OD6 METALS LTD

ASX Announcement

1 October 2025

ASX: OD6

INNOVATIVE PROCESS FLOWSHEET SELECTED WITH HIGH RECOVERIES AT THE SPLINTER ROCK RARE EARTH PROJECT

ANSTO Metallurgical Testwork program and CPC Engineering Optioneering Study recommends preferred process flowsheet for the Splinter Rock Rare Earth Project.
– JORC Mineral Resource of 682Mt @ 1,338ppm TREO

Highlights:

- **Optioneering Study recommends preferred process flowsheet moving forward** for Splinter Rock's clay-hosted rare earth mineralisation as study wraps up
- **Innovative Process Flowsheet Incorporates**
    - Heap Leach with Nanofiltration (NF), Ion Exchange (IX) and Impurity Removal (IR)
    - ~75% Nd & Pr overall Recovery
    - High-quality Mixed Rare Earth Carbonate (MREC) of ~56% TREO
    - High-quality Mixed Rare Earth Hydroxide (MREH) of ~59% TREO
    - Superior product quality with low levels of impurities (Al, Fe, P, Si)
    - Extremely low uranium and thorium content (<0.001% U + Th)
    - Optimised capital and operating cost drivers
- **Metallurgical Diamond Core Drill Campaign Nearing Completion:** Set to deliver 2 to 2.5 tonnes of rare earth bearing core to ANSTO later in October.
- **ANSTO to Commence Advanced Optimisation and Scale-up Tests this quarter:** with results due progressively during the first half of 2026.
- **Mining Study to Commence** to consider pit shell analysis, stripping ratios, high level mine scheduling and preliminary mining costs

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Managing Director Brett Hazelden, commented:

"The selection of a preferred flowsheet marks a major milestone for Splinter Rock. This outcome provides confidence in our ability to produce a high-value, low-impurity MREC or MREH product that is highly attractive to global supply chains. With this stage complete, we now move into large-scale testwork at ANSTO and commence mining studies at the Inside Centre Deposit.

Importantly, discussions with potential offtake partners, separation facilities, end-users and governments continue to reinforce the strategic value of Splinter Rock.."

MagREE (Magnet Rare Earths) = Nd + Pr + Tb + Dy)
MagREO (Magnet Rare Earth Oxide) = Nd_2O_3 + Pr_6O_{11} + Tb_4O_7 + Dy_2O_3
TREO (Total Rare Earth Oxide) = La_2O_3 + CeO_2 + Pr_6O_{11} + Nd_2O_3 + Sm_2O_3 + Eu_2O_3 + Gd_2O_3 + Tb_4O_7 + Dy_2O_3 + Ho_2O_3 + Er_2O_3 + Tm_2O_3 + Yb_2O_3 + Lu_2O_3 + Y_2O_3.

OD6 Metals Limited (OD6 or the Company) is pleased to announce that the CPC Optioneering Study, supported by metallurgical testwork completed by the Australian Nuclear Science and Technology Organisation (ANSTO), has delivered a preferred process flowsheet for the Splinter Rock Rare Earth Project. This innovative flowsheet achieves high recoveries, superior product quality, and improved cost outcomes, positioning Splinter Rock as one of the leading clay-hosted rare earth developments in Australia.

This work brings a close to the Optioneering Study and enables work to commence on the next phase of advanced Scaleup Metallurgical Testing and Project Studies.

What have been the Aims for Flowsheet Development?

The Optioneering Study and testwork program has taken the opportunity to not only test a standard flowsheet but to look at enhancements that can make the Splinter Rock Rare Earth project more resilient. As a result of having multiple technically viable flowsheets, OD6, ANSTO and CPC Engineering (CPC) have started with the end product in mind first with the key aims including:

- Produce a High Quality Mixed Rare Earth Carbonate (MREC) or Mixed Rare Earth Hydroxide (MREH)
- Enable the final product to be sold to multiple different countries and downstream process worldwide
- Balance a simple process with the need to produce a quality product
- Optimise product payability as a percentage of Rare Earth Oxide (REO) pricing
- Review benefits of removing Uranium and Thorium from the final product to enable safe transport
- Optimise Overall Recovery from mine through to the final product
- Minimise Acid and other reagent consumptions
- Lower energy consumption
- Optimise capital and operating costs
- Optimise Project economics
- Allow for Expandability
- Consider technical and commercial rick

Preferred Process Flowsheet Plus Metallurgical and Study Outcomes to Date

OD6, CPC and ANSTO have successfully demonstrated and recommended a multi-stage processing pathway outlined in Figue1 (refer Flowsheet 6 below), that **efficiently produces a superior quality product with low impurities**, that has achieved **high REE element total flowsheet recoveries** as detailed in Figure 2.

The Preferred Process flowsheet has built on the metallurgical and optioneering study outcomes to date which have been progressively reported to the ASX as per the following:

1. **Heap Leaching** – Simple, low-acid usage leaching of rare earth-bearing clays to generate enriched leachate solution (refer ASX 16 October 2024)
2. **Nanofiltration (NF)** – Recycling of Acid, concentration of REEs and reduction of liquid volume produced downstream (refer ASX 4 August 2025)

3. **Ion Exchange (IX)** – Concentration of rare earth elements and enhanced removal of iron (Fe) and aluminium (Al) reducing downstream processing risk (refer ASX 7 August 2025)
4. **Impurity Removal (IR)** – Final removal of residual deleterious elements (e.g. Al, Ca, Fe, U, Th, P) to meet high product quality and low impurity specifications.
5. **Product Precipitation** – Recovery of high-grade Mixed Rare Earth Carbonate (**MREC**) or Mixed Rare Earth Hydroxide (**MREH**) from purified solution (refer ASX 13 August 2025)
6. **Chlor-Alkali Facility (CAF)** – Confirmed as a cost-reduction measure, producing key reagents onsite and materially lowering operating costs (refer ASX 2 September 2025)
7. **Low Cost Route** – The Optioneering Study supports heap leaching as the lower cost and higher recovery option when compared to conventional agitated tank leaching for the Splinter Rock Rare Earth Project at the Inside Centre Deposit (refer ASX 11 September 2025)

The final MREC/MREH products contain elevated concentrations of **Nd, Pr, Dy and Tb**, collectively representing a **high-value magnetic rare earth mix** highly sought after in permanent magnet supply chains. Benchmark payability for MREC and MREH typically ranges between 70–85% of REO basket value.

