Bell Bay product appears to be potentially competitive in the domestic market, particularly Sydney and Melbourne. Analysis showed a potential buffer of up to \$20 per tonne in Sydney, and up to \$10 per tonne in the Melbourne market – which may be eroded by volume discounts. The price to cost buffer is low for Brisbane markets, and with likely correction in the shipping market, there is the potential for costs to exceed market price
- Despite the significant cost disadvantage for Bell Bay product supplied into conventional regional Asian markets, potential may exist for one off supply contracts for specific construction projects, where the nature of the project is conducive with the quality and specifications of the Bell Bay product, and the purchaser is prepared to pay the price premium. The nature of this ad-hoc market is likely to be sporadic and opportunistic, rather than a secured supply arrangement with steady revenue streams

4.2 Phase I Actions Study

Consideration and assessment from the Phase 1 actions from The Initial Study identified a number of key findings for the potential quarry development located at Bell Bay in Northern Tasmania. It is considered critical that the findings in the report must be read in conjunction with The Initial Study.

4.2.1 Additional Market Locations

- Based on GHD's calculations the cost of supply to Adelaide, South Australia, ranges from \$18-32 per tonne (which is heavily influenced by the level of production) and the estimated shipping rate, while supply to Auckland, New Zealand, ranges from \$20-39 per tonne (excluding any additional taxes and import duties)
- Research of aggregate markets in Adelaide and Auckland indicated that pricing in Adelaide is approximately \$15 per tonne (20mm aggregates); much less than identified in the Initial Study at other domestic market locations. Specifications of aggregate product at that price are not known, and appear unusually low when compared with other locations, and arguably more in line with a natural screened product, as opposed to a crushed stone aggregate which appears to be typically above \$30 per tonne

- If the price of crushed aggregates in Adelaide is \$15 per tonne (most likely as a result of low demand and oversupply), then it is unlikely that the Bell Bay product would be competitive; however, at \$30 per tonne, supply to Adelaide may be competitive, but only where Bell Bay production levels are above 5mtpa to achieve a small margin
- GHD Enquiries on 20-25 mm aggregate in Auckland, New Zealand indicated pricing of \$16 to \$37 AUD per tonne. At these pricing levels (which have the same specification constraints as observed for Adelaide) product from Bell Bay over the longer term would be competitive (at the higher pricing levels) at production rates at and above 5mtpa (with a small margin), or where a price premium can be achieved for superior product specifications

4.2.2 Alternate Products

- If the focus of quarry operations is on alternate (non-aggregate) products, which are currently more suited to general wharf operations, it is likely that redevelopment of a bulk handling facility (approximately \$90M) is not required. However, to enable the export of aggregates (as a secondary product) a range of non-permanent materials handling options are available, including the use of ships gear, a wharf crane with grabs, or alternatively a mobile radial loader, which have low capital outlay
- The alternate product focus of operations has the potential to export via existing Bell Bay port facilities (potentially Berth No. 6, Berth No. 3, or Berth No. 5), which will need to be transported by road. This Road transport is estimated for Gabion Rock and Aggregates to be \$3.50 per tonnes and \$5.50 per tonne for Armour Rock. The increased transport cost for Armour rock is largely a result of the increased handling difficulty and reduced payload utilisation of the haul truck. If the establishment of a quarry was to occur within EL21/2012 potential exists for a lower cost haul to port when compared to EL7/2015.
- Analysis of the difference between fixed and mobile plant showed that there is a marginal increase in the cost of operations at the reduced throughput of 2.5mtpa. There are significant benefits for a mobile plant, in particular, a much shorter time to operations and the ability to lease equipment, which is not typical for fixed plant operations
- Assuming full recovery of quarry material (ability to sell all products) the average price across all products delivered to the wharf (excluding stevedoring) is estimated to be approximately \$15 per tonne at 2.5mtpa using mobile plant operating on double shift

An initial scan of pricing for alternate products on the East Coast of Australia showed that Armour Rock is priced at between \$65 to \$75 per tonne, and Gabion Stones between \$28 and \$46 per tonne. Based on an FOB cost of approximately \$15 per tonne, Bell Bay alternate rock products have the potential to be

competitive on the East Coast of Australia, depending on the cost of maritime transport and alignment of the operation to throughput volume. Further assessment on the shipping costs (tug and barge or similar) will need to be considered in future studies

