ASX and Media Release
20 June 2022

Decision to proceed with the Bumamani Project

Key outcomes

- A decision to proceed with development of the Bumamani Project has been made following consideration of the Bumamani DFS outcomes.
- This will extend the life of Kwale Operations by 13 months to December 2024, once land access arrangements are finalised.
- An additional 17.9 million tonnes of Ore Reserves are expected to be mined to produce an estimated 42,000 tonnes of rutile, 171,000 tonnes of ilmenite and 20,000 tonnes of zircon.
- Proceeding with the Bumamani Project is a significant further step towards extending mine life at Kwale Operations and maintaining operational continuity, providing additional time to develop other opportunities in Kenya and the region.
- Production guidance released for FY23, incorporating mining of the Bumamani Project:
  - Rutile – 62,000 to 73,000 tonnes
  - Ilmenite – 260,000 to 310,000 tonnes
  - Zircon – 22,000 to 27,000 tonnes

African mineral sands producer and developer, **Base Resources Limited** (ASX & AIM: BSE) (**Base Resources** or the **Company**) is pleased to announce that a decision to proceed with development of the **Bumamani Project** has been made after a definitive feasibility study (the **Bumamani DFS**) confirmed its economic viability.

The decision means that life at Base Resources' 100% owned and operated mineral sands operations in Kwale County, Kenya (**Kwale Operations**) will be extended by 13 months to December 2024 once land access arrangements are finalised.

The Bumamani Project comprises higher-grade subsets of the Bumamani and Kwale North Dune deposits (see Figure 1) and the Bumamani DFS confirmed the viability of mining these areas concurrently with the Kwale South Dune deposit.

Mining at the Kwale North Dune is expected to commence in March 2023.

FY23 production guidance

The Company's 2023 financial year (**FY23**) production guidance is shown below, together with its FY22 production guidance which is unchanged from that last reported. The FY23 production guidance is lower than that for FY22 as a consequence of the planned commencement of mining in the lower HM grade Kwale North Dune orebody from March 2023 and normal uncertainties associated with mining a new orebody.

PRODUCTION GUIDANCE (tonnes)	FY22 Guidance Range	FY23 Guidance Range
Rutile	73,000 to 83,000	62,000 to 73,000
Ilmenite	310,000 to 340,000	260,000 to 310,000
Zircon	24,000 to 28,000	22,000 to 27,000

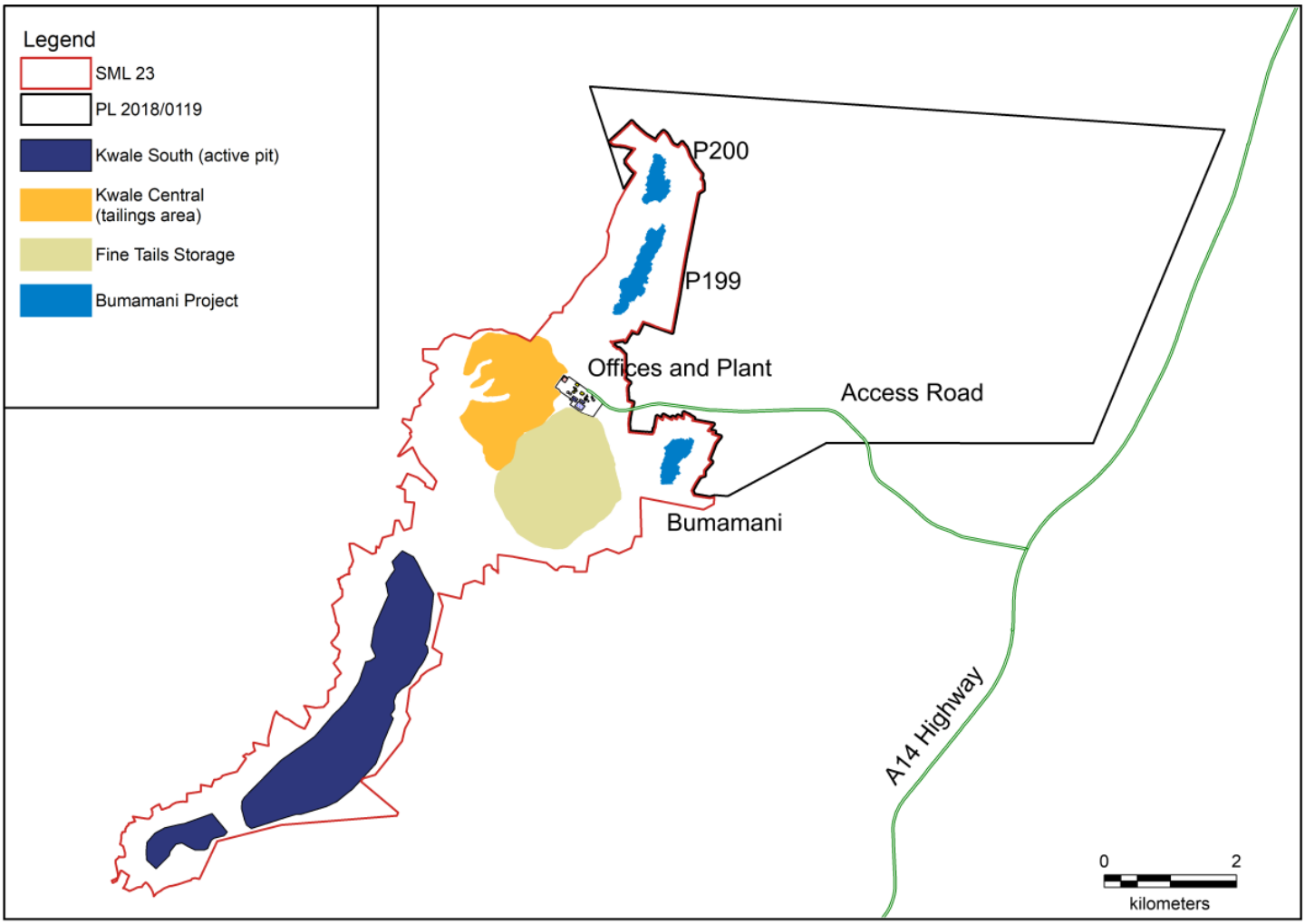
The FY23 production guidance is supported by the Bumamani DFS and is based on the following assumptions:

- Land access arrangements are finalised in time to enable mining at the Kwale North Dune to commence in March 2023.
- Mining of 16.5Mt at an average HM grade of 3.51%.
- Heavy mineral concentrate (**HMC**) produced by the wet concentrator plant of 571kt.
- HMC fed into the mineral separation plant (**MSP**) of 556kt.
- MSP product recoveries of 101% for rutile, 101.5% for ilmenite and 84.5% for zircon.

Summary of the Bumamani DFS outcomes

The Bumamani DFS was undertaken following an earlier pre-feasibility study (**Bumamani PFS**) which supported mining higher-grade subsets of the North Dune and Bumamani deposits[1] (referred to as the P199 and Bumamani pits). Following the pit optimisation stage of the Ore Reserves estimation process undertaken for the Bumamani DFS, additional material to that considered for the Bumamani PFS was shown to be economically extractable and was added to the scope of the Bumamani DFS. The area added is a subset of the Kwale North Dune referred to as the P200 pit (refer to Figure 1 below).

Figure 1: Kwale Operations layout showing current mining and Bumamani Project areas.



[1] For further information about the Bumamani PFS, refer to Base Resources' market announcements on 3 September 2021 "Bumamani PFS supports extension of Kwale mine life to mid-2024" and "Further supporting information for Bumamani PFS", available at https://baseresources.com.au/investors/announcements/.

The Bumamani DFS forecasts net positive, post-tax, cash flows from mining the Bumamani Project. The other key outcomes, together with the assumed product prices, for the Bumamani DFS are set out in table 1 below.

Table 1: Bumamani DFS key outcomes.

Outcome / Assumption	Units	Bumamani DFS
Operations life extension	Months	13
Ore mined	Million tonnes	17.9
Ore Grade	% HM	2.1
Upfront capex	US$ millions	28.1
Rutile produced	Thousand tonnes	42
Ilmenite produced	Thousand tonnes	171
Zircon produced	Thousand tonnes	20
Operating cost per tonne mined, inclusive of 5% royalty	US$/t	4.64
Operating cost per tonne produced, inclusive of 5% royalty	US$/t	266.38
Rutile price – average over LOM	US$/t FOB	1,811
Ilmenite price – average over LOM	US$/t FOB	285
Zircon price – average over LOM	US$/t FOB	2,021
Study margin of error band	%	-5 / +15

Mining

The Bumamani DFS considered mining the Kwale North Dune Ore Reserves, which are estimated at 13.9 million tonnes (**Mt**) (8.3Mt Proved and 5.6Mt Probable) at an average heavy mineral (**HM**) grade of 2.1% for 0.29Mt of contained HM, and the Bumamani Ore Reserves, which are estimated at 3.9Mt (2.6Mt Proved and 1.3Mt Probable) at an average HM grade of 2.3% for 0.09Mt of contained HM[2]. Together, these Ore Reserves estimates total 17.9Mt at an average HM grade of 2.1% for 0.38Mt of contained HM (with 10.9Mt or approximately 61% Proved and 6.9Mt or approximately 39% Probable).