The Company aims to be a 6,000 plus tonnes per annum (tpa) producer of REO, in either the form of Mixed Rare Earth Carbonate (MREC) or Mixed Rare Earth Hydroxide (MREH) in 5 years (refer ASX 11 September 2025)

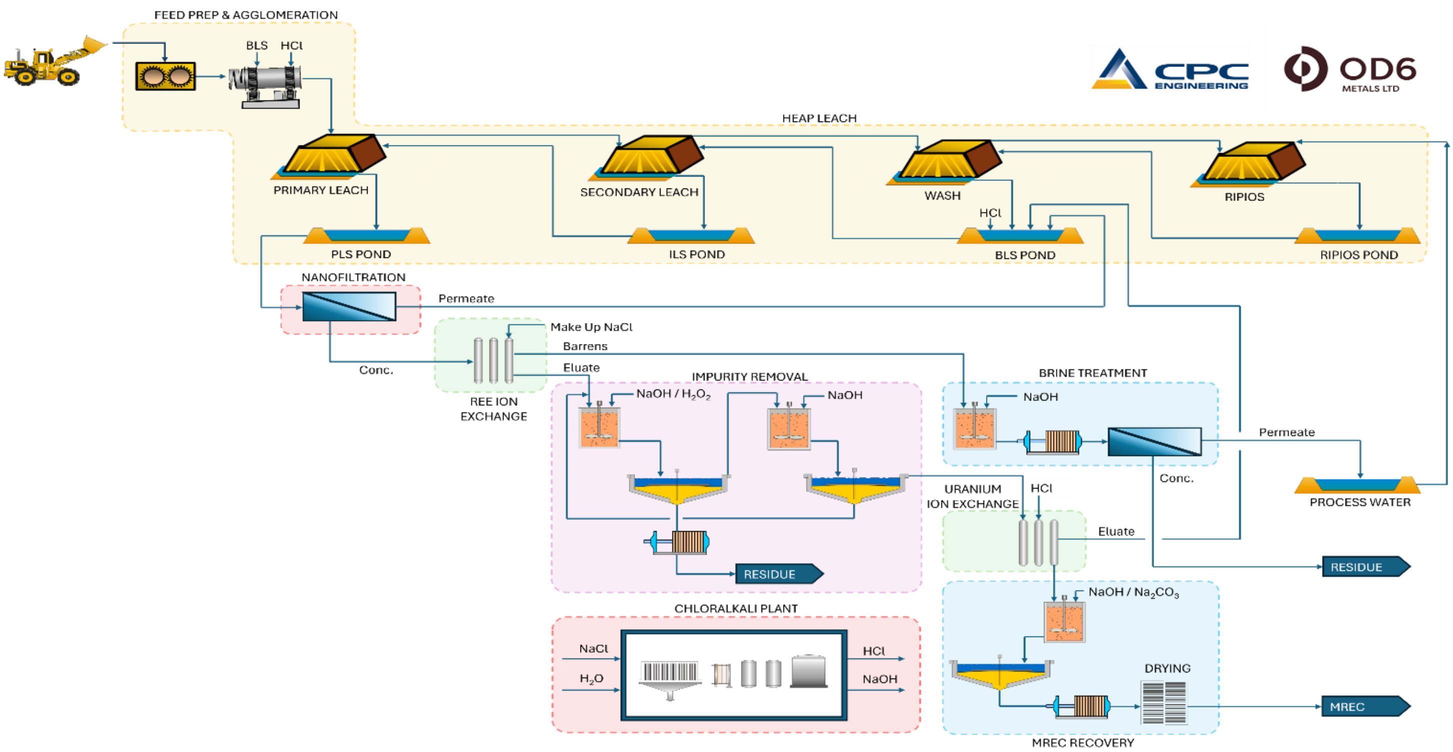


Figure 1: Preferred Process Flowsheet from ANSTO Testwork and CPC Optioneering Study

