Exhibit 96.1

# S-K 1300 Report

## Technical Report Summary on the Darling Range, Western Australia


### Alcoa Corporation

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# 1.0 Executive Summary

## 1.1 Summary

SLR Consulting Ltd (SLR) was appointed by Alcoa Corporation (Alcoa) to prepare an independent Technical Report Summary (TRS) on its Darling Range bauxite mining operations (Darling Range or the Property), located in Western Australia. The purpose of this report is to support the disclosure of Mineral Resource and Mineral Reserve estimates for the Property with an effective date of 31 December 2025. This TRS conforms to the United States Securities and Exchange Commission's (SEC) Modernized Property Disclosure Requirements for Mining Registrants as described in Subpart 1300 of Regulation S-K, Disclosure by Registrants Engaged in Mining Operations (S-K 1300), and Item 601(b)(96) of Regulation S-K, Technical Report Summary.

The SLR Qualified Persons (QPs) who have prepared the TRS meet the SLR QP requirements defined by the SEC and the Competent Person requirements defined by the Committee for Mineral Reserves International Reporting Standards (CRIRSCO).

Alcoa is one of the world's largest aluminum producers and is a publicly traded company on the New York Stock Exchange (NYSE) and the Australian Stock Exchange (ASX). The company owns and operates integrated bauxite mining, alumina refining and aluminum smelting operations at numerous assets globally across eight countries. Alcoa is also party to several other joint ventures or consortia in Brazil, Canada, and Guinea.

Alcoa's Darling Range bauxite mining operation, located south of Perth in Western Australia, comprises two active bauxite mining areas – the Huntly and Willowdale mines – owned and operated by Alcoa. The Huntly and Willowdale operations collectively represent one of the world's largest bauxite mines, which currently supplies Alcoa's alumina refineries in Pinjarra and Wagerup in Western Australia. On the basis that both mining areas supply ore to local refineries, which are also operated by Alcoa, and that both mining areas are located within the same mining lease boundary, SLR considers the mines a single property for the purposes of this report.

Alcoa has a long history of mining in the Darling Range with the Huntly and Willowdale mines commencing commercial production in 1972 and 1984, respectively. These mining areas were preceded by the Jarrahdale bauxite mine, which was operational between 1963 and 1998. The Huntly mine currently supplies bauxite to the Pinjarra refinery, while the Willowdale mine supplies the Wagerup refinery. The mines collectively supply approximately 26 Mtpa of bauxite, with approximately 16 Mtpa from Huntly and 10 Mtpa from Willowdale. For the purposes of this report, available alumina ($A.Al_2O_3$) is abbreviated to AL, and reactive silica ($R.SiO_2$) is abbreviated to SI.

There are three major Mining Reporting Centers in the approved Mining Lease (ML1SA): North (previously Jarrahdale), Huntly in the central area, and Willowdale in the south. Mining Regions refer to subdivisions of the Reporting Centers that cover several years of mining activities, focused on a specific crusher location. Resource model areas (RMA) are further subdivisions of Mining Regions.

### 1.1.1 Conclusions

#### 1.1.1.1 Geology and Mineral Resources

- Bauxite Mineral Resource estimates for the Property were prepared by Alcoa and were reviewed and adopted by SLR.
- The total estimated Measured and Indicated Mineral Resource exclusive of Mineral Reserves as at 31 December 2025, has been estimated at 186.8 Mt at a grade of

30.0% AL and 1.8% SI. Of this, the Measured portion is estimated to be 133.6 Mt (or 72% of the total Measured and Indicated Resources) at 30.1% AL and 1.9% SI, and the Indicated portion is estimated to be 53.2 Mt (or 28% of the total Measured and Indicated Resources) at 29.7% AL and 1.6% SI, and the Inferred Resource is estimated to be 51.9 Mt at 31.9% AL and 1.1% SI.

- Bauxite deposits on the Property generally occur as erratically distributed alumina-rich lenses within eroded laterites mantling granites and are thought to have formed from the lateritization of the peneplained surface of the Western Gneiss Terrane rocks. The laterite profile typically consists of an Overburden unit, underlain by Hardcap, Friable Zone, and Basal Clay, respectively. Of these, the Hardcap and Friable Zone contain the bauxite mineralization targeted by the current mining operation.
- Exploration and resource definition drilling is completed by Alcoa using vacuum drill rigs, by contractor Wallis Drilling Pty Ltd using their patented reverse circulation (RC) air core (AC) rigs, and by contractor JSW Drilling Pty Ltd using a similar method. Samples are taken on 0.5 m intervals through the bauxitic horizon and into the underlying clay material. Sample mass per sample interval is nominally 1.5 kg sample to obtain a representative sample which is logged and sub-sampled via a riffle splitter to obtain a retained split of 150 g to 200 g which is sent to the laboratory for analysis.
- The SLR QP considers the drilling and sampling protocol employed appropriate to obtain representative samples to support the accurate interpretation and definition of the zone of economic bauxite to support accurate Mineral Resource estimation.
- Sample preparation and analysis were performed by Bella Analytical Systems Pty Ltd (Bella), an independently owned and operated laboratory, located at Alcoa's Kwinana Mining Laboratory (KWI). Fourier Transform Infrared Spectrometry (FTIR) is the primary geochemical analytical technique used by Alcoa. This analytical method has been successfully applied at the Darling Range operations for more than a decade and is routinely validated by industry standard X-Ray Fluorescence (XRF) and wet chemical analytical procedures.
- The SLR QP considers the sample preparation, security, and FTIR analytical procedures to be adequate to obtain representative samples and accurate assays for the estimation of Mineral Resources and Mineral Reserves. The quality assurance program in place demonstrates acceptable accuracy and precision.
- Dry bulk density testwork has been completed historically using a variety of sampling (grab samples, diamond drillcore, test pits) and testing methods. Statistical analysis of results has been completed based on logged geology and whether samples were within the Caprock zone, Friable zone, or Clay zone. For the Caprock zone a total of 421 samples (grab samples to diamond core) were used in the statistical analysis. Dry bulk density results for the caprock zone were typically in the range of 1.8 g/cm$^3$ to 2.5 g/cm$^3$ with a mean dry bulk density value of 2.05 g/cm$^3$ calculated. Caprock samples with a higher $Fe_2O_3$ (FE) content have increased density values. The assignment of block dry density values within the Caprock zone uses an algorithm based on the estimated block FE value. A review of the mean bulk density results shows no notable differences in the average caprock dry density of samples across programs/years or from different regions. A total of 24 samples have been collected in the friable ore zone for bulk density testwork. The bulk density mean-average of the Friable zone is 1.90 g/cm$^3$.

- The SLR QP considers that bulk density testwork to date is adequate to support the application of domain average density values to obtain a global tonnage estimate. A review of reconciliation metrics to date shows estimated Mineral Resource tonnages fall within a 5% to 10% tolerance of actual mined tonnages on a monthly basis. Ongoing bulk density testwork is considered warranted to support the application of current bulk density domain values to areas of future planned production.
- Data management and quality assurance processes have been implemented to ensure that the quality of assay data meets minimum acceptable thresholds and errors do not occur in the data transfer process from the laboratory to the Alcoa acQuire database.
- The SLR QP has reviewed the Darling Range data verification protocols and independently performed data validity checks on the assay database and has reviewed quality control data to ensure assays were accurate, precise, and reflected what was contained within certified reference certificates from the laboratory.
- The SLR QP is of the opinion that the sample database is reliable and adequate for the purposes of Mineral Resource and Mineral Reserve estimation.
- Geological modelling is based on logging and assay data from drillholes to define the economic bauxite zone. Mineral Resources were estimated using two dimensional (2D) polygonal estimation (ResTag), gridded seam models (GSM), or three dimensional block models (3DBM). As part of Alcoa's continuous improvements, estimates are gradually being migrated to the 3DBM approach.
- The SLR QP considers the geological interpretation and grade estimation processes to be appropriate. Further refinement and definition of the geochemical variation present vertically in the weathered bauxitic profile will occur once 3D block model estimates are developed within areas which are currently estimated using the ResTag approach. A total of 51.9 Mt or 22% of the reported Mineral Resource exclusive of Mineral Reserves as at 31 December 2025 comes from estimates completed using the ResTag approach, while 51.9 Mt or 8% of the reported Mineral Resource inclusive of Mineral Reserve uses the ResTag approach. The SLR QP considers that no material change in the reported Mineral Resource will occur in these areas with the implementation of a 3DBM approach.
- The Mineral Resource classification approach reflects the quality of the supporting data, drill hole spacing, and the estimation methodology used.
- In SLR QP's opinion, the Mineral Resource classification approach appropriately reflects the expected confidence in the estimated Mineral Resource, in accordance with the S-K 1300 definitions.
- RPEE for the Mineral Resources have been demonstrated by economic mining of the defined bauxite zone over the life of the operation. Cut-off criteria applied in developing the reported Mineral Resource have been chosen taking into account economic criteria which include mining, haulage and processing costs, and required minimum quality specifications for the refinery to deliver a product which meets minimum acceptable saleable product standards.
- Mineral Resources estimated using polygonal methods (ResTag and GSM) are reported above a cut-off value of ≥27.5% AL, ≤3.5% SI, and ≤4 kg/t OX, that is implicit in the delineation of the bauxite layer in the geological modelling stage.
- Mineral Resources estimated using a 3DBM approach are economically evaluated based on a 'Value in Use' (VIU) calculation which considers individual and cumulative block grades to identify zones of bauxite that meet the minimum grade and quality specification required by the refinery (taking into account mining



considerations and blending opportunities). The VIU calculation used in the definition and reporting of Mineral Resources uses a life of mine (LOM) price of $500/t for alumina and $300/t for caustic soda, respectively.