The mining method planned for the Bumamani DFS is hydraulic mining, utilising Kwale Operations' existing hydraulic mining units (**HMUs**). This mining method has been successfully used at Kwale Operations since 2016. It is non-selective, with HMUs using high pressure water jets to sluice the entire ore face, creating an ore slurry which can then be pumped to the wet concentrator plant.

To maximise mining rates and better manage tailings, the Bumamani DFS established that the Bumamani Project will be mined concurrently with the Kwale South Dune deposit, commencing from March 2023. Four existing HMUs will be utilised, instead of three (as is current mining practice at Kwale South Dune), with two continuing to mine at Kwale South Dune and two at the Bumamani Project pits. After the transition to four HMUs, in both areas, one HMU will operate at full capacity of up to 800 tph and one at half capacity of up to 400 tph to give a total feed rate of up to 2,400 tph, consistent with the present feed rate at Kwale South Dune. HMUs are capable of mining at either up to 400 or 800 tph by operating one or two high pressure monitors, each capable of up to 400 tph.

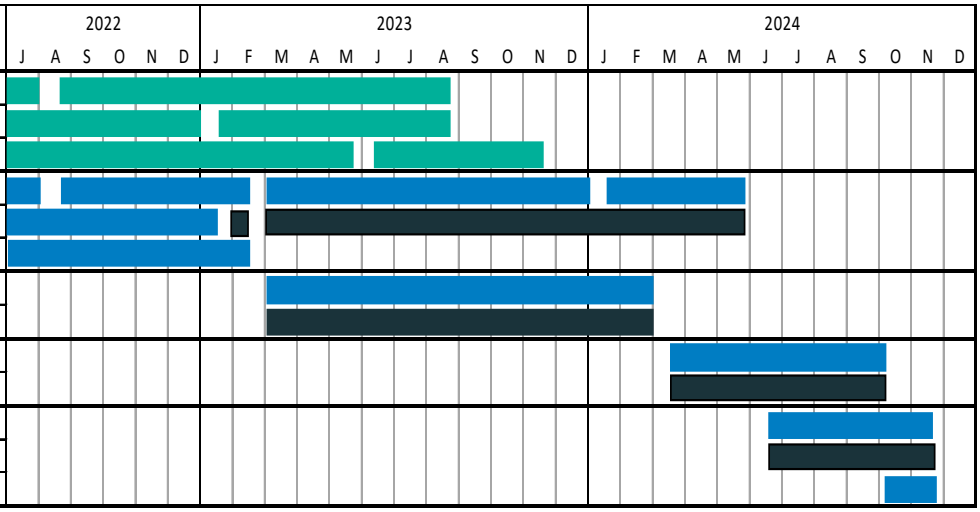
A shutdown of mining operations and the wet concentrator plant is scheduled for February 2023 to relocate the HMUs and associated pumping infrastructure, after which mining at P199 will commence. Following depletion of P199 (anticipated in February 2024), mining equipment will relocate to P200 while mining continues at Kwale South Dune. When mining completes at Kwale South Dune in May 2024, mining equipment will be relocated to the Bumamani pit.

[2] For further information, refer to Base Resources' market announcement on 20 June 2022 "Maiden Kwale North Dune and Bumamani Ore Reserves estimates" available at https://baseresources.com.au/investors/announcements/.

Figure 2 below summarises the planned mining schedule incorporating the Bumamani Project, compared to the mine plan if mining at the Bumamani Project does not occur.

Figure 2: Mining and processing schedules in the Bumamani DFS compared to the mine plan without the Bumamani Project.

