ASX Announcement

11 August 2022

Definitive Feasibility Study confirms Kayelekera as a low-cost, quick restart uranium operation

Lotus Resources Limited (**ASX: LOT, OTCQB: LTSRF**) (**Lotus** or the **Company**) is pleased to announce the results from the Definitive Feasibility Study (**Restart DFS**) for the restart of the Kayelekera Uranium Project (**Kayelekera** or the **Project**) in Malawi.

The Restart DFS has confirmed Kayelekera ranks as one of the lowest capital cost uranium projects globally whilst also having the ability to quickly recommence production (15 months development for construction/refurbishment) once a Final Investment Decision (FID) has been made.

The Company's focus is now on accelerating engagement with the various nuclear energy utilities and securing offtake agreements with the necessary volumes and pricing mechanisms to support the restart of Kayelekera whilst also considering various financing options to fund the restart.

HIGHLIGHTS

- **The Restart DFS is underpinned by an Ore Reserve Estimate of 15.9Mt at 660 ppm U_3O_8 for 23Mlbs U_3O_8 (Table 5)**
  - The uranium produced in the mine plan is based on 96% Ore Reserves and 4% Inferred Mineral Resources
- **Quick re-start (15 months development), low-cost with an average production of 2.4Mlbs U_3O_8 per annum (first 7 years) over a 10-year life-of-mine**
- **Low initial capital cost of US$88million ranks the Project as one of the lowest capital cost uranium projects globally with an Initial Capital Intensity of US$37/lb[1]**
  - includes US$35.8 million for new plant and infrastructure to improve the project economics and plant reliability which were not considered in the Scoping Study[2]
- **Cash Costs[3] are US$29.1/lb and AISC[4] of US$36.2/lb during the first 7 years of production (excluding ramp-up)**
  - LOM cash costs[3] of US$30.1/lb with LOM AISC[4] of US$37.7/lb
- **Despite the current high inflation environment, operating costs are lower compared to the historical operations and Re-Start Scoping Study estimates due to:**
  - Increased feed grades from ore sorting
  - Lower power costs from grid power; and
  - Improved acid utilisation from nanofiltration

[1] Initial Capital Intensity = Initial Capital Cost (US$88m) / Steady State Average Production (2.4Mlbs U_3O_8)
[2] ASX Announcement – 20th October 2020
[3] Cash Costs include all mining and stockpile rehandling, processing, maintenance, and general and administrative costs.
[4] AISC refers to All in Sustaining Costs which include Cash Costs plus product transport, insurance and conversion costs, Government and third-party royalties and sustaining capital (including TSF costs).

- **The Project has significantly reduced power related CO_2 emissions by ~72% or ~21,000tpa compared to the historical operation through a number of new and innovative initiatives**
  - This result aligns with the Company's ESG goals of reducing carbon emissions from its operations, while looking to be an ESG leader in the uranium industry
- **The timing of the Project restart is also aligned with uranium market conditions where significant demand is anticipated based on the global zero carbon and electrification goals**

Keith Bowes, Managing Director of Lotus, commented:

Having an asset with low technical risk and low restart capital, which can quickly commence production, are key characteristics that investors look for in a mining project. The results of the Restart DFS clearly put Kayelekera in this category and this provides an opportunity for the Company to leverage off the strongest fundamentals for the nuclear/uranium industry in many years.

The standout features of the Restart DFS are the low capital costs and attractive operating costs, which consider the current high inflation environment, whilst also ensuring a positive legacy as we have significantly reduced our carbon footprint, in line with the Company's ESG strategy.

The initial upfront capital costs remain one of the lowest in the industry, both from a headline (US$88m) and an initial capital intensity perspective (US$37/lb annual production). This is an excellent achievement given current inflationary pressures. The number is higher than that originally announced in the Scoping Study, but includes three new items (ore sorting, grid connection and a new acid plant) which are critical for lowering our operating costs.

The operating costs during steady state in the initial mining phase (i.e. before stockpile treatment commences) now sit at US$29.1/lb U_3O_8, well within the second quartile costs for current and planned uranium producers.

I am also very pleased with the success we have had in putting together a power supply strategy that not only provides electricity at a very low US$0.106/kWh, but also reduces our power related CO_2 emissions by over 70% compared to the previous operation. This is a key step in the Company strategy towards our long-term goal of becoming a leader in ESG in the uranium sector. Additional details regarding our ESG commitment and the multiple initiatives we are undertaking will be outlined in our Sustainably Report due to be released towards the end of 2022.

With the Restart DFS now complete the Company looks forward to continuing its work with the Malawian government to secure a Mine Development Agreement that will support the Project financing and shareholder returns appropriate for the scale of investment.

At the same time the Company plans to increase engagement with the various nuclear energy utilities to secure offtake agreements at the necessary volumes and pricing to support the restart of Kayelekera. This work will be undertaken in parallel with our work on securing funding for the restart.

We believe we are still in the early stages of the uranium market upcycle and are confident that the uranium price still has some way to go before it peaks. The Company will look to lock in prices that ensure long term profitability and good returns for our investors.

Figure 1 – Kayelekera Mine Site

This announcement has been authorised for release by the Company's board of directors.

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EXECUTIVE SUMMARY

The Kayelekera Uranium Project (Kayelekera or the Project) is located in the Karonga District of northern Malawi, 650km north of the national capital of Lilongwe. The Project, currently on care and maintenance, is a past producing asset having delivered approximately 11 million pounds (Mlbs) uranium between 2009 and 2014, before its closure due to a sustained low uranium price.

Following the Company's acquisition of the Project in 2020, a Re-Start Scoping Study was completed in October 2020 which identified the key drivers for the project economics all of which have been incorporated into this Definitive Feasibility Study (Restart DFS).

The key highlights from the Restart DFS are:

1. **Quick re-start to production following a Final investment Decision**
   - 15 months development prior to first production
2. **Proven processing facility reduces start-up risks**
   - Debottlenecked flowsheet consisting of traditional milling, acid leach and resin-in-pulp circuits with high metallurgical recoveries of 86.7%
3. **Simple mining technique lowers operating costs**
   - Shallow open pit mining with low strip ratio of 1.8
4. **High degree of confidence**
   - 96% of uranium produced from the mine plan is from Ore Reserves with the remaining 4% coming from Inferred Resources contained in existing stockpiles[5]
5. **Low initial capital cost**
   - US$88M ranks the Project as one of the lowest capital cost uranium projects globally with an initial capital intensity of US$37/lb
   - Includes US$35.8 million for new plant and infrastructure to improve the project economics and plant reliability including a new acid plant and steam turbine (US$15.3M), a connection to the national grid (US$13.0M) and upgrade to the front-end processing circuit to incorporate ore sorting (US$6.0M)
6. **Improved margins due to low operating cost**
   - Cash costs are US$29.1/lb and AISC of US$36.2/lb during the first 7 years of production (after ramp-up).
7. **Robust Mine life with exploration upside**
   - 10-year Life of Mine (LOM), with production of 19.3Mlbs U_3O_8 at an average annual production rate of 2.0Mlbs (2.4Mlbs for the first 7 years before production is sourced from stockpiles)
   - Exploration success at Livingstonia and potential further opportunities at Chilumba and around the current Kayelekera resource, demonstrate potential to extend the LOM past the 10 years

[5] The Company is satisfied that the proportion of inferred mineral resources is not the determining factors in project viability and that the inferred mineral resources do not feature as a significant proportion early in the mine plan

8. Significantly improved ESG results

- Power related CO_2 emissions reduced by over 72% or ~21,000tpa compared to the historical operation
- Over 600 jobs will be created for the local community
- Community Development Agreement in progress to support development of our qualified communities

The key outputs from the Restart DFS work are shown below in Table 1.

Table 1 – Key Project Outputs[6]

Production	**LOM total / Avg.**
Mine Life (Years)	9.5
Total Material Mined (Mt)	40.5
Strip Ratio	1.8
Ore Tonnes (Mt)	14.3
Ave Mined Grades (ppm U_3O_8)	648
Total U_3O_8 Mined (Mlbs)	20.5
Existing Stockpiles	
Tonnes (Mt)	4.1
Grade (ppm U_3O_8)	470
Plant	
Crusher Feed (Mt)	18.4
Crusher Feed Grade (ppm U_3O_8)	609
Ave Feed Upgrade factor	1.30
Ave Ore Sorting Recovery (%)	77.8
Mill Feed (Mt)	12.8
Average Mill Feed Grade (ppm U_3O_8)	792
Process Plant Recovery (%)	86.7
Av. Annual Production (Mlbs)	2.03
Steady State Annual Production (MLbs)	2.42
LOM Production (Mlbs)	19.3
Operating costs	
Mining Costs (US$ / t mined)	3.04
Processing Costs[7] (US$ / t ore)	27.60
G&A Costs (US$M pa)	11.10
Cash costs (US$ / lb)	30.10
AISC (US$ / lb)	37.70
Initial Capital costs	
Initial Capital (US$M)	78.3
Contingency (US$M)	9.5
Pre-Production (US$M)	11.5

[6] The key outputs are presented for the Project on a 100% ownership basis. Lotus Resources owns 85% of the Project with the remaining 15% held by the Government of Malawi
[7] Includes maintenance costs and power costs.

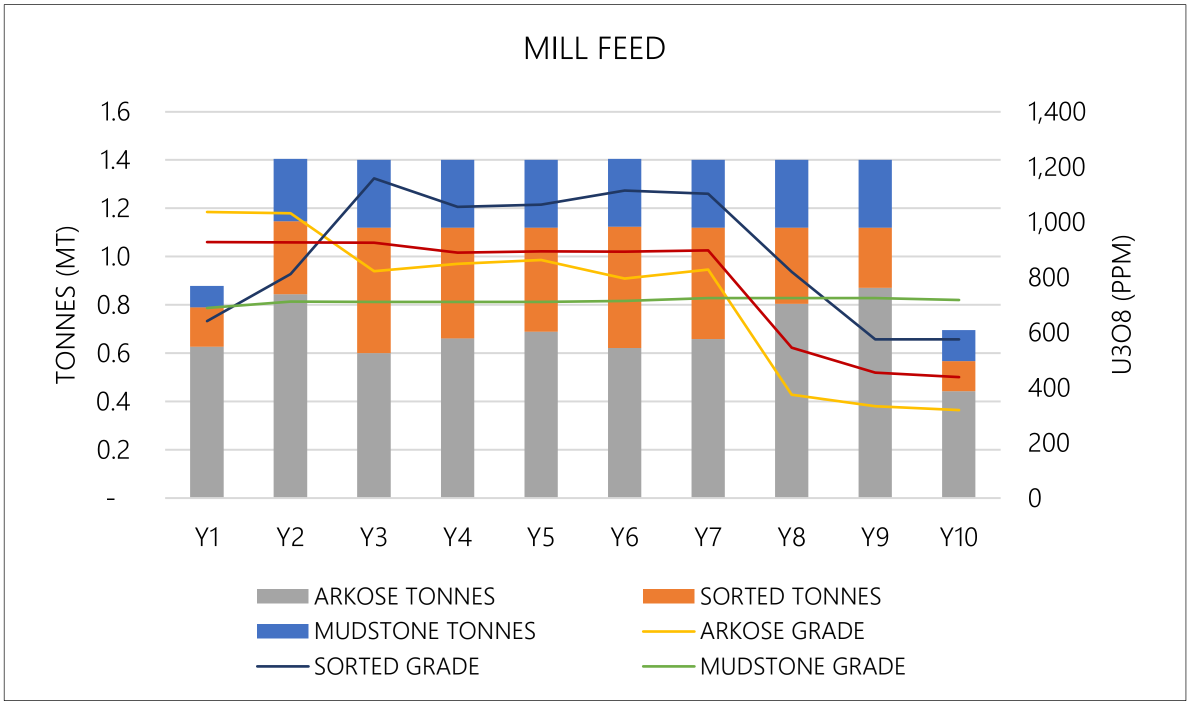

Figure 2 – Mill Feed Tonnes and Uranium Grade by Material Type and Period

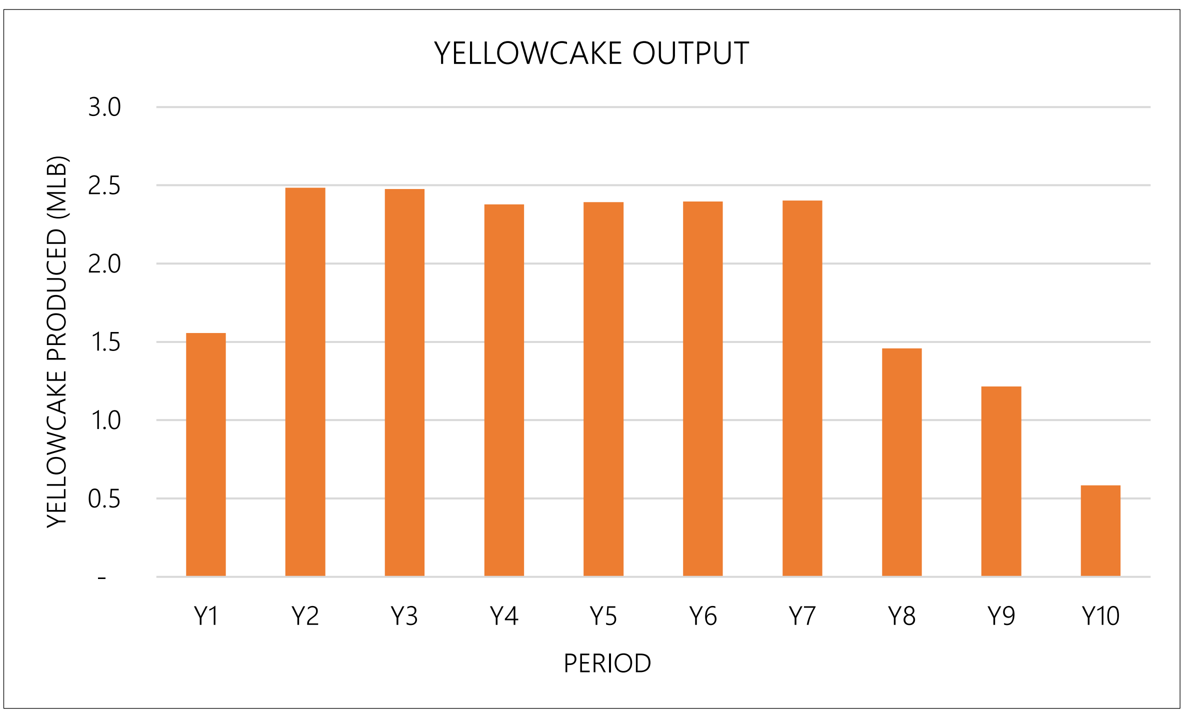

Figure 3 – Uranium Production Profile by Period

The production profile for the LOM including costs is shown below

Table 2 – Production Profile and Costs

Item	Total	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10
Mined Ore Tonnes (Mt)	**14.3**	1.4	1.5	2.0	3.3	3.0	3.1	-	-	-	-
Strip Ratio	**1.8**	3.1	3.5	2.4	1.1	1.4	1.2	-	-	-	-
Mined Ore Grade (%U_3O_8)	**648**	984	658	563	664	571	607	-	-	-	-
Mill Feed Tonnes (Mt)	**12.8**	0.9	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	0.7
Mill Feed Grade (%U_3O_8)	**792**	928	926	925	889	894	893	898	545	454	439
Production (Mlbs U_3O_8)	**19.3**	1.6	2.5	2.5	2.4	2.4	2.4	2.4	1.5	1.2	0.6
C1 Costs (US$/lb U_3O_8)	**30.1**	38.5	29.2	29.2	30.0	28.5	28.5	21.7	34.0	40.1	36.1
Sustaining Capital (US$M)	**53.8**	10.0	11.6	8.4	1.6	4.2	2.4	7.3	7.3	1.0	-
AISC (US$/lb U_3O_8)	**37.7**	51.8	38.6	37.3	35.4	35.1	34.3	29.4	43.6	43.0	40.9

Of the 19.3Mlbs uranium produced, 96% of the uranium is from Ore Reserves with the remaining 4% coming from Inferred Resources contained in existing stockpiles.

There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the conversion of Inferred Mineral Resources to Indicated or Measured Mineral Resources or that the production targets reported in this announcement will be realised.

The Company is satisfied that the proportion of inferred mineral resources is not the determining factor in project viability and that the inferred mineral resources do not feature as a significant proportion early in the mine plan

The Restart DFS incorporates the extensive optimisation programs undertaken by Lotus since the acquisition of the Project in March 2020. This work has primarily focused on:

- Mine design and scheduling considering the geotechnical constraints that were identified during the previous operating phase;
- The benefits of ore sorting technology and how this influences the mine plan, the use of existing lower-grade stockpiles and the mill feed uranium grades which, combined, directly impact production rates and LOM;
- The opportunity to connect site to the national grid, utilisation of energy produced in the onsite acid plant and solar / battery options all of which have resulted in a lower overall energy cost;

- Acid recovery from elution which allow increased utilisation of the acid within the process;
- A redesign of the existing tailings dam to increase storage capacity and to further improve the factor of safety in design to comply with the latest Global Industry Standard on Tailings Management (GISTM), the benchmark/gold standard for the safe management of tailings facilities;
- Further to this the option for in-pit disposal of tailings from stockpile treatment has been developed as a more viable alternative to construction of a new stand-alone paddock-style tailings dam that was considered in the original design work; and
- An extensive program of work has also been undertaken, including geotechnical 3D finite element modelling of the process plant terrace, to address the ground movement issues that have impacted parts of the terrace. A solution has been defined and the costs associated with this have been included in the capital cost estimates presented in the Restart DFS.

In addition to the results from the programs described above, the Restart DFS has made extensive use of the data from when the mine was operating previously to verify and confirm the assumptions made in this Restart DFS. The key assumptions are:

- Mill throughput has been constrained to 1.4Mtpa which aligns with the average throughput achieved previously, as opposed to the original design throughput of 1.5Mtpa;
- A maximum production target of 3.0Mlbs per annum U_3O_8 equivalent, noting that the back end of the circuit was designed for a production rate of 3.3Mlbs per annum U_3O_8 equivalent;
- Limiting the mudstone ore proportion of the mill feed to a maximum of 20% to mitigate rheology issues in the leach and resin-in-pulp circuits;
- A plant recovery of 86.7% based on mill feed (note, this excludes the uranium recovery from the ore sorting which is variable and depends on ROM grades); and
- A maximum acid consumption of 250 tonnes per day to align with the acid plant production rate (i.e. no external import of acid).

The timing for the restart of the mine is primarily dependent on the uranium price and the economic terms with which Lotus can sign long term offtake agreements with the utilities. The uranium spot price has already increased by ~100% in the past year, peaking at US$64/lb in April 2022. Momentum in the market is positive with strong underlying fundamentals which indicate continuing price increases that could see the necessary pricing levels achieved relatively soon.

A final investment decision (FID) will be dependent on the completion of the project work, offtake negotiations, Mine Development Agreement and financing. Assuming these are achieved in the near term, it is possible for an FID to be made as early as end 2022. With a plant refurbishment timeline of 12 to 15 months implies first production could be achieved by Q1 2024 and first shipment to customers in Q2 2024.

A high-level schedule, considering the points raised above, is shown in Figure 4.

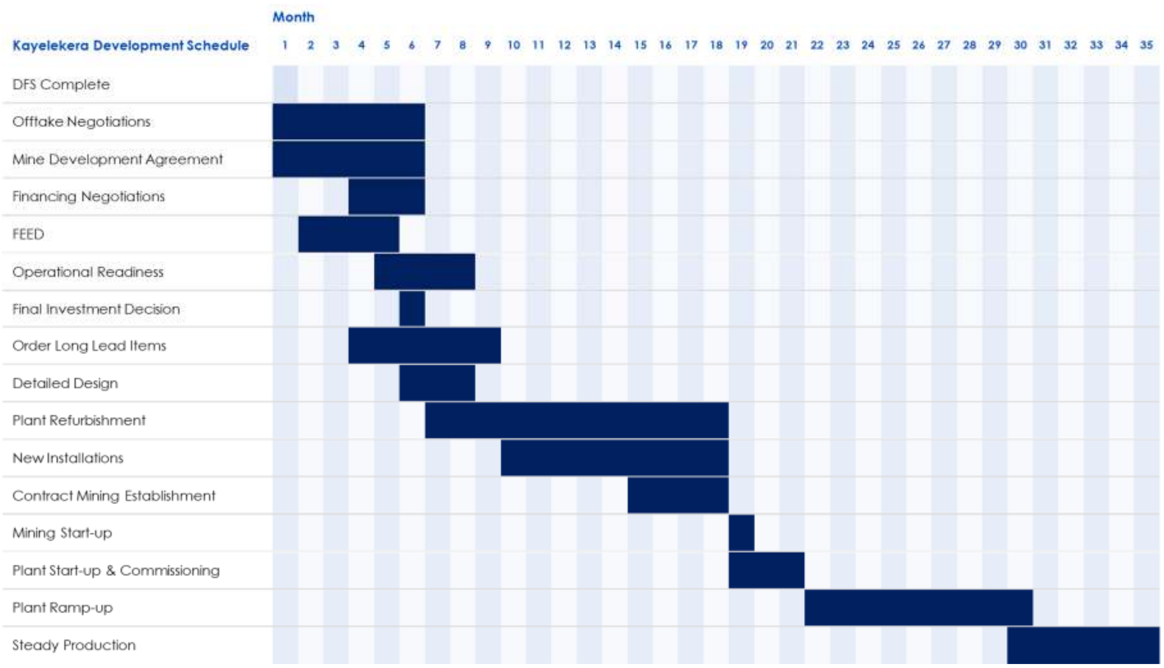

Figure 4 – Project Schedule

The Restart DFS for the Project was prepared by Lotus and a range of experienced specialist consultants as shown in Table 3

Table 3 – Key Consultants

Contribution	Company	Contact Person
Mineral Resource Estimate	Gill lane Consulting	David Princep
Pit Optimisation, Mine Design and Production Scheduling	Orelogy Consulting	Ryan Locke
Ore Reserve	Orelogy Consulting	Ryan Locke
Metallurgical / Process Design	Merrill Ford Independent Metallurgical Operations	Merrill Ford Peter Adamini
Metallurgical Test work	Steinert (ore sorting) Nagrom	Paul Beukes Rain Lewis
Process Plant & Infrastructure	Senet	Manie Gouws
Tailings and Water	SLR Consulting	Fred Sutherland
Geotechnical	Mine Technics (Open Pit) SLR Consulting (Plant)	Braam Saayman Carl Fietze
Cost Estimate Compilation	Senet	Manie Gouws
Financial Model	InfinityCorp	Byron Benvie
Community & Environment	Dhamana	Nanette Hattingh
Mine Closure Plan and Cost Estimate	Mine Earth	Stacey Gregory

NEXT STEPS

The Company's next areas of focus relate to undertaking the work necessary to position Kayelekera for a successful restart when a final investment decision is made. Key activities expected to be completed within the next 6 to 12 months include

- Complete negotiations with the Malawian Government concerning the Kayelekera Mine Development Agreement;
- Continue dialogue with nuclear energy utilities and other parties in connection with uranium offtake agreements;
- Finalisation of an agreement with the Electricity Supply Commission of Malawi (ESCOM) for the connection of the mine site to the national grid;
- Preparation of an Operational Readiness Plan for restart;
- Completion of financing plan for the initial and working capital requirements for the restart of the mine; and
- Develop the scope and costs for undertaking a Front-end Engineering and Design (FEED) program of work in conjunction with a site based early works program that could allow an accelerated restart if deemed viable.

This work will be undertaken while the Company continues to maintain Project asset integrity through its care and maintenance program.

MINERAL RESOURCE ESTIMATE

The Mineral Resource Estimate (MRE) used in the Restart DFS is the MRE announced by the Company on 9 June 2022, which is inclusive of the Livingstonia MRE, however the Livingstonia MRE was not considered in the Restart DFS scheduling as more work is required to expand the size and confidence level of those resources along with an optimised treatment plan.

Mineral Resources are reported in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, December 2012 (**JORC Code 2012**) as required by the Australian Securities Exchange (ASX). The summary information in the table below should be read in conjunction with the enclosed supporting technical information (JORC Code 2012 – Table 1 Reporting).

Information required under ASX Listing Rule 5.8.1 as it relates to the Kayelekera MRE is presented in Appendix 1.

Table 4 - Lotus Mineral Resource Inventory – June 2022 [8]

Project	Category	Mt	Grade (U_3O_8 ppm)	U_3O_8 (M kg)	U_3O_8 (M lbs)
Kayelekera	Measured	0.9	830	0.7	1.6
Kayelekera	Measured – RoM Stockpile[9]	1.6	760	1.2	2.6
Kayelekera	Indicated	29.3	510	15.1	33.2
Kayelekera	Inferred	8.3	410	3.4	7.4
Kayelekera	**Total**	***40.1***	***510***	***20.4***	***44.8***
Kayelekera	Inferred – LG Stockpiles[10]	2.4	290	0.7	1.5
Kayelekera	**Total - Kayelekera**	***42.5***	***500***	***21.1***	***46.3***
Livingstonia	Inferred	6.9	320	2.2	4.8
Total	**All uranium resources**	***49.4***	***475***	***23.3***	***51.1***

[8] See ASX announcements dated 15 February 2022 and 9 June 2022 for information on the Lotus mineral resource estimate. Lotus confirms that it is not aware of any new information or data that materially affects the information included in the announcements of 15 February 2022 and 9 June 2022 and that all material assumptions and technical parameters underpinning the Mineral Resource Estimate in that announcement continue to apply and have not materially changed.

[9] RoM stockpile has been mined and is located near mill facility.

[10] Low-grade stockpiles have been mined and placed on the medium-grade stockpile and are considered potentially feasible for blending or beneficiation, with initial studies to assess this optionality already completed.

ORE RESERVE ESTIMATE

The Ore Reserve estimate has been developed using the 9 June 2022 MRE for Kayelekera only (i.e. excluding Livingstonia) and based on the optimised mine plan and production schedule prepared as part of the Restart DFS reported herein.

Ore Reserves are reported in accordance with the JORC Code 2012 as required by the ASX. The summary information in the table below should be read in conjunction with the supporting technical information provided in Appendix 3 (JORC Code 2012 – Table 1 Reporting).

The feasibility level study on which the Mineral Resources and Ore Reserves estimated are based is the Restart plan detailed in this announcement.