- The SLR QP considers that Alcoa have appropriately substantiated that the reported Mineral Resource meets RPEE.
- In the SLR QP's opinion, the reported Mineral Resource has been developed and classified to an appropriate and adequate standard. Further refinement and development in certain areas is considered possible. A listing of recommendations are summarized in Section 1.1.2.1 or 23.1 of this report.

#### 1.1.1.2 Mining and Mineral Reserves

- Proven Mineral Reserves for the Property are estimated to total 33.4 Mt, with weighted average grades of 29.3% AL and 1.8% SI. Probable Mineral Reserves are estimated to total 359.5 Mt, at weighted average grades of 31.4% AL and 1.5% SI. Together, this results in total Proven and Probable Mineral Reserves of 392.9 Mt, with weighted average grades of 31.2% AL and 1.5% SI. The effective date of the estimate is 31 December 2025.
- The SLR QP has used the 31 December 2025 Mineral Resource estimate as the basis for its Mineral Reserve estimate, applying Modifying Factors only to those Resources classified as Measured Mineral Resources and Indicated Mineral Resources.
- The bauxite operations are mature, long-standing mining projects with an extensive production history. The major historical development capital has long since been depreciated, and current capital requirements predominantly relate to sustaining activities and planned crusher relocations. These sustaining capital levels, along with observed operating costs, are considered appropriate for use in economic analysis. The review of the FEL-2 capital studies for the Myara North and Holyoake crusher moves provides further technical support. Consequently, the SLR QP considers that the standard of technical and economic evaluation is consistent with that expected of a Feasibility Study (FS), based on the long record of profitable operation and the robustness of the Modifying Factors. The SLR QP has reviewed the operating procedures, planning assumptions, and parameters applied across the operations.
- The SLR QP considers that the accuracy and confidence in the Mineral Reserve estimate to be appropriate for the classification applied, which is supported by both the conservative operational processes and the long operational history.
- The SLR QP is not aware of any risk factors associated with, or changes to, any aspects of the Modifying Factors such as mining, metallurgical, infrastructure, permitting, or other relevant factors that could materially affect the current Mineral Reserve estimate. The Darling Range operations have however undergone some changes as related to the permitting requirements which are discussed in this report; namely the approvals process, river corridor constraints, restoration obligations, and any required adjustments to accommodate the closure of the Kwinana refinery.

#### 1.1.1.3 Mineral Processing

- The operating data between 2010 and 2025 indicates that the product from the Darling Range operations consisted of an average AL grade of 32% with SI below the target for refinery feed.
- The SLR QP is of the opinion that the Darling Range operation demonstrated that ore can be effectively crushed and supplied to a refinery for further upgrading to produce



alumina. The historical operational data confirmed that the ore consistently met refinery specifications without any deleterious elements.

Based on this, and additional information provided by Alcoa regarding the mine plan, it is reasonable to assume that the bauxite mined from Darling Range will meet the refinery specifications for the next nine years.

#### 1.1.1.4 Infrastructure

- The Darling Range mining operations have established and operational infrastructure, with mining hubs that host administrative offices, as well as crushing facilities and maintenance facilities.

Hubs are relocated periodically as production moves away from the hub and transportation costs increase. These relocations are well-understood with planning and associated budgeting occurring well in advance of relocations; production restarted seven days after the most recent shutdown.

- An extensive haul road network and overland conveyors transport crushed bauxite to the refineries.

Bauxite is transferred from each mine to the refineries primarily via long distance conveyor belt.

Alumina produced by the Pinjarra and Wagerup refineries is then shipped to external and internal smelter customers through the Kwinana and Bunbury ports.

As intended, the Kwinana refinery ceased production in the second quarter of 2024 as part of the phased curtailment, and the refinery has now permanently closed.

- The Huntly and Willowdale mines are located near the towns of Pinjarra and Waroona respectively. These are easily accessible via the national South Western Highway, a sealed single carriageway road, spanning almost 400 km from the southern side of Perth to the southwest corner of Western Australia.
- Sealed access roads to the main hubs have been established, connecting Huntly and Willowdale to the road network.
- Major haul roads have been established to each mining area, while secondary haul roads cross-cut each individual mining plateau. Roads are unsealed and require continuous maintenance.
- The Darling Range's Pinjarra refinery receives power from the South West Interconnected System (SWIS), but also has internal generation capacity of 100 MW from four steam driven turbine alternators, with steam produced by gas fired boilers and a gas turbine Heat Recovery Steam Generator (HRSG).

The refinery supplies power to the Huntly Mine by a 33,000 volt power supply line and two 13,800 volt lines.

- The Wagerup refinery is a net exporter of power to the SWIS, with internal generation capacity of 108 MW from three steam driven turbine alternators and one gas turbine; steam being generated by gas fired boilers.

The refinery supplies power to the Willowdale Mine by a single 22,000 volt power supply.

- Water is used on the mines for dust suppression, dieback washdown, vehicle washdown, workshops, conveyor belt wash, construction, and domestic purposes.

The water supplies for mining consist of licensed surface water sources supplemented with treated wastewater from vehicle washdowns, stormwater runoff and maintenance workshops.



The annual volume of freshwater abstracted under the Department of Water and Environmental Regulation (DWER) surface water licenses and Water Corporation supply agreements was as follows in 2025:

- 0% of the annual entitlement from Boronia Dam
- 6.5% of the Banksiadale Dam surface water license volume
- 96.8% of the Samson Dam surface water license volume.

An additional 790,600 kL was also abstracted from South Dandalup Dam under the agreement with Water Corporation.

- On site facilities include offices, ablutions, crib-rooms, and workshops, however there are no Alcoa accommodation facilities, as the Huntly and Willowdale mining areas are close to established population centers.
- No tailings are generated within the boundaries of the mining operations, and the majority of overburden (waste) is used to rehabilitate the previously mined out areas. Residue from processing is generated downstream of the mines and is not considered in this TRS, although they are considered as a cost and as part of the financial evaluation.
- Overburden is segregated for later contouring and rehabilitation of adjacent, completed mining operations. Caprock and other non-viable rock is used to backfill these shallow, completed pits and the viable topsoil is spread on top, contoured, and revegetated.

#### 1.1.1.5 Environment

- Alcoa has established processes to facilitate conformance with environmental requirements, identifying sensitive areas ahead of time enables them to be managed ahead of disturbance.
- Alcoa is modernizing its environmental approvals framework for its Huntly Bauxite Mine and Pinjarra Alumina Refinery, by referring future mining plans for assessment under Part IV of the Western Australian *Environmental Protection Act 1986* (EP) and the Australian *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) in 2020.
- Mining in some areas became more constrained in 2023 as a result of internal and external factors. This continued into 2024 and 2025 and has resulted in a presumed temporary decrease in operability and associated decrease in Reserve estimation.
- The 2023-2027 MMP describes Alcoa's proposed mining operations for the Huntly and Willowdale mines within ML1SA from 1 January 2023 to 31 December 2027. The 2023-2027 MMP was referred to the Environmental Protection Authority (EPA) in 2023 by a third party.
- On 14 December 2023 the State Government announced the *Alcoa Transitional Approvals Framework* which enables Alcoa to continue mining as defined in the 2023-2027 MMP while the formal EPA Environmental Impact Assessment (EIA) is in progress. The State Government reserves the right to, with reasonable notice, withdraw or amend the exemption at any point. The 2023 Exemption Order is central to the Framework.
- In October 2024 the Premier rolled over the 2023-2027 approval to cover 2024-2028 with the same conditions.
- The Company is aiming to have the 2025-2029 MMP in place in the first half of 2026.

- On 18 February 2026, the Federal Minister for the Environment and Water announced Alcoa would enter into enforceable undertakings related to clearing that occurred between 2019 and 2025, and that the government had entered a strategic assessment agreement with Alcoa for its Huntly and Willowdale mining operations. At the same time, Alcoa was granted a national-interest exemption allowing for limited land clearing and mining operations to continue for a period of 18 months, while the strategic assessment is completed.
- The Company is committed to continuing to work collaboratively with stakeholders to achieve Ministerial decisions on future mining plans at Holyoake and Myara North by the end of 2026. The TRS for 2024 indicated approvals were expected in the first quarter of 2026, this is now estimated to be the end of 2026. The timeframe for approvals under the EP Act and EPBC Act can be estimated, but not predicted with certainty; further delays are possible.
- Construction for Myara North, Holyoake, and O'Neil will commence pursuant to the requirements of the State and Federal approvals, which will be issued upon completion of the EPA and EPBC assessment processes.
- Alcoa has made progress in drafting and implementing a number of new management plans and processes required to meet current compliance requirements.
- Alcoa's mine sites are monitored in accordance with the conditions of Government authorizations and its operational licenses at Huntly (L6210/1991/10) and Willowdale (L6465/1989/10) and the MMP. Compliance and reporting is also required under the Environmental Protection (Darling Range Bauxite Mining Proposals) Exemption Order 2023. Outcomes of and compliance with the management and monitoring programs are tracked within Alcoa's Environmental Management System and reported in monthly and annual reports to regulators including the BSEC (previously MMPLG) and DWER (at least annually, according to MMPLG requirements and Part V License requirements), the Minister for State Development (in accordance with the Exemption Order):

  Alcoa provided the monthly reports for January to December 2024, and January to June 2025 required under Clause 10 of the 2023 Exemption Order, no non-compliances had occurred. Reporting continues on a monthly basis; more recent reporting will be reviewed in the next TRS;

  Review of Alcoa's most recent Annual Environmental report to the Jobs, Tourism, Science, and Innovation (JTSI) (dated July 2025) and both Part V Licence Annual Environmental Reports largely reported compliance with environmental commitments and success of operational controls to manage environmental objectives.
- Alcoa implements a comprehensive water management and monitoring program in accordance with the requirements of its abstraction and operational licenses.
- Alcoa's groundwater monitoring program is extensive and continues to evolve.
- Alcoa has established systems and processes to support maintenance of its social license to operate and conducts an extensive program of community relations activities to ensure that the public is aware and informed regarding its operations.
- Alcoa has formally consulted and engaged survey work from the relevant Traditional Owners across its operational footprint; Alcoa supported the establishment of the Gnaala Karla Boodja Aboriginal Corporation Ranger program in 2024, which is designed to embed Noongar People in land management across Gnaala Karla Boodja land.