Mining	Pit	Mining Unit	Mining Rate tph
Mine Plan without Bumamani Project	Kw Sth	HMU 1	800
		HMU 2	800
		HMU 3	800
Bumamani Project Mine Plan	Kw Sth	HMU 1	800
		HMU 2	800 /400
		HMU 3	800
	P199	HMU 3	800
		HMU 4	400
	P200	HUM 3	800
		HMU 4	400
	Bumamani	HMU 1	800
		HMU 2	400
		HMU 3	800



Processing
Process plant operations without Bumamani Project
Bumamani Project process plant operations

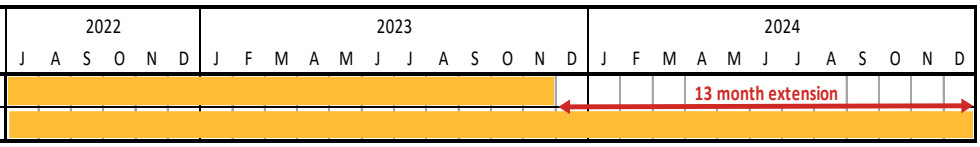
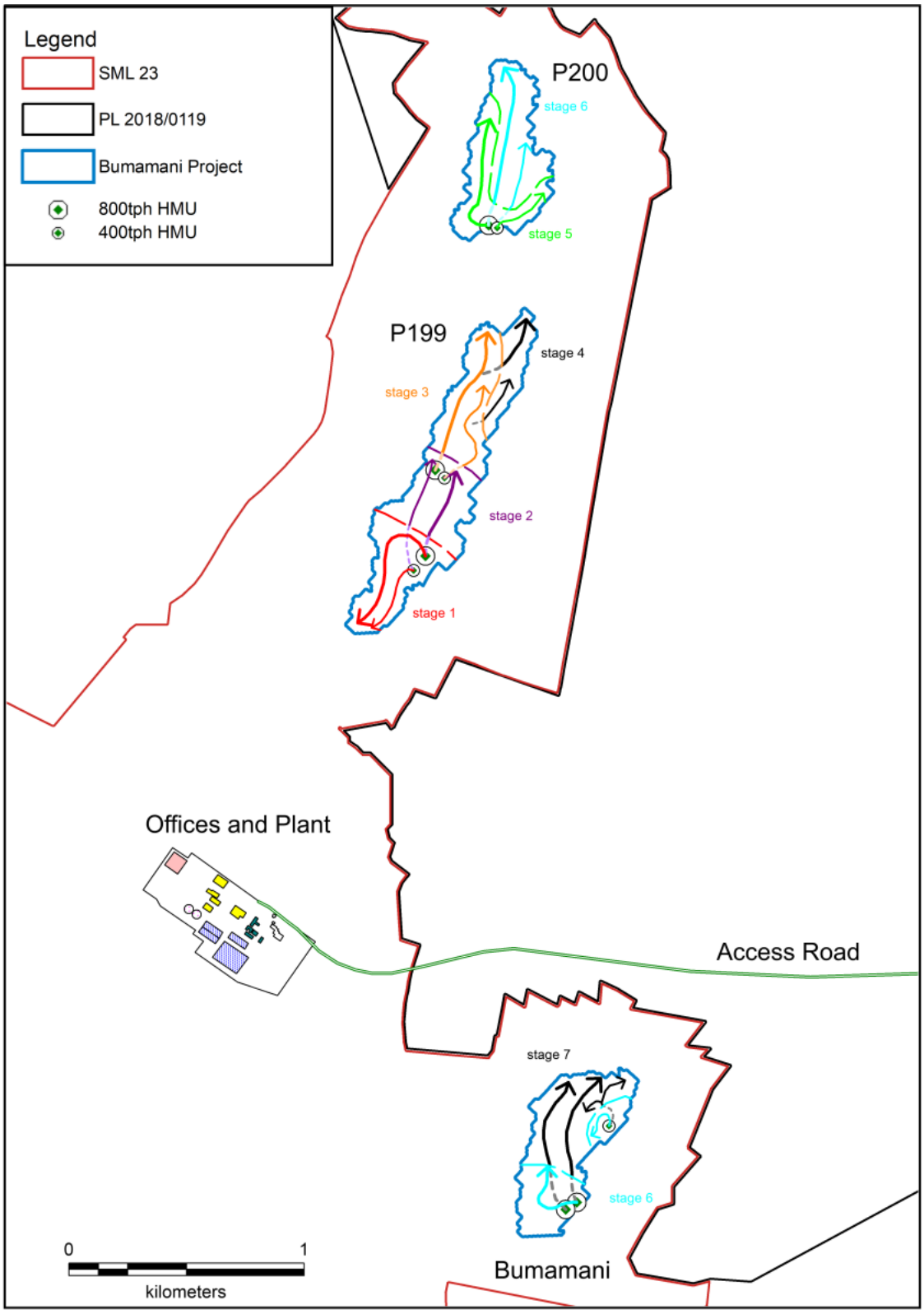


Figure 3 below shows the planned mining schedule at the Bumamani Project across seven stages. Mining is scheduled at P199 and P200 concurrently with mining at Kwale South Dune for stages 1-5, following which (and for the last two stages) mining occurs solely at the Bumamani pits.