Information required under ASX Listing Rule 5.9.1 as it relates to the Kayelekera Ore Reserve is presented in Appendix 2.

Table 5 - Lotus Ore Reserve Inventory – July 2022[11]

Project	Category	Mt	Grade (U_3O_8 ppm)	U_3O_8 (M kg)	U_3O_8 (M lbs)
Kayelekera	Open Pit - Proved	0.6	902	0.5	1.2
Kayelekera	Open Pit - Probable	13.7	637	8.7	19.2
Kayelekera	RoM Stockpile – Proved	1.6	760	1.2	2.6
Kayelekera	**Total - Kayelekera**	***15.9***	***660***	***10.4***	***23.0***

[11] Ore Reserves are reported based on a dry basis. Proved Ore Reserves are inclusive of RoM stockpiles and are based on a 200ppm cut-off grade for arkose and a 390ppm cut-off grade for mudstone. Ore Reserves are based on a 100% ownership basis of which Lotus has an 85% interest

RESTART DEFINITIVE FEASIBILITY STUDY DETAILS

Introduction

Lotus has undertaken a definitive feasibility level study to determine a baseline scenario for the re-commencement of production at its Kayelekera Uranium Project. The Restart DFS has been prepared based on information provided by various consultants in their specific areas of expertise and information obtained from past operational experience.

The Project, which is currently in care and maintenance, is a successful past producer of uranium, having delivered ~11Mlbs uranium to the market between 2009 and 2014.

Lotus owns 85% of Kayelekera, with the remaining 15% held by the Government of Malawi. The Project is located in the Karonga District of northern Malawi, 650km north of the national capital of Lilongwe and 52km by road to the west of the lake-side town of Karonga as shown in Figure 5.

Figure 5 – Project Location

Tenements

Through its Malawian subsidiary Lotus (Africa) Limited, Lotus owns the following mining and exploration licences in Malawi.

Item	Granted	Expiry	Status	Comment
Mining Licence				
- ML0152/2007 - Kayelekera	02/04/2007	01/04/2037	Valid	Option to further renew
Exploration Licences				
- EL418 - Chilumba	07/09/2021	06/09/2023	Valid	
- EL489 - Nthalire	30/01/2021	29/01/2023	Valid	One more extension available
- EL502 - Juma	20/04/2021	19/04/2023	Valid	One more extension available
- EL417 - Rukura	07/09/2021	06/09/2023	Valid	
- EL595 - Llvingstonia	06/10/2021	05/10/2024	Valid	Two more extensions available
- EL583 - Livingstonia West	06/10/2021	05/10/2024	Valid	Two more extensions available
- EPL0225 - Mapambo	12/12/2018	11/12/2020	Pending	Renewal in progress

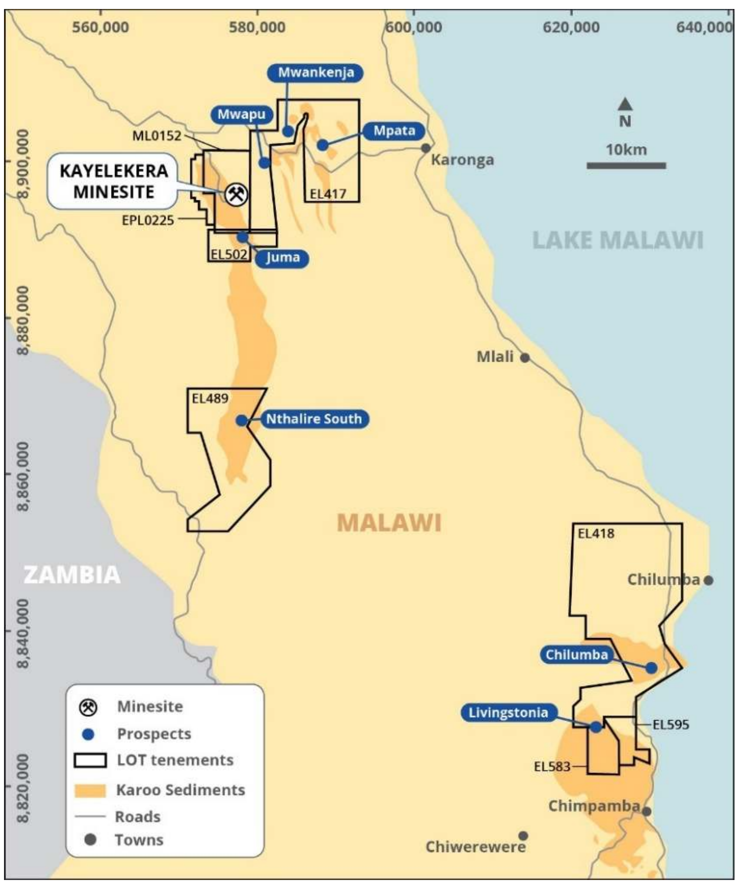

Figure 6 – Tenement Map

Kayelekera Mineral Resource and Geology

Kayelekera is a sandstone-hosted uranium deposit associated with the Permian Karoo sediments and is hosted by the Kayelekera member of the North Rukuru sediments of the Karoo. The mineralisation at Kayelekera is hosted in several arkose units where they are adjacent to the Eastern Boundary Fault zone (Figure 7). The mineralisation forms more or less tabular bodies restricted to the arkoses, except adjacent to the NS strand of the Eastern Boundary fault at the eastern extremity of the pit. Here, mineralisation also occurs in mudstones in the immediate vicinity of the fault. The highest grades correspond to the intersection of the eastern and Champhanji faults. Mineralisation grade and tonnage declines with lateral distance from these faults. The lowest level of known mineralisation is currently at a depth of approximately 160m below surface.

Secondary mineralisation is concentrated in vertical fractures and along the contacts between mudstone and arkose and is restricted to the upper parts of the deposit.

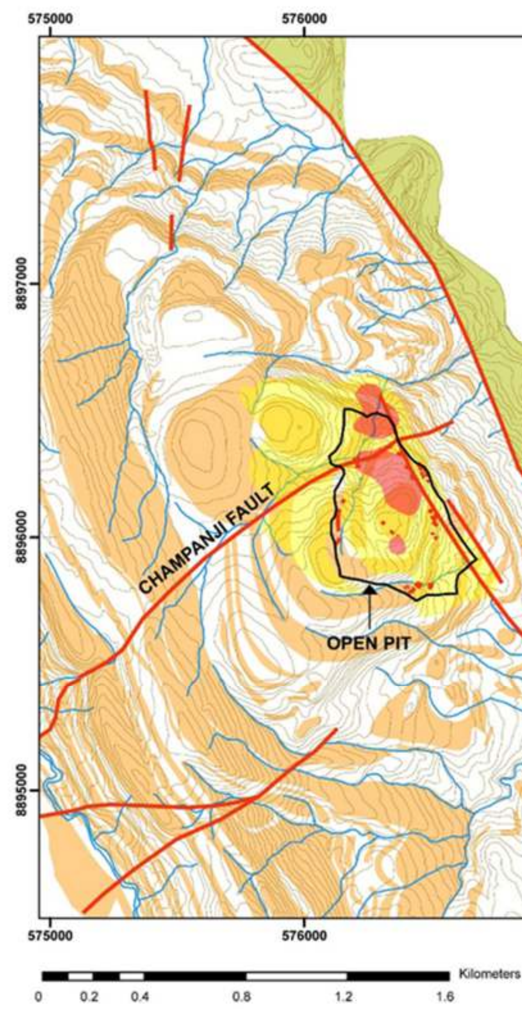

Figure 7 – Surface Geology of the Kayelekera Mineralisation

Primary reduced (i.e. carbon and pyrite-bearing) arkose mineralisation accounts for 40% of the total mineralisation. About 30% of the mineralisation is hosted in oxidised arkose (i.e. lacking carbon and pyrite). Approximately 10% of mineralisation is termed "Mixed Arkose" and exhibits characteristics of both primary and secondary arkose ore types. A further 20% of primary mineralisation is hosted by mudstone and is termed mudstone mineralisation.

Uranium in primary mineralisation is present as coffinite, minor uraninite and a U-Ti mineral, tentatively referred to as brannerite. Modes of occurrence include disseminated in matrix clay, included in detrital mica grains and intimately intergrown with carbonaceous matter. Individual grains are extremely fine, typically <10 µm. Coffinite and uraninite also show an association with a TiO_2 phase, possibly rutile after detrital ilmenite.

The mineral resource dataset consists of 75,252 one metre composited samples and is derived from a combination of assays and downhole radiometric logging. Assays have been used, where available, in preference to downhole radiometrics. Disequilibrium factors applied to the dataset are based on those calculated by Barrett for the original Paladin mineral resource estimates and are specific to oxidation state and Arkose/Mudstone unit designation.

The drill hole database was intersected with the mineralisation wireframes and the results were coded into the drill hole database. Mineralised drill hole intercepts were then produced, and these were subsequently composited to 1.0 metre intervals and used in the grade estimation process.

Mineral resources have been estimated at a number of cut-off grades using Multiple Indicator Kriging with block support correction. Primary model panel dimensions are 20mE x 20mN x 2mRL. Estimates assume that final grade control sampling at approximately 3.5mE x 3.2mN x 1mRL spacing will be available prior to final mining and a selective mining unit of approximately 3mE x 3mN x 2mRL. Figure 8 illustrates the distribution of grade and panel proportions within the mineral resource model on a selected RL using blocks above a 200ppm U_3O_8 cut off.

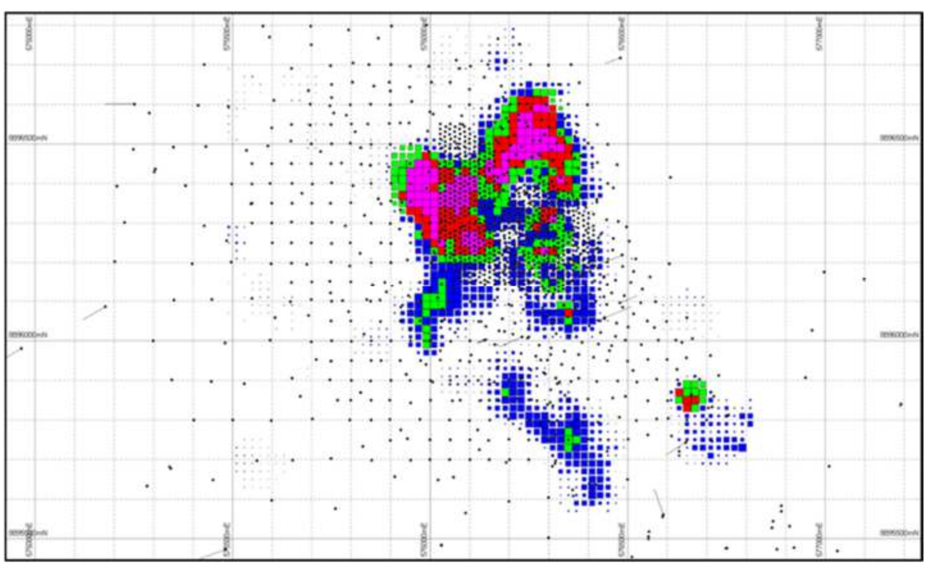

Figure 8 – Depleted Mineral Resources 860mRL

(grey < 200ppm, blue 200 – 400ppm, green 400 – 600ppm, red 600 – 800ppm, magenta 800 – 2000ppm)

In-situ Mineral Resources are depleted for mining to 31 December 2013 when mining ceased; Stockpiles have been depleted to the end of processing in June 2014. Metal content is based on contained metal in the ground and takes no account of mining or metallurgical recoveries, mining dilution or other economic parameters. An in-situ bulk density of 2.29g/cm^3 was applied for arkose material and 2.20g/cm^3 for mudstone material to all blocks within the model.

Table 6 presents the Mineral Resources for Kayelekera only as at 9 June 2022 and reported above a 200ppm U_3O_8 lower cut-off for in-situ material and for the medium-grade stockpiles.

Table 6 - Lotus Mineral Resource Estimate – June 2022[12]

Project	Category	Mt	Grade (U_3O_8 ppm)	U_3O_8 (M kg)	U_3O_8 (M lbs)
Kayelekera	Measured	0.9	830	0.7	1.6
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Kayelekera	**Total**	***40.1***	***510***	***20.4***	***44.8***
Kayelekera	Inferred – LG Stockpiles[14]	2.4	290	0.7	1.5
Kayelekera	**Total – Kayelekera**	***42.5***	***500***	***21.1***	***46.3***

Exploration Potential

Lotus's exploration targets in Malawi have been high grade (>0.1% U_3O_8) tabular sandstone-hosted deposits in Karoo-aged strata that could provide feed for the Kayelekera mill.

Historical airborne and ground radiometric surveys confirmed the 11 prospect areas first defined by the UK's Central Electricity Generating Board (CEGB) regional exploration work during the 1980s. The most significant prospects are: Mpata, Mwapu, Chilumba, Livingstonia, Mwankenja, Juma, and Nthalire (see Figure 6).

The previous owners drilled a total of 195 reverse circulation (RC) holes in seven areas within these prospects. Although uranium mineralisation was frequently intersected, no significant economic results were seen, however the drill targets in the Mwankenja South, Livingstonia and Chilumba prospect areas based on radiometric anomalies, as well as structural targets in the Nthalire areas, were untested.

Lotus has therefore focused its exploration program on two fronts:

[12] See ASX announcements dated 15 February 2022 and 9 June 2022 for information on the Lotus mineral resource estimate. Lotus confirms that it is not aware of any new information or data that materially affects the information included in the announcements of 15 February 2022 and 9 June 2022 and that all material assumptions and technical parameters underpinning the Mineral Resource Estimate in that announcement continue to apply and have not materially changed.

[13] RoM stockpile has been mined and is located near mill facility.

[14] Low-grade stockpiles have been mined and placed on the medium-grade stockpile and are considered feasible for blending or beneficiation based on the work undertaken in this Restart DFS.

- Step-out drilling around the existing known mineralisation at the Kayelekera deposit, which has resulted in the successful increase in mineral resources reported in that area;
- Regional exploration at Livingstonia, which successfully defined the Livingstonia Mineral Resource Estimate of 6.9MT at 320ppm U_3O_8 for 4.8Mlbs of Inferred Resources (see ASX Announcement 9 June 2022) and at Chilumba where a 1,500m drilling program was recently completed, for which the assay results are pending.

Livingstonia, and any other new deposits, can be considered additional feed sources for the Kayelekera mill that could extend the LOM past the current 10 years indicated in this Restart DFS.

It is also important to note that the only geophysical techniques used to date have been radiometric and magnetic surveys and with the range of other survey techniques available (electromagnetic, electrical conductivity etc) the Company believes there are still opportunities for more discoveries that could further extend the Kayelekera LOM.

Geotechnical

Open Pit

The orebodies and hence the open pit is divided into southern and northern domains by the major west-to-east striking Champhanji Fault (see Figure 7), which displaced the strata north of it by ~300m eastwards and ~20m vertically up. These main northern and southern ore zone domains are further subdivided into western, central, and eastern structural geological and geotechnical domains, based on the dip directions and dip angles of the strata.

Several bench, inter-ramp and overall slope scale failures occurred during the historic mining stages and continued after suspension of mining in December 2013. The primary cause of these is the extremely low shear strength of the Karoo mudstone strata and the very weak mudstone-arkose contacts, both of which dip predominantly in the direction of the pit slopes. Multiple faults cut through and disrupt or displace the strata to more or lesser degrees.

Pore-water pressures in the slopes, whether long-term or transient elevated pressures during the rain seasons, aggravate slope instability in a major way. Historic hydrogeological and geotechnical assessments defined a multiple aquifer system, with high permeability and high transmissive arkose units intercalated with extremely low transmissivity mudstone units.

A large portion of the south-western pit slope has failed and now comprises failure rubble of mixed arkose and mudstone. This failure occurred on a fault or shear in the TU-Mudstone, close to the TU-Mudstone and U-Arkose contact (Figure 9).

The mudstone bedding (strata) dip, the TU-Shear, Fault 1, indicated groundwater levels, the failure rubble, and rainwater which percolate into the cracks and into the rubble, combine to dictate slope stability and slope design. Mine Technics modelled these features, together with the lithological and fault models, and imported these into the 3D slope stability analysis software SLIDE3®. Several iterations of stability analyses and sensitivity analyses were done on preliminary shells from the pit optimisation work and then on iterations of pit and stage designs.

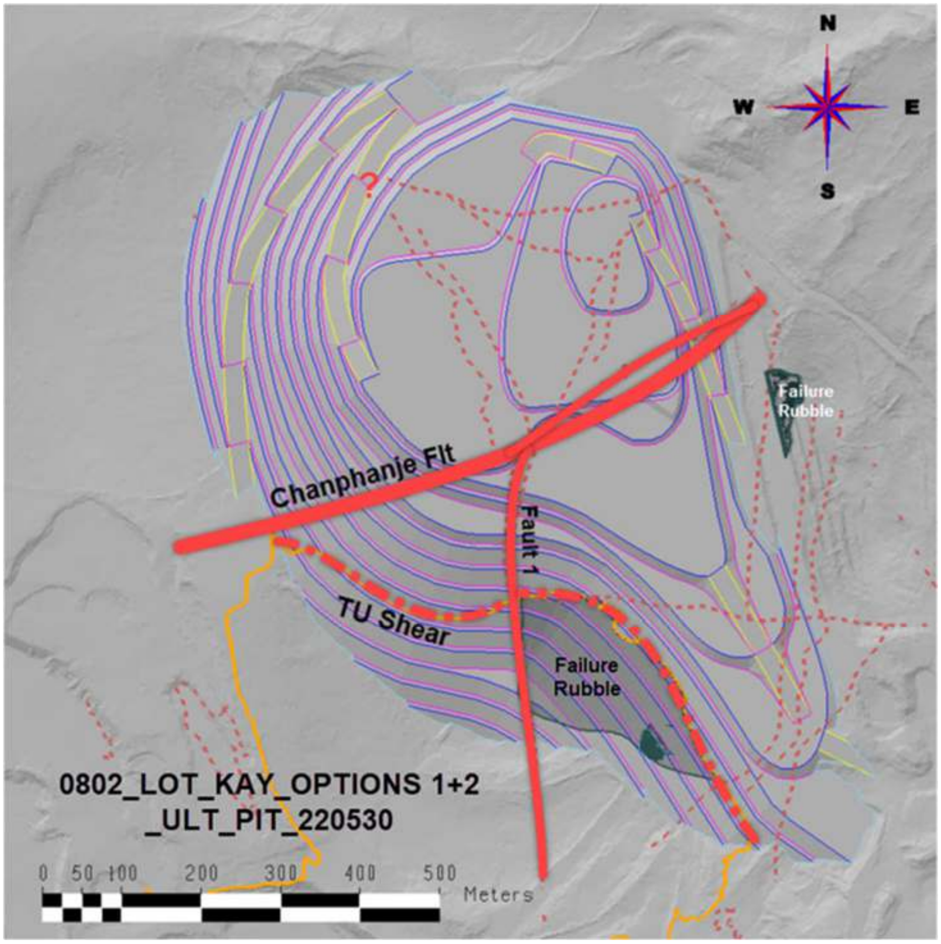


Figure 9 – Fault Planes Overlaying Ultimate Pit Design

Mine Technics and Orelogy closely interacted and collaborated to ultimately develop two staged mining options for the Restart DFS. Mine Technics recommended slopes for the northern domain and advised slope configuration changes to best secure the ramp systems.

The option selected had significantly lower risk of mining disruptions from failures out of ramps where these intersect modelled faults mainly because the ramps do not cross the Champhanji Fault zone and the wide concave slope geometry of all stages is also favourable for stability.

The short standing times of staged northern domain slopes as part of the mining plan will also mitigate geotechnical risks and will be a substantial improvement over the historic (unstable) mining stage designs.

Plant Terrace

A known issue on site is the ground movement that has occurs on the plant terrace. This was identified as early as 2012 by the previous owners with the preliminary mitigation strategy of relocating the stockpiles and rock dumps located to the west and above the plant terrace being undertaken. Multiple programs by various expert consultants have been undertaken over the years and the Company has a sound understanding of the issues. However, although the stockpile relocations significantly reduced the movement, there is still some movement evident on site.

An investigation undertaken by SLR Consulting (SLR) on behalf of Lotus concluded that a rotational paleo-landslide (RPL) had occurred, with several slumps evident behind the RPL. This failure was possibly a multiple retrogressive slide which has eroded and developed into a succession of slips.

SLR's initial assessment was that the mechanism driving the slope movements at the plant was due to the external disturbances in the form of the cutting and/or filling of parts of the slope for plant construction which resulted in the alteration of the balance between the driving and resisting forces leading to renewed movements in the slope. These movements are likely occurring along an existing paleo slip surface or shear, with residual strengths operative on these surfaces.

SLR reviewed the data generated from the existing ground monitoring system consisting of 75 prisms, 6 inclinometers and a number of vibrating wire piezometers. In December 2021 SLR obtained access to satellite Interferometric Synthetic Aperture Radar **(InSAR)** data, processed, and supplied by TRE-Altamira (TRE-A). InSAR is a proven technique for measuring ground movements. Satellites record images of the Earth, and these images can be combined to measure movements of the ground surface.

Two data sets have been supplied, data from the Envisat satellite covering the period July 2007 to May 2009, and data from Sentinel-1 covering the period January 2015 to October 2021.

SLR has overlain prism data over the InSAR data to compare the two methods and to check they align. Overall displacement direction data between the two methods are aligned with the InSAR data indicating eastward movement of less than 100 mm. A comparison was also made between InSAR and prism data for vertical displacement. Vertical displacement directions correlate very well in the process plant area with the InSAR data showing uplift of 100 mm or less.

To further characterise the ground conditions at the plant site, a geotechnical program was carried out in 2022, comprising the following:

- Eight holes drilled to further characterise the soils.
- Televiewer was carried out to collect structural data and samples were collected for testing.
- A geological and geotechnical model was developed to understand the spatial characteristics of the strained zone.

Initially 2D Numerical modelling was carried out using RS2. 3D and 2D numerical modelling was then carried out using FLAC. FLAC3D utilizes an explicit finite volume formulation that captures the complex behaviour of models that consist of several stages, show large displacements and strains, exhibit non-linear material behaviour, or are unstable.

Based on the initial modelling a number of mitigation strategies were identified with further unloading of the slope and the installation of multiple piles considered most likely to be effective.

The modelling indicated that the preferred solution is a combination of removing the remaining mudstone and marginal ore stockpile from the top of the hill above the plant terrace, along with the installation of a pile wall retention system consisting of 3 fences with piles at 2m spacings and a depth down to 25 metres. One fence will be along the western side of the plant terrace, one further west, part way up the slope and the final one to the east of the Return Water Pond 2 (RWP2).

Modelling under this scenario indicates predicted ground movements will be reduced by more than 80% with annual movements between 5 and 8mm on the terrace being calculated compared to the current 40mm being measured. At this scale of movements any infrastructure impacted can have an engineering solution defined so as to manage the impacts effectively.

Mining

Orelogy was commissioned by Lotus to conduct the design and scheduling work for the open pit mining component of the Restart DFS.

The mining operation extends over a 6-year mining period followed by a further 4 years of stockpile rehandle. Mining will be undertaken by an independent mining contractor using a multi-stage approach to focus on value maximisation and minimising waste development in the early years, whilst ensuring ore continuity can be maintained over the life of the project

Mining Method

Conventional open pit mining has been adopted as the preferred mining method as:

- The ore presents as a series of horizontally stacked arkose layers separated by mudstone layers all of which are close to the surface.
- There is space to construct waste dumps to the west of the open pit development.
- It has already been successfully demonstrated with operations running from 2009 to 2014.
- It is expected, with a high chance of success, to generate the best value.

The operation is currently planned in four stages over the 6-year mine life. Open pit mining will be undertaken using:

- A fleet of 75 t class excavators and 60 t class rigid dump trucks supported by an appropriate ancillary fleet will be used to mine approximately 7 Mtpa. This equipment matches the scale of the operation and the mining environment, characterised by predominantly oxide/transitional materials. Bench heights are 10.0m high and will be mined in 2.0m flitches.
- At the completion of the open pit, stockpiled ore will be rehandled and processed at the end of the mine life.

As the model is a MIK resource model, ore losses and dilution are "built into" the construction of the model and hence can be used in-situ with no further post processing.

Pit Optimisation

The Project is based on mining costs sourced from Q2 2022 request for budget pricing costs from mining contractors who have the equipment and experience to mine in Malawi. All processing orientated costs and recoveries were supplied by Lotus based on the 2020 Scoping Study outputs (see ASX announcement 20 October 2020) and from the recently undertaken test work. The key change from the Scoping Study was the inclusion of ore sorting on crushed product prior to it being fed to the plant milling circuit. Initially ore sorting was used as a mechanism to upgrade low grade ore, however test work also showed that sorted medium and high-grade ore can also be beneficial in increasing project value.

Uranium price for the pit optimisation has been modelled at $75/lb. A range of different scenarios were run including a suite of sensitivity runs across a range of key parameters including changes to uranium price and the inclusion of the ore sorter with various cut-over grades. All of these scenarios mine to the base of the mineralisation with changes to cut-off grades either increasing or decreasing the ore inventory in very similar shells of 40 to 41Mt in size.

Mine Design

Slope design criteria was provided by the independent geotechnical firm Mine Technics. However, this was also refined in areas in around the Champhanji fault which cuts across the Project. Multiple stages were designed to minimise up front waste movements and to help ensure ore continuity can be maintained over the LOM with the least amount of waste required.

Ramp widths were designed to industry standards and are 25m wide at a gradient of 10%, and where required, minimum mining widths have been set at 40m.

Cut-off grades for the inventory are 200 ppm U_3O_8 for arkose and 390 ppm U_3O_8 for mudstone. The total inventory by stage as shown in Table 7 highlights a very close correlation to the optimal shell on which it was designed.

Table 7 - Mining Inventories by Each Mining Stage

Stage	Ore	Grade	Waste	Total	Strip
	Mt	U ppm	Mt	Mt	W:O
1	2.8	850	1.8	4.5	0.6
2	7.3	618	15.1	22.3	2.1
3	2.0	573	3.7	5.7	1.8
4	2.3	570	5.7	8.0	2.5
TOTAL	14.3	648	26.2	40.5	1.8

The staging logic as illustrated in Figure 10 was based on lower revenue factor shells to ensure the highest value ore is mined first with modification introduced in and around the main Champhanji fault to ensure safe mining practices.