- Alcoa's Social Performance Management System (SPMS), SP360, is in place across its global operations. The SPMS supports locations to undertake effective engagement with communities, manage their social risks and maintain Alcoa's Social License to Operate.
- Alcoa's Closure Planning and Execution staff for Darling Range are located across multiple teams. The Global Planning Team is primarily responsible for developing the Long-Term Mine Closure Plans (LTMCPs) and life of asset planning for Alcoa's WA (Western Australian) Mining Operations (Huntly and Willowdale).
- The agreed closure requirements for Darling Range centers around the return of Jarrah Forest across the site. The approved 2024-2028 MMP aims to establish, and return to the State, a self-sustaining Jarrah Forest ecosystem, that meets the agreed forest values that will support similar management practices as that employed in the surrounding Northern Jarrah Forest.

### 1.1.2 Recommendations

#### 1.1.2.1 Geology and Mineral Resources

- The SLR QP recommends that ISO 9001 and ISO 17025 certification is pursued for the laboratories, to substantiate to technical personnel outside of Alcoa that the quality assurance programs in place meet ISO 17025 quality management system certification.
- SLR recommend that ongoing checks of FTIR assay results by traditional XRF and wet chemistry methods by an independent 3rd party laboratory occur to ensure that FTIR assay results are accurate in all regions of new mining and within different material types and areas of differing mineralogy. SLR consider that the XRF and wet chemistry check assaying program should occur on all reference (REF) samples (1% of dataset) in favour of the current FTIR check assaying program which potentially has the same limitations on accuracy and precision as the Bella Laboratory FTIR process. The check assay program should include analysis of 'Internal Reference Material' (IRM) from high Fe caprock material and low grade clayey bauxite and results should be reviewed on a regular basis to ensure any identified issues are rectified promptly.
- Ongoing development of 'Internal Reference Material' (IRM's) to ensure quality assurance program has high quality reference standards which cover the expected grade range of all key elements (AL, AT, SI, ST, FE, OX, SU) for the economic bauxite zone. SLR consider two high FE caprock standards, two low AL, high SI clayey bauxite standards and an additional average grade Al, SI bauxite sample should be developed and added to the current quality assurance program. Additionally, it is advised to continue monitoring failures and recurrent trending biases associated with IRM KH20 and if the need arise replace this standard with an alternative or a newly developed IRM.
- Re-implement the taking of field duplicates at rig throughout the drillhole to ensure representative samples are being attained at drill rig within the Caprock, Friable and Clay zones and to ensure information is obtained to substantiate that current sampling and splitting processes are robust and are not subject to bias.
- Address biases identified in the Holyoake re-assay program by limiting the use of historic data where possible and continuing the re-assay program for assays collected before 2005.



- Consider validation of current estimation results using risk-based (conditional simulation) techniques to quantify uncertainty and support Mineral Resource classification.
- Review applied cut-off criteria and currently assigned economic and mining parameters, considering more flexible costs and bauxite prices to ensure all material that meets RPEE is contained within the reported Mineral Resource.
- Investigate whether the 5% positive bias in the tonnage between the As Mined and sampling tower weightometers is persistent in the 3D block models (3DBM). SLR consider bulk density testwork within each of the identified bauxite domains for new regions of mining is required and a phase of bulk density testwork on large diameter sonic drillcore is recommended. This bulk density testwork subject to safety considerations could be supported by a phase of in pit sampling within 0.5 m X by 0.5 m Y by 0.5 m RL sample pits within operating pits within Caprock, Friable bauxite and Clayey bauxite weathering profiles.
- Continue implementation and development of the reconciliation system to be able to obtain accurate grade, tonnage, moisture content and survey data on which accurate dry tonnage reconciliation against the block model can be completed. SLR understand the challenges faced in reconciling from multiple pits and stockpiles and consider that an ongoing program of in pit bulk density and moisture content sampling is required to substantiate currently applied density and moisture content values.
- Reconciliation results in recent years (2024, 2025) of SI grades of mined material against estimated SI grades from the block model have shown a notable bias. Mined SI grades have been typically >15% higher than those predicted. This bias coincides with the removal of a 0.5 m mining buffer zone above the base of interpreted bauxite / top of clay horizon to maximise economic bauxite recovery. SLR note the base of economic bauxite / top of clay surface is not a distinct boundary and is a function of weathering processes and can be somewhat gradational and variable on a local scale. SLR recommend that in these areas a semi-soft boundary estimation approach should be used in addition to the hard boundary estimation approach currently applied and comparisons be made from a reconciliation perspective to justify the best estimation approach to use moving forward.

#### 1.1.2.2 Mining and Mineral Reserves

- Currently, a historical dilution and mining recovery factor is applied to the final Mineral Reserves to reconcile the tonnes and grade. The SLR QP recommends applying dilution and ore loss at the re-blocked model level before performing the optimization and reporting these values independently.
- A reconciliation system is being implemented to allow the comparison of mined tonnes to the predicted tonnes of the geological model. This system will assist in defining dilution and losses related to modifying factors. Alcoa had been actively developing this reconciliation system during 2024 with partial implementation during 2025.
- A mine planning schedule (the Long Term Mine Plan, or LTMP) has been developed providing a strategic schedule over nine years which incorporates a tactical schedule over the first three years. However, currently Mineral Reserves would provide an additional three years of mine scheduling which would benefit cashflow modelling. Completing a strategic mine schedule for the total Mineral Reserve would allow impacts from sequencing of later Capital costs to be modelled appropriately. The view of the SLR QP is that the unscheduled Mineral Reserve ore tonnes should be added to the LTMP.

- The SLR QP notes that a defined Process Acceptance Criteria has yet to be provided with specifications on upper and lower limits for all key process constraints. This should be provided for review.
- Capital costs for the Myara North and Holyoake mine moves were in the process of being advanced to FEL 3. Although the cost estimates could be reviewed, a complete FEL 3-level study defining the execution basis of estimate and its linkage to a master schedule was not available and should be prepared to support final capital confidence.
- In addition, for the purposes of the value-in-use assessment, further review is required of the key cost drivers underpinning the analysis, including residue storage facilities and other refinery-related operating and sustaining capital costs provided, to confirm their completeness, assumptions, and consistency with the execution basis and long-term operating plans.

#### 1.1.2.3 Mineral Processing

- The historical operational data for the Darling Range demonstrates that ore consistently met refinery specifications.
- Ideally, independent verification of sample analysis is conducted, by a certified laboratory, on a structured program, to ensure the QA/QC aspects of the internal analysis. Within this process a proportion of samples from each batch could be sent to the independent laboratory for analysis and the results can be compared with the internal analysis.
- The SLR QP is appreciative that the mine is operational, meaning a trade-off versus logistics / practicality would need to be carried out.

#### 1.1.2.4 Infrastructure

- The Darling Range mining operations have well established infrastructure, with mining hubs that are periodically moved to reduce transportation distances between mining operations and the hubs. The SLR QP makes no recommendations regarding infrastructure.

#### 1.1.2.5 Environment

- Alcoa has established systems to facilitate adherence to environmental commitments and has made progress with modernizing environmental approvals and permits for Huntly, Willowdale and the future mining areas at O'Neil, Holyoake and Myara North. The SLR QP recommends that the following action is taken:
- Continued close engagement with EPA, DCCEEW, Bauxite Strategic Executive Committee (BSEC) and the community to best enable a prompt resolution to approval and permitting process to minimize impacts to the Reserve estimate into the future.
- Appropriate resourcing will be required to enable the successful execution of existing State and Federal approvals alongside the emerging strategic assessment by Alcoa and DCCEEW.
- Continued compliance with all approval and permit requirements. Compliance with the conditions associated with the *Alcoa Transitional Approvals Framework* and Exemption Order and recently announced Federal National-Interest Exemption is critical to ensure these instruments are maintained.
- Progress was made to close out the Contaminated Sites Act process in 2025 however the release of version 3.0 of the per- and polyfluoroalkyl substances (PFAS)

National Environmental Management Plan necessitated changes that are anticipated to be submitted back to DWER in 2026. An update on progress should be reported in the future.

- Following from Alcoa's commitment in support of the Gnaala Karla Booja (GKB) Ranger Program in 2024, a review of how the Ranger Program has benefited the community, and the environment, should be conducted and summarized in the future.