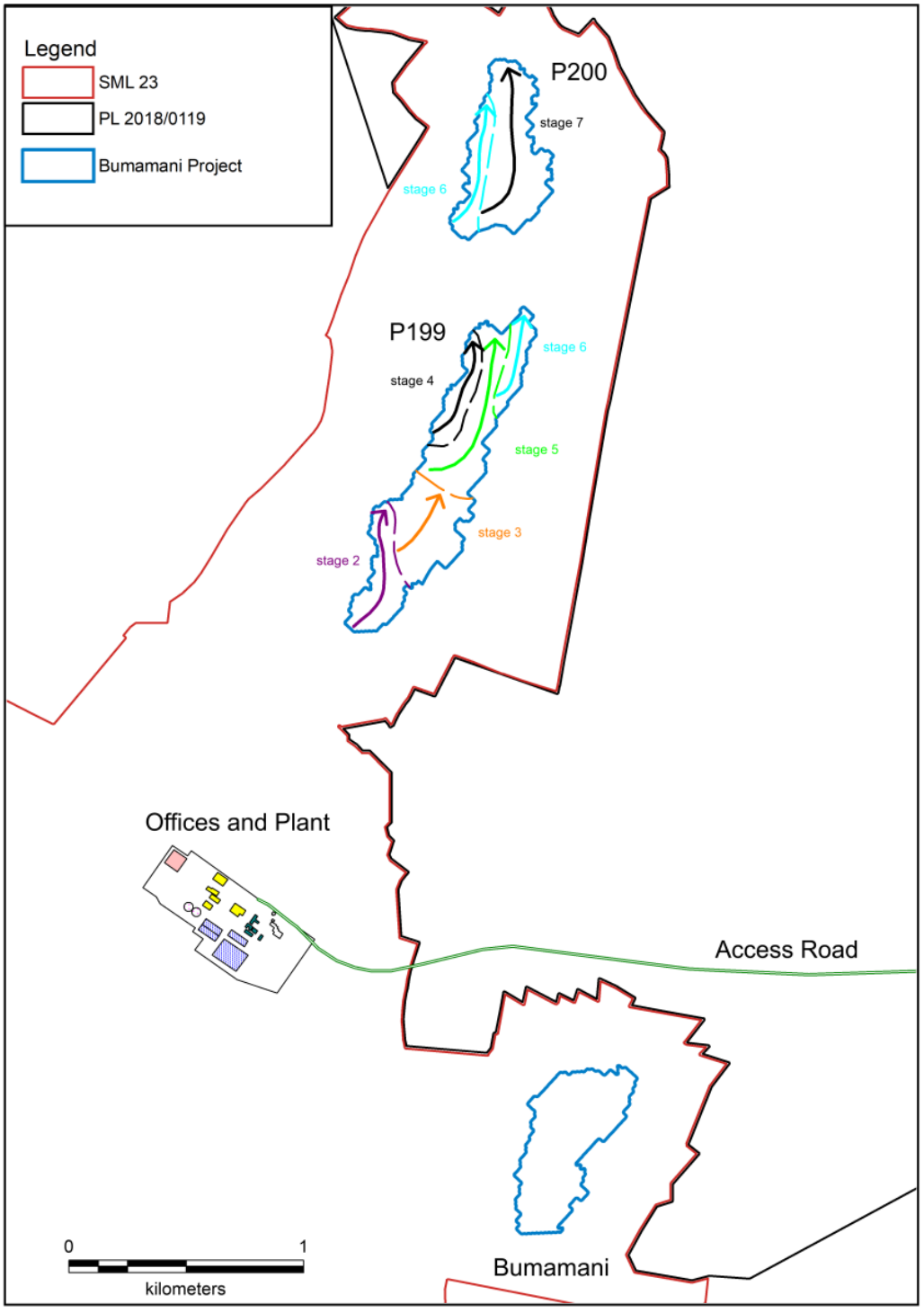
Figure 3: Planned HMU mine schedule for Bumamani, P199 and P200 pits.



Tailings

The majority of fine tailings will be accommodated within Kwale Operations' current tailings storage facility while coarse tailings will be used for land rehabilitation across Kwale Operations. It is anticipated that approximately 25% of the fine tailings from all mining will be co-disposed with the coarse tailings to create a water retention layer as part of land rehabilitation, which is the current practice at Kwale Operations. Coarse tailings disposal will commence in the P199 mined out void as soon as space is available and will subsequently move to P200 when space is available. From commencement of P199 mining, approximately 30% of coarse tails production will be placed in these pit voids. Figure 4 below depicts the planned tailings schedules for the Bumamani DFS.