- Stage 1 focuses on a high value area in the north-east of the project area and minimises interaction with the Champhanji fault
- Stage 2 is the largest stage and mines out the southern failure.
- Stage 3 and 4 are westerly extensions of the orebody.

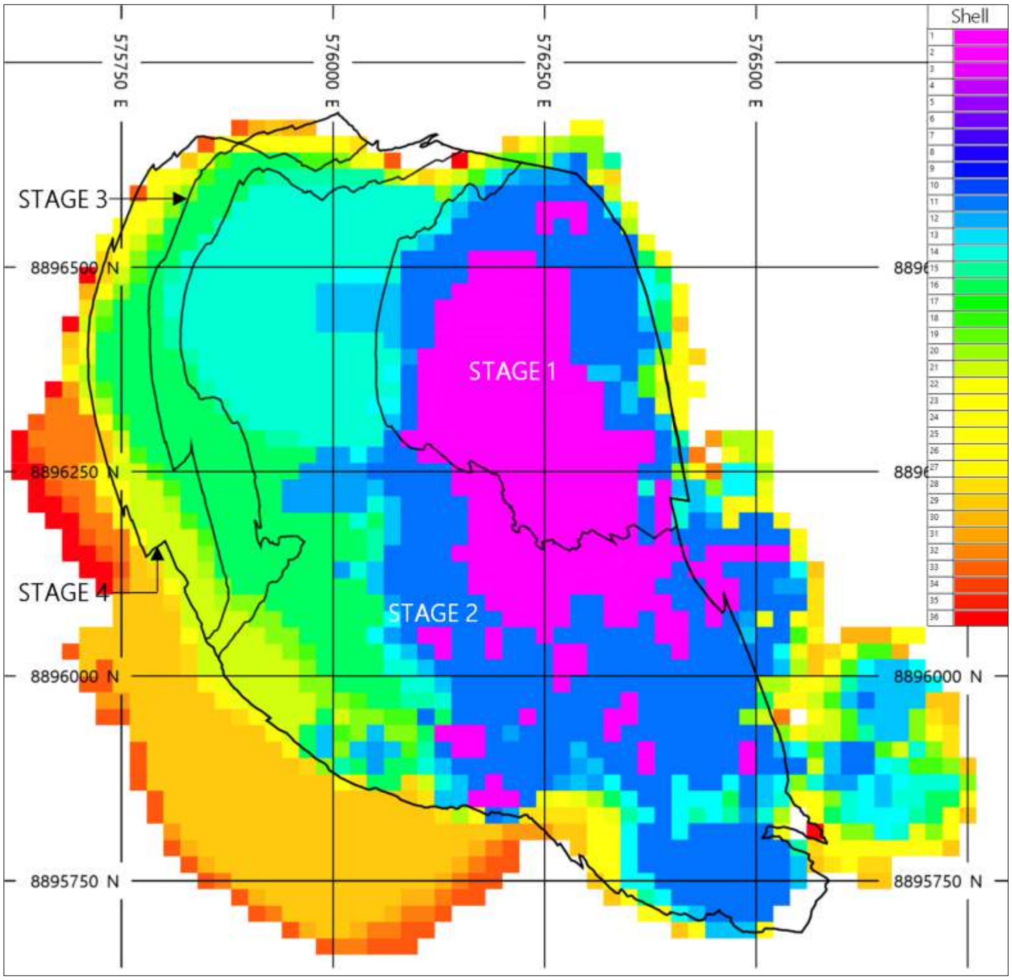


Figure 10 – Stage Pit Outlines with Nested Pit Optimisation Shells

Waste dumps and stockpiles are located in areas outside of the mine design envelope. Clean waste material generated will be used for construction of the wall lifts at the TSF and as part of the closure plan will be used as a capping material at the TSF, open pit and for any mineralised waste dumps. Stockpiles are placed as close to the process facility as possible to minimise stockpile rehandle costs. Table 8 summarises the current stockpile state already placed near the ROM pad and ready for processing.

Table 8: Existing Stocks

Material Type	Quantity	U_3O_8 Grade
	Mt	ppm
LG Arkose	2.5	290
HG Arkose	0.3	1140
Mudstone	1.2	670
Total	**4.1**	**470**

Production Scheduling

All scheduling has been completed with Maptek Evolution™ in both a strategic and tactical sense. This ensures value is maximised and is also used to inform the tactical level scheduling scenarios.

The primary objectives included:

- Maintain a safe working height between stages to minimise any geotechnical risk. The current mining strategy focuses on mining Stage 1 to get access to high value ore whilst ensuring subsequent stages are developed with a 20 – 30m vertical lag on a period-by-period basis which will reduce risk failure and ensure a safe operation.
- Work with the ore sorter concept integrated into the scheduling process to target required mill feed grades (i.e., average feed grade to mill after ore sorting).
- Maximise and maintain steady U_3O_8 output whilst managing feed constraints by targeting approximately 930ppm U_3O_8 feed grade for the first 3 years, followed by 900ppm thereafter.
- Process a percentage of marginal ore each period to avoid a build-up of stocks requiring sorting in the latter part of the schedule. These low-grade ores are only economic to process if they are sorted before mill processing and would needlessly prolong the Project life if sorted at the end of the schedule due to the finite sorting capacity per period.
- Process a percentage of mudstone material each period to avoid a build-up of mudstone stocks in the latter part of the schedule.

Total material mined is capped at 7.0 Mtpa for the first three years of the schedule. During this period, all arkose waste sent to TSF1, the existing tailings facility, which is located to the south of the process plant, for construction of the required wall lifts.

Table 9: Mining Plan

Item	Unit	Mine Plan
Mined Ore tonnes		
- Total (M&I)	Mt	14.3
Mined Ore grade		
- Total (M&I)	ppm U_3O_8	648
Strip Ratio	w:o	1.8
Stockpile tonnes	Mt	4.1
Stockpile average grade	ppm U_3O_8	470
Crusher feed tonnes	Mt	18.4
Crusher feed average grade	ppm U_3O_8	609
Crusher feed metal	Mlbs U_3O_8	24.7
Mill feed tonnes	Mt	12.8
Mill feed average grade	ppm U_3O_8	792
Mill feed metal	Mlbs U_3O_8	22.3

Mine Cost Estimation

A mining contractor approach has been used to develop the orebody. A detailed request for budget pricing was submitted and Tayanna Mining Contractors have prepared a competitive submission for the Project.

Table 10 shows the mining rates, grades and costs by period.

Table 10 – Mining Production Profile and Costs

Item	Total	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10
Total Mined Tonnes (Mt)	**40.5**	5.8	7.0	7.0	7.0	7.0	6.9	-	-	-	-
Total Mined Ore Tonnes (Mt)	**14.3**	1.4	1.5	2.0	3.3	3.0	3.1	-	-	-	-
Strip Ratio	**1.8**	3.1	3.5	2.4	1.1	1.4	1.2	-	-	-	-
Mined Ore Grade (%U_3O_8)	**648**	984	658	563	664	571	607	-	-	-	-
Crusher Feed Tonnes (Mt)	**18.4**	1.3	2.1	1.9	1.9	2.0	1.9	1.9	2.1	2.2	1.1
Crusher Feed Grade (%U_3O_8)	**609**	670	679	745	696	690	703	704	429	359	349
Mining Cost (US$/tonne material)	**3.04**	2.78	2.83	2.83	2.77	2.73	2.78	-	-	-	-
Mining Cost (US$/tonne ore)	**8.60**	11.50	12.78	9.72	5.88	6.43	6.16	-	-	-	-
Mining Cost (US$/lb U_3O_8 produced)	**6.37**	10.25	7.94	7.95	8.15	8.01	7.97	1.23	2.02	2.42	2.51

Figure 11, Figure 12 and Figure 13 summarise the mining physicals by period.

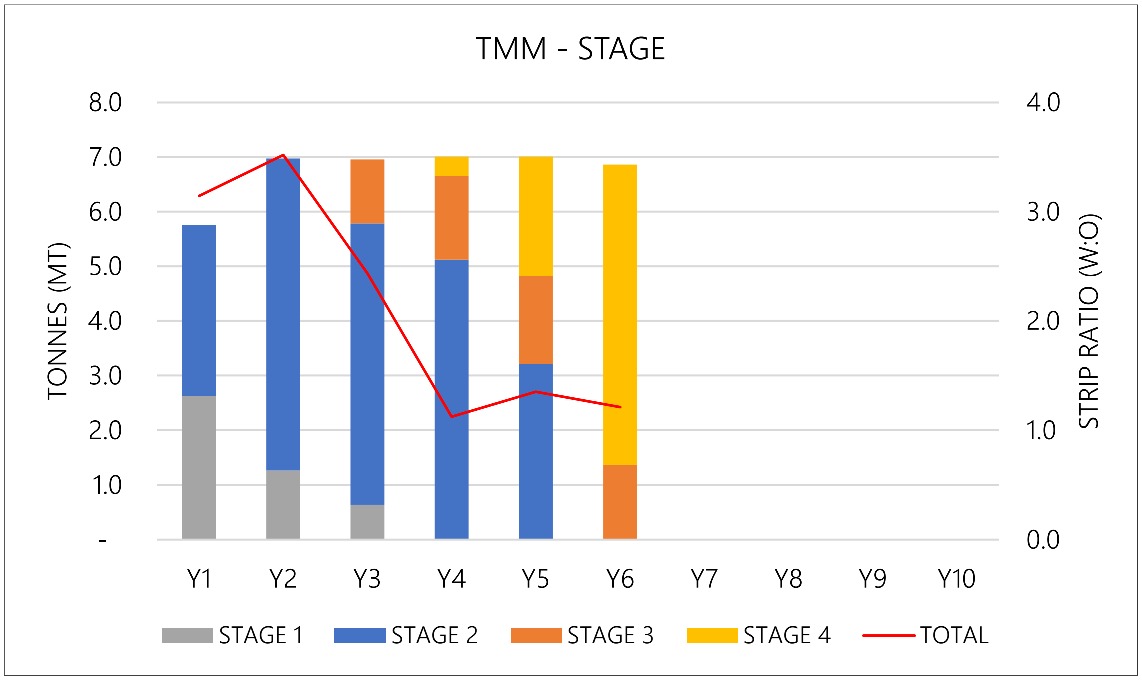


Figure 11 – Total Material Movement and Mine Strip Ratios by Stage and Period

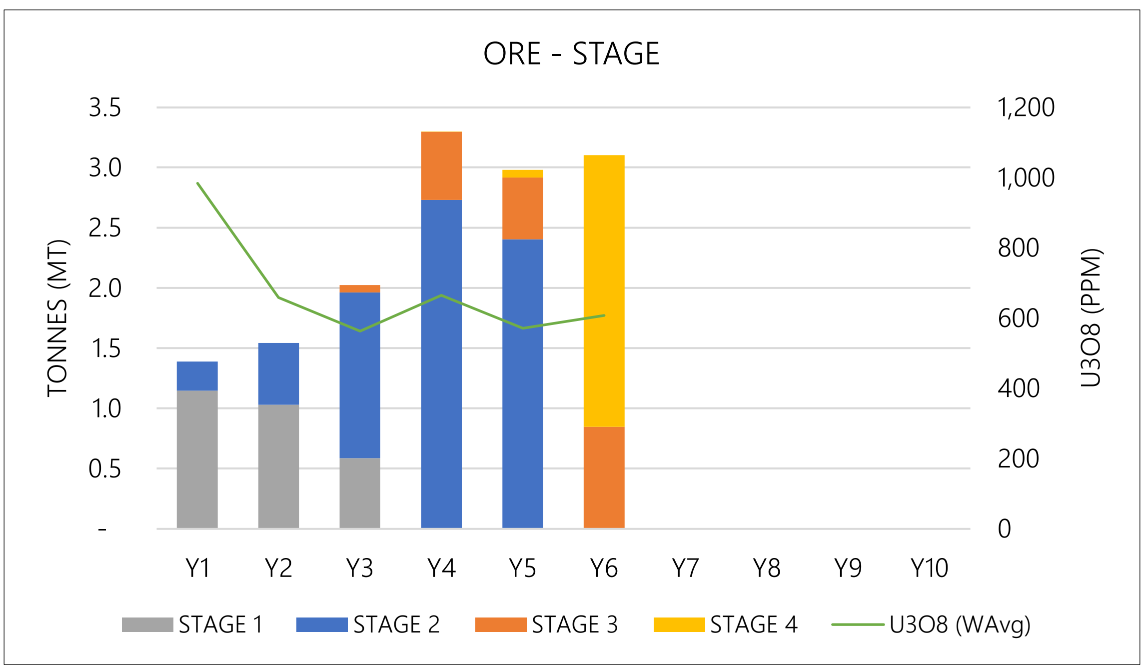


Figure 12 – Pit Ore Tonnes and Uranium Grades by Stage Period

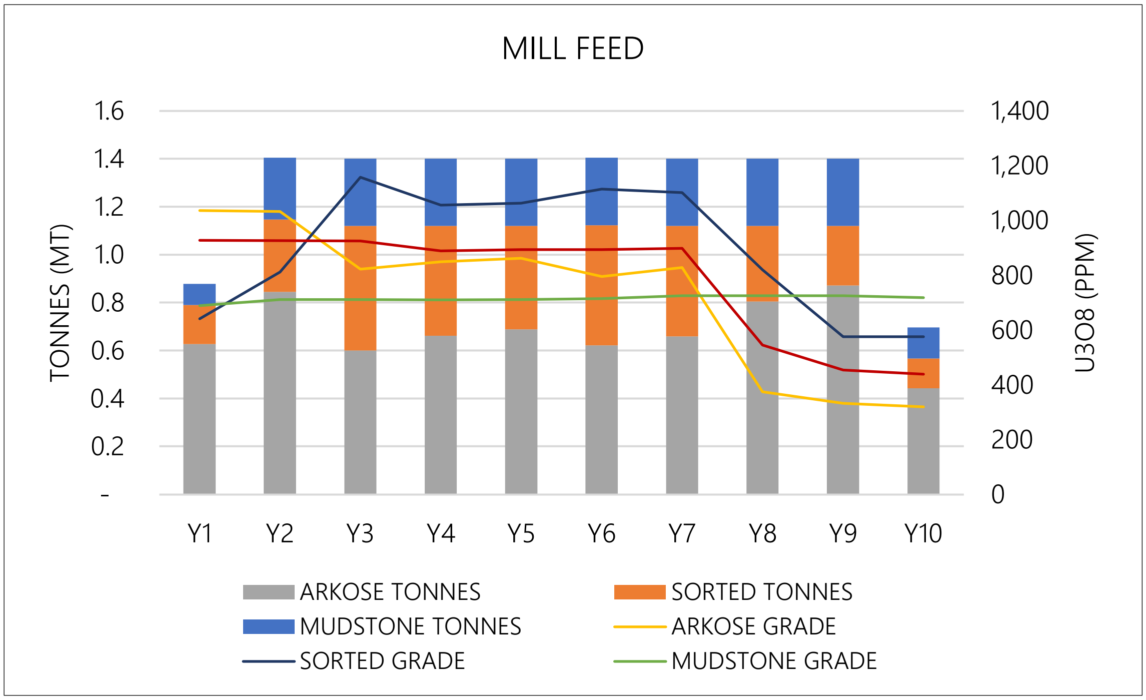


Figure 13 – Mill Feed Tonnes and Uranium Grades by Material Type and Period

Metallurgy

No further metallurgical test work was undertaken on the processes that are in the current plant as historical operating data was considered to be the best source of information for performance and inputs to defining costs in the Restart DFS. The test work undertaken by Lotus therefore focused on the new unit operations that are being considered for the Kayelekera plant, the main one being ore sorting which had been identified as a method to increase feed grade to the main plant and to convert lower grade ores into economic feed material for the plant.

Ore sorting is in concept a very simple process based on determining the attributes of each particle or rock that passes under its detectors and then deciding whether to "accept" the particle or "reject" the particle to waste. The intricacy comes with the detectors, the algorithms for the selection criteria and the computing speed to allow efficient and accurate processing of materials. The process flowsheet requires the material crushed and screened to specified size range (e.g. 30mm to 90mm) and then fed to the unit in a consistent and uniform manner for separation. The Steinert multi-sensor machine, indicating the sorting belt with various sensors, as well as the valve and splitter bars used to separate ore and waste is shown in Figure 14.

The ore sorting test work was conducted by Steinert, a German company with a Western Australian testing centre that provides sensor sorting technologies for the mining regions around Australia, while supplying the latest in sensor sorting equipment from its German factories. A key attraction to the Steinert set-up was the fact that their testing facility (Figure 15) uses a full-scale unit so that there is no scale-up issues when analysing the results.

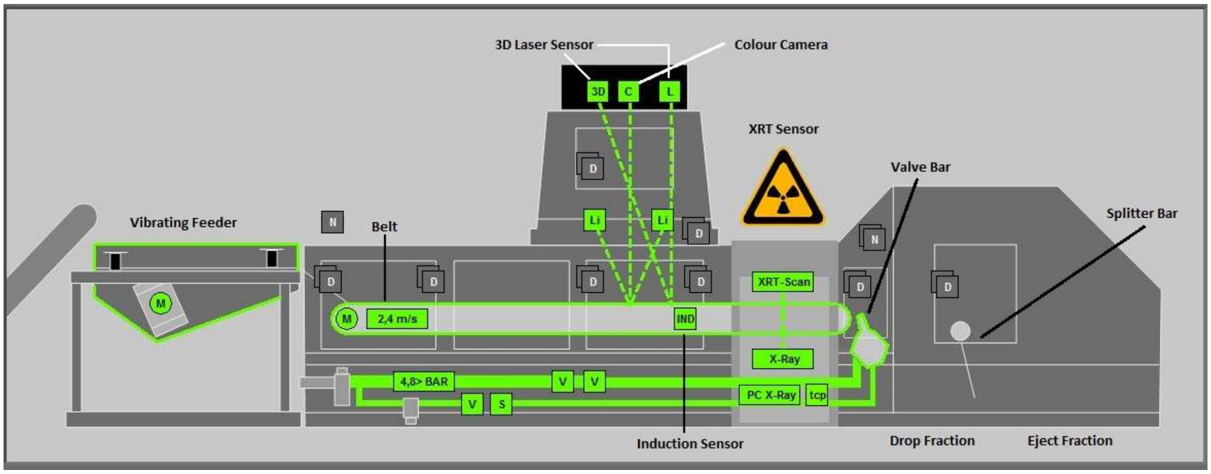


Figure 14 – Schematic of the ore sorting stages with multiple detectors as used for the Kayelekera application

Figure 15 – Full scale Ore Sorting Testing Facility

Independent Metallurgical Operations (IMO) was contracted to manage the metallurgical program for the Restart DFS. In the first round of test work the colour sensor technique was tested by itself followed by a combination of colour and x-ray sensing all on 20 to 60mm material from drums of samples previously collected by Paladin on the crusher product conveyor when the plant was previously operating. Samples were prepared by Nagrom, the Mineral Processors (Nagrom). The samples were first screened to remove a fines fraction (-20mm in this case) that would not be fed to the ore sorter. Uranium upgrade factors and recoveries from each run are shown in Figure 16 and Figure 17.

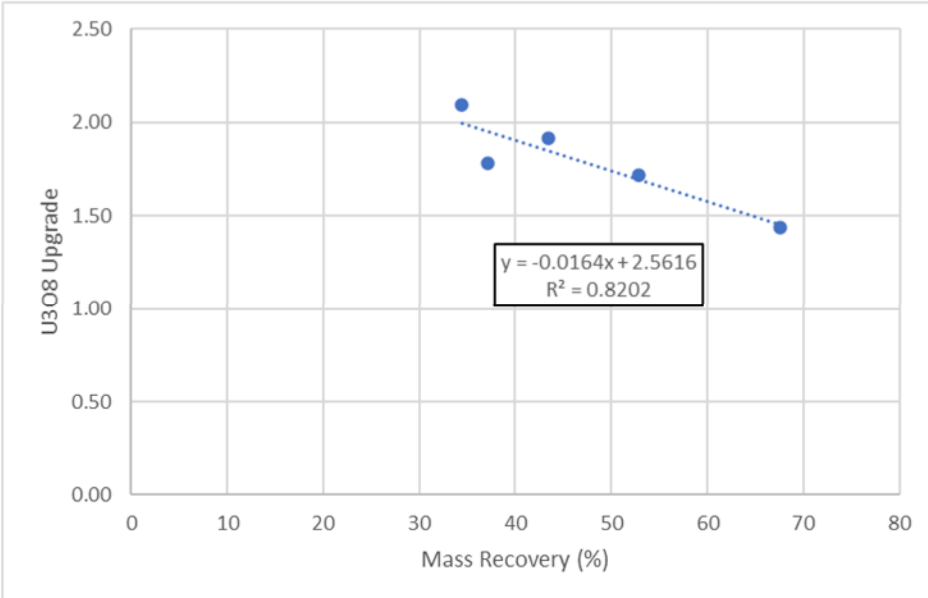


Figure 16 - Ore Sorting Mass Recovery and Uranium Upgrade Correlation

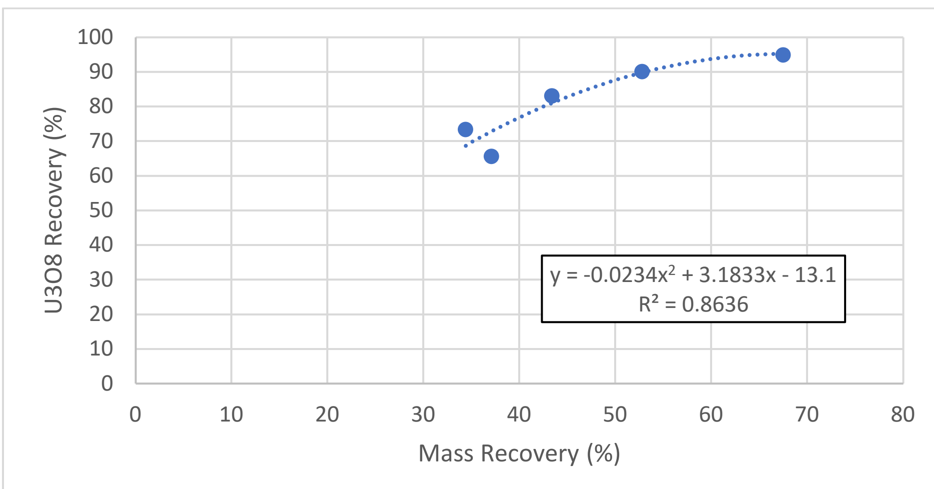


Figure 17 - Ore Sorting Mass Recovery and Uranium Recovery Correlation

A second ore sorting run, which is still being assessed, was conducted on individual ore types of 30 to 90mm material with IMO observing that the particles were more biased towards the coarse end of this size range. It was also concluded that each ore type contained a narrow range of uranium grades. Based on the various mass recoveries the relationship shown in Figure 18 was derived. IMO also used the upgrade ratio shown in Figure 16 to derive a theoretical uranium upgrade shown in Figure 19. Both Round 1 and Round 2 ore sorter correlations were utilised to derive expected ore sorter performance at the Kayelekera Operation.

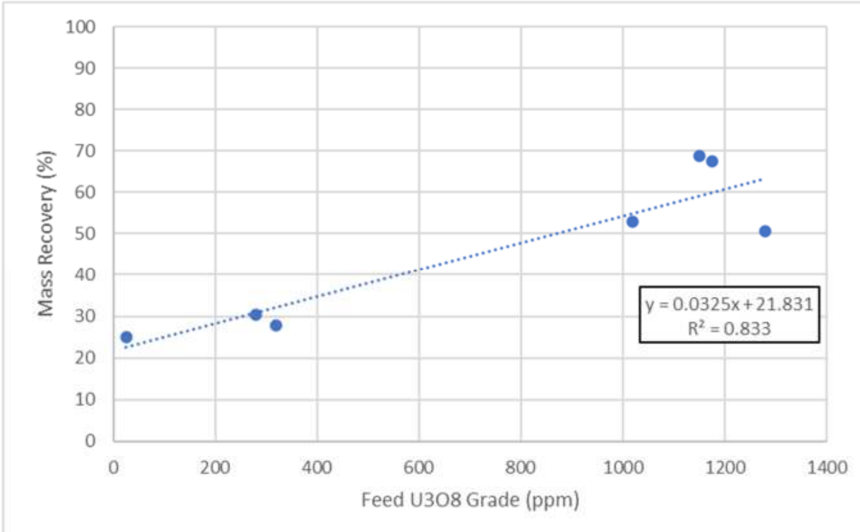


Figure 18 - Ore Sorting Uranium Feed Grade and Mass Recovery Correlation

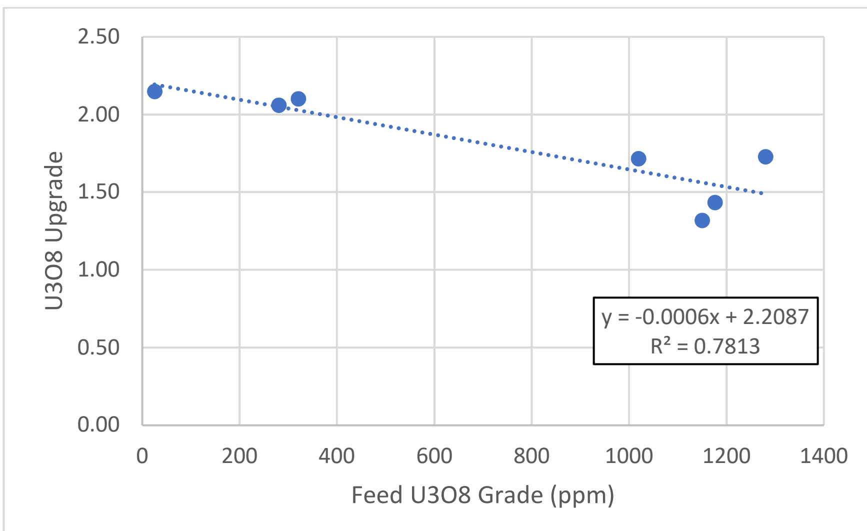


Figure 19 - Ore Sorting Derived Uranium Upgrade Based on Uranium Feed Grade

Other test work was also performed on ore sorter and ore products with IMO presenting the following high-level conclusions:

- Uranium leaching was successful on both -20 mm (representative of the ROM ore) and the ore sorter concentrate with both achieving uranium recoveries of greater than or equal to 94% demonstrating that the ore sorter product has similar leaching characteristics to the original ore feed;

To determine if there was potential for upgrading of the fines portion of the feed (which cannot be treated in the ore sorters) a short test work was undertaken investing size and density separation techniques. A brief summary of the results are provided below.