## 1.2 Economic Analysis

### 1.2.1 Economic Criteria

A technical-economic model was prepared on an after-tax discounted cash flow (DCF) basis, the results of which are presented in this subsection.

Annual estimates of mine production with associated cash flows are provided for years FY26 to FY34 inclusive, based on Proven and Probable Reserves only.

Key criteria used in the analysis are discussed elsewhere throughout this TRS. General assumptions used are summarized in Table 1-1. All values are presented in United States Dollars ($) unless otherwise stated.

**Table 1-1: LOM Technical-Economic Assumptions**

| Description | Value |
|---|---|
| Start Date | January 1, 2026 |
| Mine Life based on Mineral Reserves | 9 years |
| Average LOM Price Assumption | $28.74/t |
| Total Operating Costs | $4,127.4 million |
| Capital over nine years | $1,309.6 million |
| Income tax | $412.0 million |
| Discount Rate | 10.25% |
| Discounting Basis | End of Period |
| Corporate Income Tax Rate | 30% |
| Model Basis | Nominal |

### 1.2.2 Cash Flow Analysis

The economic analysis presented herein complies with S-K 1300 requirements and is based on a reserve-based discounted cashflow analysis using only Proven and Probable Mineral Reserves for the 9-year mine planning window.

Using the defined 9-year detailed mine plan period, at a 10.25% discount rate and average bauxite price of $28.74/t, the operation generates an after-tax NPV of $75.7M.

This figure reflects substantial sustaining capital requirements (major mine moves, conveyor replacements, haul roads, and other sustaining operations) during the period. This valuation is presented on a 100% attributable basis using nominal cash flows which allow for annual price inflation of 3% and cost escalation primarily ranging between 2 and 3%.

**Table 1-2: LOM Indicative Economic Results**

| Description | Units | Total LOM |
|---|---|---|

| | | |
|---|---|---|
| LOM | Years | 9 |
| LOM Bauxite Production (wet) | Mt | 258.5 |
| Average LOM Price | $/t | 28.74 |
| **Gross Revenue** | $ million | **7,429.4** |
| Labor | $ million | 1,334.1 |
| Services | $ million | 595.7 |
| Other Indirect | $ million | 425.6 |
| PAE – Corporate Chargebacks | $ million | 344.8 |
| Energy | $ million | 27.2 |
| Fuel | $ million | 317.0 |
| Supplies | $ million | 254.5 |
| Maintenance | $ million | 509.3 |
| **On-site Mine Operating Costs** | $ million | **3,808.2** |
| **Off-site Mine Operating Costs** | $ million | **265.2** |
| Corporate Income Tax | $ million | 412.0 |
| **Net Income after Taxes** | $ million | **961.3** |
| Depreciation Tax Savings | $ million | 1.928.8 |
| Sustaining Capital (2026 to 2034 inclusive) | $ million | 1,309.6 |
| Closure Costs | $ million | Included in ARO under operating costs |
| **Free Cash Flow** | $ million | **319.2** |
| **NPV @ 10.25%** | $ million | **75.7** |

### 1.2.3 Sensitivity Analysis

Project risks can be identified in both economic and non-economic terms. Key economic risks were examined by running cash flow sensitivities. The operation is nominally most sensitive to market prices (revenues) followed by operating costs.

## 1.3 Technical Summary

### 1.3.1 Property Description

Alcoa's Darling Range Bauxite Mines are located in the Darling Range, in the southwest of Western Australia. All spatial data used for Mineral Resource estimation are reported using a local grid based on Australian Map Grid 1984 (AMG84) system (Zone 50) and using Australian Geodetic Datum 1984 (AGD84) coordinate set (EPSG:20350). The approximate coordinates of the mining areas are 410000 m East and 6390000 m North (Huntly) and 410000 m East and 6365000 m North (Willowdale). The Reporting Center of Huntly is located approximately 80 km to the southeast of Perth, and approximately 30 km northeast of the township of Pinjarra. Willowdale is located 100 km south-southeast of Perth, and approximately 20 km southeast of the township of Waroona.

The Pinjarra refinery is located adjacent to the east of the town of Pinjarra and is approximately 25 km southwest of the Huntly mining areas. The Wagerup refinery, supplied by Willowdale, is located immediately adjacent to the east of the South Western Highway, approximately 8 km south of Waroona and 20 km west of the Willowdale mining area. The

Kwinana refinery, previously supplied by Huntly, was curtailed in 2024 and an announcement to permanently close was made in 2025.

### 1.3.2 Land Tenure

The Property is constrained by a single mineral concession referred to as Mineral Lease (ML) 1SA. The concession was originally granted on 25 September 1961, by the State Government of Western Australia under the Alumina Refinery Agreement Act, 1961, permitting the exploration and extraction of bauxite. ML1SA was granted for a period of four, 21-year periods, the fourth period of which is due to expire on 24 September 2045. The State Government concession agreement includes the potential for conditional renewal beyond 2045. This will require negotiation between Alcoa and the State Government prior to this date to agree on an extension of the agreement and is therefore not guaranteed.

The current lease covers an area of 7,022.61 km², and extends from just north of Perth, to Collie in the south. The legislation under which Alcoa operates is overseen by the Mining and Management Program Liaison Group, which comprises representatives from several State Government departments. The current concession of ML1SA covers an area of 7,022.61 km², extending from the north of Perth on the eastern side to the town of Collie in the south.

Alcoa has the exclusive right to explore for and mine bauxite on all Crown Land within the ML1SA, however a number of environmental and statutory constraints exist within the area, and Alcoa is not permitted to access bauxite from the areas covered under these constraints. For example, the 2023-2027 MMP requires:

- A reduction in mining activities inside higher risk areas within drinking water catchments.
- Alcoa cannot undertake any new mining pit clearing in any areas with an average pit slope greater than 16% within any Reservoir Protection Zone (RPZ, 2 km from reservoir top water level).
- An increase in rehabilitation and reduction in open areas.
- A maximum annual clearing footprint of 800 ha.

Mineral Resources and Mineral Reserves have not been defined in the constrained areas.

In August 2001, Alcoa entered a sub-lease arrangement with a consortium referred to as the Worsley Participants. This arrangement permits the Worsley Participants to mine and process bauxites within the sub-lease area. Alcoa has not declared Mineral Resources or Mineral Reserves within the sub-lease area.

### 1.3.3 Ownership

Mineral rights for the Property, excepting the sub-lease area, are 100% owned by Alcoa of Australia Limited (AofA), a wholly-owned subsidiary of Alcoa.

### 1.3.4 History

Bauxite occurrences were first recorded in the Darling Range in 1902. Bauxite was detected as a result of analyzing laterite from Wongan Hills, and subsequently through examination of lateritic road gravels from several localities in the Darling Range. The Geological Survey of Western Australia (Geological Survey) produced studies and publications, driving the bauxite exploration, though most attention was focused on localities in the Darling Range close either to Perth or to railway lines servicing towns such as Toodyay and York. By 1938, bauxite deposits were known to be common throughout the Darling Range over an area of 560 km long by 40 km to 80 km wide. The Geological Survey maintained interest in Darling Range laterite as an economic source of aluminum until the 1950s. However, by the late



1950s exploration had been taken over by mining companies. The earliest non-government exploration for bauxite was carried out in 1918 by the Electrolytic Zinc Co. of Australia Pty Ltd, deeming the deposits to be generally low grade and not of commercial value, though like earlier explorers, did not focus upon the underlying friable units.

No further private exploration took place until 1957 when Western Mining Corporation Ltd (WMC) began to explore for bauxite in the Darling Range. Following a regional reconnaissance, a joint venture company, Western Aluminum NL (WANL), formed by WMC with North Broken Hill Ltd and Broken Hill South Ltd, explored temporary reserves over a large portion of the southwest. These areas were part of a Special Mineral Lease (ML1SA) granted to WANL in 1961.

In 1961, WANL joined with the Aluminum Company of America Ltd (Alcoa US), allowing additional systematic exploration of lease ML1SA. Commercial mining was finally started in 1963 at Jarrahdale and continued until 1998, supplying bauxite to the Kwinana refinery.

In 1977, WANL became Alcoa. As of December 2025, the Huntly and Willowdale mining operations remain active. Huntly supplies approximately 16 million tonnes per annum (Mtpa) of bauxite to the Pinjarra refinery, while Willowdale supplies approximately 10 Mtpa of bauxite to the Wagerup refinery.

### 1.3.5 Geological Setting, Mineralization, and Deposit

The Darling Range comprises a low incised plateau formed by uplift along the north-south trending Darling Fault, which is a major structural lineament that separates the Pinjarra Orogen to the west, from the Yilgarn Craton to the east. The range extends for over 250 km, from Bindoon in the north to Collie in the south.

Bauxite deposits have been identified throughout the Darling Range and generally occur as erratically distributed alumina-rich lenses within the eroded laterites that mantle the granites to the east of the scarp line. The bauxites are thought to have formed from the lateritization of the peneplained surface of the Western Gneiss Terrane rocks. Lateritization is thought to have commenced during the Cretaceous and continued through to the Eocene, with the subsequent periodic activity of the Darling Fault resulting in the current landform of scarps and deeply incised valleys on the western edge of the Darling Range.