Figure 4: Planned tailing schedule for Bumamani, P199 and P200 pits.



Processing

Material mined will be processed through Kwale Operations' existing wet concentrator plant and mineral separation plant. Recovery factors assumed were the same as those currently experienced at Kwale Operations and are set out in Table 2 below. They are also supported by the metallurgical testwork carried out on the Kwale North Dune.

The metallurgical testwork comprised wet concentrator and mineral separation plant tests on bulk samples collected from two 61cm diameter holes drilled in the Kwale North Mineral Resource, as part of the earlier Kwale North pre-feasibility study. One hole is adjacent to P199 while the other hole is in P200. Discrete ore zones were sampled (Ore1, Ore4 and Ore5) from each hole. The samples were dried and shipped to Brisbane, Australia for processing through IHC Robbins' laboratory. Samples of the fine tailings generated by IHC Robbins were sent to Outotec Metso for thickener testwork. The results of the testwork were not materially different to the run of mine results being achieved from mining the Kwale South Dune deposit. No metallurgical testwork was completed on the Bumamani deposit, however, it exhibits similar characteristics (including particle size) to ore currently mined at Kwale South Dune and is expected to achieve similar processing results, including mineral recoveries, as those achieved from mining the Kwale South Dune ore.

Table 2: Bumamani DFS recovery assumptions.

Description	Units	Bumamani DFS (consistent with current)
Concentrate grade	%	85.0
HM recovery – wet concentrator plant	%	79.5
Rutile recovery – wet concentrator plant	%	88.9
Ilmenite recovery – wet concentrator plant	%	90.0
Zircon recovery – wet concentrator plant	%	94.7
Rutile recovery – mineral separation plant	%	101.0
Ilmenite recovery – mineral separation plant	%	101.5
Zircon recovery – mineral separation plant	%	84.5

Marketing

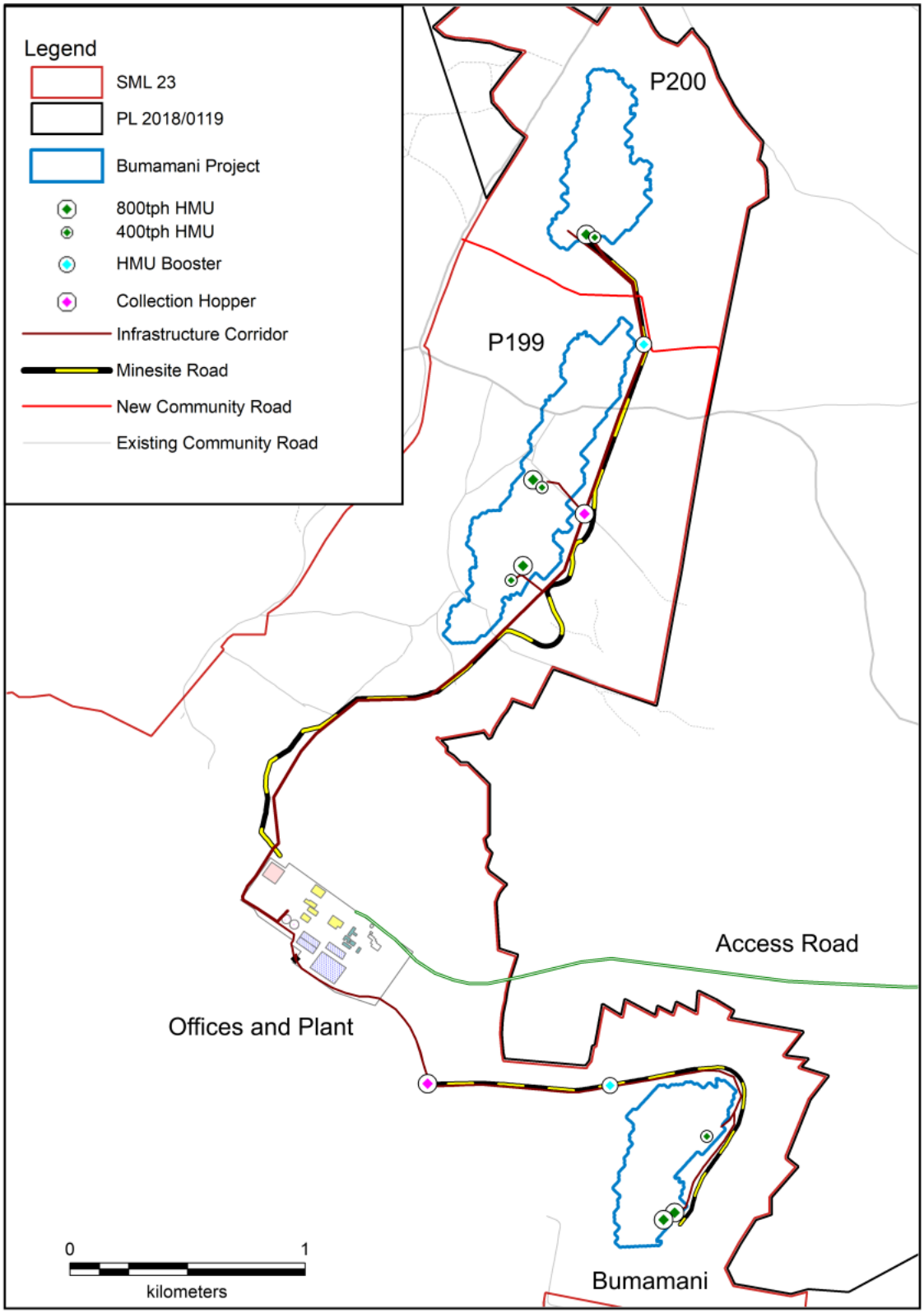
The chemical specifications of products from the Bumamani Project are the same as existing Kwale Operations production and the Bumamani DFS assumes the same price forecast applicable to Kwale Operations products.