- A reflux classifier was successful in achieving a uranium upgraded product (3,219 ppm and 1,980 at respective uranium recoveries of 40.1% and 60.4%) from the -20 mm fractions stage crushed to <2 mm;
- Size by assay test work showed that fines from the -20 mm fractions stage crushed to <2 mm have a higher uranium oxide grade with the -63 µm containing a uranium oxide grade of 2,005 ppm compared to a uranium oxide head grade of 908 ppm. This fraction contained 13.8% of the mass and 30.4% of the uranium; and
- Deslime test work conducted using a two-stage cyclone configuration on the – 20 mm fractions which were ground to a P_{80} of 250 µm was successful in achieving an upgraded product into the combined cyclone overflow stream with a uranium oxide grade of 3,232 ppm compared to a uranium oxide head grade of 807 ppm in the deslime feed. The combined cyclone overflow contained 16.8% of the mass and 67.4% of the uranium.

The results of the fines upgrading test work demonstrates that there is an opportunity to upgrade the fines portion of the feed with reasonable recoveries, increasing the uranium head grade to the mill and improving the production rate further. These concepts will be considered in the FEED stage of work to determine if it has an economic benefit for the Project.

Processing

The original process used at Kayelekera incorporated a conventional crushing, milling, high density ion exchange (resin-in-pulp), membrane-based acid recovery and conventional uranium precipitation / yellow cake and tailings operations. The processing plant operated successfully for five years prior to the asset being placed on care and maintenance for economic reasons. Consequently, the metallurgy of the ore and the performance of the process plant and incorporated process are well understood.

The Restart DFS assumes the same core processing method will be used, but that the front-end circuit will be modified to include the ore sorting process as described in the previous metallurgy section. The new front-end circuit will therefore consist of conventional crushing, scrubbing (to remove fines) screening (to achieve the required particle feed size for the ore sorters), 2 parallel Steinert ore sorters with the concentrate from these units and any fines from scrubber / screening (<10mm size) fed to the existing mill.

The new process will continue to use the existing crushing circuit (jaw crusher and mineral sizer) with some modifications, including vibrating grizzlies with high pressure water sprays to remove as much of the clay material as possible prior to crushing to address the sticky nature of the ore. It is intended that the mudstone plus any direct feed arkose will be processed through the mineral sizer, while the arkose feed for the ore sorters will be fed to the jaw crusher circuit.

Of the two Steinert ore sorters, one will be set up to treat coarser ore (30-90mm material), while the other will be set up to treat finer ore (10-30mm). Based on the current test data, the selectivity at each size is similar, but the coarser unit can handle higher tonnages (~120tph) while the finer unit can only treat ~40tph. The distribution to the ore sorters is dependent on the performance of the crushing circuit and any material breakdown occurring in the scrubbers. The intention is to maximise the production of the coarse material so that more ore can be fed to the sorters.

In addition to the new scrubber and ore sorters, an emergency stockpile post the ore sorters has been included to split the plant and avoid shutdowns due to the difference in availabilities between the crushing circuit and milling/leaching circuit (65% and 90% respectively). The layout for the new front-end is shown below in Figure 20.

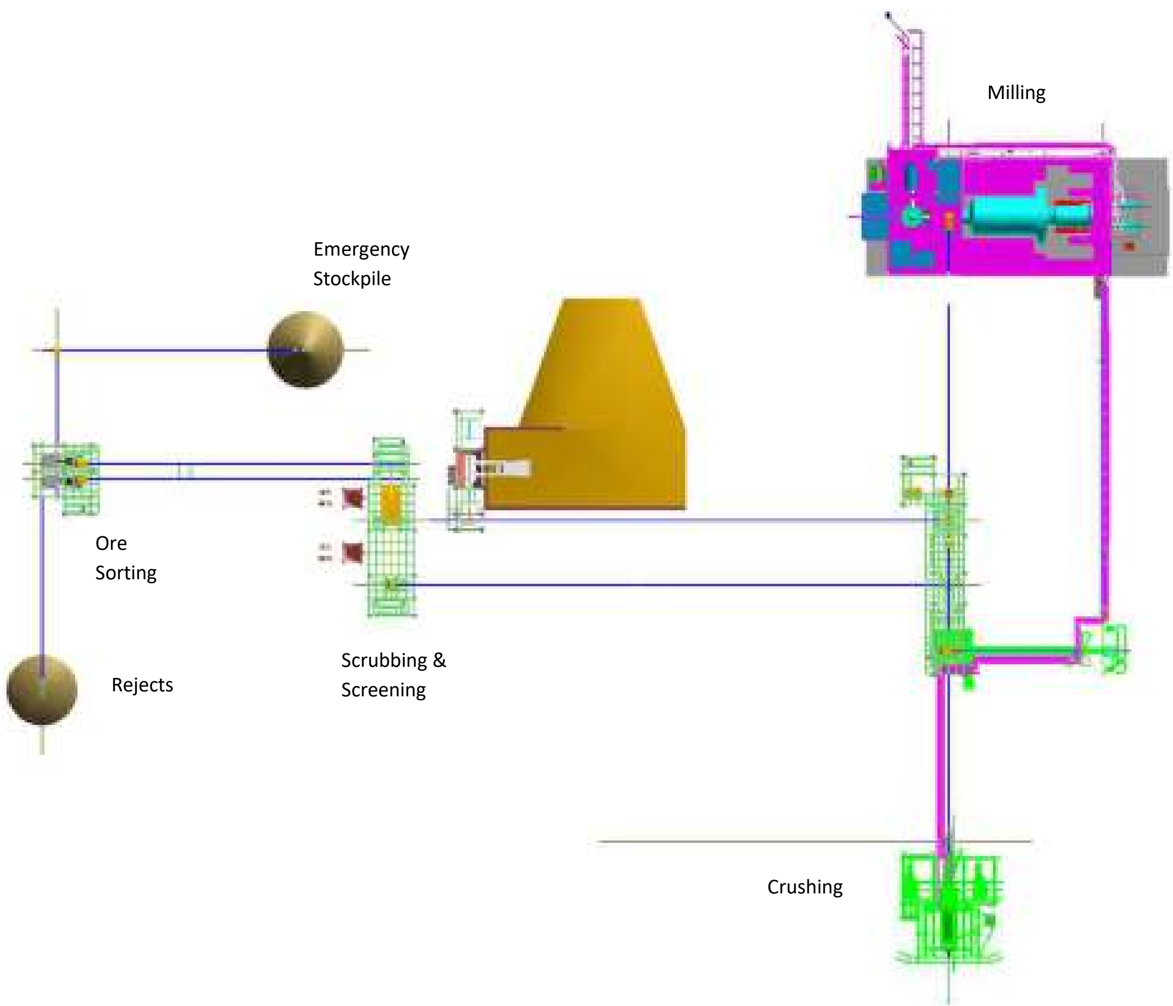


Figure 20 – Flowsheet Schematic

As the operation was previously known to be acid constrained (with acid being imported at times) the fresh acid produced in the onsite acid plant will be supplemented by acid recovered from the resin elution circuit. This will be done through an upgraded and expanded nano-filtration circuit that separates the acid and uranium from the eluate allowing the acid to be recycled to the leach circuit to be "used again" thereby reducing the overall acid demand. There is an existing single-pass nanofiltration circuit already installed on site that operated for 6 months prior to shut-down.

This circuit will be upgraded, and a second unit added so that a two-pass circuit can be used. By using two passes the acid recovery increases from ~60% to 83%.

A schematic of the new process flowsheet is shown in Figure 21.

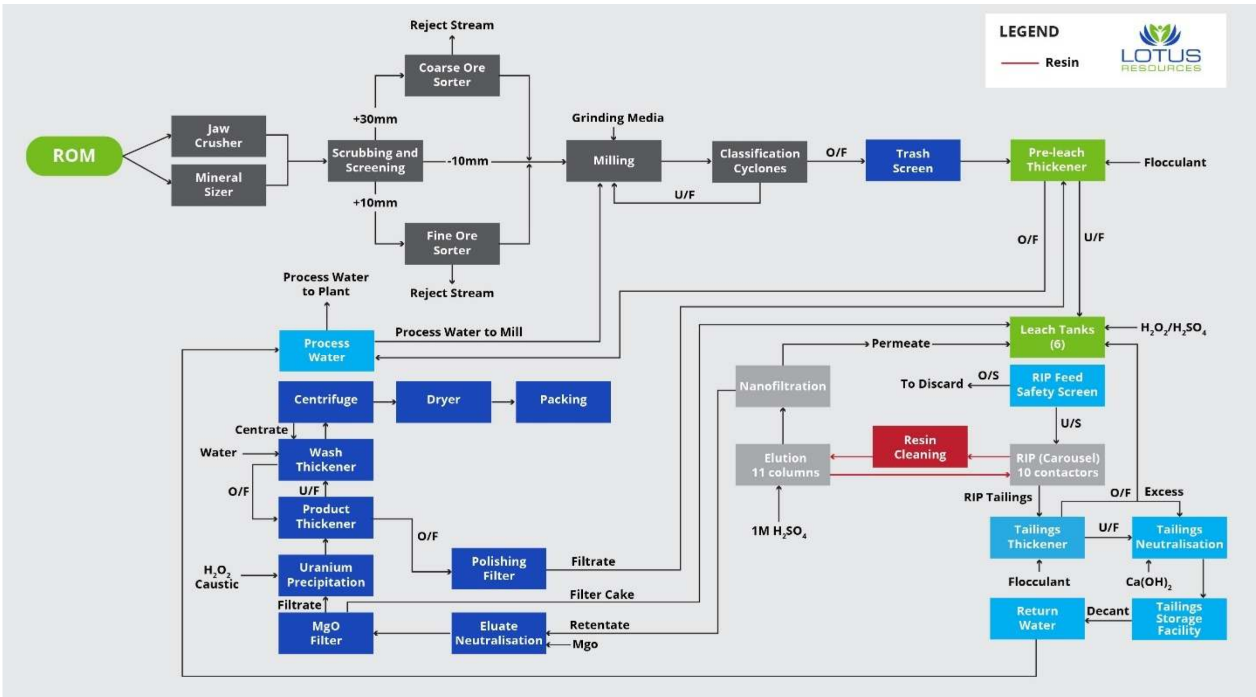


Figure 21 – Flowsheet Schematic

The process design for the plant has been based on the following information.

Table 11 – Process Design Basis

Item	Unit	Value	Source
Crusher Availability	%	65.0	Plant data
Plant Availability	%	83.4	Plant data
Average Crusher Feed rate	Mtpa	1.9	Mass balance
Average Crusher Feed Grade	ppm U_3O_8	805	Mine Plan (Stage 1)
Coarse Ore Sorter Feed rate	Mtpa	1.0	Steinert
Fine Ore Sorter Feed rate	Mtpa	0.35	Steinert
Average Ore Sorter Uranium Recovery	%	85.4	Test work
Average Mill Feed rate	Mtpa	1.4	Plant data
Average Mill Feed Grade	ppm U_3O_8	950	Mass balance
Average Uranium Recovery (after mill)	%	86.7	Plant data
Average Uranium Production	Mlbs/annum	2.5	Mass balance

The production profile for the 10-year LOM is shown in Table 12 along with the operating costs per period.

Table 12 – Plant Production Profile

Item	Total	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10
Crusher Feed Tonnes (Mt)	**18.4**	1.3	2.1	1.9	1.9	2.0	1.9	1.9	2.1	2.2	1.1
Crusher Feed Grade (%U_3O_8)	**609**	670	679	745	696	690	703	704	429	359	349
Mill Feed Tonnes (Mt)[15]	**12.8**	0.9	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	0.7
Mill Feed Grade (%U_3O_8)	**792**	928	926	925	889	894	893	898	545	454	439
Production (MLbs)	**19.3**	1.6	2.5	2.5	2.4	2.4	2.4	2.4	1.4	1.2	0.5
Processing Cost[16] (US$/tonne ore)	**24.6**	31.1	25.7	25.7	25.3	25.3	25.2	25.2	23.3	20.5	18.1
Processing Cost[15] (US$/lb U_3O_8)	**16.3**	17.5	14.5	14.6	14.9	14.8	14.8	14.7	22.4	23.6	21.6

Infrastructure

The main components of the Kayelekera operation include:

- Open Cut Mine Pit
- Run of Mine (ROM) Pad and Crusher
- Waste Rock Dumps (WRD)
- Low Grade Ore Stockpiles
- Marginal Grade Ore Dumps
- Water Ponds
- Process Plant and Facilities
- Power Generation Plant
- Tailings Storage Facility (TSF) and Infrastructure
- Accommodation camp

From an infrastructure perspective the most significant changes are being made to the power generation, acid plant and tailings storage facilities.

[15] Mill feed is after the ore sorter unit operation
[16] Includes power costs, excludes maintenance costs.

Power

Power accounted for approximately 18% of cash costs during the previous operations (diesel gensets). Reducing power costs will therefore has a significant benefit on overall operating costs. Options for power on site include grid power, power co-generated from a steam turbine to be installed on the new acid plant, a solar / battery energy storage system (BESS) setup and diesel gensets. The Restart DFS has assumed that reliable grid power will be available from ESCOM, the Electricity Supply Corporation of Malawi, when the mine restarts. The connection point for the grid connection will be the Karonga substation which is ~50km from site. Power for the grid is supplied by the recently upgraded hydro-power facility in the south of the country on the Shire River. This is an important consideration for the Company as it will significantly decrease the CO_2 emissions in the Company's Scope 2 emission data. The Company has held multiple discussions with ESCOM regarding access to grid power and has received costing information in this regard.

The ESCOM proposal considers that the best approach will be to upgrade the existing backbone overhead power lines and associated equipment from Bwengu to Uliwa and Karonga and construct a new 66kV line from Karonga to Kayelekera. The cost of the upgrade and new installation is approximately US$13M. As it is unlikely that ESCOM would be able to finance this themselves in the necessary timeframe an option therefore exists for Lotus to finance the installation and to then recover the costs through reduced tariffs over the LOM. This is currently part of the negotiation with ESCOM.

An independent consultant, ResourcesWA, has been engaged to develop the optimal power system for the site. Based on an average power demand of 6.9MW, the optimal power supply is achieved through a combination of co-gen power, solar/BESS and grid with some diesel required for periods. The splits from the various power sources are:

- 28% from co-gen (acid plant)
- 39% from grid
- 25% from solar/BESS
- 8% from diesel gensets

The weighted average cost estimate for power will be US$0.106/kWh before the capital deduction from ESCOM (estimated at US$0.10/kWh) a significant reduction compared to diesel generation price of US$0.351/kWh at a diesel price of US$1.20/litre.

In addition, CO_2 emissions for power generation are reduced by more than 72% or ~21,000 tonnes per annum with the hybrid system when compared to the base case diesel genset option.

Acid Plant

An acid plant is located on site which has a capacity to produce 240tpd of acid. The acid plant was decommissioned when the Project was placed on care and maintenance, but a detailed assessment of the plant has identified significant corrosion issues and this combined with the damage seen from ground movement in the area has resulted in a decision to purchase a new modular acid plant which will be more efficient, includes process guarantees and is cost effective when compared to undertaking repairs to existing plant.

The new acid plant will be a 250tpd modular acid plant provided by Outotec combined with the co-gen steam turbine for power generation. This unit is a standard size modular unit sold by Outotec which ensures supply issues, logistic issues and any spares requirements etc are minimised in this current market. The equipment costs for the modular acid plant are €13M (US$13M).

It is envisaged the acid plant will be an owner operated plant (i.e. not third party, as was the case with the previous operation). With a sulphur cost of US$340/tonne the estimated sulphur acid cost is US$141/tonne inclusive of power, labour, maintenance and other reagents.

In addition to the acid plant, a nano-filtration process was implemented at site to recover acid from the elution circuit. This circuit will be upgraded as part of the restart with the potential to recover ~60tpd acid and has been incorporated into the overall consumption calculations used in the Restart DFS.

Tailings Storage Facilities (TSF)

TSF costs make-up a significant portion of the operation sustaining capital requirements and as such any improvements that maximise existing TSF capacity and/or simplify new TSF design will be beneficial. SLR Consulting (SLR) undertook a preliminary review of 8 potential options for tailings disposal at the mine site, two new concepts and five from the original work undertaken by Knight Piesold prior to the mine starting up. These options were ranked based on performance criteria, including tailings consequence classification, storage capacity and storage ratio with the preferred options being additional wall lifts on the existing TSF (TSF1) and an expanded version of TSF1 where an additional wall is added to the south of the existing decant pond (TSF1X). Both of these will provide immediate capacity for tailings storage and minimise the footprint of waste disposal areas. These options were developed to feasibility design level.

Two alternative options were also considered as part of the feasibility study, TSF-Pit and TSF5 which would be required when either TSF1 or TSF1X were full. According to the latest schedules the open pit will be operational for the first 6 years of production. This will be followed by processing of on surface stockpiles. The mine schedule indicates that total capacity requirement is 12.8 Mt and TSF life of just under 10 years (annual tailings production is 1.4Mtpa, with 0.9 Mt in Year 1 and 0.7 Mt in Year 10).

TSF1 is the preferred option for the first 7.5 years of operation followed by The TSF-Pit as the best candidate site for tailings storage once TSF1 reaches full capacity. This will allow partial backfilling of the pit and reduction of the waste disposal footprint.

The TSF designs will be to ANCOLD 2019 guidelines to ensure the highest levels of safety and GISTM 2020 guidelines will be taken into consideration for estimation of the consequence classification and the extreme event design criteria to minimise risk.

The TSF1 raise will be undertaken in phases, taking into account waste production and in order to avoid large upfront expenditure, it is proposed that TSF1 is built in 4 raises:

- Phase 1, to Level 807 mRL, which will provide deposition for a minimum of 2.9 years. For this phase the existing decant pond will be maintained. The works will be carried out in 2 sub-phases:

- Phase 1A, where only the crest of the existing North Embankment is raised together with the lining works. This sub-phase will be needed prior to the restart of the plant operation.
  - Phase 1B, which will involve the construction of the North Embankment and North Seepage Pond For ease of construction, it is assumed that the full width of the North Embankment is constructed up to that level.
- Phase 2, to Level 809 mRL, which will involve widening the TSF to include the old decant pond and the construction of a new decant pond. This raise provides 1 year deposition.
- Phase 3, to Level 814.5 mRL, which involves the construction of the South Embankment and South Seepage Pond. This raise provides 2.15 years of deposition.
- Phase 4, to Level 820 mRL, i.e. to ultimate height. This raise provides 2.15 years of deposition.

Recent bathymetric survey results indicate a dry density of existing consolidated tailings of 1.23 t/m3. An average dry density of 1.05 t/m3 has however been assumed for future tailings.

The TSF ultimate layout post Phase 4 is shown in Figure 22.

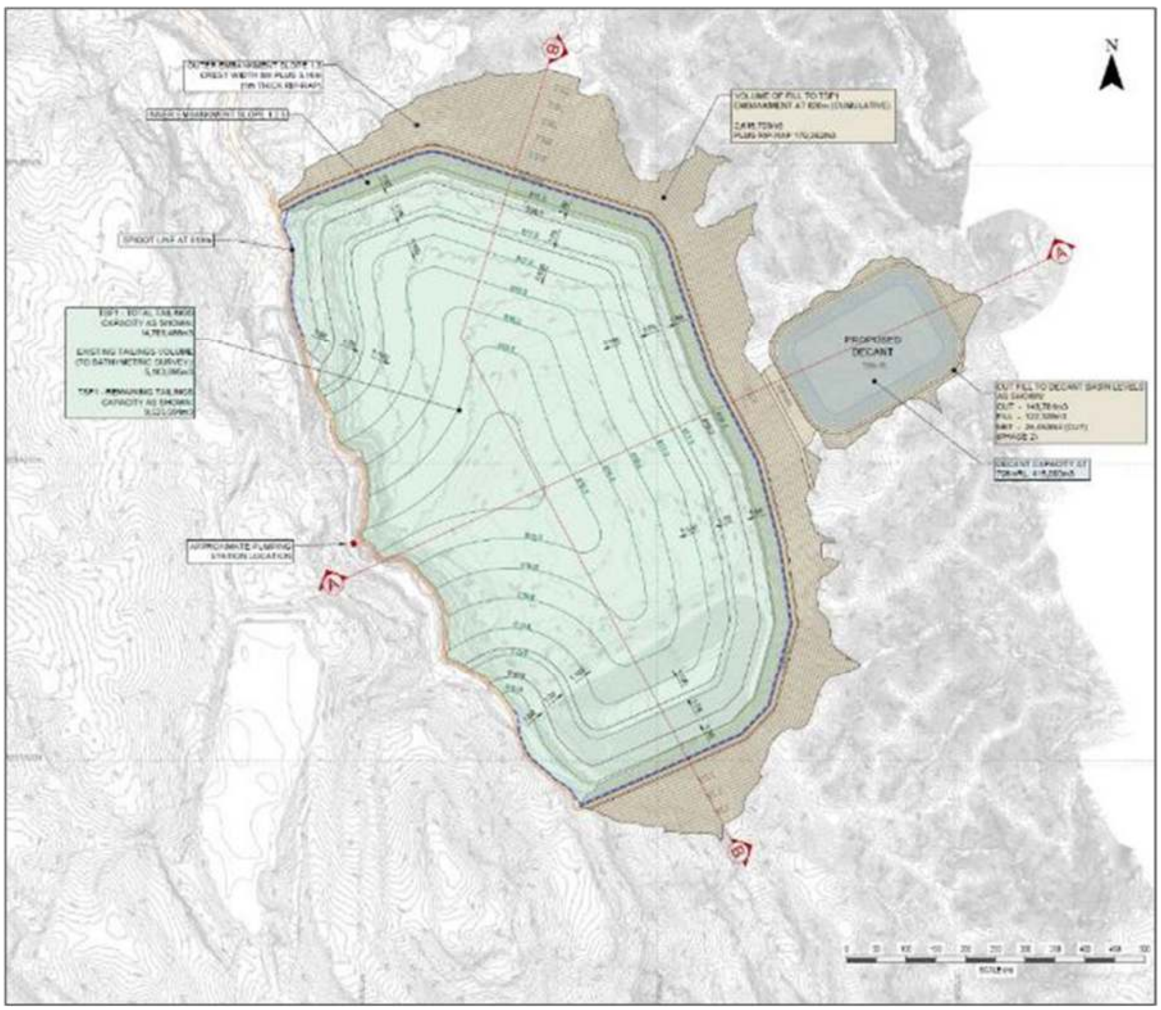


Figure 22 – Ultimate TSF1 Configuration Plan (Elevation 820mRL)

After Year 7 TSF1 will be full and the remaining tailings will be disposed of in the abandoned open pit. Based on the current production schedule only a further ~2 years of storage is required. This can be easily contained with a small retaining wall (878mRL) on the east and southern edges of the pit. A further lift could also be undertaken to 892mRL which would increase the storage to ~9.5Mt or 5.6 years of production. The layout for the Stage 1 lift is shown in Figure 23.

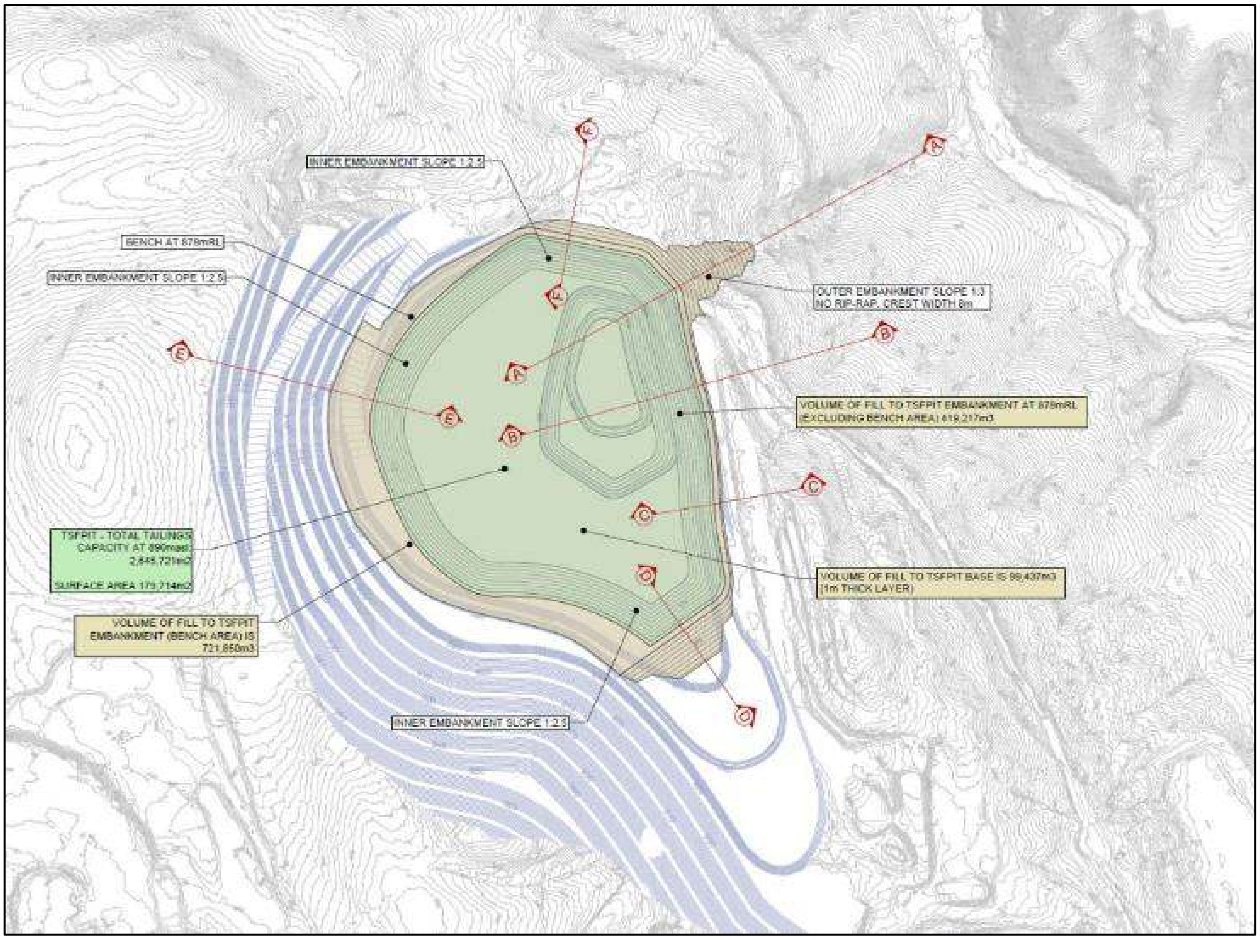


Figure 23 – TSF-Pit Stage1 Configuration Plan (Elevation 878mRL)

<u>Embankment Static Stability Analysis</u>

In order to maximise the safety aspects of the TSF the ANCOLD (2019) Dam Safety Guidelines specify the following Factors of Safety (FoS) for the TSF embankment wall constructions:

- a downstream embankment slope target FoS of 1.5 for long term conditions (steady state, normal water level); and
- an upstream embankment slope target FoS of 1.3 for short term conditions.