Most of the bauxites display a typical profile comprising the following sequence, from the top down:

- **Overburden:** A mix of soils, clays, rock fragments and humus that is typically 0.5 m deep, but deeper pockets are common.
- **Hardcap:** An indurated iron-rich layer that is usually 1 m to 2 m thick. It is generally high in AL and low in SI.
- **Friable Zone:** A partially leached horizon that usually contains a mix of caprock fragments, clasts, nodules, pisolites, and clays. It is typically a few meters thick but can exceed several meters in some areas. It is generally high in AL and low in SI.
- **Basal Clay:** A kaolinitic clay horizon that represents the transition zone between the Friable Zone and the underlying saprolitic material. It is generally high in SI and low in AL.

The Hardcap and Friable Zone contain the mineralization targeted by the current mining operation. Selective mining practices are applied to minimize the inclusion of Overburden, because of its elevated organic carbon levels, and Basal Clay because of its elevated SI concentrations. Within the Hardcap and Friable Zone, the dominant minerals, in order of abundance, are gibbsite, quartz, goethite, kaolinite, and hematite, with lesser amounts of anatase and muscovite.



### 1.3.6 Exploration

Systematic exploration for bauxite within the region commenced in the 1960s and is conducted on a continuous basis to maintain sufficient Resources and Reserves to meet refinery supply. Alcoa systematically drills the laterite areas on a regular grid spacing of 60 m by 60 m, followed by successive infill programs in selected areas that reduce the spacing to 30 m by 30 m, and finally to 15 m by 15 m. The 2025 Mineral Resource estimates were derived from data acquired from a total of 360,822 holes, drilled between 1991 and 2025, with approximately 83% of the holes drilled after 2009.

The planned drill hole collar locations are pegged by Alcoa surveying staff using real time kinematic differential global positioning system (RTK DGPS). Prior to mid-2015, theodolite/ total stations and differential global positioning system (DGPS) were used to position the 60 m spaced holes, and the 30 m and 15 m grids were positioned by taping and optical square sighting between the 60 m pegs. If the drill rig cannot be setup within 2 m of the peg, the offset distance is measured and marked on the driller's log. Alcoa has recently introduced the practice of resurveying all drill hole locations after drilling. However, the planned coordinates are used for subsequent modelling activities.

All holes are assumed to be vertical. However, the drill rigs have limited levelling capability, and most holes are orthogonal to the local surface gradient, resulting in deviations of several degrees from vertical.

A digital elevation model representing the natural surface was prepared from a combination of collar survey data, Light Detection and Ranging (LiDAR) data, and satellite imagery.

The drilling is conducted using a fleet of tractor-mounted vacuum rigs, which have been modified to operate in forested areas with minimal clearing or ground preparation. In 2015, Alcoa added air core drilling rigs to the fleet. These rigs are also tractor-mounted and are fitted with a similar sample collection system to that used on the vacuum rigs. The rigs are fitted with hollow-bladed bits that have a nominal cutting diameter of 45 mm and an internal retrieval tube diameter of 22 mm to 25 mm.

For each hole, the drillers prepare a log sheet that contains survey, drilling, geological logging, and sample submission information.

All samples below the overburden are collected on 0.5 m intervals, with the material extracted via the hollow drill stem into a collector flask attached to the cyclone underflow. Each sample, which weighs approximately 1.5 kg, was split through a riffle splitter (historically) or rotary splitter (current process) to yield a retained split weighing approximately 200 g. This material is placed into a barcode-labelled sample packet for dispatch to the Bella laboratory. The remaining material is discarded.

Sample preparation and geochemical assaying is performed by Bella Analytical Systems Pty Ltd (Bella), an independently owned and operated laboratory. All assays produced by Bella are monitored and controlled by Alcoa at the Kwinana Mining Laboratory (KWI), which, although it has a QA/QC system based on ISO 9001 protocols, only has one section of the laboratory certified to ISO 9001 for the purpose of certification of shipment assays of alumina.

A link exists between the Bella and Alcoa Laboratory Information Management System (LIMS) for the two-way exchange of data.

A robotic processing system is used to prepare each sample for Fourier Transform Infrared Spectrometry (FTIR) and Reference Method (REF) testing. This entails pulverizing each sample in a flow-through ring mill to a nominal grind size of 85% passing 180 µm, and then splitting off sufficient material to fill a barcoded scanning flask (20 mm high with an 80 mm diameter). The material from the ring mill is discharged through a rotary splitter, with approximately 80 g to 100 g of material retained for geochemical testing, and the remainder



discarded. A duplicate sample is collected from 1% of the samples via a rotary splitter fitted with twin select chutes.

Reference Method (REF) assays are completed by Alcoa at KWI to validate and calibrate the FTIR assays, as part of a broader quality assurance and quality control (QA/QC) program, which also includes the insertion of duplicates, standards, sample to extinction (STE) samples, and third party check assays.

The SLR QP considers the sample preparation, security, and analytical procedures to be adequate for the estimation of Mineral Resources and Mineral Reserves, and that the implemented quality assurance and quality control (QA/QC) program demonstrates acceptable accuracy and precision.

While FTIR assaying is not yet widespread in the mining industry, the SLR QP is of the opinion that it is appropriate for the estimation of the Darling Range Bauxite Mineral Resources and Mineral Reserves.

### 1.3.7 Mineral Resource Estimates

Ongoing development of drilling, assaying, geological modelling and estimation processes has occurred at the Darling Range operations over the last 20 years. In particular, a significant program of work has occurred since 2019 to transition Mineral Resource estimation processes across all plateaus from polygonal ResTag or GSM approach to a 3DBM methodology, on which optimized mine plans and schedules can be developed, which can consider the geochemical variation present both vertically and laterally within the bauxitic profile. Approximately 577.6 Mt or 91% of the Mineral Resource tonnage inclusive of Mineral Reserve was estimated using the new 3DBM procedures, while approximately 51.9 Mt or 8% was estimated using the ResTag approach. Approximately 184.6 Mt or 77% of the Mineral Resource tonnage exclusive of Mineral Reserve was estimated using the new 3DBM procedures, while approximately 51.9 Mt or 22% of the reported Mineral Resource tonnage exclusive of Mineral Reserves was estimated using the ResTag approach. The SLR QP considers that no material change in the reported Mineral Resource will occur in these areas with the implementation of a 3DBM approach. The application of a 3DBM approach will support mine planning, blending strategies and reconciliation. A review of production results and reconciliation data indicate that estimates prepared using the ResTag 2D polygonal estimation approach have been appropriate and reflect what has been achieved in practice.

The demarcation of economic bauxite is based on AL and SI cut-off grade criteria applied to both individual and accumulated sample grades for the traditional approaches, or individual and accumulated model grades for the 3DBM approach. Minimum thickness criteria are also considered. The lateral constraints to the reported Mineral Resource also account for buffer zones around permitting limits. The SLR QP considers the geological modelling process which takes into account both logging and assaying data appropriate for the accurate definition of economic bauxite and for use in estimating the reported Mineral Resource.

Additional constraints are applied to the reported Mineral Resource once tight spaced 15 m by 15 m spaced drilling is completed prior to production. These constraints take into account the accurate demarcation of bedrock material, practical mining constraints including stripping ratios, and the consideration of practical floor heights and maintaining equipment transit corridors.

The Mineral Resource outlines are divided into Resource Blocks that delineate sub-regions containing material with similar grade characteristics, and contain tonnages that can be used for long-term, medium-term, and short-term scheduling activities (80 kt to 100 kt for 60 m spacing, down to 20 kt to 40 kt for 15 m spacing). For the 30 m and 60 m areas, the Resource Blocks are assigned the length-weighted average grades of the enclosed composites.



The model contains estimates for a range of constituents that are of prime importance for Bayer processing, including AL, SI, oxalate (OX), sulphate (SU), boehmite (BO), and hematite (FE). Validation by SLR included a technical review of Alcoa validation processes which included visual and statistical checks between the composites and block estimates, comparisons of the estimates derived from different data spacings, and comparisons of the estimates with production data.

A review of tonnage reconciliation results has shown that the estimated tonnes with an applied moisture factor has been consistently biased high by 5% over the past 10 years when compared with the actual measured tonnes reported from weightometers following the primary crusher and at the processing plant. A number of factors (density estimate in model, applied moisture content, inaccurate survey of pit floors or stockpiles) could be drivers on the tonnage bias. The SLR QP considers ongoing bulk density and moisture content testwork and further development of the bulk density / tonnage estimation and reconciliation processes will lead to improved tonnage reconciliation. Alcoa personnel apply a 5% tonnage reduction to the estimated Mineral Resource to account for the identified tonnage bias.

From a grade estimation perspective, reconciliation results of actual grades (obtained from sampling tower at both Huntly and Willowdale operations) against LTMP estimated grades show good performance for AL and FE (Section 11.10.3). Reconciliation results for SI in recent years have shown higher grades are obtained in practice than what has been estimated. The undercall or negative bias in SI estimates is greatest in recent years when the removal of a 0.5 m mining buffer zone above the base of interpreted bauxite / top of clay horizon was removed to maximize bauxite recovery. At the Huntly operation SI bias has been generally less than 14%, though this increased to 22% in 2025. At the Willowdale operation, SI bias has been less than 14%, though reaching 29% in 2021, 23% in 2024, and 38% in 2025.

The SLR QP notes the base of economic bauxite / top of clay surface is not a distinct boundary and is a function of weathering processes and can be somewhat gradational and variable on a local scale. Ongoing development of the estimation process to adopt a semi-soft boundary estimation approach at the base of bauxite / top of clay may lead to improved SI reconciliation.