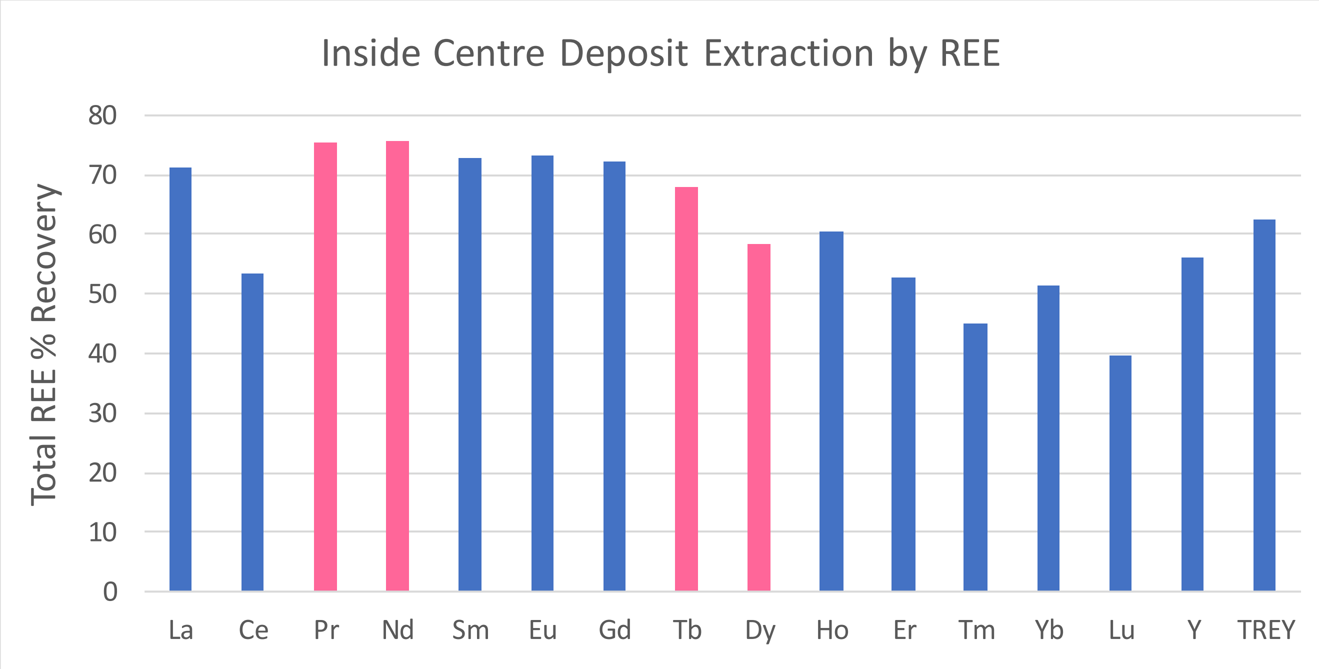


Figure 2: Anticipated Inside Centre Total REE Recovery by Element Utilising the Preferred Process Flow Sheet

Flowsheets Tested and Considered

OD6 has sequentially tested several flowsheets over time starting with a relatively simple flowsheet that would produce a lower quality product, through to a more complex flowsheet with a higher quality product, higher recovery of REEs plus lower reagent usage requirements.

Each flowsheet tested is summarised below with its pros and cons.

Flowsheet 1

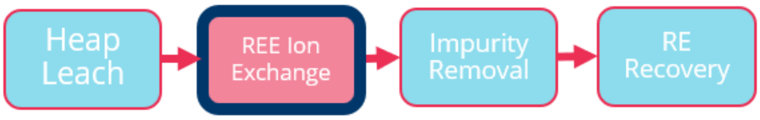
Simpletest flowsheet where by the ore is heap leached, followed by a standard two stage Impurity Removal (IR) at a pH of ~4.15 and ~5.5, followed by precipitation of a MREC or MREH at a pH ~7.5.

Pros and Cons:

- Simple process
- Overall REE Recovery is lower due to REE losses in the Impurity Removal stage
- No acid recovery and recyling
- IR circuit required to treat 100% of the volume of heap leach liquor
- Average product quality due to higher Al, Fe, U and Th residual impurities

Flowsheet 2

Builds on Flowsheet 1 with the introduction of a REE Ion Exchange (IX) module prior to Impurty Removal. The IX concentrates the REEs onto a Resin that is then eluted back into solution prior to the IR circuit (similar to how carbon is utilised in a gold CIP/CIL circuit). The volume of liquor reporting to the IR circuit is signifcantly decreased. IR is a standard two stage impurity removal at a pH of ~4.1 and ~5.5, followed by precipitation of a MREC or MREH at a pH ~7.5.

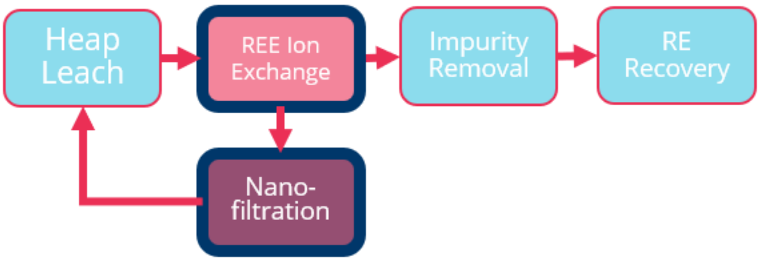


Pros and Cons:

- IX Concentrates REEs requireing a smaller IR circuit
- Some impurity rejection during IX
- IX barren liquid unable to be recycled
- Overall REE Recovery is similar to Flowsheet 1
- No acid recovery and recyling
- IR circuit treats a reduced volume of heap leach liquor
- Average product quality due to higher Al, Fe, U and Th residual impurities

Flowsheet 3

Builds on Flowsheet 2 with the introduction of a Nanofiltration (NF) to recover acid from the IX barren liquid. Recovered acid is then recycled to the Heap leach circuit. The IX concentrates the REEs on to a Resin that is then eluted back into solution prior to the IR circuit. IR is a standard two stage impurity removal at a pH of ~4.1 and ~5.5, followed by precipitation of a MREC or MREH at a pH ~7.5.

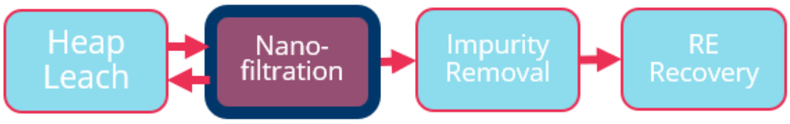


Pros and Cons:

- >80% acid recovery in the NF permeate
- IX Concentrates REEs requireing a smaller IR circuit
- Some impurity rejection during IX reducing RE loss in IR
- Overall REE Recovery is improved marginally
- IR circuit treats a reduced volume of heap leach liquor
- Circuit complexity increasd in number of steps
- Extra NF circuit increase Capital Cost but loweres operating cost due to reduced acid requirements
- Average product quality due to higher Al, Fe, U and Th residual impurities

Flowsheet 4

Builds on Flowsheet 1 with the introduction of a Nanofiltration (NF) to recover acid direct from the Heap Leach and then recycled to the Heap leach circuit. NF reduces liquor volume reporting the the IR circuit signifantly. IR is a standard two stage impurity removal at a pH of ~4.1 and ~5.5, followed by precipitation of a MREC or MREH at a pH ~7.5.