Based on the embankment design undertaken by SLR for both the north and south walls, and assuming a crest Level 820mRL, tailings pond level 818mRL and an embankment outer slope of 3:1, the analysis completed using GeoStudio SLOPE/W shows the TSF design meets ANCOLD (2019) criteria for static stability.

Dam Break Assessment and Consequence Classification

The tailings dam break assessment and the consequences of such an event are a key component of the criteria used to define the design parameters for a TSF. Based on the assessment undertaken by SLR they have determined that the water and solids released from a tailings dam failure will enter the North Rukuru and the Sere rivers. The North Rukuru river is a very large watercourse and for rainy day failure (the most likely event situation), the volume released from the TSF will be small compared to the extreme flood event in this watercourse.

The nearest receptors/villages that are most likely to be impacted by a tailings dam failure are more than 9 kilometres downstream. For the dam break scenario, the release hydrograph will be heavily attenuated before reaching these receptors. The Population at Risk (PAR) is expected to be 10-100, it is extremely unlikely that the PAR would be 1000+. Based on this information the preliminary (conservative) consequence classification for the TSF1 is:

- GISTM: Very High
- ANCOLD: High B or High A

Embankment Dynamic Stability Analysis

With a GISTM Classification of "Very High" (1 in 5,000-year event equivalent) and a selected earthquake time history scaled to a Peak Ground Acceleration of 0.4g a dynamic stability analysis was completed using Quake/W. The assessment confirmed that there is adequate freeboard available following a design earthquake event and that the associated wall deformation/settlement is <0.2m such that overtopping and subsequent embankment washout and failure is extremely unlikely i.e. the likelihood of the dam break scenario as described in the assessment is extremely unlikely.

Hydrology and Hydrogeology

The hydrology and hydrogeology work for the Restart DFS was undertake by SLR in conjunction with their TSF and geotechnical studies.

Climate

The Project is located in the Karonga District in the undulating hills of the lower elevations of the rift escarpment. Principal drainage includes North Rukuru river, and its tributaries Sere and Muswanga rivers. The Sere River catchment is the immediate catchment within which they project area falls and has an area of 156.5 km^2.

The minimum temperature recorded at the site weather station in the colder months of June and July was around 7°C; and the maximum temperatures in the hotter months of November and December was around 37°C. Rainfall is the most important element of weather over Malawi, such that the seasons of the year are dictated by precipitation rather than temperature. The site experiences a dry season from May to November and a wet season from December to April.

The rainfall and evaporation data for around Kayelekera is shown in Figure 24.

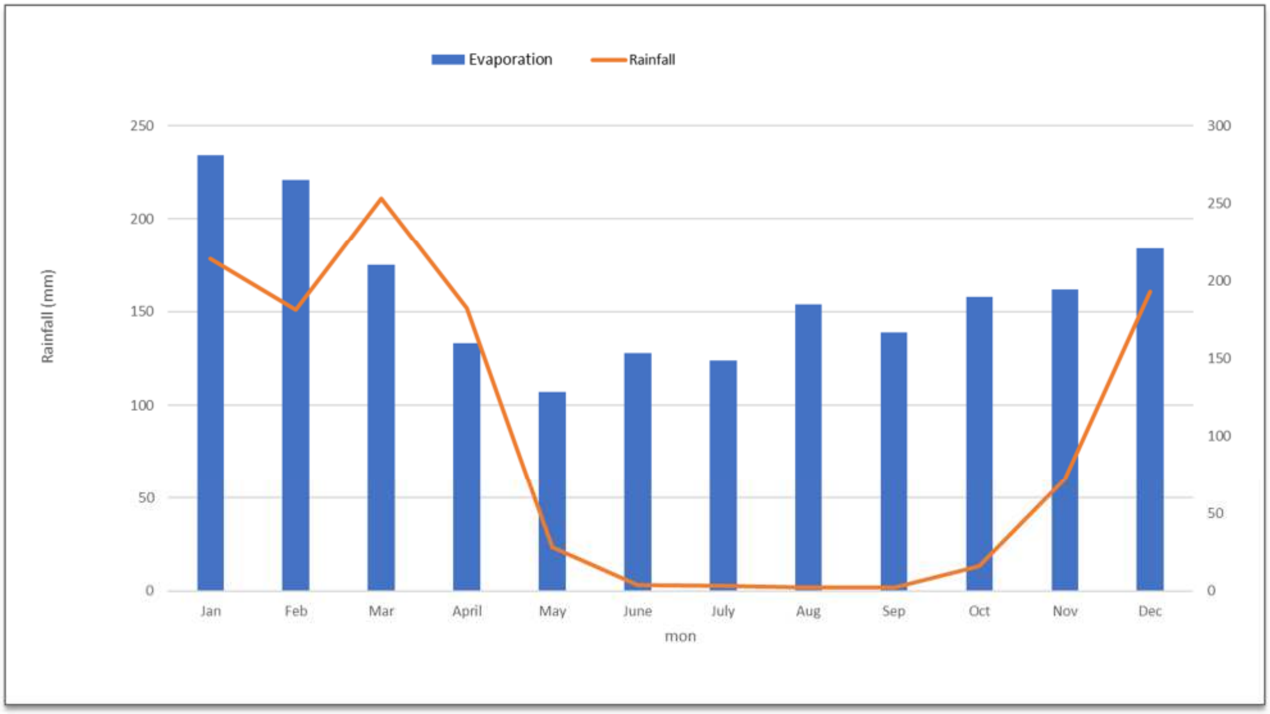


Figure 24 – Rainfall and Evaporation around Kayelekera Mine

Surface Water (Hydrology)

The water management philosophies of the mine are to reuse dirty water around the processing plant and where possible avoid/minimise make up requisition from Sere River which is a water source for other users in the area.

A high-level static water balance indicates on average a water positive scenario i.e., water is required to be stored or discharged from site. During the wet season, the mine is water positive as there is excess of water from rainfall in the system. During the dry season, the mine is water negative and raw water abstractions or use of stored water may be required to meet the process plant demand.

The existing infrastructure will be utilised as much as possible in the design of the stormwater management plan. A conceptual stormwater model, assuming the details of the existing infrastructure, has been developed in PCSWMM. Existing channels are shown in yellow and new channels are shown in red (see Figure 25). Assuming all channels to be 1m wide by 1m deep with 1:2 side slopes, then the current layout will accommodate the 1 in 50yr RP 24-hr duration storm event off the delineated catchments.

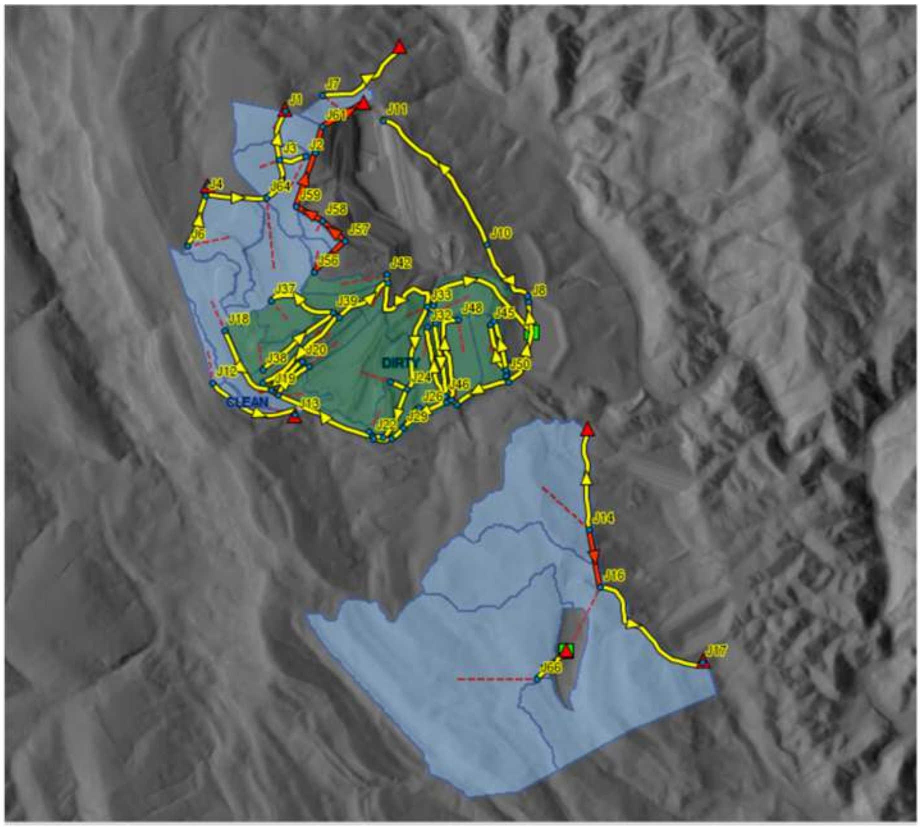


Figure 25 – Surface Water Infrastructure

Clean Water Channels - the existing channels (total length of 3.8km) are well placed for the restart. Approximately 2.6km length of existing channels will need to accommodate high velocities and it is proposed that these sections should be lined with grouted stone pitching to prevent erosion. A new channel of 1.26km is also proposed to prevent water from entering the open pit.

Dirty Water Channels - the existing channels are well placed for the restart. It is assumed that these channels will need to be lined as per best practice guidelines and regulations. The total length of dirty water channels is 10km.

<u>Groundwater (Hydrogeology)</u>

Groundwater modelling was undertaken by SLR to simulation and to predict the groundwater flow regime and possible contaminant plume along with estimating the pore pressures distribution for pit and plant terrace slope.

The modelling showed that the maximum expected passive groundwater inflows for the pit (not considering evaporation) is 400 m^3/day (approx. 17m^3/hr) which implies that no active dewatering work is needed, and that the inflows can be handled by sump pumping. However active depressurization could be carried out if required for pit slope stability,

Capital Cost Estimates

Initial Capital Costs

The capital cost estimate for the resumption of production at Kayelekera assumes

- that the existing plant to be retained will be refurbished
- a new front-end circuit post crushing will be installed that included scrubbing, screening and ore sorting
- a new 250tpd modular acid plant (Outotec design) will be installed
- a program of work to stabilise the plant terrace will be undertaken
- a small wall lift will be done on the existing tailings dam that will allow ~2 years of deposition
- the camp and administrative facilities will be refurbished or replaced where appropriate
- a new fleet of non-mining related mobile equipment will be purchased
- the Company will fund the installation, connection and upgrades to the grid power (note this capital can be recovered from ESCOM via reduced tariffs)
- a 15-month detailed design and construction period has been determined

The estimate is based on budget quotations received from:

- Mining contractor mobilisation and site establishment
- Various vendors / contractors who visited site in January/February 2022 for a plant inspection
- Equipment vendors for the acid plant (Outotec), ore sorting unit (Steinert), scrubber (Sepro) and nanofiltration (BMS)
- Senet database for smaller equipment and installation costs
- SLR consulting for plant terrace stabilisation design and costs (incorporating budget quotes for piling) and TSF design and costing
- Construction schedule, preliminary and generals and construction labour from first principles
- ESCOM for grid connection and upgrade requirements

The estimate is considered to be an AACE Class 3 estimate with an accuracy of ±10-15% based on Q2 2022 data. A contingency amount has been assigned to each of the capital costs items with a weighted average contingency of 12% calculated for the Project.

The key financial assumptions for the estimate are shown below

- Foreign exchange rates
  - EUR: USD = 1.00
  - ZAR: USD = 17.14
  - MWK: USD = 1,020
- Excludes duties and tariffs as per provisions in current legislation
- Excludes VAT and withholding taxes

Table 13: Capital Cost Estimates

Item	Capital Cost Estimates (US$M)
Initial Capital	
Mining Contractor	0.60
Plant Refurbishment	13.46
Acid Plant (with Steam Turbine)	15.29
Nanofiltration Upgrade	1.53
Front-end Upgrade (ore sorting)	5.99
Plant Terrace Ground Stabilisation	9.45
Tailings Dam (TSF1 first lift)	2.47
Surface Water Infrastructure	1.75
Sub-Total	**50.54**
Owners Costs	
Camp and Office Refurbishment	3.22
Mobile Equipment	3.57
Grid Connection	12.98
First Fill	4.19
Owner's Direct Costs	3.79
Sub-Total	**27.75**
Contingency	9.46
Total	**87.75**

<u>Pre-Production Costs</u>

Pre-production costs have been built-up from first principles and have been split into mining, plant and G&A. As mining has already been undertaken on site there is no pre-strip required to mine first ore and with ~1.5Mt of high-grade ore on the RoM pad, mining is not on the critical path for re-start.

The pre-production costs include labour costs for the operations team ramping up and includes a training component. The majority of the costs relate to the plant where additional reagents are assumed to be purchased such that a minimum of 3-4 months of reagents (US$8.6M) is onsite prior to restart.

Table 14: Pre-Production Capital Cost Estimates

Item	US$M
Mining	0.30
Processing	9.61
General and Admin	1.61
Total	**11.52**

Working Capital Cost

Based on the initial cost modelling, a minimum working capital amount of US$19.8M will be required. This is driven by the timeline between production, delivery of product to the conversion facilities and receival of payment which is assumed to be 3 months. The Company will also consider its minimum cash holding requirements and potential improvements to payment terms from offtake contracts when determining the required working capital funding.

Sustaining Capital Cost

Sustaining capital requirements are predominantly driven by the wall lifts on the existing tailings storage facility (TSF1) and the need to construct a new tailings storage facility (utilising the abandoned pit) for the remaining two years of production. Mobile equipment replacement, IT upgrades and an allowance for plant and infrastructure capital has also been included.

Table 15: Sustaining Capital Cost Estimates

Item	US$M
TSF1 wall lifts	30.35
In-Pit TSF construction	11.41
Mobile Equipment and IT Replacement	4.01
Plant and Infrastructure allowance	8.00
Total	**53.77**

Closure Cost

Closure costs for the mine post operations as defined in this Restart DFS were provided by Mine Earth and have been based on the latest Mine Closure Plan which is an update and refinement of the previous mine closure plans and aligns with relevant international standards.

Table 16: Mine Closure Cost Estimates

Item	US$M
Closure Activities	18.1
Closure and Post Closure Management, Monitoring	3.6
Fixed Costs and Redundancies	3.3
Contingency	2.1
Total	**27.0**

Operating Cost Estimates

Operating costs are based on the estimates prepared by Orelogy for mining and Senet/Lotus for processing, engineering (maintenance) and General and Administration. The estimates are considered to be a Class 3 estimate with an accuracy of ±10-15%. No contingency has been included in the estimate and it is assumes no duties or tariffs will be incurred.

The operating cash costs have been defined as direct costs at mine site inclusive of all mining, processing and General and Administration costs. Cash costs exclude:

- Project financing costs and interest charges
- Inflation
- Corporate overheads
- Government taxes including VAT, import duties and tariffs and withholding taxes

The basis of the operating cash costs is outlined below

Mining

Table 17 summarises the mining contractor unit cost which averages $2.94/t material mined using the ore sorted model. The overall mining costs are US$119M for the life of the operation, excluding owner's team of ~US$650,000 / annum.

Table 17 – Unit Mining Costs

Area		Units	$/t
General Fixed Overheads and Admin		$/t mined	$0.38
Pit Dewatering		$/t mined	$0.01
Load and Haul	Waste Mining Cost	$/t mined	$0.95
	Ore Mining Cost	$/t mined	$0.48
Drill and Blast	Waste Cost	$/t mined	$0.40
	Ore Cost	$/t mined	$0.22
Fuel		$/t mined	Included in L&H
Dayworks Cost		$/t mined	$0.03
Ore Rehandle		$/t mined	$0.47
Total		**$/t mined**	**$2.94**

Reagents

Reagents used in the process plant are the largest contributor to the operating costs. The main reagents, their consumption rates and annual costs are shown below in Table 18 with rates indicated as kg/tonne of mill feed or kg/kg uranium produced based on the process design criteria throughputs and production rates (1.4Mtpa mill feed and 2.5Mlbs/annum U_3O_8).

Table 18 – Reagents Cost

Reagent	Consumption Rates	Units	Costs US$/t	Costs US$/lb
Grinding Media	1.5	kg/t	1.59	0.88
Flocculant-Pre-Leach Thickener	100	g/t	0.39	0.21
Sulphuric Acid (Lixivant)	45.6	kg/t	6.89	3.79
Hydrogen Peroxide (Leach Oxidant)	3.4	kg/t	4.68	2.58
Resin	0.36	m^3/t	1.91	1.05
Sulphuric Acid (Elution)	15.9	kg/kg	1.98	1.09
Hydrogen Peroxide (Uranium Precipitation)	0.28	kg/kg	0.32	0.17
Sodium Hydroxide (Neutralisation)	0.3	kg/kg	0.20	0.11
MgO (Iron Precipitation)	1.75	kg/kg	1.13	0.62
Lime (Tailings Neutralisation)	10.6	kg/t	3.02	2.00
Flocculant (Tailings)	100	g/t	0.39	0.21
Total			**22.50**	**12.71**

Labour

The workforce for the project is a combination of expatriates and national Malawian personnel, with expatriates used to cover positions where the necessary skills are not currently available within Malawi. The Company's intention is to train up local Malawian employees with the intention that overtime they can assume the majority of the positions initially filled by expatriates. The breakdown of the work force is shown below in Table 19.

Table 19: Labour Numbers and Cost Estimates

Item	# Expatriates	# Nationals
General and Administration	5	32
Human Resources	1	5
Mining	4	24
Processing (inc Acid Plant)	24	104
Engineering	17	65
Site Services	2	79
Safety, Health Environment and Radiation	1	19
Social and Communities inc. Security	0	134
Total	**54**	**441**
US$M/annum	**$5.45**	**$2.21**

The labour numbers exclude the mining contractor who will on average have onsite 202 employees, with the majority of these being Malawian nationals.

Power

An independent consultant, ResourcesWA, has been engaged to develop the optimal power system for the site. Based on an average power demand of 6.9MW, the optimal power supply is achieved through a combination of co-gen power, solar/battery energy storage system and grid with some diesel required for period. The breakdown of the power supply and costs is shown below

Table 20: Power Cost Estimates

Item	Contribution	US$/kWh
Grid Power	39.3%	$0.130
Co-gen Power (Acid plant)	27.9%	$0.000
Solar / Battery Energy Storage System	25.0%	$0.165
Diesel Gensets	7.8%	$0.325
Average power cost		**$0.106**
Rebate for Grid Capex		$0.010
Applied average power cost	**100%**	**$0.095**

The following royalties are also payable on the sales value:

- Government royalty of 3%[17]
- Power Resources Inc. production royalty of 0.75%
- Paladin Energy – 3.5% NSR payable up to a maximum of A$5M

Transport and converter costs have been modelled based on the following:

- Finished yellowcake is packed into sealed drums and transported via road to the Port of Beira, Mozambique and by ship in secure freight containers to USA, Canada or Europe
- Capacity per freight container is ~34klbs U_3O_8 at an estimated cost of US$43k per container including road and ocean freight and clearing & forwarding charges (US$2.03/lb U_3O_8).
- Converter charges are estimated at $0.35/lb U_3O_8
- Marine cargo insurance costs are assumed to amount to 0.6% of sales value

The operating cash costs and all-in sustaining costs (AISC) over LOM and during mining stage operations i.e. after ramp-up and before the start of "stockpile only" treatment based on the cost model are shown below in

Table **21**.

All-in sustaining costs (AISC) are defined as the cash costs plus

- Transport, Insurance and Conversion
- Royalties
- Depreciation and Amortisation

[17] As provided for in the Mine Development Agreement in place during the previous operational phase but is not based on the current Malawian legislation.

- Sustaining Capital (including TSF costs)

Table 21: Average Operating Cost Estimates

Item	Ave LOM US$/lb	Ave Mining Period US$/lb U_3O_8
Mining	6.35	8.00
Processing	16.28	14.71
Engineering / Maintenance	1.97	1.85
General & Admin	5.44	4.58
Operating Cash Cost	**30.04**	**29.14**
Transport, Insurance & Conversion	2.03	2.03
Royalties	2.85	2.67
Sustaining Capital	0.62	0.65
TSF lifts	2.15	1.67
All-in Sustaining Cost (AISC)	**37.69**	**36.12**

Sensitivity Analysis

Sensitivities as measured against the base case AISC on per lbs of production basis are reflected in the figure below.

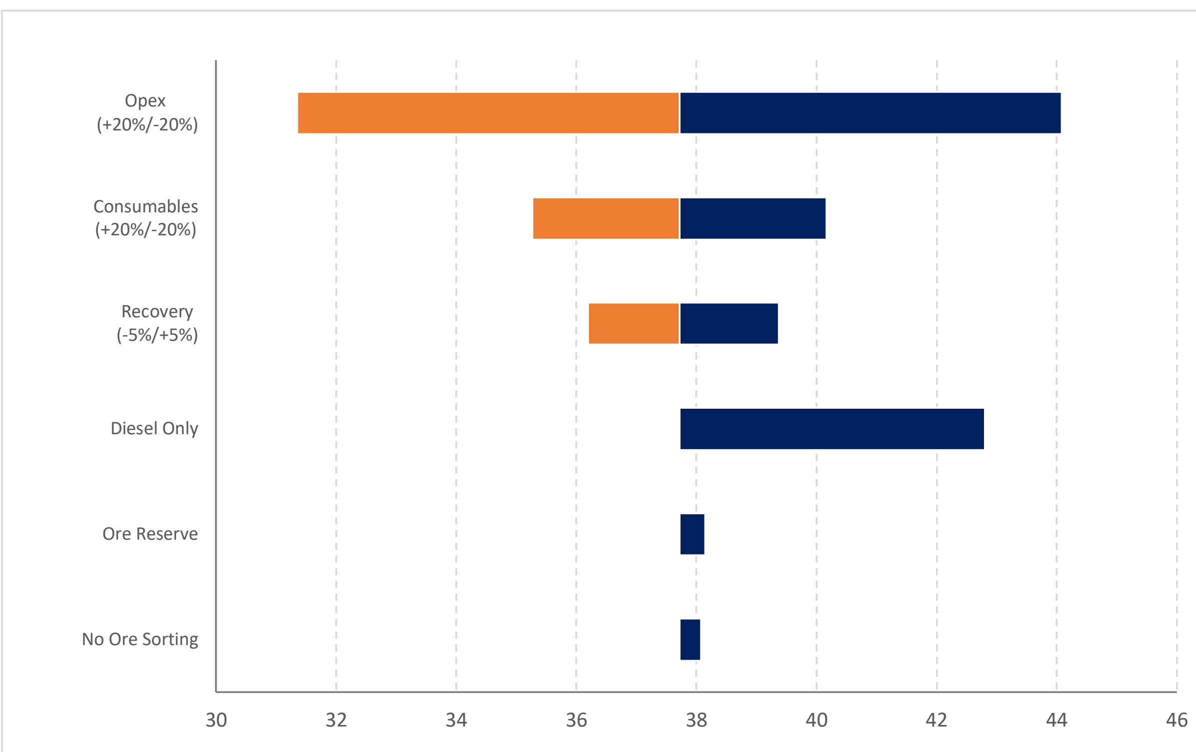


Figure 26 – Sensitivity of AISC vs Base Case

Operating Costs
- +20%/-20% on all base case operating costs

Consumables
- +20%/-20% on all major processing consumables and reagent costs

Plant Recovery
- +5%/-5% sensitivity on base case overall plant recovery of 87.6%

Diesel Only
- power generation downside scenario assuming generation using diesel gensets only (i.e. no grid or solar) compared to base case hybrid power supply
- diesel consumption increases by 95ML over the life of mine under this scenario resulting in an increase in power costs of US$98M.

Ore Reserve
- mine plan based on mining and processing ore reserves only compared to base case mine plan
- under this scenario production reduced by 0.8Mlbs, with a marginal increase in costs

No Ore Sorting
- ore sorting is not incorporated into the mine plan resulting in some lower grade material not being processed and being treated as waste
- under this scenario mined ore reduces by 4.9Mt resulting in a reduction in production of 2.1Mlbs, the increased mill feed grade results in only a marginal increase in cast costs

Supply Chain and Logistics

The re-establishment of the supply chain will be a significant exercise for restart with the key focus areas being:

- Recruitment of competent staff;
- Lead times for equipment, material and reagents;
- Reinstatement of the general stores systems;
- Preparation of storage facilities for reagents; and
- Payment terms.

The logistics of getting supplies to a remote site such as Kayelekera and the product to a port for export to the various conversion facilities has been an important part of the study work. The Restart DFS has had the benefit of prior knowledge and procedures from the previous operating period which has been used as a base for the work performed. A number of logistics companies were approached for budget quotations for the inbound movements and were asked to quote on various arrival ports and routes. Dar es Salaam for the bulk reagents and consolidation at warehouses in Johannesburg for general stores were identified as the most cost-effective options.

For outbound logistics (i.e. uranium product) the specialist logistics company TAM International LP (**TAM**) quoted on a fully managed system that assumes TAM manages all aspects of the transport for Lotus. Lotus would be responsible for physically packing the drums, marking and labelling the drums, and placing the drums in the container. TAM would arrange and manage all aspects of transport from the mine site to the uranium conversion site. The average estimated cost for the service to either Converdyn (USA), Cameco (Canada) or Orano (France) is US$2.03/lb.