The Mineral Resource classifications have been applied to the Mineral Resource estimates based predominantly on the drill spacing completed and the subsequent confidence in the geological interpretation and estimate. Some regions have had the classification downgraded taking into account the quality of the historical input data in these regions. In SLR QP's opinion, the Mineral Resource classification approach appropriately reflects the expected confidence in the estimated Mineral Resource, in accordance with the S-K 1300 definitions.

The SLR QP considers that Alcoa have appropriately substantiated that the reported Mineral Resource meets RPEE.

It is the SLR QP's opinion that, with consideration of the recommendations summarized in Section 1.1.2.1 and Section 23.1 of this report, any issues relating to all relevant technical and economic factors likely to influence RPEE can be resolved with further work.

Mineral Resource estimates exclusive of Mineral Reserves for the Darling Range Property are shown in Table 1-3 and Table 11-1, with an effective date of 31 December 2025. These include a 5% reduction factor in tonnage, based on the results of annual reconciliations (see discussion on density in Section 11.8).

**Table 1-3: Summary of Darling Range Mineral Resources Exclusive of Mineral Reserves – Effective Date 31 December 2025**

| Category | Tonnage (Mt) | AL (%) | SI (%) |
|---|---|---|---|



| | | | |
|---|---|---|---|
| Measured | 133.6 | 30.1 | 1.9 |
| Indicated | 53.2 | 29.7 | 1.6 |
| **Measured + Indicated** | **186.8** | **30.0** | **1.8** |
| Inferred | 51.9 | 31.9 | 1.1 |

Notes:

1. The definitions for Mineral Resources in S-K 1300 were followed.
2. Mineral Resources are 100% attributable to Alcoa and are exclusive of Mineral Reserves.
3. Mineral Resources for the polygonal models are estimated at a geological cut-off grade, which generally approximates to nominal cut-off grades of 27.5% available alumina (AL) with less than 3.5% reactive silica (SI).
4. Mineral Resources estimated using a 3DBM approach are evaluated taking into account all estimated block grades with economic bauxite material defined based on a 'Value in Use' (VIU) calculation which takes into account individual and cumulative block grades to identify zones of economic bauxite which meet the minimum grade and quality specification required by the refinery taking into account mining considerations and blending opportunities. The VIU calculation used in the definition and reporting of Mineral Resources uses a life of mine (LOM) price of $500/t for alumina and $300/t for caustic soda, respectively.
5. A minimum total mining thickness of 1.5 m was used.
6. In situ dry bulk density is variable and is defined for each block in the Mineral Resource model.
7. A global downwards adjustment of tonnes by 5% is made to account for density differences based on historic mining performance.
8. The reference point for the Mineral Resource is the in situ predicted dry tonnage and grade of material to be delivered to the refinery stockpile following the application of a Mineral Resource pit.
9. Numbers may not add due to rounding.

### 1.3.8 Mineral Reserve Estimates

A Mineral Reserve has been estimated for Alcoa's Darling Range bauxite mining operations in accordance SEC S–K 1300 which are consistent with the guidelines of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Mineral Reserves (the JORC 2012 Code).

As part of the annual audit the SLR QP inspected the Alcoa Huntly and Willowdale operations and site Mine Planning Department between 21 and 22 October 2025 and visited Alcoa's Mine Planning offices in Perth CBD on 23 and 24 October 2025, interviewing relevant personnel on these dates and on other occasions. The SLR QP has prior knowledge of the asset being involved in the previous Mineral Reserve Statement (since 2021).

The Mineral Reserve is classified with reference to the classification of the underlying Mineral Resource and with reference to confidence in the informing Modifying Factors. The SLR QP considers the Proven and Probable classification to be appropriate to the deposit and associated mining operations.

The Proven Mineral Reserve is a subset of Measured Resources only. The Proven Mineral Reserve is included in the Long Term Mine Plan (LTMP) and is approved for mining.

The Probable Mineral Reserve is estimated from that part of the Mineral Resource that has been classified as Indicated or from Measured resources that are not yet approved for mining.

Variable cut-off grades are applied in estimation of the Mineral Reserve, and these are related to operating cost and the nature of the Mineral Resource in relation to blending requirements. The Mineral Reserve estimate is expressed in relation to AL and SI, the latter being the critical contaminant in relation to the refineries. The reference point for the Mineral Reserve is prior to the processing plant at the refinery.

Mineral Reserve estimates for the Darling Range Property are shown in Table 1-4 (and Table 12-1), with an effective date of 31 December 2025.

**Table 1-4: Summary of Darling Range Mineral Reserves – Effective 31 December 2025**

| Region | Class | Tonnage (Mt) | AL (%) | SI (%) |
|---|---|---|---|---|
| Huntly | Proven | 22.7 | 28.6 | 1.9 |
| | Probable | 235.8 | 31.6 | 1.5 |
| | **Total** | **258.5** | **31.3** | **1.6** |
| Willowdale | Proven | 10.8 | 30.7 | 1.7 |
| | Probable | 123.7 | 31.1 | 1.4 |
| | **Total** | **134.5** | **31.1** | **1.4** |
| Total | Proven | 33.4 | 29.3 | 1.8 |
| | Probable | 359.5 | 31.4 | 1.5 |
| | **Total** | **392.9** | **31.2** | **1.5** |

Notes:

1. The definitions for Mineral Reserves in S-K 1300 were followed, which are consistent with JORC definitions.
2. Mineral Reserves are stated on a 100% ownership basis following Alcoa Corporation's acquisition of Alumina Limited.
3. The target grade for mine planning is generally between 29.0 to 33% available alumina (AL) and around 1.5% reactive silica (SI) and varies locally. Related to the last two years production and the MTP from 2026 to 2028 these target AL grades are expected to be lower, generally between 28.5% and 30%, while SI levels are higher, ranging from approximately 1.8% to 2.25%. From 2029 onward, AL grades improve to 31–32.5% and SI drops to about 1.3%–1.5%, trending toward ~1.15% by 2034, as the schedule moves from lower-quality to higher-quality ore zones.
4. Mineral Reserves are estimated at an economic cut-off which considers grade, operating costs and ore quality for blending. The economic cut off has been estimated using a base alumina price of $400/t for Alumina. Various deductions for caustic ($500 /t), other alumina production costs, along with mining related costs and a metallurgical recovery factor for extractable alumina of 93% have been applied during optimization to provide economically minable shells for the purpose of the LTMP.
5. Minimum mining widths are not used due to the surficial nature of the Mineral Resource, rather a minimum mining block size of 15m by 15m by 1m deep is applied.
6. The reference point for the Mineral Reserve is the refinery processing plant gate, with crushing, washing (as applicable), and transportation being the only process employed.
7. Bulk density is variable, dependent on the nature of the Mineral Resource and is separately estimated in the Mineral Resource model.
8. The moisture factor used to convert wet tonnes to dry tonnes is 0.91
9. Numbers may not add due to rounding.

### 1.3.9 Mining Methods

The Huntly and Willowdale mines employ conventional open pit mining practices and equipment. The fleet is mixed between contract and owner-operator, depending on the nature of the task at hand. Owner operator equipment is used for mining the bulk of the Mineral Reserve; mining is day shift only in environmentally (noise) sensitive areas and at the perimeter of the mining area.

Following definition of Mineral Reserve blocks, vegetation is cleared ahead of mining on behalf of the Western Australian State Forest Products Commission (FPC), saleable timber being harvested for use. Following harvesting and clearing, Alcoa operations commence stripping topsoil and secondary overburden removal (SOBR) using small excavators, scrapers, and trucks. Soil is stockpiled at the site, away from the proposed pit, for rehabilitation purposes.

Mining progresses on 4 m benches, utilizing a contour-mining sequence, cutting benches across the topography, working from top to bottom, maintaining the flattest floor obtainable



to a maximum overall gradient of 1:10. This is most pronounced in steep areas. Most of the mineralization lies beneath a gently undulating topography and contour mining is minimal.

After completion of mining, overburden is progressively backfilled into adjacent exhausted pits, topsoiled and rehabilitated by re-establishment of native vegetation, creating a stable post-mining landform that replicates the pre-existing environment.

### 1.3.10 Processing and Recovery Methods

The SLR QP notes in accordance with the mine planning reviewed, total silica ($T.SiO_2$) and SI contents, on an annual average basis, remains on target for refineries for the next nine years. This means, there is no indication that deleterious elements will exceed acceptance criteria in the Darling Range ore over the next nine years of production.

The process plant for the Darling Range operations consists of two separate crushing facilities at the Huntly and Willowdale mines. Both facilities crush the Run-of-Mine (ROM) and currently convey the crushed ore to two separate refineries located at Pinjarra and Wagerup.

The power consumption of the Huntly operation is approximately 5,500 MWh to 6,500 MWh per month. The Willowdale power consumption is approximately 2,000 MWh per month.

The process plant is a dry crushing operation and therefore water is only required for dust suppression and is included as part of mine water consumption. Water is not required as a consumable for the plant.

### 1.3.11 Infrastructure

The infrastructure for the mining operations is established and operational. During 2021, the infrastructure hub for Willowdale was relocated 16 km southwards from Orion (having been based there for 21 years) to the Larego site which is located approximately 20 km north-east of the town of Harvey. The hub hosts new administrative offices, as well as crushing facilities and maintenance facilities. The Orion site has been decommissioned.