Pros and Cons:

- >80% acid recovery in the NF permeate
- No Impurity rejection during NF
- NF Concentrates REEs requireing a smaller IR circuit
- Overall REE Recovery is similar to Flowsheet 1
- IR circuit treats a reduced volume of heap leach liquor
- Removes cost of IX circuit
- Average product quality due to higher Al, Fe, U and Th residual impurities

Flowsheet 5

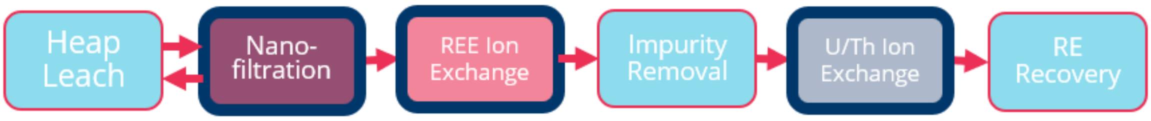
Builds on Flowsheet 4 and Is a reordering of Flowsheet 3. Nanofiltration (NF) recovers and recycles acid to the Heap leach circuit. NF reduces liquor volume reporting to the IX circuit signifantly. The IX concentrates the REEs on to a Resin that is then eluted back into solution prior to the IR circuit. The volume of liquor reporting to the IR circuit is reduced further and impurities also reduced. IR is a standard two stage impurity removal but given the improved feed volume and quality the pH set points can be optimsed to ~3.5 and 4.4, followed by precipitation of a MREC or MREH at a pH ~7.1 to 7.5.

Pros and Cons:

- >80% acid recovery in the NF permeate
- NF reduces liquor volume to IX by ~65% decreasing cuircuit size
- IX Concentrates REEs requireing a smaller IR circuit
- Cleaner IX eluate allows for simple IR and lower pH, reducing REE loss due to coprecipitation
- Overall Recovery REE is improved
- IR circuit treats a further reduced volume of heap leach liquor
- Circuit complexity increasd in number of steps but total plant size and equipement requirements signifantly decreased
- Total Capital Cost lower due to smaler downstream circuit sizes and also lowers operating cost due to reduced acid requirements and plant size
- Improved product quality due to better impurity removal of Al and Fe, but not, U and Th

Flowsheet 6

Builds on Flowsheet 5. An an additional U/Th Ion Exchange step is added to improved product quality and increase payability. No change to NF, REE IX and IR operating circuits.



Pros and Cons:

- >80% acid recovery in the NF permeate
- NF reduces liquor volume to IX by ~65% decreasing cuircuit size
- IX Concentrates REEs requireing a smaller IR circuit
- Cleaner IX eluate allows for simple IR and lower pH, reducing RE loss due to coprecipitation
- Overall Recovery REE is improved
- IR circuit treats a reduced volume of heap leach liquor
- Circuit complexity increasd in number of steps but total plant size and equipement requirements signifantly decreased
- Total Capital Cost lower due to smaler downstream circuit sizes and also lowers operating cost due to reduced acid requirements and plant size
- Improved product quality due to better impurity removal or Al, Fe, U and Th

Next Steps

Complete Metallurgical Core Program: Drilling due to be completed in October with core samples dispatched to ANSTO also in October.

ANSTO Testwork Scale Up: Heap Leach and Impurity Removal testwork as described above

- **Heap leach Optimisation**: Heap Leach duration and kinetics, Acid strength and consumption, Counter current heap configuration, Particle agglomeration methodology
- **Impurity Removal Verification:** Nanofiltration (NF) acid recovery, Ion Exchange (IX) selectivity and elution to reduce Fe/Al and trace U/Th, plus two stage Impurity removal (IR) optimisation
- **Bulk MREC and MREH Production:** Precipitation to produce >1 kg of MREC and/or MREH for customer qualification, offtake discussions, and to assess commercial payability options

Mining Study to Commence: Burnt Shirt have been engaged to conduct a mine options study at the Inside Centre Deposit to consider geology, mining method, pit shell analysis, stripping ratios, high level mine scheduling and preliminary mining costs

Engagement with potential offtake partners: To assess commercial payability options for MREC and MREH products.

Engagement with government and potential financing partners: OD6 has and continues to engage government and potential financing organisations. This is anticipated to be a continuous process over the development cycle.

Selective Nd, Pr, Tb and Dy Oxide Production Potential: Whilst initial development at Splinter Rock targets MREC or MREH, the onsite Chlor-Alkaly Facility (CAF) positions OD6 for potential future production of individual oxides (Nd, Pr, Dy, Tb, and potentially Sm, Y) through a chloride-based SX process. Discussions with ANSTO to conduct a desk top assessment are advancing and may be commenced during 2025.

Competent Persons Statement

The scientific and technical information that relates to process metallurgy is based on information reviewed by Mr Brett Hazelden (Managing Director and CEO) of OD6 Metals Limited. Mr Hazelden is a Member of the AusIMM and has sufficient experience relevant to hydrometallurgical processes to qualify as a Competent Person as defined by the JORC Code. Mr Hazelden owns shares in the Company and participates in the Company's employee securities incentive plan. Mr Hazelden consents to the inclusion in this announcement of the matters based on their information in the form and context in which it appears.