Environmental and Permitting

The primary Malawian environmental policies, legislation and regulations relating to Kayelekera that the Company must adhere to include:

- The National Environmental Policy (NEP), 1996 (amended in 2004)
- Mines and Minerals Policy, 2013
- National Water Policy, 2005
- Environmental Management Act, 2017
- Mines and Minerals Act, 2018
- Water Resources Act, 2013
- Forestry Act, 1997 and the Forestry (Amendment) Act, 2017
- Atomic Energy Act, 2011
- Atomic Energy Regulations, 2012

In addition, the following international standards and guidelines have been considered in the design and management of the Project

- IFC Performance Standards on Environmental and Social Sustainability (2012)
- Management of Radioactive Waste from the Mining and Milling of Ores IAEA Safety Guide No. WS-G-1.2 2002 (IAEA, 2002);
- Australian Leading Practice Sustainable Development Program in the Mining Industry (2011)

The main licences which Kayelekera operates under are as follows:

<u>Currently Valid</u>

- Certificate of Registration of a Workplace
- Sere River (Treated Water Discharge Consent)
- Electricity Generation
- Fuel Storage Licence
- Notice of Approval to Proceed with Project
- Licence to operate a hazardous waste disposal facility
- Store of radioactive sources
- Transport of hazardous substances
- Permit for handling and storage of hazardous materials
- Transportation of hazardous waste
- Importation of Chemical

<u>To be renewed or reinstated</u>

- High Frequency System Licence
- PMR Services Licence
- Licence for gas emissions
- Importation of radioactive source
- Discharge of effluent (general domestic waste) into ponds

- Permit to transport hazardous substances

An Environmental Management Plan (EMP) and various sub-management plans already exist on site from the Construction and Operational phases and where necessary were updated for the Care and Maintenance phase. The EMP and all of the Management Plans are currently being reviewed by external expert consultants and are being updated to reflect the latest national and international legislation and accepted good practise in the industry.

The key Management Plans include:

- Environmental Management Plan
- Radiation Management Plan
- Integrated Water Management Plan
- Stakeholder Engagement Plan
- Social Management Plan
- Influx Management Plan
- Mine Closure Plan

Closure Plan

Mine Earth was commissioned by Lotus to update the Decommissioning, Closure and Rehabilitation Study (DCRP) for the Kayelekera Mine.

The original DCRP was developed in August 2018 and revised in September 2021. The DCRP describes the legislation, performance standards and guidelines, environmental setting, closure risks, closure strategies and financial liabilities for the Project.

The new Mine Closure Plan (**MCP**) presents an update and refinement of the previous plans to align with relevant international standards and industry practice.

Although the Mines and Minerals Act of 2019 requires the development of a rehabilitation and mine closure plan, there are currently no specific guidelines prescribed by the Malawi Government. The MCP has been developed in accordance with guidance from the following:

- The International Finance Corporation (IFC) Environmental Health and Safety Guidelines for Mining (IFC, 2007).
- The International Council on Mining and Metals (ICMM) Integrated Mine Closure Toolkit.
- The Australian Government Leading Practice Sustainable Development Program for the Mining Industry – Mine Closure (2016).
- The 'Mine Closure Plan Guidance' (DMIRS, 2020).
- The South African Land Rehabilitation Guidelines for Surface Coal Mines (2019).

The earlier documentation was reviewed against these standards to ensure the following was addressed in the updated MCP:

- Relevant legislation and legal commitments have been identified.
- Stakeholders have been identified and a plan for ongoing engagement has been developed.
- Closure plans are relevant and achievable, and all disturbance has been considered.

- The environmental setting of the Project has been considered.
- Closure risks have been identified and ranked appropriately.
- Closure cost estimates align with the closure strategies in the MCP and meet international standards of good practice.

The closure cost estimate (CCE) by Mine Earth was determined to be a Class IV estimate with reference being made to with the good practice guidance presented in Financial Concepts for Mine Closure and Integrated Mine Closure – good practice guide (ICMM, 2019). The CCE was developed from a desktop assessment using GIS data, aerial photography and Mine Earth's database of closure activity rates. Costs were developed based upon the closure plan for each domain.

The CCE accounts for the following costs:

- Earthworks, including removing concrete, reprofiling, WRD and TSF rehabilitation with inert material and topsoil covers where required.
- Revegetation;
- Management costs for the closure program of works.
- Contractor mobilisation and demobilisation costs.
- Post closure costs including site inspections, maintenance, monitoring, reporting and management.
- Includes contingency.

The estimated closure cost are shown below

Table 22: Mine Closure Cost Estimates

Item	US$M
Closure Activities	18.1
Closure and Post Closure Management	1.5
Post Closure Monitoring	2.1
Fixed Costs and Redundancies	3.3
Contingency	2.1
Total	**27.0**

Community and Stakeholder Engagement

Kayelekera has an area of influence extending from the local villages, through Karonga district and to Malawi as a whole. The direct area of influence includes the communities of Kayelekera (2.7 km north), Chiteka (4 km north-west), Nkhachira (3 km west), Simfukwe (9 km north-west), Juma Kayira (5.9 km south) and the town of Karonga.

A socio-economic assessment as a component of the 2006 EIA was undertaken by the previous owners. The assessment included a social baseline study comprising a population and housing census of the Kayelekera Village and socio-economic analysis of the Karonga district. A Social

Impact Assessment (SIA) and a draft Social Management Plan (SMP) were prepared on the basis of this work.

In 2008, during the construction phase, a further SIA was conducted to determine the social impacts of the construction activities. The study was primarily to check on progress of implementation of the SMP and also focused on the local community, in particular the migration of workers into the area.

The consultant was again engaged in 2013 to conduct a further SIA, titled the Operation Phase Draft Social Impact Assessment of Kayelekera Mine. The main objective of the operational SIA was to conduct an assessment of the social impacts of the Project on the local community, and to determine broad socio-economic impacts to the region and Malawi.

Lotus has followed up this work with a new social survey conducted on over 200 households within the local area. The results from this survey are being used to develop a new SMP and related documentation.

Government and Community Agreements

As part of the new Mines and Minerals Act, any company that has a large-scale mining licence, such as Kayelekera holds, is required to enter into a Community Development Agreement (CDA) with the local qualified communities. This agreement allows for 0.45% of the gross revenues generated from the mine to be spent on projects or activities selected by the qualified communities. The intent behind the CDA aligns with Lotus's policies that aim to achieve a balance between economic, environmental and social needs. The Company's commitment includes:

- Adhering to the laws and regulations of host countries;
- Respecting and responding to local customs, traditions and cultures;
- Contributing to local economic development of communities;
- Being open and transparent in all communications;
- Investing in projects that are of mutual benefit to the company and the community;
- Embracing principles of local procurement and employment;
- Encouraging suppliers and contractors to adopt similar policies, standards and practices; and
- Undertaking activities in a manner that is conducive to ensuring that the local operating company is, and remains, a responsible member of the community.

The Company is also securing a Mine Development Agreement that will set the fiscal regime in which the Project will operate and will include other provisions for contractual protections as are customary for such concession agreements. The key items being finalised under the agreement are critical to support the investment to restart operations and the financial returns for the Project.

Development Timelines

The GANTT chart below shows a potential timeline to the restart of the Kayelekera mine. The key assumptions behind this timeline and the issues that drive the Final Investment Decision (FID) timing are:

- Uranium spot and term pricing

- Lotus entering into acceptable offtake agreements with utilities
- Financing arrangements confirmed
- Impact of existing market constraints (availability of personnel, equipment etc)

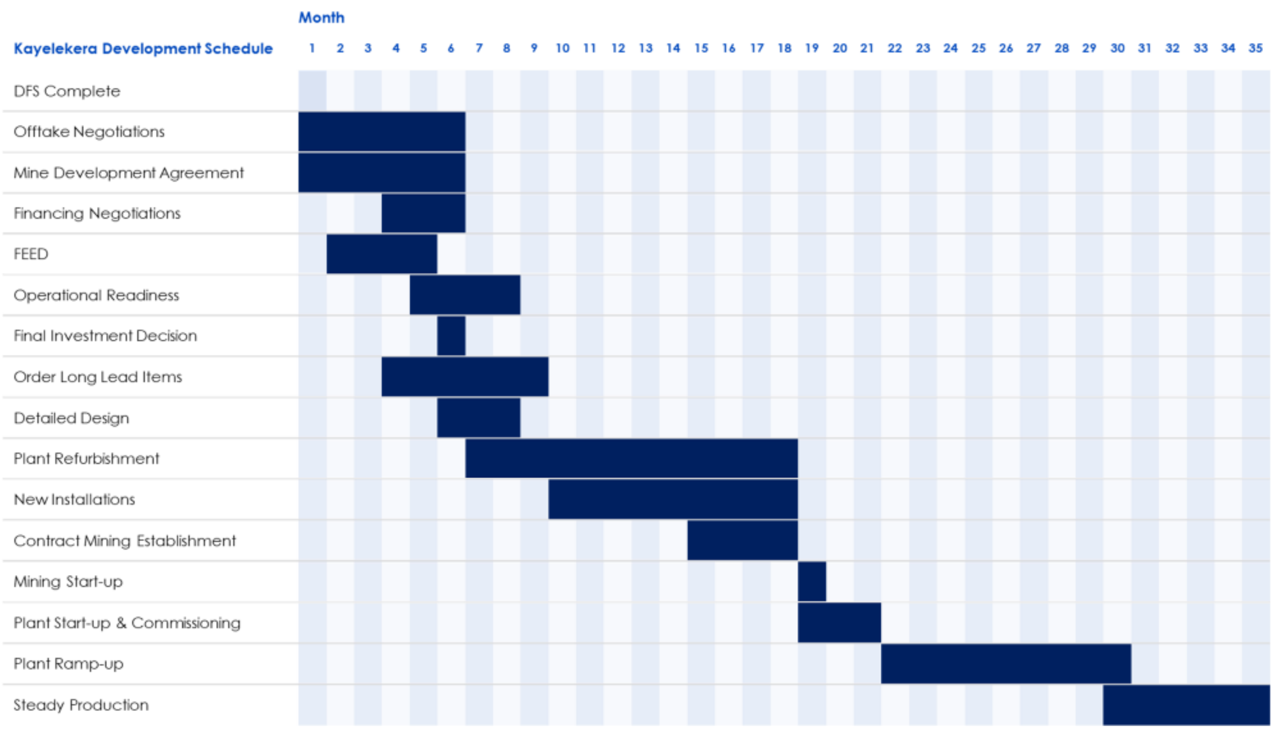


Figure 27: Indicative Development Timeline

Marketing and offtake

The Project is a known uranium supplier in the global marketplace having produced almost 11 million lbs of product between 2009 and 2014, providing comfort around the product quality to the utility buyers targeted for the restart contracts. Uranium produced from the Project was initially established in the global nuclear fuel market during 2007-2008 as several term agreements were secured in support of the Project development. Subsequent to the Project start-up, deliveries were made to all three Western conversion facilities (United States, Canada and France) for book transfer to nuclear fuel customers in North America, Asia and Europe during 2009-2014.

The Company is looking to enter into sufficient long-term (multi-year) uranium supply agreements which will need to be secured at prices appropriate for sustainable and profitable recommencement of production. The Company has initiated discussions with utilities in North America, Asia and Europe re-introducing the Project and updating them as to the restart and baseload contracting plans.

<u>Nuclear generating capacity</u>

According to the World Nuclear Association, there are 441 operable units with nearly 392 GWe in net generating capacity in 31 countries around the world. The average age of the current fleet of operating reactors is roughly 27 years. Many of these plants are expected to remain online for the next 15–20 years or longer. As of December 2021 there were 54 reactors under construction with 102 further reactors planned and 330 proposed.

The driver behind this extremely aggressive growth in reactor builds is two-fold. Firstly, it is now widely recognised that nuclear power is the lowest CO_2 emitting power generation source currently available (see Figure 28) and that further to this it provides 24 hour baseload energy. Therefore, nuclear energy is a critical component of any country's CO_2 emissions reduction strategy.

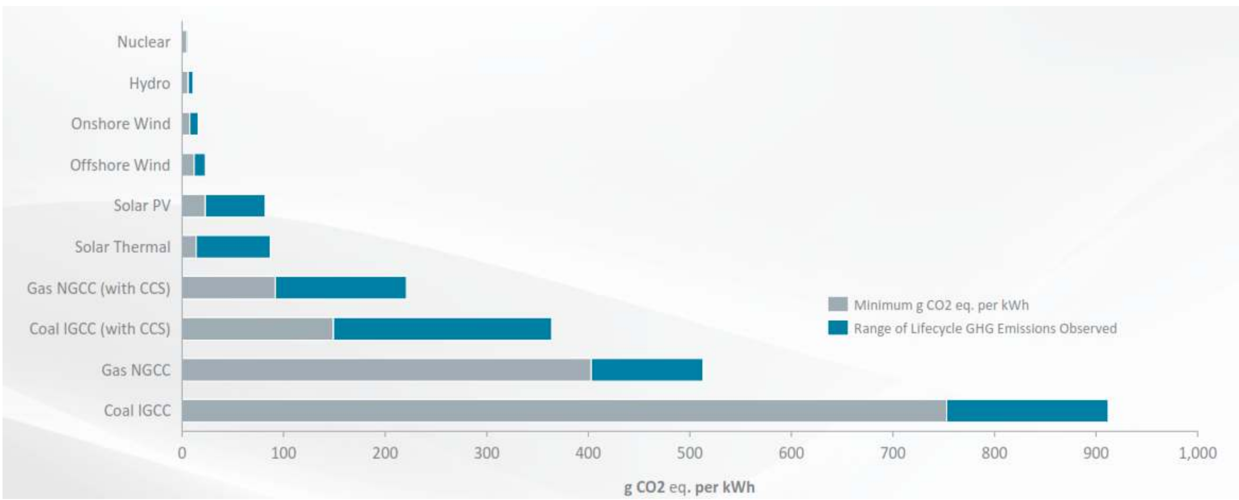


Figure 28: CO_2 Emissions by Source

Secondly electricity demand will nearly double by 2050 and carbon-free electricity will need to expand five-fold to meet Net Zero by 2050.

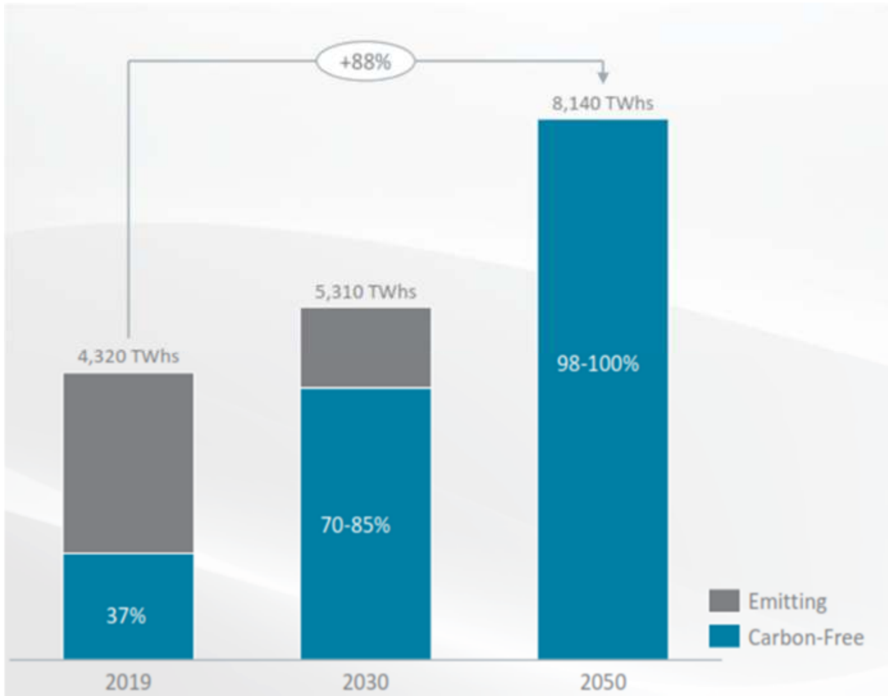


Figure 29: Global Power Demand

Uranium term price

Since 2017, the Ux Long-Term U_3O_8 Price, as reported by UxC, stayed in a range of US$30-US$32 per pound, until the entry of the Sprott Uranium Trust (SPUT) into the market. SPUT has purchased in excess of 39Mlbs on the spot market since August 2021 and during this time saw the spot price peak at over US$63 per pound. This has impacted the Long-Term Price which has steadily increased since to steady out at levels of US$50 per pound and above. The UxC Long-Term U_3O_8 Price is currently sitting at US$52 per pound for the period ending 30 July 2022.

Supply and Demand

Supply and demand information from 2021 shows that uranium demand requirements were ~180Mlbs, but that primary supply only delivered ~130Mlbs. The supply gap was met by a combination of secondary supplies including inventories and underfeeding. Inventories are dwindling and the impact of the Russian invasion in Ukraine has raised the risk profile of relying on Russian conversion and enrichment facilities such that the option of underfeeding at existing western facilities is becoming less likely. All of this means that primary production must increase to meet the demands going forward and in order to do this uranium prices must increase to trigger new producers coming online. Brownfield operations such as Kayelekera are in the best position to be first movers in this scenario.

Funding

A key objective in preparing the Restart DFS was to enable it to support a satisfactory level of confidence regarding key operating and capital cost parameters and associated funding requirements. The Company has worked with consultants and contractors who have experience and demonstrated expertise in the development of uranium projects. As the Project previously operated successfully for 5 years producing approximately 11 million lbs U_3O_8, the Company considers that there is a reasonable basis to assume that future funding will be available as and when required.

In determining the total amount of funding required for the restart of operations, the Company will take into account various factors in addition to those covered previously in this study including offtake contract pricing and payment terms, developments in supply chain considerations impacting the level of reagents and consumables required to be maintained on site, supply contract terms and contracting opportunities, minimum cash requirements and the cost of debt capital solutions available and equity capital.

The Company's Board and Management have a successful track record of developing and financing mineral resource projects globally, including demonstrated success in Tanzania, Malawi and South Africa.

The Company has a proven ability to attract new capital, as evidenced from a series of share placements (**Placements**) completed over the past three years.

There was strong support for the Placements and with completion of the Restart DFS, the Company considers that it is well placed to secure the funding required for the redevelopment of the asset. The Restart DFS's positive technical and cost fundamentals also provide a sound basis for the Company to commence discussions with off-takers and traditional debt and equity financiers.

For the reasons outlined above, the Company believes that there is a reasonable basis to assume that future funding will be available as and when required. However, investors should note that there is no certainty that the Company will be able to raise the amount of funding required to develop the Project when needed. It is also possible that such funding may only be available on terms that may be dilutive or otherwise affect the value of the Company's shares, or that the Company may pursue other value realisation strategies such as a sale, partial sale or joint venture of the Project (which may reduce the Company's proportionate ownership of the Project).

Risks and Opportunities

The risk identification and assessment process is an ongoing process and will be continuously updated as the Project moves through its various phases.

The objectives that Lotus is seeking to achieve through this process are:

- All risks need to be identifiable, prioritised and managed in a coordinated manner;
- Allow better identification and exploitation of opportunities;
- Compliance with relevant legislation;
- Avoidance of costly surprises as undesirable risks are identified and managed; and
- Reduction of costs through more targeted and effective controls.

A risk register has been developed for the Project, along with a specific mine closure risk assessment. These activities have identified the following key risks associated specifically with the project.

- Inflation leading to elevated project costs and reduced returns

- Capex estimating inaccuracy leading to inadequate capital allocation
- Inability to secure Mine Development Agreement with a fiscal regime supportive for investment
- Failure to successfully negotiate the grid connection with ESCOM and/or reduced power available from the grid resulting in increased operating costs for the plant
- Poor contracting management (awarding) resulting in sub-optimal financial outcome
- Poor execution of the Kayelekera restart resulting in delays and adverse financial impact
- Underperformance of plant due to design issues/application of technology
- Failure to adequately identify and control operational risks in advance of commissioning
- Inability to recruit and retain quality personnel leading to delay in execution of plans, loss of productivity and financial impact
- Inadequate stakeholder engagement/ management (Government, NGOs) resulting in project execution delays and reputation impact
- Uranium price does not reach threshold for project restart resulting in delays
- Geotechnical issues around processing plant cannot be mitigated causing damage to plant and infrastructure
- Failure of tailings containment structure leading to breach and environmental discharge
- Employees and contractors may be exposed to radiation in the performance of their duties or stakeholders may be concerned around the risks of radiation
- Supply chain interruptions lead to delays in securing key consumables or supplies
- Poor maintenance of plant and infrastructure at Kayelekera leads to increased capital costs and/or delay in execution
- Inadequate HR management (induction / training / supervision) leading to loss of productivity and other business risks (OH&S accidents)

At the same time, the following key opportunities for the Project were identified

- Exploration success delivering an increase in the LOM
- Improved performance of the tailings dam operation resulting in higher storage capacity that negates the need for the additional tailings dam, saving significant sustaining capital
- Better than expected performance of ore sorting further reducing operating costs
- Leveraging off the Company's ESG work to obtain premium uranium prices from ESG focused utilities
- Sale of surplus sulphuric acid able to be produced from acid plant when underutilised

APPENDIX 1 – Kayelekera Mineral Resource Information as required under Listing Rules 5.8.1 is shown below (refer to Appendix 1 for additional details)

Geology and Geological Interpretation

The Kayelekera deposit consists of a sequence of alternating arkose units (up to seven in total) and intervening mudstone units. The arkose/mudstone sequence is well defined and appears to be fault bounded on the eastern side, with an east-west trending fault intersecting the sequence within the northern portion of the package. As the mineralisation is flat lying and all drilling included in the resource estimation is vertical the mineralised intercepts can be considered to represent true widths

Sampling and Sub-sampling Techniques

All holes were geologically logged and down hole gamma logged. RC samples were collected via a cone splitter at 1m intervals. All samples were collected and contained in poly-weave or plastic bags. All sampling was carried out under Lotus's sampling protocols and QA/QC procedures as per industry best practice. All samples were riffle split into 80/20 proportions. Larger rejects (>20kg) were stored on site if they appeared mineralised or gave a count value of larger than 750cps on the scintillometer

Drilling Techniques

The entire drill hole dataset used consisted of 938 diamond, percussion and RC holes for 34,833m. The Historically Kayelekera deposit has been drilled using combination of diamond core ("DD") and percussion ("P") drill holes. Holes were drilled on a nominal 50m x 25m grid spacing for total 213 holes for 18,106m up to the end of 1990. Since then in 2004, 20 holes (2 DD and 18 P); in 2005, 11 twin holes drilled for metallurgical purposes; later in 2005, reverse circulation ("RC") drilling for a total of 120 holes; in 2007, an extensive RC program to convert Inferred Mineral Resource within the pit design for a total of 132 holes. Further grade control drilling of 620 RC holes by 12.5x12.5m pattern was drilled in 2007. In late 2021 an additional 35 RC holes were drilled by Lotus for 4,533m, results from this drilling were announced to the ASX on 27th January 2022 titled 'Drilling expands the mineralised footprint at Kayelekera'.

Criteria Used for Classification

The resources were classified as Measured, Indicated and Inferred on the basis of drilling density throughout the deposit as well as the validity of the underlying data. The Competent Person considered all relevant factors when determining the Mineral Resource classification.

Sample Analysis Methodology

All samples analysed were done using pressed powder XRF methods by ALS Laboratory in Edenvale, Johannesburg. Certified standards, duplicates and blanks were also inserted in the sample batches.

Deconvolution and disequilibrium factors for the more recent drilling were determined by Barrett Geophysical from XRF analysis of RC drill samples and radiometric down hole logging undertaken by Paladin. Disequilibrium figures utilised included 1.07 to 1.11 for oxidised arkose (e.g. $eU_3O_8/1.07$); 0.83 for reduced arkose and 0.71 for mudstone (e.g. $eU_3O_8/0.71$). It is the opinion of the Competent Person that these factors were acceptable and able to be applied to the current and historical radiometrically derived U_3O_8 grades to produce a unified dataset with XRF derived grades. XRF grade data was ranked above eU_3O_8 grade data in the resource dataset wherever a complete XRF dataset was available and considered robust

Estimation Methodology

The Mineral Resource estimate is based on a combined sample dataset from original historical drilling and drilling conducted by Paladin and Lotus between 2003 and 2021. Except for a limited number of geotechnical and recent Lotus holes all holes were drilled vertical.

Individual arkose units were modelled in three dimensions utilising Micromine software to domain the estimate.

The estimate was undertaken by MIK utilising standard software with a parent cell of 20mE by 20mN and 2mRL and reported at various cut-offs utilising a SMU of 3mE x 3mN x 2mRL utilising a variance adjustment factor and information effect.

Separate variography and MIK estimates were undertaken to each modelled domain utilising 1m grade composites

An insitu bulk density of 2.29g/cm^3 was applied for Arkose material and 2.20g/cm^3 for mudstone material to all blocks within the model

Cut-off Grades

The reporting cut-off grade of 200ppm U_3O_8 is based on processing scenarios, processing cost, recovery and pricing assumptions provided by Lotus and these are expected to be used in upcoming mining studies.

Mining and Metallurgical Method

The mineralisation will be extracted by open pit mining techniques as per previous mining.

The initial FS test work program was conducted by Mintek in Johannesburg under the supervision of GRD Minproc. Subsequent investigations were conducted by the Australian Nuclear Science and Technology Organisation ("ANSTO") in Sydney. Samples for metallurgical test work were sourced from throughout the ore body and separated into Oxidised Arkose, Reduced Arkose and Mudstone. A portion of the work undertaken by Mintek and ANSTO was on composite samples conforming to the expected proportions of individual rock types in the processing stream.

Based on the test work results a treatment plant was constructed comprising a single stage crushing, SAG milling, pre-leach thickening, sulphuric acid leaching, resin in pulp (RIP), resin elution, gypsum precipitation and UO_4 precipitation. This is followed by washing, liquid solid separation, drying and packaging of the UO4 product for export.

Subsequent test work undertaken Lotus has focused on ore sorting technology and how this can impact on plant feed grades. Test work was undertaken by technology specialist Steinert on a number of composite and individual material specific samples with results indicating clean waste can be successfully separated from mineralised material thereby boosting feed grades.

APPENDIX 2 – Kayelekera Ore Reserve Information as required under Listing Rules 5.9.1 is shown below (refer to Appendix 1 for additional details)

Study Status

This Feasibility Study has been prepared with accuracy of +/- 10-15%. There is no certainty that the conclusions of the Study will be realised.

Mineral Resources underpinning the study

The Mineral Resource estimate that underpins the Study was released by Lotus on 9 June 2022 It was prepared by a competent person in accordance with the JORC Code 2012.

The Study is based on a combination of Measured, Indicated and Inferred Resources. Approximately 96% of the Life-of-Mine (LOM) production is in the Measured and Indicated Mineral Resource category and 4% is in the Inferred Mineral Resource category.