Extensive haul road networks and overland conveyors transport crushed bauxite to the Wagerup and Pinjarra refineries. Bauxite is transferred from each mine to the refineries primarily via long distance conveyor belt. The Alumina produced by the refineries is then currently shipped to external and internal smelter customers through the Kwinana and Bunbury ports.

As intended, the Kwinana refinery ceased production in the second quarter of 2024 as part of the phased curtailment announced in January 2024. The refinery has now permanently closed (and the mine plans have been revised accordingly). The Darling Range's Pinjarra refinery receives power from the South West Interconnected System (SWIS). The refinery also has internal generation capacity of 100 MW from four steam driven turbine alternators, with steam produced by gas fired boilers and a gas turbine Heat Recovery Steam Generator (HRSG). The refinery supplies power to the Huntly Mine by three different power supply lines (a single 33 kV and two 13.8 kV). Willowdale Mine has a single 22 kV power supply fed from the Wagerup refinery. The Wagerup refinery is a net exporter of power to the SWIS, with internal generation capacity of 108 MW from three steam driven turbine alternators and one gas turbine. The steam is produced by gas fired boilers.

The WA mines are licensed by the Department of Water and Environmental Regulation (DWER) to draw surface water from five locations to meet their water supply requirements. The Huntly mine draws water from Banksiadale Dam and Boronia Waterhole. Huntly mine also holds a license to draw water from Pig Swamp and Marrinup, however these resources are retained as a backup water supply and have not been utilized in recent years. Huntly mine is also permitted to draw water from South Dandalup Dam under an agreement with the Water Corporation. A pumpback facility from South Dandalup Dam to Banksiadale Dam



is used to raise levels in Banksiadale Dam during periods of low rainfall runoff. Willowdale Mine draws water from Samson Dam.

There are no Alcoa accommodation facilities located within the Darling Range Property. The Huntly and Willowdale mining areas are within proximity to established population centers including Pinjarra approximately 30 km to the southwest of Huntly and Waroona approximately 20 km northwest of Willowdale. Onsite facilities include offices, ablutions, crib-rooms and workshops, all of which were observed to be in excellent condition.

No tailings are generated within the boundaries of the mining operations, and the majority of overburden (waste) is used to rehabilitate the previously mined out areas. Residue from processing is generated downstream of the mine and is not considered in this TRS, although they are considered as a cost and as part of the financial evaluation. Alcoa's Darling Range mining operations do not produce mine waste or "mullock" in the same manner as conventional mining operations, the majority of overburden (waste) is used to rehabilitate the previously mined out areas.

### 1.3.12 Market Studies

Alcoa Corporation is a vertically integrated aluminum company comprising bauxite mining, alumina refining, aluminum production (smelting and casting), and energy generation.

Through direct and indirect ownership, Alcoa Corporation has 25 locations in eight countries around the world, situated primarily in Australia, Brazil, Canada, Iceland, Norway, Spain, and the United States. Governmental policies, laws and regulations, and other economic factors, including inflation and fluctuations in foreign currency exchange rates and interest rates, affect the results of operations in these countries.

There are three commodities in the vertically integrated system: bauxite, alumina, and aluminum, with each having their own market and related price and impacted by their own market fundamentals. Bauxite, which contains various aluminum hydroxide minerals, is the principal raw material used to produce alumina. Bauxite is refined using the Bayer process to produce alumina, a compound of aluminum and oxygen, which in turn is the raw material used by smelters to produce aluminum metal.

Annually, the majority of bauxite produced by Alcoa operated mines is delivered to Alcoa refineries.

China is the largest third-party seaborne bauxite market and accounts for more than 90% of all bauxite traded. Bauxite is sourced primarily from Guinea, and Australia on the third-party market. In the long run, China is expected to continue to be the largest consumer of third-party bauxite with Guinea expected to be the majority supplier.

Bauxite characteristics and variations in quality heavily impact the selection of refining technology and refinery operating cost. Bauxite with high impurities could limit the customer volume an existing refinery could use, resulting in a discount applied to the value-in-use price basis.

Besides quality and geography, market fundamentals, including macroeconomic trends – the prices of raw materials, like caustic soda and energy, the prices of Alumina and Aluminum, and the cost of freight – will also play a role in bauxite prices.

Alcoa determines economic cut-off grade by deducting operational costs (mining, refining etc.) from a base alumina price of $400/t. This approach is described in more detail in Section 12.7.

The bauxite price utilized in the mine cash flow is determined using an internal transfer price methodology that considers both the mine's operating cost structure and the value to Alcoa's integrated refining operations. The starting price of $25.45/t (FY26) escalates by 3% annually, resulting in a weighted average of $28.74/t over the nine-year mine plan period.

### 1.3.13 Environmental Studies, Permitting and Plans, Negotiations, or Agreements with Local Individuals or Groups

Alcoa has established practices and processes for enabling conformance to environmental requirements. Sensitive areas are identified and managed ahead of disturbance. Environmental factors are considered prior to drilling; hence, mining blocks carrying intolerable environmental risks do not feature in the Mineral Reserves (for example, areas around granite outcrops and water courses have a buffer applied and are essentially no-go areas from a mining perspective). Mining in some areas became more constrained in 2023 as a result of internal and external factors including third party referrals of the 2022-2026 and 2023-2027 MMPs to the EPA. In most circumstances, activities under assessment must cease during the EPA's process.

Importantly, on 14 December 2023 the State Government announced the Alcoa Transitional Approvals Framework and Exemption Order, which will enable Alcoa to continue mining as defined in the 2023-2027 MMP (and subsequent roll-overs) while the formal Western Australian EPA EIA is in progress. Note, that the State Government reserves the right to, with reasonable notice, withdraw or amend the exemption at any point.

The 2023-2027 MMP was developed by Alcoa and approved by the Minister for State Development in December 2023. The approval was rolled over in October 2024 to cover the 2024-2028 MMP which describes Alcoa's operations from 1 January 2024 to 31 December 2028. The MMP describes the way in which Alcoa mines within Mining Lease ML1SA at Huntly and Willowdale. For example, Alcoa undertakes surveys to inform the mine plan development, facilitate characterization of ore quality and volumes, assess geotechnical conditions, identify constraints and protect or manage important environmental, cultural heritage and social values.

Based on reports provided under Clause 10 of the 2023 Exemption Order for January to December 2024 and January to June 2025, Alcoa has been able to comply with increased regulatory requirements while the EPA formally assesses the 2022-2026 and 2023-2027 MMPs.

As was reported in the previous TRS, relevant to MMP areas:

- Reduce mining activities inside higher risk areas within drinking water catchments.
- Alcoa will not undertake any new mining pit clearing in any areas with an average pit slope greater than 16% within any Reservoir Protection Zone (RPZ, 2 km from reservoir top water level).
- Increase rehabilitation and reduce open areas where possible, with priority in higher risk areas.
- Maximum annual clearing footprint of 800 ha.
- Alcoa is currently working on further revision to the Rehabilitation Completion Criteria as part of the 2024-2028 MMP approval which will come into effect from 2026.

Alcoa operated within these constraints in 2024 and 2025.

Separate to the MMP, Alcoa is modernizing its environmental approvals framework for the Huntly Bauxite Mine by referring future mining plans beyond the scope of the 2023-2027 MMP for assessment under Part IV of the Western Australian *Environmental Protection Act 1986* (EP) and the Australian *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The future mining plans that have currently been referred to both state and federal departments propose to transition the Huntly Mine to the proposed O'Neil, Myara North, and Holyoake mine regions within Alcoa's Mining Lease ML1SA.



The resulting EIAs under State and Federal legislation will inform stakeholders on long-term mine plans and environmental management requirements and facilitate the setting of approval conditions.

As reported in the TRS for 2022, 2023 and 2024 numerous baseline studies have been completed to support approvals for future extensions to the mining footprint to the Myara North and Holyoake regions, this is also the case for O'Neil. Baseline studies are guided by the requirements of the EPA and guidelines under the EPBC Act and are well understood.

Construction for Myara North, Holyoake, and O'Neil will commence pursuant to the requirements of the State and Federal approvals, which will be issued upon completion of the EPA and EPBC assessment processes indicatively forecast for the end of 2026, as opposed to the first quarter of 2026 as reported in the TRS for 2024. The timeframe to approval of O'Neil, Myara North, and Holyoake under the EP Act and EPBC Act can be estimated, but not predicted with certainty; further delays are possible.

There is no requirement for the monitoring of any tailings or mine waste dumps associated within the mining operations at Willowdale and Huntly as:

- No tailings are generated within the boundaries of the mining operations at Huntly and Willowdale.
- Overburden is carefully segregated for later contouring and rehabilitation of adjacent, completed mining operations. Caprock and other non-viable rock is used to backfill these shallow, completed pits and the viable topsoil is spread on top, contoured, and revegetated. Waste dumps are not constructed at Huntly or Willowdale.

Alcoa's mine sites are monitored in accordance with the conditions of Government authorizations and its operational licenses at Huntly (L6210/1991/10) and Willowdale (L6465/1989/10). Outcomes of and compliance with the management and monitoring programs are tracked within Alcoa's Environmental Management System and reported within annual reports to DWER and JTSI.

- Review of the most recent annual reports to DWER and JTSI largely reported compliance with environmental commitments and success of operational controls to manage environmental objectives.
- In addition, Alcoa was reported as being wholly compliant in monthly reports demonstrating compliance with the Exemption Order.