Information in this report relating to Mineral Resource estimation and Exploration Results is based on information reviewed by Mr Jeremy Peters who is a Fellow of the Australasian Institute of Mining and Metallurgy and a Chartered Professional Geologist and Mining Engineer of that organisation. Mr Peters is a Director of Burnt Shirt Pty Ltd, consulting to OD6 and has sufficient experience which is relevant to clay-hosted rare earth mineralisation to qualify as a Competent Person as defined by the 2012 Edition of the Australasian Code for reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Peters consents to the inclusion of the data in the form and context in which it appears.

Aspirational Production Target Cautionary Statement

The Company cautions that the above aspirational statement of prospective production and the aspirational production target ranges adopted in the optioneering study (refer ASX 11 September 2025) are conceptual in nature and the target ranges were adopted solely to support comparative techno-economic assessment within the optioneering study. They are not production targets or forecast financial information derived from production targets for the purposes of the Corporations Act or ASX Listing Rules and there is a low level of geological confidence associated with any potential production parameters at this stage. Further exploration, engineering, and feasibility work are required before OD6 can determine the likelihood of establishing Ore Reserves and/or production targets or before making any final investment decision. There is no certainty that the conceptual ranges adopted within the optioneering study will be realised.

Forward Looking Statements

Certain information in this document refers to the intentions of OD6 Metals, however these are not intended to be forecasts, forward looking statements, or statements about the future matters for the purposes of the Corporations Act or any other applicable law. Statements regarding plans with respect to OD6 Metals projects are forward looking statements and can generally be identified by the use of words such as 'project', 'foresee', 'plan', 'expect', 'aim', 'intend', 'anticipate', 'believe', 'estimate', 'may', 'should', 'will' or similar expressions. There can be no assurance that the OD6 Metals plans for its projects will proceed as expected and there can be no assurance of future events which are subject to risk, uncertainties and other actions that may cause OD6 Metals actual results, performance, or achievements to differ from those referred to in this document. While the information contained in this document has been prepared in good faith, there can be given no assurance or guarantee that the occurrence of these events referred to in the document will occur as contemplated. Accordingly, to the maximum extent permitted by law, OD6 Metals and any of its affiliates and their directors, officers, employees, agents and advisors disclaim any liability whether direct or indirect, express or limited, contractual, tortuous, statutory or otherwise, in respect of, the accuracy, reliability or completeness of the information in this document, or likelihood of fulfilment of any forward-looking statement or any event or results expressed or implied in any forward-looking statement; and do not make any representation or warranty, express or implied, as to the accuracy, reliability or completeness of the information in this document, or likelihood of fulfilment of any forward-looking statement or any event or results expressed or implied in any forward-looking statement; and disclaim all responsibility and liability for these forward-looking statements (including, without limitation, liability for negligence).

No new information

Except where explicitly stated, this announcement contains references to prior exploration results, all of which have been cross-referenced to previous market announcements made by the Company. The Company confirms that it is not aware of any new information or data that materially affects the information included in the relevant market announcements.

The information in this report relating to the Mineral Resource estimate for the Splinter Rock Project is extracted from the Company's ASX announcements dated 24 May 2024. OD6 confirms that it is not aware of any new information or data that materially affects the information included in the original announcement and that all material assumptions and technical parameters underpinning the Mineral Resource estimate continue to apply

This announcement has been authorised for release by the Board of OD6 Metals Limited

About OD6 Metals

OD6 Metals is an Australian public company pursuing exploration and development opportunities within the critical minerals sector, namely rare earths and copper.

Rare Earth Elements

OD6 Metals has successfully identified clay hosted rare earths at its 100% owned **Splinter Rock Project** which is located in the Esperance-Goldfields region of Western Australia.

The Company released a Mineral Resource Estimate (MRE) for Splinter Rock in May 2024, confirming that the project hosts one of the largest and highest-grade clay-hosted rare earths deposits in Australia with an Indicated Resource of 119Mt @ 1,632ppm TREO and an Inferred Resource of 563Mt @ 1,275ppm TREO with an overall ratio of ~23% high-value Magnetic Rare Earths (MagREE).

OD6 Metals believes that Splinter Rock has all the hallmarks of a world class rare earths project with a conceptual heap leach development which utilises the large and high-grade Splinter Rock resource to support a long-life REE operation.

Copper

The Company is advancing the **Gulf Creek Copper-Zinc VMS Project** located near the town of Barraba in NSW, Australia.

Gulf Creek was mined at around the turn of the 20th century and was once regarded as the highest-grade copper mine (2% to 6.5% Cu) in NSW until its closure due to weak copper prices in 1912. Very little exploration has occurred at the project in over 100 years, with OD6 aiming to apply modern day exploration technologies.

The 2025 maiden drilling program successfully defined high grade copper below the historical mine plus confirmed the strong relationship between magnetism and massive sulphide mineralisation. Geophysical modelling has identified multiple, high priority and untested targets ready for drilling providing over >3km of untested strike in the immediate mine-stratigraphy, and over >10km across the tenement.

Corporate Directory

Managing Director	Mr Brett Hazelden
Non-Executive Chairman	Mr Piers Lewis
Non-Executive Director	Dr Mitch Loan
Financial Controller/ Joint Company Secretary	Mr Troy Cavanagh
Joint Company Secretary	Mr Joel Ives

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Metallurgical Sample Selection and Testing Approach

The Company has created a composite sample for the Inside Centre that represent an area of consistent geology, prior metallurgical outcomes, low striping ratios and significant grades.

A total 6 holes were selected (see table below) to composite at Inside Centre with samples combined by weight to reflect the intercept length to maintain representativity and minimise any bias.