There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the conversion of Inferred Mineral Resources to Indicated or Measured Mineral Resources or that the production targets reported in this announcement will be realised.

Mining factors or assumptions

Mining is proposed to be completed by conventional open pit mining practices.

The parameters associated with the Whittle pit optimisations and open-cut mine operation are as follows

- Contractor mining
- Dilution has been accounted for through the geological model used (multiple indicator kriging)
- Pit slopes – 22deg
- Reference mining cost – US$2.56/t

Metallurgical factors or assumptions

Recovery numbers were based on results from the historical operation. The Plant operated for 5-years, producing almost 11Mlbs U_3O_8 equivalent. The inclusion of ore sorting in the feed preparation circuit has been assumed for the Feasibility Study.

Metallurgical recoveries for ore sorting are supported by specific test work and are dependent on RoM head grade. Recoveries based on mill feed grade (i.e. post ore sorting) used in the Study were 86.7% based on average historical plant performance.

Basis for Cut-off Grades

Ore Reserve cu-off grades are 200ppm U_3O_8. This value is lower than previously reported, but is above the marginal breakeven grade assuming the inclusion of ore sorting in the process. This figure is supported by metallurgical test work and historical information from the Kayelekera operation

Estimation Methodology

The Mineral Resource estimate is based on a combined sample dataset from original historical drilling and drilling conducted by Paladin and Lotus between 2003 and 2021. Except for a limited number of geotechnical and recent Lotus holes all holes were drilled vertical.

Individual arkose units were modelled in three dimensions utilising Micromine software to domain the estimate.

The estimate was undertaken by MIK utilising standard software with a parent cell of 20mE by 20mN and 2mRL and reported at various cut-offs utilising a SMU of 3mE x 3mN x 2mRL utilising a variance adjustment factor and information effect.

Separate variography and MIK estimates were undertaken to each modelled domain utilising 1m grade composites. An insitu bulk density of 2.29g/cm^3 was applied for Arkose material and 2.20g/cm^3 for mudstone material to all blocks within the model.

Environmental

The Company has an Environment Certificate and Mining Licence (ML052) in place for the operation. Environmental Management Plans, including Radiation Management Plans are in place for the current care and maintenance phase and have previously been approved for the operation phase. The Company will review these plans prior to the restart and update as necessary.

Infrastructure

The Project is the restart of an existing asset that operated for 5 years from 2009 to 2014 and as such has the infrastructure required for the recommencement of production available onsite. The Company has reviewed the requirements for the operation and has determined that the facilities are in reasonable condition with a relatively small capital expenditure required to return them to operating status.

Capital Costs

The capital estimate is considered to have an accuracy of -10/+15%. A 12% contingency has been applied to account for any potential shortcomings in the data.

The capital cost estimates have been based on the work carried out by a selection of experience consultants familiar with the commodity and/or the Project including Gill Lane Consultants (geology), Miner Technics (geotechnical) Orelogy Consultants (mining), SLR Consulting (tailings and water), Senet Engineering (plant and infrastructure).

Operating Costs

Operating costs include all costs associated with mining, processing and general site administration. These costs were built up from first principles, determined from "request for budget quotations" from contractors, using historical operating data, and where applicable referenced against similar operations as a check. Mining costs were estimated at US3.04/t material, plant US$27.60/t ore and G&A costs at US$10.5M per annum. The AISC cost of US$37.8/lb U_3O_8 is based on the Company's cost models.

Revenue Factors

No revenue assumptions have been made for this Study due to the uncertainty associated with predicting long-term uranium prices in the current market.

Schedule and Project timing

The next stage of project development will include a more detailed engineering assessment as part of a Front-end Engineering and Design (FEED) work program, the preparation of an

Operational Readiness Plan and discussions with various parties concerning future offtake and financing needs.

Marketing

Production from the Project is expected to be contracted through term arrangements with utility and nuclear fuel buyers worldwide. The Company has initiated contact with previous off-takers of the Kayelekera product as well as potential new off-takers and intends to continue on that path to build a supply order book required to support a decision to mine.

Economic Parameters

The Study has been completed with a -10%/+15% accuracy for all cost information. No financial analysis has been reported as part of this study. An independent cost model has been developed as a LOM model and includes all cost information including sustaining capital costs, tailings capital costs and closure costs.

Exchange rates

Estimates in this announcement are presented in US$. Foreign exchange rates used to convert to US$ are:

- EUR: USD = 1.00
- ZAR: USD = 17.14
- MWK: USD = 1,020

Community and Social Responsibility

Consultation with the local communities, the general public, non-governmental organisations and private interests are ongoing and will continue.

No significant environmental or stakeholder issues have been identified at this stage with strong support for the Project received from key stakeholders.

The Company is in the process of negotiation a Community Development Agreement through which 0.45% of Gross Revenue will be directed back into the community for selected projects and activities.

Permitting

Permitting of the Project benefits from Kayelekera being a previous operating asset with key permits in place.

Other

Other risks to the Project relate to uranium price, social licence, and other similar risks customary for resource projects.

Audit and Reviews

Internally reviewed by Company personnel.

APPENDIX 3 – Competent Persons Statement

Mineral Resources

The Mineral Resource estimate for the Kayelekera deposit was prepared by David Princep of Gill Lane Consulting. David Princep has visited the Kayelekera Project on numerous occasions since 2003 with the most recent being in October 2013 just before the Project was placed on care and maintenance. Mr. Princep is a Fellow of the Australasian Institute of Mining and Metallurgy and a Chartered Professional Geologist. Mr. Princep has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration to qualify as a Competent Person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC 2012). Mr. Princep approves of, and consents to, the inclusion of the information in this announcement in the form and context in which it appears.

Ore Reserves

The Ore Reserve estimate for the Kayelekera deposit was prepared by Ryan Locke of Orelogy Consulting. Ryan Locke has visited the Kayelekera Project from 29th to 30th April 2022 while the Project was placed on care and maintenance. Mr Locke is a Member of the Australasian Institute of Mining and Metallurgy (AUSIMM) . Mr Locke has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration to qualify as a Competent Person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC 2012). Mr Locke approves of, and consents to, the inclusion of the information in this announcement in the form and context in which it appears.

Forward Looking Statements

This Announcement includes “forward-looking statements” within the meaning of securities laws of applicable jurisdictions. Forward-looking statements involve known and unknown risks, uncertainties and other factors that are in some cases beyond Lotus Resource Limited’s control. These forward-looking statements include, but are not limited to, all statements other than statements of historical facts contained in this announcement, including, without limitation, those regarding Lotus Resource Limited’s future expectations. Readers can identify forward-looking statements by terminology such as “aim,” “anticipate,” “assume,” “believe,” “continue,” “could,” “estimate,” “expect,” “forecast,” “intend,” “may,” “plan,” “potential,” “predict,” “project,” “risk,” “should,” “will” or “would” and other similar expressions. Risks, uncertainties and other factors may cause Lotus Resource Limited’s actual results, performance, production or achievements to differ materially from those expressed or implied by the forward-looking statements (and from past results, performance or achievements). These factors include, but are not limited to, the failure to complete and commission the mine facilities, processing plant and related infrastructure in the time frame and within estimated costs currently planned; variations in global demand and price for uranium; fluctuations in exchange rates between the U.S. Dollar and the Australian Dollar; uncertainty in the estimation of mineral resources and mineral reserves; the failure of Lotus Resource Limited’s suppliers, service providers and partners to fulfil their obligations under construction, supply and other agreements; the inherent risks and dangers of mining exploration and operations in general; environmental risks; unforeseen geological, physical or meteorological conditions, natural disasters or cyclones; changes in government regulations, policies or legislation; foreign investment risks in Malawi; breach of any of the contracts through which the Company holds property rights; defects in or challenges to the Company’s property interests; uninsured hazards; industrial disputes, labour shortages, political and other factors; the inability to obtain additional financing, if required, on commercially suitable terms; reliance on key personnel and the retention of key employees; the impact of the Covid-19 pandemic on the Company's business and operations; and global and regional economic conditions. Readers are cautioned not to place undue reliance on forward-looking statements. The information concerning possible production in this announcement is not intended to be a forecast. They are internally generated goals set by the board of directors of Lotus Resource Limited. The ability of the Company to achieve any targets will be largely determined by the Company's ability to secure adequate funding, implement mining plans, resolve logistical issues associated with mining and enter into any necessary off take arrangements with reputable third parties. Although Lotus Resource Limited believes that its expectations reflected in these forward-looking statements are reasonable, such statements involve risks and uncertainties and no assurance can be given that actual results will be consistent with these forward-looking statements.

APPENDIX 4 – JORC Code, 2012 Edition – Kayelekera Deposit

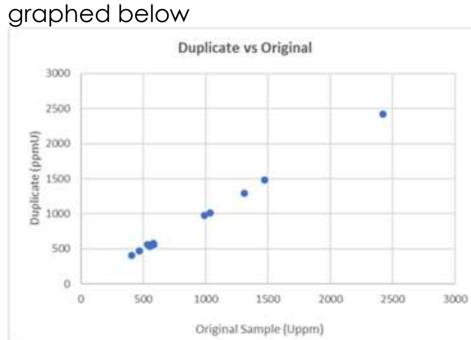
Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	• The entire drill hole dataset used consisted of 938 diamond, percussion and RC holes for 34,833m. The Historically Kayelekera deposit has been drilled using combination of diamond core ("DD") and percussion ("P") drill holes. • Holes were drilled on a nominal 50m x 25m grid spacing for total 213 holes for 18,106m up to the end of 1990. Since then in 2004, 20 holes (2 DD and 18 P); in 2005, 11 twin holes drilled for metallurgical purposes; later in 2005, reverse circulation ("RC") drilling for a total of 120 holes; in 2007, an extensive RC program to convert Inferred Mineral Resource within the pit design for a total of 132 holes. • In late 2021 an additional 35 RC holes were drilled by Lotus for 4,533m, results from this drilling were announced to the ASX on 27th January 2022 titled 'Drilling expands the mineralised footprint at Kayelekera'. • Further grade control drilling of 620 RC holes by 12.5x12.5m pattern was drilled in 2007. All holes were geologically logged and down hole gamma logged. • For intervals of interest, samples were collected over a sample length of 1m, each sample weighing approximately 0.5kg. • RC samples were collected via a cone splitter at 1m intervals. All samples were collected and contained in poly-weave or plastic bags. • The nominal drill diameter was 5 inches and all drill samples were bagged from the cyclone and weighed to provide some assessment of the average drill sample recoveries. • All sampling was carried out under Lotus's sampling protocols and QA/QC procedures as per industry best practice. • All samples were riffle split into 80/20 proportions. Larger rejects (>20kg) were

Criteria	JORC Code explanation	Commentary
		stored on site if they appeared mineralised or gave a count value of larger than 750cps on the scintillometer • Certified standards, duplicates and blanks were also inserted in the sample batches. • All samples analysed using pressed powder XRF methods by ALS Laboratory in Edenvale, Johannesburg. • Samples were driven by Lotus personnel to Lilongwe and air freighted by South African Airways to Johannesburg
Drilling techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• The Kayelekera deposit has been drilled using combination of DD, P (historical) or RC drilling. • All RC drilling has utilised a Warman 250 RC rig mounted on a Unimog truck supported by separate truck mounted Atlas Copco 3000 psi compressor to provide additional air capacity and a 9 tonne Mercedes Benz flatbed support ruck with drill bit size of 5 inches. • Diamond drilling has utilised conventional wireline drill rig with core size of HQ.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• No core recovery information was available. • For RC drilling, the nominal drill hole size was 5 inches and all drill samples were bagged from the cyclone and weighed to provide some assessment of the average drilling sample recoveries. The average weight of the 1,978 metres checked was 25.04kg per sample against an expected 29kg for 100% recovery. The majority of poor recovery samples were within the first metre of the drill hole, with these removed, the average weight was 25.25kg for an average recovery of 87%. The vast majority of drill intervals weighed achieved a better than 80% recovery and this is considered to be a very good result. • All RC drilling is conducted to industry best practice and Lotus QA/QC protocols whereby the hole is cleaned at the end of every metre interval by raising the bit slightly and blowing out the hole before drilling the next metre

Criteria	JORC Code explanation	Commentary
		and ensuring water ingress into the hole whilst drilling is minimised. • No relationship between sample recovery and grade has been observed; studies to date show no correlation exists.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• All holes have been geologically logged (RC on 1m intervals, and DD on 1m intervals or to geological contacts) with recording of lithology, grain size and distribution, sorting, roundness, alteration, oxidation state, and colour, and stored in the database. All holes were logged to a level of detail sufficient to support Mineral Resource estimation, and metallurgical investigations. • No routine geotechnical or structural data has been logged or recorded. • Oxidation, colour, alteration, roundness, sorting, sphericity, alteration and mineralisation are logged qualitatively. All other values are logged quantitatively. • All holes (core and chips) have been photographed and stored in a database. All photographs are of wet samples only. • All holes have been logged over their entire length (100%) including any mineralised intersections.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure*	• All sampling was carried out using Lotus sampling protocols and QA/QC procedures as per industry best practice. • All RC samples were riffle split into 80/20 proportions. Larger rejects (>20kg) samples were stored on site if they appeared mineralised or gave a count value of larger than 750cps on the scintillometer • Certified standards, duplicates and blanks were also inserted in the sample batches. • All samples analysed using pressed powder XRF methods by ALS Laboratory in Edenvale, Johannesburg. • Samples were driven by Lotus personnel to Lilongwe and air freighted

Criteria	JORC Code explanation	Commentary
	that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling. • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	by South African Airways to Johannesburg.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	• Laboratory assays were carried out by ALS Laboratory Edenvale, Johannesburg on selected mineralised intervals that were defined by downhole radiometric logging. • Each sample weighed approximately 0.5kg • Sample preparation comprised the followed procedures: WEI-21 sample weighing LOG-22 barcode sample login SCR-41 sample screened to -180 micron • Analytical Procedures comprised: • ME-XRF05 trace level XRF analysis • Every 10th sample comprised a field duplicate • Blank samples were inserted at frequency of 1 in 10. • Duplicate versus original assay results are graphed below  • The CP considers the analytical data to be of a high standard with high levels of accuracy and does not exhibit any tendency for bias
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.*	• Significant intersections identified by radiometric logging (>1m and >200ppm U_3O_8) were physically sampled with laboratory analytical techniques used to verify the interval.

Criteria	JORC Code explanation	Commentary
	• *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• Assays have been used, where available, in preference to downhole radiometrics. • Where radiometric data has been used (quoted as eU_3O_8) disequilibrium figures utilised included 1.07 to 1.11 for oxidised arkose (e.g. eU3O8/1.07); 0.83 for reduced arkose and 0.71 for mudstone (e.g. eU3O8/0.71). • It is the opinion of the Competent Person that these factors were acceptable and able to be applied to the current and historical radiometrically derived U_3O_8 grades to produce a unified dataset with XRF derived grades. • No holes were twinned in the program • Data verification was undertaken using specialist mining software • No adjustments to the data were necessary
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• All drill hole collars were surveyed with DGPS equipment in the MMG Zone 36 South grid. Historical collars were also surveyed where collar identity is recognisable. All holes were drilled vertical. Down-hole probe surveys have been undertaken on most of the holes to validate the down-hole measurements. • Topographic surveys have been carried out several times and the latest pit survey was conducted in early 2015.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• Drill spacing within the deposit is generally 25m x 25m with an area representing the initial 12 months of mining drilled to 12.5m x 12.5m. • The drill spacing expands to 50m x 50m and 100m x 100m on the western periphery of the mineralisation. • The most recent drilling was completed on the eastern, southern, and western sides of the main mineralisation. • The drill spacings completed to date support the current classifications applied to the Mineral Resource estimate. • No compositing has been applied to assayed intervals, downhole gamma logging intervals were composited to 1m – the assay sampling interval.

Criteria	JORC Code explanation	Commentary
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• Drilling sections are orientated perpendicular to the strike of the mineralised host rocks at Kayelekera. • All holes are drilled vertical, which is approximately perpendicular to the flat dip of the stratigraphy. • No orientation-based sampling bias has been identified in the data.
Sample security	• *The measures taken to ensure sample security.*	• Chain of custody was managed by Lotus. • Samples were driven by Lotus personnel to Lilongwe and air freighted by South African Airways to Johannesburg and samples analysed at ALS Laboratory Edenvale, Johannesburg.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Data was validated by Lotus whilst loading into database. Any errors within the data are returned to site geologist for validation.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• The Kayelekera Uranium Project is located in Malawi, in East Africa. The project site is located within the Kyungu Chieftainship, in the Karonga District of Northern Malawi about 35km from the local centre of Karonga and 650km north of the national capital of Lilongwe. • A formal and detailed Development Agreement for the Kayelekera Uranium Project was approved by the Government of Malawi and executed on 22nd February 2007. The Development Agreement provides a stable fiscal regime for at least 10 years from the commencement of production. Negotiations for the renewal of the Development Agreement are currently ongoing with the Malawian Government • The Kayelekera deposit is covered by a single licence, Mining Licence (ML)0152, of 55.5 square kilometres which was renewed on the 1st September 2021 and valid for a further 15 years • The tenement is in good standing and no known impediments exist.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• The tenement area has been previously explored by numerous companies. • In 1983 The Central Electricity Generating Board ("CEGB") were granted two Reconnaissance Licences, RL004 and RL005. In April 1984 RL004 was converted to an Exclusive Prospecting Licence, EPL002, which was renewed in April 1987 as EPL 002 R1, and again in 1990 for two years as EPL 002/90 R2, covering a reduced area. RL 005 was renewed in both 1984 and 1985 before being dropped due to poor results. • In 1983 regional gamma-ray spectrometry was carried out which identified 12 anomalies for ground follow-up. Surface investigations,

Criteria	JORC Code explanation	Commentary
		including geological mapping and scintillometer surveys, of the known mineralisation at Kayelekera were carried out. • In 1984 further ground surveys were completed delineating targets for more detailed investigation. A limited drill program (510m) was undertaken at Kayelekera to investigate mineralisation at depth, whilst trenches were dug to study near surface occurrences. • In 1985 a total of 3,994m of drilling was completed outlining a deposit containing 7,500t of U_3O_8. Heliborne surveys (magnetics, gamma-ray spectrometry) for U, Th and K were completed and identified some new targets and a better-defined existing target areas for ground follow-up and drilling in 1986. • During 1986, a further 3,821m of drilling was completed on Kayelekera, increasing the resource to 9,300t of U_3O_8. Seven other targets were drilled (2,503m) although no significant mineralisation was discovered. • In 1987, 7,665m of drilling was carried out to infill the existing drilling to 50m by 50m. A number of pits were dug and some preliminary geotechnical holes drilled. Scout drilling on other targets failed to intersect any radiometrically anomalous strata but a two-metre thick coal seam was intersected 1km north of the Kayelekera village at Nhkachira. • In 1988 no drilling was completed on the uranium deposit at Kayelekera but a total of 1,180m were drilled on various scout targets. One hundred and seventeen metres were drilled to evaluate limestone deposits in the Mwesia basin (lime is needed in the uranium extraction process). In addition, 289m were drilled to test the coal seams previously identified. During the latter part of 1988, the British Civil Uranium Procurement Organisation ("BCUPO") received competitive tenders for the execution of a detailed feasibility study for the Kayelekera project. Wright Engineers

Criteria	JORC Code explanation	Commentary
		Limited ("Wright") of Vancouver, Canada was selected to produce the feasibility study which commenced in March 1989 and was completed by June 1990. • In 1989, a further 2,017m of drilling was drilled into the deposit and its margins for structural, hydrogeological, geotechnical and metallurgical purposes. An independent evaluation confirmed an in-situ resource of >9,000t of contained U_3O_8. A further 1,805m of drilling was completed to evaluate the Nhkachira coal deposit, which was shown to comprise several thousand tonnes of coal in a single 2m thick seam. • Since 2002, Paladin conducted extensive drilling programs in 2004, 2005, 2008-2011. Mining at the project was commenced in 2008.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• Kayelekera is situated close to a major tectonic boundary between the Ubendian and the Irumide domains. The Ubendian domain consists of medium to high-grade metamorphic rocks and intrusions cut by major NW-SE dextral shear zones and post-tectonic granitoid intrusions dated at 1.86Ga (Lenoir et al., 1995). These shear zones may well have been reactivated during and after deposition of the Karoo sequence, since many major brittle faults that offset the Karoo-aged rocks have the same orientation. • Mineralisation at Kayelekera is hosted in several arkose units where they are adjacent to the Eastern Boundary Fault zone. The mineralisation forms more or less tabular bodies restricted to the arkoses, except adjacent to the NS strand of the Eastern Boundary fault at the eastern extremity of the pit. Here, mineralisation also occurs in mudstones in the immediate vicinity of the fault. It can be seen that the highest grades correspond to the intersection of the eastern and Champanji faults. Mineralisation grade and tonnage declines with lateral distance from these faults.

Criteria	JORC Code explanation	Commentary
		• Secondary mineralisation tends to be concentrated in vertical fractures and along the contacts between mudstone and arkose and is restricted to the upper parts of the orebody Primary reduced (i.e. carbon and pyrite-bearing) arkose ore accounts for 40% of the total ore. About 30% of the mineralisation is hosted in oxidised arkose (i.e. lacking carbon and pyrite) and is called oxidised ore. 10% of mineralisation is termed "Mixed Arkose" and exhibits characteristics of both primary and secondary arkose mineralisation types. • Uranium in primary ore is present as coffinite, minor uraninite and a U-Ti mineral, tentatively referred to as brannerite. Modes of occurrence include: disseminated in matrix clay, included in detrital mica grains and intimately intergrown with carbonaceous matter. Individual grains are extremely fine, typically <10µm. Coffinite and uraninite also show an association with a TiO_2 phase, possibly rutile after detrital ilmenite. It is possible that uranium deposition was accompanied by leaching of Fe from detrital ilmenite and precipitation of a TiO_2 polymorph.
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* o *easting and northing of the drill hole collar* o *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* o *dip and azimuth of the hole* o *down hole length and interception depth* o *hole length.* • *If the exclusion of this*	• Refer to previous announcement to the ASX on 27th January 2022 titled 'Drilling expands the mineralised footprint at Kayelekera' for complete drillhole information

Criteria	JORC Code explanation	Commentary
	information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• Metal equivalent values have not been used.
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	• Due to the use of vertical drilling and the horizontal, layered nature of the deposit all drill intercepts can be considered to represent the true width of the mineralisation.
Diagrams	• *Appropriate maps and sections (with scales) and*	• See diagrams in body of announcement.

Criteria	JORC Code explanation	Commentary
	tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• Refer to previous announcement to the ASX on 27th January 2022 titled 'Drilling expands the mineralised footprint at Kayelekera' for complete drillhole information.
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• The deposit has previously been the subject of extensive drilling, metallurgical, hydrogeological, pre-feasibility and definitive feasibility studies.
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• Additional exploration work is being planned and will be announced when appropriate.

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• The data used in this estimate is based on a combined sample dataset from the original CEGB drilling and that conducted by PDN and LOT between 2005 and 2021. This data has been validated as much as possible by reference to original CEGB graphical drill logs, sample submission sheets and analytical reports. The original CEGB drill holes have been re-surveyed where possible and those positions incorporated into the sample dataset. • For historical, PDN and LOT drilling, geological and field data is collected using Field Marshall software on tablet computers. Historical drilling data has been captured from historical drill logs. • The data is verified by company geologists before the data is sent for further validation and compilation into an Access database. Historic data has been verified by checking historical reports on the project. • The drilling data was received in the form of a number of Micromine data files which were compiled into an Access database. This database was then used for data validation, checking for sample overlaps, lithological consistency etc. Due to uncertainty about the previous history of the data files and what calibrations had been applied to the data the drill holes were compared visually against the data displayed in the CEGB Ore Reserve Assessment report. • Previous drill and sampling logs were also examined to provide a direct check on the consistency and veracity of the dataset available. • Disequilibrium calibrations were developed using factors supplied by Barrett Geophysical and comparison to those used in the previous resource estimation
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• Numerous site visits by the Competent Person from PDN have occurred during exploration and mining activities. • The most recent site visit was in late 2013 coinciding with the site being placed on care and maintenance due to persistent low uranium prices.