- The scale of operation for a mobile plant is limited to approximately 5mtpa, whereas a fixed plant can more easily accommodate a throughput in the order of 10mtpa, without the need for duplication (which would be required for a mobile plant)
- Commercial recovery of surplus and waste material through the installation of a concrete batching plant and casting facility has the potential to exploit low cost aggregates and crusher dust, a favourable (cool) casting environment, nearby vacant land – the proposed Gunns Mill site, nearby water sources, nearby cement facilities (Cement Australia –Railton), and close proximity to port facilities (short transfer distance) for the shipping of irregular shaped and heavy products
- There is large variation on production costs for a batch plant and casting operation due to many cost influences related to licencing, labour and throughput. This is demonstrated through precast units selling for as low as a few hundred dollars per cubic metre (such as mass block wall units), and over \$1,000 per cubic meter for detailed panels
- Analysis showed that the cost to produce 1 cu.m of 40MPa concrete is approximately \$130 in material, excluding capex and labour. Anecdotally labour cost has been indicated to be low for a batching plant (but significantly higher for casting due to higher labour intensity)
- There are a number of options available for the value-add processing, including building and operating a batch plant and casting facility. However, there is the potential to lease or partially lease (on a time period or project basis) its operation to reduce commercial exposure
- Based on anecdotal eastern sea board concrete costs, the cost of production at Bell Bay will likely be competitive, thereby reducing the distance disadvantage exporting from Tasmania. The success of this value-add offering will depend on the size of the market, and ability to penetrate it. One strategy to minimise production cost is through securing 3rd party leases for either or both the batching plant and casting facility, which will assist in generating economies of scale to socialise fixed costs and off-set licencing and formwork costs to users of the facilities

4.2.3 Reducing capital

4.2.3.1 Leased plant

- Comparison between owned versus leased plant showed little difference, likely a result of the vendor being prepared to forego the margin on asset or margin at sale, instead focusing on the maintenance and consumables contract over the

longer term. Additionally, if the commercial terms are favourable, with lower barriers to entry in a competitive market, then vendors will be more likely to seek rates that are comparable to owned plant

- Leased equipment rates (which may be paid by operating hour) will be highly sensitive to both the throughput rate (where lower rates increase the per tonne cost substantially), and the lease period (due to the remaining life of plant, and ability to redeploy plant if asset costs are not fully recovered)

4.2.3.2 Single ship loader

- Reducing capital through limiting operations to a single ship loader, will require substitution of the proposed system with a rail mounted travelling telescopic luffing ship loader. This will require a significantly higher civil (rail track and higher loads) berth and ship loader costs, limiting the levels of capital savings. Alternatively, the vessel will need to warp at berth (repositioned on its ropes) under the loader, which is a more hazardous operation, especially in high flow currents, increases wear on the berth and fenders, and increases wear on the vessel

- With the movement of a vessel under a single ship loader, further capital reductions (a shorter berth) can be achieved, but must be considered with potential interaction of vessels at the adjacent WC2 berth. However, the lower ship loading rate through a single loader reduces the capacity of the bulk loading facilities, limiting the scalability of the terminal, and constrains the ability to socialise fixed costs through greater economies of scale, and the additional time at berth will add to vessel cycle times and therefore the ship cost per tonne

4.2.3.3 Second hand transfer conveyor

- Despite the potential cost savings that may present from the purchase of a second hand transfer conveyor are likely to be offset by sourcing a conveyor of suitable specification (belt width and design speed) may be challenging, potential relocation costs may be prohibitive from remote locations, and the cost of modification or retrofitting of trestles may exceed the costs of a designed for purpose conveyor system

5.0 CONCLUSIONS

Based on consideration and assessment of both The Initial Study and the Phase 1 actions Study undertaken by GHD Australia's Launceston office, a number of key conclusions have been drawn on the potential for a quarry development located at Bell Bay in Northern Tasmania. PBB is currently taking these key conclusions into consideration when planning the next steps to the economic assessment of the project.

In order to exploit natural competitive advantage (the unique position of being a coastal quarry with nearby access to existing port facilities), and provide the ability to meet market demand in a highly integrated industry, the quarry

development, and subsequent studies should consider:

- A flexible plant operation and diversified product range, with a start-up focus on alternate rock products (armour rock and gabion stone) in addition to aggregate
- The use of leased plant in the initial operations to minimise upfront capital and time to commence operations
- Undertake a phased development approach to the project, with an initial small volume Phase 1 operation, growing through expanded Phase 2 and Phase 3, with commercially defined trigger points based on market size and realisation of product demand for quarry products
- Exploit the advantages of a small start-up volume with a low up-front capital cost requirement (through leased plant and use of existing berthing facilities) to establish a market presence, generate initial project cash flow, as well as minimise commercial risk exposure
- New identified aggregate markets in NZ, in addition to Melbourne and Sydney
- Target key strategic positioning opportunities for the supply of quarry products (and potentially value-add concrete products) for coastal protection and rehabilitation projects (for armour rock, coastal protection blocks, and gabion stones) on the Australian east coast – particularly after recent events of the June 2016 storms in Collaroy NSW.
- Establishing a quarry closer to Bell Bay on EL21/2012 to reduce transport costs rather than the current plan of establishing a quarry on EL7/2015.

6.0 ENVIRONMENT

No on ground physical exploration work was conducted by PBB on EL21/2012 for this reporting period and therefore there has been nil surface disturbance, which, would require rehabilitation. No fauna, flora, archaeological or scientific surveys were conducted during this reporting period.

7.0 EXPENDITURES

No exploration programs were conducted on EL21/2012 for this reporting period.

GHD Australia's Launceston Office was engaged by PBB to undertake the two desktop Preliminary Economic Assessment studies at a cost of \$60,000. A portion of the cost of these studies equating to approximately \$6,000 is attributed to expenditure EL21/2012.

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