Column (Heap) Leach tests agglomerated the samples with a small amount of flocculant (~300g/t) to wet the ore and bind the fines together. They are then irrigated with 25 g/l HCl lixiviant and run at ANSTO's standard column operating conditions for the duration of the tests. The column tests were conducted over an 80 day period with samples still extracting rare earths at the end of this period.

Metallurgical Composite Drill Hole Location Details – Inside Centre Deposit

Hole ID	Type	Easting	Northing	RL (m)	Dip (degrees)	Depth(s)
SRAC0225	Aircore	501815	6336021	204.1	-90	33-86
SRAC0226	Aircore	501953	6335879	204.4	-90	21-81
SRAC0266	Aircore	501399	6336445	205.4	-90	21-58
SRAC0357	Aircore	502068	6336999	204.9	-90	39-90
SRAC0358	Aircore	502177	6336615	204.0	-90	36-84
SRAC0359	Aircore	501939	6336293	203.5	-90	27-87

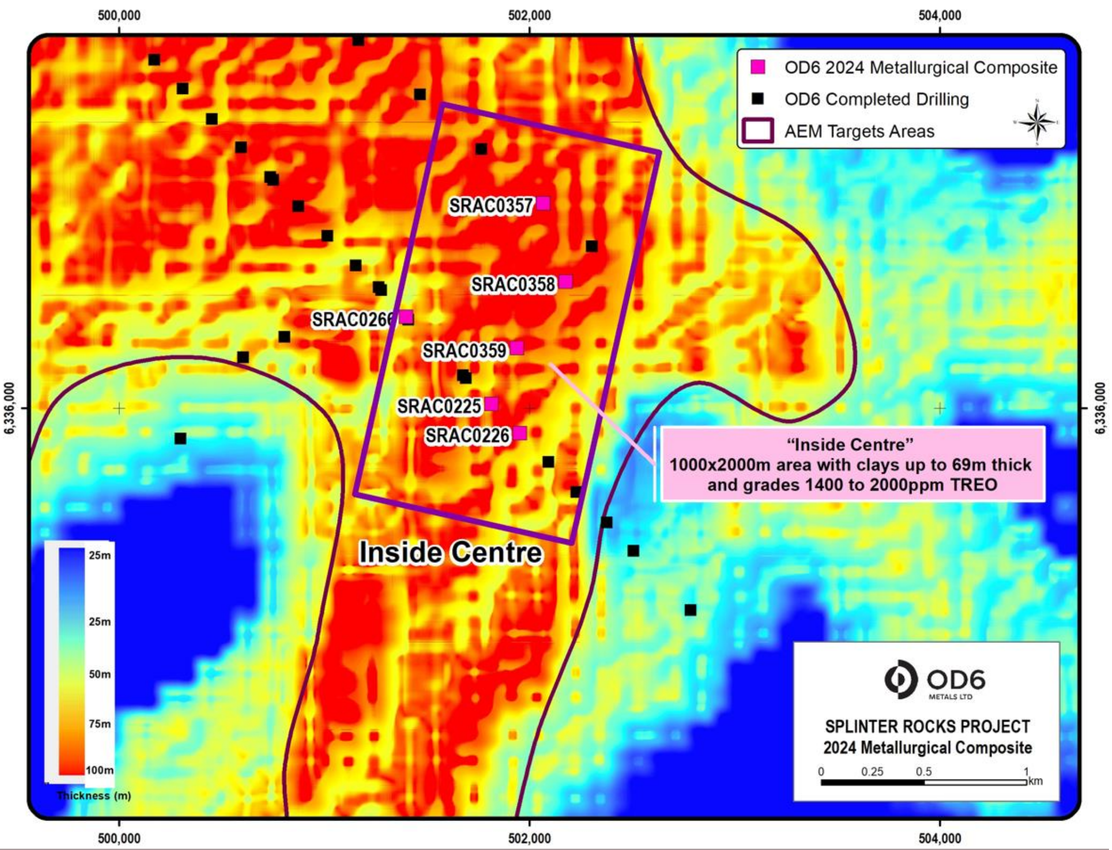

Figure 6: Inside Centre Composite Sample Locations overlain on airborne electromagnetic survey interpretation

JORC 2012 – Table1: Splinter Rock

Section 1 Sampling Techniques and Data

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

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.*	• Geochemical sampling was undertaken by sampling of metre interval samples returned from the cyclone of a conventional air core drilling rig. • Certified reference samples, duplicates and blank samples were inserted into the drill sample stream such as to represent approximately 5% of the samples submitted to the laboratory for analysis • Two composite samples were collected over three metre intervals – the first (the A sample) being submitted for laboratory analysis and the second (the B sample) being retained as a reference. A sample from each metre was collected and stored in a chip tray for logging and x-ray diffraction analysis. • Drill intercept samples for the two heap leaching metallurgical composites were obtained from the 'B' samples located on the company's Exploration Licenses. Samples were sent to ANSTO for making up the composites and completing the testwork.
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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).*	• Air core drilling was completed by hammer and blade industry standard drilling techniques • Aircore is considered to be an appropriate drilling technique for saprolite clay • Drilling used blade bits of 87mmØ with 3m length drill rods to blade refusal.
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.*	• Air core recoveries were not recorded but are not considered to be materially biased, given the nature of the geology and samples. • The assay data will be analysed against control samples and historical assays for any indications of bias
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 chips were logged qualitatively and quantitatively. • A sample from each metre was collected and stored in a chip tray for logging • Geological logs recorded lithology, colour and weathering.
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.*	• A composite sample of ~ 3kg for analysis was taken using a scoop from each metre pile to subsample 1 to 1.5kg sample. This was then dispatched to the laboratory. • A second composite sample was similarly taken and stored on site as a reference • Air core samples were a mix of wet and dry • Certified reference samples, duplicates and blank samples were inserted into the sample stream such as to represent approximately 5% of the samples submitted to the laboratory for analysis