The assumed product prices were derived from Base Resources' internal price forecasts for the proposed period of extraction, based on supply/demand analysis and taking into account relevant data from independent industry consultants, TZMI, and are not materially different from TZMI's average forecast prices over the same period.

Infrastructure and capital and operating costs

As Kwale Operations is an operating mine, all the major infrastructure already exists – 132 kV power line and transformer yard, 8Gl water dam, water bores, export facility, processing plants, offices, maintenance workshops, laboratory and camp. The cost of additional roads, powerlines, pumps and pipelines required to service the proposed pits have been allowed for in the capital expenditure estimate. Figure 5 below shows the locations of new mine infrastructure, including a new community road to replace those intersected by the pits, with all infrastructure implemented in a staged approach as required by the mine plan.

Figure 5: New infrastructure location.



Capital cost is estimated at US$28.1 million, including the acquisition of land and the additional mine services and infrastructure that will be required. The Bumamani DFS capital cost estimate is higher than that of the Bumamani PFS, primarily due to inclusion of the P200 area and related field services and land acquisition costs. Capital costs will be funded from internally generated cash flows.

Operating cost per tonne mined is expected to be consistent with current Kwale Operations performance but operating costs per tonne produced are expected to be higher due to the lower production volumes, a consequence of the lower heavy mineral grade of the Bumamani Project relative to the Kwale South Dune.

Implementation schedule

Implementation is planned in three stages:

- Stage 1 – (7 months) land acquisition, resettlement and completion of all construction work, including mining earthworks and installation of new field services to the P199 mining area.
- Stage 2 – (1 month) relocation of two HMUs, plus associated plant, and field services from Kwale South Dune to P199, including a 2-week shutdown for tie-ins followed by commissioning and start-up.
- Stage 3 – following the start-up of P199, field services will be extended to P200 and the Bumamani pit, as required by the mine plan, and consists of mining earthworks, relocation and installation of pipelines, booster stations and power supply lines.

Legal, community and environment

The Company has secured the right to mine the Bumamani Project, following the recent extension of the boundary of Special Mining Lease 23 (**SML 23**) to incorporate that project. The extension was effected by a formal deed of variation between the Company's wholly-owned Kenyan subsidiary, Base Titanium Limited, and the Government of Kenya acting through the Ministry of Petroleum and Mining. In accordance with the terms of SML 23, a royalty of 5% is payable to the Government of Kenya.

The Resettlement Action Plan for landowners in the Bumamani Project areas has been approved by the National Environmental Management Authority (**NEMA**) and is currently being implemented. The socio-economic baseline study has confirmed landowner eligibility and, following an extensive consultation and negotiation process, compensation rates have been agreed. Asset valuation is underway following which, individual compensation agreements will be signed and relocation implemented. Broader community consultation programs have been running for the duration of the current mining operation, assisting with two-way information sharing and management of stakeholder expectations.