Criteria	JORC Code explanation	Commentary
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• The confidence in the geological interpretation is considered to be good and is based on previous mining history and visual confirmation in outcrop and within the Kayelekera open pit. • Geochemistry and geological logging has been used to assist identification of lithology and mineralisation. • The Kayelekera deposit consists of a sequence of alternating arkose units (more than seven in total) and intervening mudstone units. The arkose/mudstone sequence is well defined and appears to be fault bounded on the eastern side, with an east-west trending fault intersecting the sequence within the northern portion of the package. As the mineralisation is relatively flat lying and the vast majority of drilling included in the resource estimation is vertical the mineralised intercepts can be considered to represent true widths. • Infill drilling has confirmed geological and grade continuity.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• The Kayelekera Mineral Resource area extends over a strike length of 1,600m (from 8,895,300mN – 8,896,900mN) and includes the 300m vertical interval from 1,000mRL to 700mRL.
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and*	• Using parameters derived from modelled variograms, Multiple Indicator Kriging ("MIK") was used to estimate average block grades using industry standard software. • The basic unit of an Indicator Kriging block model is a large block (normally referred to as a panel) that has the dimensions of the average drill hole spacing in the horizontal plane. The panel should be large enough to contain a reasonable number of blocks, or Selective Mining Units ("SMU's"). The SMU is the smallest volume of rock that can be mined separately as ore or waste and is usually defined by a minimum mining width. At Kayelekera the dimensions of this volume have been set at 3mE x 3mN x 2mRL. • The goal of Indicator Kriging is to estimate the tonnage and grade of mineralisation that would be recovered from each panel if the panel were mined using the block as the minimum selection

Criteria	JORC Code explanation	Commentary
	parameters used. • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if*	criteria to distinguish between ore and waste. To achieve this goal, the following steps are performed; • Estimate the proportion of each geological domain within each panel. This can be achieved by Kriging of indicators of domain classifications of sample data points or by passing a template model through wireframes and calculating proportions of panels inside and outside of each wireframe. A combined kriging approach was used for Kayelekera, each panel being assigned a proportion of one, or a combination, of domains. Whilst this step was completed an explicit geological model developed in Micromine was applied to the Mineral Resource estimate. • Estimate the histogram of grades of sample-sized units within each domain within each panel using MIK. MIK actually estimates the probability of the grade within each panel being less than a series of indicator threshold grades. These probabilities are interpreted as panel proportions. • For each domain, and for each panel that receives an estimated proportion greater than 0ppm U_3O_8, implement a block support correction (variance adjustment) on the estimated histogram of sample grades in order to achieve a histogram of grades for SMU-sized blocks. This step incorporates an explicit adjustment for the Information Effect. At Kayelekera the total block support correction was set at between 0.07 and 0.24 for individual domains. This is a moderate correction factor, however in the experience of the competent person these orders of adjustments are commonly seen in deposits with mineralisation styles similar to that present at Kayelekera. • Calculate the proportion of each panel estimated to exceed a set of selected cut-off grades, and the grades of those proportions. • Apply to each panel, or portion of a panel below surface, an in-situ bulk density (ISBD) to achieve estimates of recoverable tonnages and grades for each panel. Apart from the consideration of adjusting Mineral Resource classification according to block proportions, completes construction of the resource model. The estimates of block support corrected resources for each panel may be combined to provide an estimate of global recoverable resources for the deposit. • The parent block dimensions used were 20m NS by 20m EW by 2m vertical and no sub-cells were used. • A bulk density of 2.29t/m3 for Arkose and 2.20t/tm3 for mudstone was applied to all blocks

Criteria	JORC Code explanation	Commentary
	available.	within the model which was subsequently trimmed to a topography derived from a combination of airborne survey and mine surveyor pickup. • A domain geometry model was constructed in Micromine using the previously created arkose unit wireframes. Panel proportions for each arkose unit were then exported and used to produce a third party geological domain model for use in estimation software as this was believed to produce a more representative geological model. • The size of the variance adjustment needed to obtain the variance of the block grade distribution within a panel can be calculated using the rule of additivity of variances, which in the case of block support adjustments is often called Krige's Relationship: **Var(samples in a panel) = Var(samples in a block) + Var(blocks in a panel)** • The variance of sample grades in a panel and the variance of samples within a block can be directly calculated from the variogram of uranium grades for a particular domain. The ratio of **Var(blocks in panel)** to **Var(samples in panel)** is that required to implement the block support adjustment. • Variance adjustment ratios applied in estimating the Kayelekera recoverable uranium resources are listed in the attached table. These ratios have been applied using a Direct Lognormal Correction method (i.e., incorporating symmetrization of block grade distributions). Selective Mining Unit (SMU) dimensions of 3mE x 3mN x 2mRl have been assumed along with grade control spacing of 3.5mE x 3.2mN x 1mRl. • The current Mineral Resource estimate at Kayelekera reported a total of 0.9Mt at 830ppm U3O8 for 1.6Mlb U_3O_8 in the Measured Mineral Resource category and 29.3Mt at 510ppm U_3O_8 for 33.2Mlb U_3O_8 for Indicated and Inferred Mineral Resources of 8.3Mt at 410ppm U3O8 for 7.4Mlb all at a cut-off grade of 200ppm U_3O_8. These Mineral Resources are depleted for mining, an additional 1.6Mt at 755ppm U_3O_8 for 1,199 tonnes is held as ROM stockpiles and 2.4Mt at 290ppm U_3O_8 in LG stockpiles. • No recovery of by-products is anticipated. • Only U_3O_8 was interpolated into the block model. There are no known deleterious elements within the deposits. • Selective mining unit assumptions are based on the size of the mining equipment to be used and the expected blast hole spacing. • The deposit mineralisation was constrained by wireframes representing the different geological

Criteria	JORC Code explanation	Commentary
		units. The wireframes were applied as hard boundaries in the estimate. • The drill hole database was intersected with the mineralisation model and the results were coded into the drill hole database. From this mineralised drill hole intercepts were produced and these were subsequently composited to 1m intervals and used in the grade estimation process. • Statistical analysis and variogram analysis was carried out on data from various arkose units R to X along with one derived for all mudstone and deeper arkose units. • Comparison between the current estimate and the previous Mineral Resource is very good when constrained to similar spatial extents. This Mineral Resource has been extended to the west due to additional drilling.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnages and grades are estimated dry.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• The Statement of Mineral Resources has been constrained by the mineralisation solids and reported above a cut-off grade of 200ppm U_3O_8. The cut-off grade was estimated based on parameters derived from internal mining studies and provided by Lotus. • It should be noted that additional studies are required to confirm economic viability at current uranium prices.
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining*	• It is assumed that the mineralisation is likely to be extracted by open pit mining techniques as per previous mining. As the mineral resource estimation technique is MIK no additional dilution or recovery adjustments have been made over those contained in the original estimation. Refinement of the MIK variance adjustment have been undertaken over and above the calculated values based on mining experience since 2008.

Criteria	JORC Code explanation	Commentary
	methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• While mineral processing and metallurgical test studies were carried out on mineralisation from the Kayelekera deposit as part of the original CEGB feasibility study it was felt that the results from these studies were not appropriate for the current economic climate or state of uranium processing technology. As a consequence, new mineral processing and metallurgical testing studies were carried out on the deposit by Paladin and reported in their FS. • The initial FS test work program was conducted by Mintek in Johannesburg under the supervision of GRD Minproc. Subsequent investigations were conducted by the Australian Nuclear Science and Technology Organisation ("ANSTO") in Sydney. Samples for metallurgical test work were sourced from throughout the ore body and separated into Oxidised Arkose, Reduced Arkose and Mudstone. A portion of the work undertaken by Mintek and ANSTO was on composite samples conforming to the expected proportions of individual rock types in the processing stream. It is the opinion of the author that the samples selected for metallurgical test work are representative of both the mineralisation and the anticipated feed proportions of each rock type. • Based on the test work results a treatment plant was constructed comprising: single stage crushing, SAG milling, pre-leach thickening, sulphuric acid leaching, resin in pulp (RIP), resin elution, gypsum precipitation and UO precipitation. This is followed by washing, liquid solid separation, drying and packaging of the UO_4 product for export. • Subsequent testwork undertaken Lotus has focused on ore sorting technology and how this can impact on plant feed grades. Testwork was undertaken by technology specialist Steinert on a

Criteria	JORC Code explanation	Commentary
		number of composite and individual material specific samples with results indicating clean waste can be successfully separated from mineralised material thereby boosting feed grades.
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	• Historical mining has occurred at the Kayelekera deposit. Mining commenced in May 2008 and ceased in December 2013. During the operating period 9.1Mbcm of material (of which 3.0Mbcm was ore) was removed from the open pit, at an average monthly rate of nearly 130,000bcm/month, resulting in a strip ratio of 2:1. • At the time, PDN aimed to minimise its impact on the environment through effective environmental management across all aspects of its operations; preventing, minimising, mitigating and remediating any adverse impacts of its operations on the environment; and achieving continuous improvement in environmental performance. • Environmental Management Plans (EMP's) have been prepared for the Construction, Operational and C&M phases of KM. The Environmental Management Plan currently in place is the C&M EMP. However upon Restart the Operational EMP will be revised for the re-establishment of operations. • A comprehensive environmental monitoring programme was conducted during the pre-mining, construction and operational phases and is continuing through the C&M phase at the mine. The programme includes monitoring of: Surface Water, Groundwater, Dust, SO_2, Environmental Radiation, Aquatic invertebrates and previously completed rehabilitation. • The monitoring programme is regularly reviewed based on the monitoring outcome and any changes to the operations or the environment. The monitoring requirements are outlined in the EMP's and detailed monitoring schedules have been prepared for each stage of the operation. • Environmental inspections and audits are undertaken by KM site personnel on a regular basis. • Environmental inspections of the component areas of the site are conducted in accordance with the EMP and the Environmental Inspection Schedule. Audits of compliance with the EMP are also undertaken by KM personnel. • Corporate environmental audits were conducted on at least an annual basis to assess compliance, conformance and environmental performance of the operations.

Criteria	JORC Code explanation	Commentary
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• A bulk density of 2.29t/m3 for Arkose and 2.20t/m3 for mudstone was applied to all blocks within the model which was subsequently trimmed to a topography created from data contained within the geological database. • Density is measured using the water immersion technique. Moisture is accounted for in the measuring process and measurements were separated for lithology, mineralisation and weathering.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).*	• The Mineral Resource has been classified on the basis of drilling density throughout the deposit as well as the validity of the underlying data. • All relevant factors have been taken into account when determining the Mineral Resource classification. • The current classification of the deposit reflects the opinion of the Competent Person.

Criteria	JORC Code explanation	Commentary
	• *Whether the result appropriately reflects the Competent Person's view of the deposit.*	
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• The previous mineral resource estimate was reviewed by PDN and external specialists and the current values are only marginally different based on additional drilling completed by LOT.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.*	• Based on the current understanding of the deposit it is believed that the Mineral Resource estimate reasonably reflects the accuracy and confidence levels within the deposit. Due to the nature and style of the mineralisation it is expected that additional, detailed, infill drilling will locally modify grades and thicknesses however the global tonnages and grades are expected to remain consistent. • The lode geometry and continuity has been adequately interpreted to reflect the applied level of Measured, Indicated and Inferred Mineral Resource. The data quality is good and the drill holes have detailed logs produced by qualified geologists. A recognised laboratory has been used for all analyses. • The Mineral Resource statement relates to global estimates of tonnes and grade. • The current Mineral Resource estimate at Kayelekera reported a total of 0.9Mt at 830ppm U3O8 for 1.6Mlb U_3O_8 in the Measured Mineral Resource category and 29.3Mt at 510ppm U_3O_8 for 33.2Mlb U_3O_8 for Indicated and Inferred Mineral Resources of 8.3Mt at 410ppm U3O8 for 7.4Mlb all at a cut-off grade of 200ppm U_3O_8. These Mineral Resources are depleted for mining, an additional 1.6Mt at 755ppm U_3O_8 for 1,199 tonnes is held as ROM stockpiles and 2.4Mt at 290ppm U_3O_8 in LG stockpiles

Criteria	JORC Code explanation	Commentary
	• *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	

Section 4 Estimation and Reporting of Ore Reserves

(Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	• *Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.* • *Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.*	• The most recent Mineral Resource estimate was declared on 15th February 2022 and has been used in the FS. Refer to the ASX release of 15th February 2022 for material assumptions and further information. • The Measured and Indicated Resources have been used as the basis for conversion to the Ore Reserve. • The Mineral Resources are inclusive of the Ore Reserve.

Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.*
	• *If no site visits have been undertaken indicate why this is the case.*
		• A site visit was undertaken by the Competent Person, Mr. Ryan Locke, from 29th to 30th April 2022. All pertinent locations across the site were walked including the open pit and waste dump locations, the process Plant and tailing storage areas.
		• The following observations were made:
		  • The site was easily accessible from M26 sealed road located to the north of the site.
		  • The existing open pit is located on the Eastern face of the ridgeline and is approximately 80m high.
		  • The existing open pit has naturally revegetated since the mine closure in 2014.
		  • Water drainage from the existing pit is managed by drainage channels diverting the water into the existing process pond.
		  • The mudstone and Arkose rock types were clearly visible within the previously mined areas.
		  • 3 large failures we observed within the previously mined area.
		• No items of concern were observed.

Study status	• *The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.*
	• *The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan*
		• The 2022 Feasibility Study has been prepared for the Kayelekera Project.
		• The 2022 FS report was compiled by Lotus with input from:
		  • Gill Lane Consulting (Geology)
		  • Orelogy Mine Consulting (Mine planning)
		  • Mine Techniucs (Pit geotechnical)
		  • Senet (Plant and Infrastructure)
		  • Steinert (Ore Sorting testwork)
		  • SLR Consulting (Hydrology and Hydrogeology)
		  • SLR Consulting (plantr geotechnical)
		  • Dhamana (Environmental)
		  • SLR Consulting (Tailings storage)

Criteria	JORC Code explanation	Commentary
	that is technically achievable and economically viable, and that material Modifying Factors have been considered.	• InfinityCorp (financial analysis) • Orelogy undertook the mining component of this FS, and in the course of the study, produced optimisations, designs and production schedules. • Modifying factors considered in the open pit mine planning process included mining dilution and ore loss, slope design criteria, mining and processing cost estimates and other practical mining considerations.
Cut-off parameters	• *The basis of the cut-off grade(s) or quality parameters applied.*	• The economic break-even cut-off calculation is detailed: $\boldsymbol{Cut\ off\ grade} = \frac{(\boldsymbol{process} + \boldsymbol{overhead\ cost}) \times (\boldsymbol{1} + \boldsymbol{Mining\ Dilution}}{\boldsymbol{Payable\ Uranium\ Price} \times \boldsymbol{Process\ Recovery}\ (\%}$ • The cut-off calculation included the modifying factors for ore sorting of the Arkose mineralisation. • The cut-off grade of 200 ppm and 390 ppm U3O8 has been applied to arkose and mudstone material respectively.
Mining factors or assumptions	• *The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).* • *The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.* • *The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.* • *The major assumptions made and Mineral*	• The Mineral Resources have been optimised using Whittle software based on Measured and Indicated material only and utilising appropriate modifying factors and allowances for mining ore loss and dilution. An additional ore loss factor of 50% was applied to the mineralisation contained within the failed or displaced areas of the deposit. • A relatively conservative optimisation shell, based on a Revenue Factor of 0.84, was selected as the basis for subsequent detailed pit designs. The Ore Reserve is the Measured and Indicated Resources within those detailed final pit designs. • The mining method selected is a conventional open pit truck and shovel approach. It is assumed that all material to be mined will require blasting to some degree. Ore and surrounding waste are assumed to be blasted on 6.0 metre bench heights and mined in 2.0 metre high flitches using a backhoe excavator. Pit ramps are designed at a 10% gradient and 25 m wide. This will be adequate for haul trucks of up to a 60 tonne payload to be utilised. As there are existing ore stockpiles located on the ROM pad and ore is easily accessible in the pit floor, a pre-strip period is not required. The mining production rate ramps up to full production over a 6 month period.

Criteria	JORC Code explanation	Commentary

	Resource model used for pit and stope optimisation (if appropriate).
	• *The mining dilution factors used.*
	• *The mining recovery factors used.*
	• *Any minimum mining widths used.*
	• *The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.*
	• *The infrastructure requirements of the selected mining methods.*
		• A Feasibility Study level geotechnical study had been completed by independent geotechnical consultants Minetech for the Kayelekera Uranium Project. The pit design parameters from this study have been used as the basis for the pit optimisations and subsequent pit designs for the study.
		• An overall slope angle of 24 deg has been applied to the pit walls North of the Champhanjie fault zone. An overall pit slope angle of 22 degrees has been applied South of the fault.
		• The February 2022 Resource model has been used for the pit optimisation process.
		• As the model is an MIK resource model, ore losses and dilution are "built into" the construction of the model and hence can be used in-situ with no further post processing. An additional ore loss factor of 50% has been applied to the failed areas within the existing open pit.
		• A minimum mining width of 40 m has been used within the design phase.
		• Inferred Resources from within the pit design have not been included within the Ore Reserve estimate.
		• An additional LOM schedule was produced including the existing low grade ore stockpiles. This material contributes to 4% of the recovered metal produced over the life of mine
		• The previous mining facilities at Keyelekera will be refurbished and used for the open pit mining operation. The existing facilities includes:
		  • mining contractor workshop, offices, mess room and ablutions
		  • heavy equipment washpad,
		  • ROM pad
		  • fuel and explosives storage

Metallurgical factors or assumptions	• *The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.* • *Whether the metallurgical process is well-tested technology or novel in nature.* • *The nature, amount and representativeness of*	• While mineral processing and metallurgical test studies were carried out on mineralisation from the Kayelekera deposit as part of the original CEGB feasibility study it was felt that the results from these studies were not appropriate for the current economic climate or state of uranium processing technology. As a consequence, new mineral processing and metallurgical testing studies were carried out on the deposit by Paladin and reported in their FS. • The initial FS test work program was conducted by Mintek in Johannesburg under the

Criteria	JORC Code explanation	Commentary
	metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied. • *Any assumptions or allowances made for deleterious elements.* • *The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.* • *For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?*	supervision of GRD Minproc. Subsequent investigations were conducted by the Australian Nuclear Science and Technology Organisation ("ANSTO") in Sydney. Samples for metallurgical test work were sourced from throughout the ore body and separated into Oxidised Arkose, Reduced Arkose and Mudstone. A portion of the work undertaken by Mintek and ANSTO was on composite samples conforming to the expected proportions of individual rock types in the processing stream. It is the opinion of the author that the samples selected for metallurgical test work are representative of both the mineralisation and the anticipated feed proportions of each rock type. • Based on the test work results a treatment plant was constructed comprising: single stage crushing, SAG milling, pre-leach thickening, sulphuric acid leaching, resin in pulp (RIP), resin elution, gypsum precipitation and UO precipitation. This is followed by washing, liquid solid separation, drying and packaging of the UO4 product for export. • Subsequent testwork undertaken Lotus has focused on ore sorting technology and how this can impact on plant feed grades. Testwork was undertaken by technology specialist Steinert on a number of composite and individual material specific samples with results indicating clean waste can be successfully separated from mineralised material thereby boosting feed grades.
Environmental	• *The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.*	• At the mine location, studies have been completed for flora, fauna, subterranean fauna, surface water, groundwater, and waste characterisation. The Project is not likely to have highly significant environmental impacts that are of public interest. • All potential environmental and social impacts associated with the Project have been considered and no issue has been identified that cannot be mitigated or managed to an acceptable degree. • The existing waste rock dump is located to the west of the open pit. Future mining activities will extend the existing rock dump to the north. • Further work is required to confirm if any encapsulation of PAF or mudstone rock is required. • 21% of the mined waste will be utilized for the extension of the existing TSF, and the construction of the additional TSF required.

Criteria	JORC Code explanation	Commentary
Infrastructure	• *The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.*	• The M26 sealed public road passes ~9km north of the mine area. The existing site access road will require upgrading/refurbishment to enable the delivery of equipment to site and transport of the product from site. • The local town of Karonga is located a further ~40km to the East along the sealed road on the edge of lake Malawi. • The exiting mining camp will be used for Lotus personnel. • The mining contractor will be responsible for the construction of the accommodation facilities. • The existing fresh waste dam will be used for the camp. • The mining lease is sufficiently extensive to accommodate all the required infrastructure. • It is envisaged most of the mine workforce will be sourced from the local town of Karonga.

Costs	• *The derivation of, or assumptions made, regarding projected capital costs in the study.*
	• *The methodology used to estimate operating costs.*
	• *Allowances made for the content of deleterious elements.*
	• *The source of exchange rates used in the study.*
	• *Derivation of transportation charges.*
	• *The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.*
	• *The allowances made for royalties payable, both Government and private.*
		• Lotus has included the capital costs estimates within the financial model. These costs have not been included within the pit optimisation or LOM schedule.
		• The mining contract Request for Quotation received three acceptable and conforming submissions. The preferred submission was utilised to provide capital estimates for provision of the following mining infrastructure:
		  • Contractor's Offices
		  • Contractor's HV & Truck Workshop incl/ Parts Store/Warehouse
		  • Contractor's Ablutions / Toilets
		  • Contractor's Meal / Crib Facilities
		  • Contractors accommodation camp
		  • Goline Facility
		  • Fuel Storage and Dispensing Facilities
		  • Lubricant Storage and Dispensing Facilities
		  • Equipment Washdown Facility
		  • Explosives Facility
		  • Tyre Handling, Fitting and Storage Facilities
		  • Water, lighting, power and reticulation
		• Senet and Lotus have undertaken operating cost estimates for all non-mining related activities for the Project. This includes, but not limited to, the following:
		  • Process Cost
		      • Crushing and scrubbing
		      • Ore sorting
		      • Milling and leaching
		      • Uranium precipitation, drying and Packing
		  • Engineering and Maintenance costs

Criteria	JORC Code explanation	Commentary
		• Acid Plant • Power • General & Admin Costs • Management • SHER • Communities • Security • Mining operating costs have been developed based on the preferred submission to the mining contractor request for Quotation. The RFQ utilised the an initial version of the mine schedule based on the designs used to define the Ore Reserve. Minor changes to the final LOM schedule have been included and are considered immaterial to cost estimation and the RFQ submission costs are considered valid. • Mining costs were generated from the RFQ submission for the following activities: • Mobilisation and site establishment • Monthly Management Fees • Production Drill & Blast• • Excavate, Load, Haul & Dump – Ore / Low Grade / Waste • Primary Crusher Feed • Rehandle LG Stockpile to ROM Pad • Clearing And Grubbing • Topsoil Management • Road Construction • Pit Dewatering • Waste Dump Rehabilitation • Demobilisation and site dis-establishment • A fuel price of $1.20/l was assumed for the mining costs estimation. • The resulting mining contract LOM cost of USD$2.94/dry tonne mined and Lotus team cost of A$0.30/dry tonne mined results in a total mining cost of A$3.28/dry tonne mined. • No deleterious elements • All prices used in the study are in USD • The transport cost related to haulage of the product to port has been estimated by Lotus. This has been estimated based on a rate USD$2.03 / lb of U3O8 product. • Processing costs have been estimated by Lotus at USD$18.25 / lb. • 5% royalty have been applied to the revenue.
Revenue factors	• *The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity*	• Head grade has been calculated in the Mining Reserve using modelled within an additional ore loss applied to mineralisation within the failed zone. • Revenue for pit optimisation assumes a U3O8 sale price of USD$75/lb. Additional sensitivity

Criteria	JORC Code explanation	Commentary
	price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc. • *The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.*	analysis to price was completed within the optimisation process. The 0.84 revenue factor shell was selected for the design process, and is equivalent to a USD$63/lb price. • The sales price used for base case financial analysis was USD$75/lb U3O8. • The uranium price is of a highly cyclical nature. In 2007 prices reached a high of +USD$130/lb, however since 2011 uranium prices have hovered between US$20/lb to US$40/lb up until 2020. In the past number of years, the price of uranium has increased and remain above US$40/lb.
Market assessment	• *The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.* • *A customer and competitor analysis along with the identification of likely market windows for the product.* • *Price and volume forecasts and the basis for these forecasts.* • *For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.*	• Production from the Project is expected to be contracted through term arrangements with utility and nuclear fuel buyers worldwide. The Company has initiated contact with previous off-takers of the Kayelekera product as well as potential new off-takers and intends to continue on that path to build a supply order book required to support a decision to mine.

Economic	• *The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.*
	• *NPV ranges and sensitivity to variations in the significant assumptions and inputs.*
		• Critical inputs to the economic model are:
		  • Pricing for uranium sale of USD$75/lb
		  • Costs generated from the Restart DFS.
		• NPV ranges from USD$160M to USD$280M based on 20% change in all values measured. These included uranium price (long and short-term), capex, opex, and fuel price. IRR ranges from 28 to 50%.
		• The post-tax NPV 8% of the Project using a schedule based on the Ore Reserve including the inferred classified existing low grade ore stockpiles and utilising the long-term historical pricing was estimated to be USD$193M, clearly indicating:
		  • The Ore Reserve is valid in and of itself and

Criteria	JORC Code explanation	Commentary
		generates a significant cashflow • the Project is not reliant on the use of Inferred Resources in the LOM schedule to be economically viable with less than 4% of the product produced derived from the existing Low grade ore stockpile.
Social	• *The status of agreements with key stakeholders and matters leading to social licence to operate.*	• Consultation with the local communities, the general public, non-governmental organisations and private interests are ongoing and will continue. • No significant environmental or stakeholder issues have been identified at this stage with strong support for the Project received from key stakeholders • The Company is in the process of negotiation a Community Development Agreement through which 0.45% of Gross Revenue will be directed back into the community for selected projects and activities.
Other	• *To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:* • *Any identified material naturally occurring risks.* • *The status of material legal agreements and marketing arrangements.* • *The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.*	• Mining was suspended at Kayelekera in 2014 due to low market prices and placed on care and maintenance. Between the suspension of mine activities and 2022, there has been three key wall failures within the open pit. This material has been identified and flagged within the Reserve model and consists of less than 3% of the total declared Ore Reserve. There is a risk to the mining operation of further wall failures. The staging of the open pit has been completed to minimize the risk by the application of an overall pit slope angle of ~22 degrees and a vertical lag of ~20m between stages.

Criteria	JORC Code explanation	Commentary
Classification	• *The basis for the classification of the Ore Reserves into varying confidence categories.* • *Whether the result appropriately reflects the Competent Person's view of the deposit.* • *The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).*	• The most recent Mineral Resource estimate was declared on 15th February 2022 and has been used in the FS. Refer to the ASX release of 15th February 2022 for material assumptions and further information. • The Measured and Indicated Resources have been used as the basis for conversion to the Ore Reserve. • The Mineral Resources are inclusive of the Ore Reserve.

Audits or reviews	• *The results of any audits or reviews of Ore Reserve estimates.*	• A site visit was undertaken by the Competent Person, Mr. Ryan Locke, from 29th to 30th April 2022. All pertinent locations across the site were walked including the open pit and waste dump locations, the process Plant and tailing storage areas.
		• The following observations were made:
		  ◦ The site was easily accessible from M26 sealed road located to the north of the site.
		  ◦ The existing open pit is located on the Eastern face of the ridgeline and is approximately 80m high.
		  ◦ The existing open pit has naturally revegetated since the mine closure in 2014.
		  ◦ Water drainage from the existing pit is managed by drainage channels diverting the water into the existing process pond.
		  ◦ The mudstone and Arkose rock types were clearly visible within the previously mined areas.
		  ◦ 3 large failures we observed within the previously mined area.
		• No items of concern were observed

Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such*	• The 2022 Feasibility Study has been prepared for the Kayelekera Project.
		• The 2022 FS report was compiled by Lotus with input from:
		  ◦ Gill Lane Consulting (Geology)
		  ◦ Orelogy Mine Consulting (Mine planning)
		  ◦ Mine Techniucs (Pit geotechnical)
		  ◦ Senet (Plant and Infrastructure)
		  ◦ Steinert (Ore Sorting testwork)
		  ◦ SLR Consulting (Hydrology and Hydrogeology)
		  ◦ SLR Consulting (plantr geotechnical)
		  ◦ Dhamana (Environmental)
		  ◦ SLR Consulting (Tailings storage)
		  ◦ InfinityCorp (financial analysis)

Criteria	JORC Code explanation	Commentary
	an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate. • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.* • *It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• Orelogy undertook the mining component of this FS, and in the course of the study, produced optimisations, designs and production schedules. • Modifying factors considered in the open pit mine planning process included mining dilution and ore loss, slope design criteria, mining and processing cost estimates and other practical mining considerations.