Criteria	JORC Code explanation	Commentary
	• *Measures taken to ensure 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.*	• Heap Leach test samples were composited from the B samples by weight to reflect the intercept length to maintain representativity and minimise any bias

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.*
		• "A Samples" were submitted for chemical analysis using industry standard sample preparation and analytical techniques including:
		  • Riffle split all "A samples" to 50:50 bagging one half as a coarse reject for storage
		  • Pulverise the balance of the material via LM-5
		  • Generate a standard 300g master pulp packet
		  • Bag the balance as a bulk pulp master for storage
		• Multi-Element Ultra Trace method ME-MS61r for exploration in soils or sediments. 4-Acid digeston 0.25g sample analysed via ICP-MS and ICP-AES. REEs included.
		• The final column residues were also analysed. The following techniques were used:
		  • XRF at ANSTO for major gangue elements (Al, Ca, Cu, Fe, K, Mg, Mn, Na, Ni, P, Si, Sr, Zn) and a range of minor elements
		  • The REEs along with Y, U, Th and Sc in the samples will be analysed by tetraborate fusion digest/ICP-MS (lithium tetraborate method) and four acid digest/ICP-MS at ALS Geochemistry Laboratory, Brisbane

Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *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.*	• Certified reference samples, duplicates and blank samples were inserted into the drill sample stream such as to represent approximately 5% of the samples submitted to the laboratory for analysis • No holes were twinned (duplicated). • Data stored in a database, with auto-validation of logging data, • Multielement results (REE) are converted to stoichiometric oxide (REO) using element-to-stoichiometric conversion factors. (conversion table below) • Rare earth oxide is the industry accepted form for reporting rare earths. The following calculations are used for compiling REO into their reporting and evaluation groups: • TREO (Total Rare Earth Oxide)

Element ppm	Conversion Factor	Oxide Form
Ce	1.2284	CeO_2
Dy	1.1477	Dy_2O_3
Er	1.1435	Er_2O_3
Eu	1.1579	Eu_2O_3
Gd	1.1526	Gd_2O_3
Ho	1.1455	Ho_2O_3
La	1.1728	La_2O_3
Lu	1.1371	Lu_2O_3
Nd	1.1664	Nd_2O_3
Pr	1.2082	Pr_6O_{11}
Sm	1.1596	Sm_2O_3
Tb	1.1760	Tb_4O_7
Tm	1.1421	Tm_2O_3
Y	1.2699	Y_2O_3
Yb	1.1387	Yb_2O_3

Criteria	JORC Code explanation	Commentary
		$= La_2O_3 + CeO_2 + Pr_6O_{11} + Nd_2O_3 + Sm_2O_3 + Eu_2O_3 + Gd_2O_3 + Tb_4O_7 + Dy_2O_3 + Ho_2O_3 + Er_2O_3 + Tm_2O_3 + Yb_2O_3 + Lu_2O_3 + Y_2O_3$. Note that Y_2O_3 is included in the TREO calculation.
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.*	• Drill hole collars were located using a handheld GPS to +/-5m accuracy • Grid system was MGA 94 Zone 51 • Downhole survey was not undertaken, the holes being vertical • No topography control was used, given the relatively flat topography
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.*	• Drilling intervals were closed to approximately 200m centres where historic drilling returned elevated REE assays • Downhole samples were taken on 1m intervals • This drilling indicated excellent continuity, particularly when supported by the results of the Tempest Airborne Aeromagnetic Survey, which was used to define basin limits. • Tempest Airborne Electromagnetic Survey (AEM), undertaken by Xcalibur Multiphysics • Data collected using the TEMPEST EM system (50Hz) using fixed wing aircraft. • Nominal flight height of 120 m above ground level. • GPS cycle rate of 1 second, accuracy 0.5m • Altimeter accuracy of 0.05m • Flight line spacing 400 to 800m. • Conductivity measurements and sampling interval at approximately 11 to 12 metres along line. • This data when combined with further drilling will be utilised to guide future mineral resource estimation
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.*	• Drillholes were vertical and approximately perpendicular to mineralisation hosted in flat lying clay-beds • This orientation is not considered by the Competent Person to have introduced material sampling bias. • For AEM data: Flight lines are North West- South East: drainage and regolith patterns show a regional slope down from NW to SE, whereas geological structure is dominantly NE-SW. • The thickness of regolith presented in the cross-sections is based on geophysical inversion modelling conducted by the CSIRO. This inversion modelling used Monte Carlo simulation known as RJMCMC regression based on Bodin and Sambridge (2009) https://doi.org/10.1111/j.1365-246X.2009.04226.x & Minsley (2011) https://doi.org/10.1111/j.1365-246X.2011.05165.x with modifying parameters by CSIRO. refer ASX Announcement 5 October 2022 • The RJMCMC method uses a comparison method to estimate the conductivity.
Sample security	• *The measures taken to ensure sample security.*	• Samples were taken and dispatched by road freight direct to the analytical laboratory
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• The Independent Competent Person (Jeremy Peters) reviewed the sampling techniques and data collection. The Independent Competent Person has previously completed a site visit during drilling to verify sampling techniques and data collection.