The key regulatory approval in addition to the SML 23 extension, being that in respect of the Environmental and Social Impact Assessment (**ESIA**), was issued on 23 August 2021 by NEMA following extensive public consultation and environmental impact assessments. An environmental management plan was also approved as part of the ESIA. The only other authorisation required to mine the Bumamani Project is that for silt trap construction as a control measure for sedimentation with no issues expected in obtaining this authorisation.

Key risks and sensitivities

Completing the necessary land acquisitions at reasonable prices within a timeframe that does not impact the implementation schedule and commencement of mining at the Bumamani Project in March 2023, has been identified as a key risk. The Company is confident that this risk will not give rise to material impacts on implementation of the Bumamani Project given progress made to date and further planned mitigations. However, given the requirement for engagement with and action by landowners, residual risk remains. Inaction on the part of landowners and any emerging project opposition could stem from, among other things, the upcoming Kenyan general election in August 2022. The inability to commence mining at the Bumamani Project by March 2023 as planned would impact project economics.

The key sensitivity to the Bumamani Project achieving forecast net positive, post-tax cash flows is product prices, which are subject to many variables outside the control of Base Resources and the assumed average product prices may not reflect realised prices. If all other financial and operating outcomes were as forecast, realised prices for the full product suite would need to be 29% lower than forecast for the Bumamani Project to not be net cash flow positive.

Other factors which could negatively affect cash flows include an increase in operating costs or an increase in land acquisition costs, though these are moderated by the Company's experience managing Kwale Operations and the progress made in the land acquisition process.

Ore Reserves estimates and production and forecast financial information

The information included in this announcement about the estimated Ore Reserves for the Kwale North Dune and Bumamani deposits has been extracted from Base Resources' ASX announcement titled "Maiden Kwale North Dune and Bumamani Ore Reserves estimates" dated 20 June 2022, which is available at https://baseresources.com.au/investors/announcements/. Base Resources confirms that it is not aware of any new information or data that materially affects the information included in that announcement and all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed.

The estimated Ore Reserves for the Kwale North Dune and Bumamani deposits underpin the Bumamani DFS and the anticipated production and financial outcomes from that study. These Ore Reserves estimates were prepared by Competent Persons in accordance with the requirements of the JORC Code. The proportions of Probable and Proved Ore Reserves underpinning the Bumamani DFS and the anticipated production outcomes are disclosed in the main body of this announcement. The material assumptions on which Bumamani DFS production and financial outcomes disclosed in this announcement are based are also disclosed in the main body of this announcement.

Forward Looking Statements

The Bumamani DFS is based on technical, economic and other conditions and information as at the date of this announcement, which may be subject to change. Accordingly, the information and conclusions presented in this announcement should be viewed in this light. Information in this announcement should also be read in conjunction with other announcements made by Base Resources to ASX.

Certain statements in or in connection with this announcement contain or comprise forward looking statements. Such statements may include, but are not limited to, statements with regard to capital cost, operating cost, future production and available grades, product prices, and financial performance and may be (but are not necessarily) identified by the use of phrases such as "will", "expect", "anticipate", "believe" and "envisage". By their nature, forward looking statements involve risk and uncertainty because they relate to events and depend on circumstances that will occur in the future and may be outside Base Resources' control. Accordingly, results could differ materially from those set out in the forward-looking statements as a result of, among other factors, changes in economic and market conditions, success of business and operating initiatives, changes in the regulatory environment and other government actions, fluctuations in product prices and exchange rates and business and operational risk management. Some risks that could impact Base Resources' ability to achieve the outcomes or results expressed or implied by such statements are disclosed in this announcement. Subject to any continuing obligations under applicable law or relevant stock exchange listing rules, Base Resources undertakes no obligation to update publicly or release any revisions to these forward-looking statements to reflect events or circumstances after today's date or to reflect the occurrence of unanticipated events.

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For further information contact:

James Fuller, Manager - Communications and Investor Relations
Base Resources
Tel: +61 (0) 8 9413 7426
Mobile: +61 (0) 488 093 763
Email: jfuller@baseresources.com.au

UK Media Relations
Tavistock Communications
Jos Simson and Gareth Tredway
Tel: +44 (0) 207 920 3150

This release has been authorised by the Board of Base Resources.

About Base Resources

Base Resources is an Australian based, African focused, mineral sands producer and developer with a track record of project delivery and operational performance. The company operates the established Kwale Operations in Kenya and is developing the Toliara Project in Madagascar. Base Resources is an ASX and AIM listed company. Further details about Base Resources are available at www.baseresources.com.au.