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 Splinter Rock Project is held by Odette Six Pty Ltd which is a 100% owned subsidiary of OD6 Metals Ltd. • Granted exploration Licences include E63/2115, E69/3904, E69/3905, E69/3907, E69/3893, E69/3894. • The ELs predominantly overly vacant crown land with a small portion of freehold agricultural land used for crop and livestock farming to the south. • The Company has Native Title Land Access agreements with Ngadju Native Title Aboriginal Corporate and Esperance Tjaltjraak Native Title Aboriginal Corporation. The tenements are in good standing with no known impediments outside the usual course of exploration licenses.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• An Independent Geological Report was completed by of Sahara Natural Resources and included in the Company's Prospectus dated 10 May 2022. • Historic exploration for REE's was conducted by Salazar Gold Pty Ltd • The historical data has been assessed and is considered of good quality
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The rare earth mineralisation at the Splinter Rock project occurs in the weathered profile (in-situ regolith clays) adjacent to and above Booanya Granite of the East Nornalup Zone of the Albany-Fraser Orogen. • The Booanya granites are enriched in REEs. Factors such as groundwater dispersion and paleo-weathering environments may mobilise REEs away from the granite sources.

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:*
	  ○ *easting and northing of the drill hole collar*
	  ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  ○ *dip and azimuth of the hole*
	  ○ *down hole length and interception depth*
	  ○ *hole length.*
	• *If the exclusion of this 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.*
		• All drill results are reported to the ASX in line with ASIC requirements.
		• A summary of material drill hole information ins included in the Drill Hole Data table included below.
		• Some results occur outside the mineralised area of interest and have been excluded as not being of material interest.
		• Internal waste results have been included in the mineralised intercepts.
		• Mineralised intersections have been publicly reported by OD6 in accordance with the JORC Code and ASX Listing Rules and are not repeated here.

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.*	• No cutting of grades has been engaged in • Data has been aggregated according to downhole intercept length above the cut-off grade and internal sub-grade material has been included. • A lower cut-off grade of 300ppm TREO has been applied. OD6 considers this to be an appropriate cut-off grade for exploration data in a clay-hosted REE project • A 1,000ppm cut off grade has been applied to the Mineral Resource • Multielement results (REE) are converted to stoichiometric oxide (REO) using element-to-stoichiometric conversion factors. • These stoichiometric conversion factors are stated in the 'verification of sampling and assaying' table above and can be referenced in appropriate publicly available technical data. •

Criteria	JORC Code explanation	Commentary
Relationship between mineralisation widths an 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').*	• Drillholes drilled vertical and orthogonal to generally flat to shallow dipping clay mineralisation. • Drilled width is approximately true width.
Diagrams	• *Appropriate maps and sections (with scales) and 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.*	• Diagrams are included at relevant sections in this Report
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.*	• All drillhole results have been reported including those drill holes where no significant intersection was recorded. • Electromagnetic data processing presented in this release is across all tenure at Splinter Rock. • Mineralisation has been reported at a variety of cut-off grades

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.*	• All material exploration data available is reported.
		• There have been various photogrammetric and geophysical surveys at Splinter Rock at various times that have contributed to understanding of the geology of the deposit.
		• Airborne Electromagnetics modelling used to assess clay thickness and depth to basement.
		• ANSTO conducted hydrochloric acid tank leaching tests with samples at 25g/L hydrlochloric acid concentration, at 30°C, under ambient pressure and 4 wt% solids for 24 hours. Liquor samples were taken every 6 hours and assayed for rare earths and major impurities. The residue sample was assayed after the conclusion of the test.
		• ANSTO's heap leaching involved samples undergoing a 25g/L hydrochloric acid leach at a 5 L/m^2/hr irrigation rate, at 22 °C for 80 days in a 50mm diameter column of~1m bed height of 2.18 m^3 volume. Liquor samples were taken every 2-4 days for the duration of the tests and assayed for rare earths and major impurities.
		• The recoverability of rare earths are indicative only and do not currently account for additional losses that may occur during downstream processing.
		• Nanofiltration (NF) Tests used both actual and synthetic heap leach solutions at 38 bar pressure and commercially available membranes
		• ion Exchange (IX) Tests used both actual and synthetic heap leach solutions at 23°C over a time period utilising a commercially available membranes. The Resin was then "eluted" by utilising a NaCl solution acidified to pH 2 using HCl at a temperature of 23°C over 21 hours at a rate of 0,5 Bed Volume per hour.
		• Impurity Removal (IR) Tested Tests used both actual and synthetic heap leach solutions at ambient temperatures. NaOH is the current preferred Alkali when increasing pH during IR Stage 1 and 2
		    ○ Stage 1: ~pH 3.5
		    ○ Stage 2: ~pH 4.1 – 4.4
		• Sodium Carbonate (Na_2CO_3) or Sodium Hydroxide (NaOH) has been utilised to produce a Mixed Rare Earth Carbonate (MREC) or Mixed Rare Earth Hydroxide (MREH) respectively.
		• Final MREC/H precipitation occurs from a starting point of ~4.1 to 4.4 pH to a finish pH of between 7.1 to 7.5.
		• The metallurgical samples that have been provided to the laboratory for leaching assessment are detailed within this report.

Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or*	• Mineralisation is open in multiple directions. • Further work will include additional air core drilling, core

Criteria	JORC Code explanation	Commentary

	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.*
		drilling (e.g sonic or push-tube drilling, mineralogy, metallurgical test work and study work.
		• Further Metallurgical work is detailed below
		  • Diamond core heap leaching: Conduct column leach tests on splinter rock diamond core clay samples with hydrochloric under the same conditions as the initial heap leach tests.
		  • Mixed Rare Earth Precipitation: Investigate mixed rare earth precipitation methods, including carbonates and hydroxides.
		  • Process Modelling and Economic assessment of preferred flowsheet.
		  • Mini Pilot Scale Testing: Conduct mini pilot scale testing using composited bulk samples to validate findings on a smaller scale.
		  • Conversion of Rare Earth Carbonate/Hydroxide: Apply process models to assess options for converting mixed rare earth carbonate/hydroxide in a downstream refinery to multiple potential rare earth oxides