Alcoa has established systems and processes for maintaining its social license to operate and was admitted to the International Council on Mining and Metals (ICMM) in 2019, aligning to its social performance requirements. In addition, Alcoa's Western Australian operations are certified under the Aluminum Stewardship Initiative, Alcoa has confirmed recertification has commenced as of the date of this TRS. Related to the requirements of the BSEC, Alcoa's actions include an annual 5-year consultation process aligned with the 5 Year Mine Plan. The consultation process involves engaging with affected landowners. Alcoa's consultation extends to shires, as well as state and local government.

Alcoa has established systems and processes to support maintenance of its social license to operate and conducts an extensive program of community relations activities to ensure that the public is aware and informed regarding its operations.

Alcoa has continued to engage with Traditional Owners through the Gnaala Karla Booja Aboriginal Corporation on cultural heritage and environmental matters across its operational footprint. In May 2025, Alcoa submitted the Cultural Heritage Management Plan to the relevant Government regulator. Consultation is continuing with Gnaala Karl Booja Aboriginal Corporation on a Cultural Heritage Management Framework that it is intended to replace the May 2025 Cultural Heritage Management Plan in due course.



Alcoa's Social Performance Management System (SPMS), SP360, is in place across its global operations. The SPMS supports locations to undertake effective engagement with communities, manage their social risks, and maintain Alcoa's Social License to Operate.

Alcoa's Closure Planning and Execution staff for Darling Range are located across multiple teams. The closure staff within the Global Planning Team are primarily responsible for developing the Long-Term Mine Closure Plans (LTMCPs) and life of asset planning of Alcoa's WA Mining Operations (Huntly and Willowdale). Short to Medium term closure planning and execution is developed across organizational divisions and includes multidisciplinary inputs such as from Operations, Mid- and Short-term Planning, Finance, Centre for Excellence, Environment and Asset Management (both Fixed and Mobile Plant). The agreed closure requirements for Darling Range centers around the return of Jarrah Forest across the site.

The Alcoa procurement system defines "local" as it relates to Huntly and Willowdale as the localities of Keysbrook, North Dandalup, Dwellingup, Myara, Jarrahdale, Banksiadale, Inglehope, Etmilyn, Meelon, Harvey Waroona, Nanga, Cookernup and Yarloop. Within Alcoa's guidelines of safe, ethical, and competitive business practices, Alcoa's Local Community Supplier Policy states it will, among other things:

- Invite capable local business to bid on locally supplied or manufactured goods or services;
- Give preference to local business in a competitive situation;
- Work with local business interest groups to identify and utilize local suppliers; and
- Where possible, structure bids to enable local supplier participation.

Whilst the Policy does not specifically address local hiring, most of the mine's workforce are based within the close vicinity.

Alcoa also endeavors to add value to Traditional Owners and the local economy through the use of businesses owned by Traditional Owners, businesses that employ and work with Traditional Owners and locally owned businesses, for example Alcoa supported the establishment of the Gnaala Karla Boodja Aboriginal Corporation Ranger program in 2024.

### 1.3.14 Capital and Operating Cost Estimates

Alcoa forecasts its capital and operating costs estimates based on annual budgets and historical capital and operating costs over the long life of the current operation.

#### 1.3.14.1 Capital Costs

The operation is well-established, and the LOM plan outlines capital expenditure aligned with scheduled production rates throughout the mine's life. This includes future capital expenditures for major mine relocations to meet anticipated refinery production while sustaining ongoing operations.

Projected mine capital expenditure over the next nine years of mine life is estimated to total $1,310 million, although this will include capital outlay required to extend the mine life much beyond the nine-year period covered by the valuation. Of the total capital, approximately $936 million represents the FEL-3 level estimates for the major mine moves. This includes $302 million for the Myara North Mine Move and $533 million for the Holyoake Mine Relocation. A further $101 million has been identified as contingency across both mine-move estimates.

A breakdown of the major expenditure areas and total expenditure over the Mine Plan is shown in Table 1-5.

**Table 1-5: Nine Year LOM Sustaining Capital Costs by Area**

| Project | Cost $ Million | Percentage of Total |
|---|---|---|
| Mine Moves | 936 | 71% |
| Conveyor Belt Replacements | 67 | 5% |
| Haul Road Improvements | 178 | 14% |
| Other Sustaining capital | 129 | 10% |
| **Total** | **1,310** | **100%** |

Other capital costs are for replacement of conveyors, haul road improvements and other sustaining capital needed to continue the operations.

Alcoa's sustaining capital estimates for Darling Range are derived from annual budgets and historical actuals over the long life of the current operation. According to the American Association of Cost Engineers (AACE) International, these estimates would generally be classified as Class 1 or Class 2 with an expected accuracy range of -3% to -10% to +3% to +15%.

### 1.3.14.2 Operating Costs

The main production mining operations are primarily Owner-operated using Alcoa equipment and employees, with contractors engaged for specific supporting activities.

Operating costs are derived from historical site cost data and, in the SLR QP's opinion, achieve an accuracy range of -10% to +15%, which is appropriate for this level of planning.

No material factors have been identified that would significantly impact operating costs over the LOM.

Year-to-year variations are expected due to routine maintenance outages and production schedule fluctuations.

Table 1-6 presents both the forecast costs for 2026 and average operating costs over the nine-year LOM. As announced in September 2025, the Kwinana refinery permanently closed, following an end to production in the second quarter of 2024.

**Table 1-6: LOM On-site Mine Operating Costs by Category***

| Cost Centre | 2026 ($/wmt) | Average LOM ($/wmt) | Percentage of Operating Cost |
|---|---|---|---|
| Direct Labor | $3.83 | $5.16 | 35% |
| Services | $2.26 | $2.30 | 16% |
| Other | $1.54 | $1.64 | 11% |
| Corporate Chargebacks for support services | $2.11 | $1.33 | 9% |
| Energy | $0.19 | $0.11 | 1% |
| Fuel | $0.46 | $1.22 | 8% |
| Operating Supplies and Spare Parts | $0.81 | $0.98 | 7% |
| Maintenance (fixed plant and mobile fleet) | $0.90 | $1.98 | 13% |
| **Mine Operating Cash Cost ($/wmt)** | **$12.10** | **$14.72** | **100%** |
| | | | |

| | | | |
|---|---|---|---|
| **Off-site Costs** | | | |
| G & A, selling and other expenses | $1.21 | $0.89 | |
| R & D Corporate Chargebacks | $0.12 | $0.14 | |
| Other COGS | $0.23 | $0.21 | |
| **Total Cash Operating Costs** | **$13.66** | **$15.96** | |

*Due to rounding, numbers presented may not add up precisely to the totals provided.

Services costs include contractor costs for certain mining activities such as in noise sensitive areas and for haul road construction services, in select areas of pit development, and during landscaping activities for rehabilitation after mining.

As of December 2025, the Huntly and Willowdale operations together employ 1,181 employees consisting of 37 technical, 124 management and 849 operations employees. Additionally, 171 employees are centrally employed on the combined operations.

# 2.0 Introduction

SLR Consulting Ltd (SLR) was appointed by Alcoa Corporation (Alcoa) to prepare an independent Technical Report Summary (TRS) on Alcoa's Darling Range bauxite mining operation (Darling Range or the Property), located in Western Australia. The purpose of this report is to support the disclosure of Mineral Resource and Mineral Reserve estimates for the Property with an effective date of December 31, 2025. This TRS conforms to the United States Securities and Exchange Commission's (SEC) Modernized Property Disclosure Requirements for Mining Registrants as described in Subpart 1300 of Regulation S-K, Disclosure by Registrants Engaged in Mining Operations (S-K 1300), and Item 601(b)(96) of Regulation S-K. This Technical Report Summary updates the TRS titled "Technical Report Summary for Darling Range, Western Australia," with an effective date of December 31, 2024, that was prepared in accordance with S-K 1300 and Item 601(b)(96) by SLR for Alcoa.

The SLR Qualified Persons (QPs) who have prepared the TRS meet the SLR QP requirements defined by the SEC and the Competent Person requirements defined by the Committee for Mineral Reserves International Reporting Standards (CRIRSCO).

Alcoa is one of the world's largest aluminum producers and is a publicly traded company on the New York Stock Exchange (NYSE) and the Australian Stock Exchange (ASX). The company owns and operates integrated bauxite mining, alumina refining and aluminum smelting operations at numerous assets globally across eight countries. Alcoa is also party to several other joint ventures or consortia in Brazil, Canada, and Guinea.

Alcoa's Darling Range bauxite mining operation, located south of Perth in Western Australia, comprises two active bauxite mining areas – the Huntly and Willowdale mines – owned and operated by Alcoa. The Huntly and Willowdale operations collectively represent one of the world's largest bauxite mines, which currently supplies Alcoa's alumina refineries in Pinjarra and Wagerup. On the basis that both mining areas supply ore to local refineries, which are also operated by Alcoa, and that both mining areas are located within the same mining lease boundary, SLR considers the mines a single property for the purposes of this report.

Alcoa has a long history of mining in the Darling Range with the Huntly and Willowdale mines commencing commercial production in 1972 and 1984, respectively. These mining areas were preceded by the Jarrahdale bauxite mine which was operational between 1963 and 1998. The Huntly mine currently supplies bauxite to the Pinjarra refinery, while the Willowdale mine supplies the Wagerup refinery. The mines collectively supply approximately 26 Mtpa of bauxite, with approximately 16 Mtpa from Huntly and 10 Mtpa from Willowdale. For the purposes of this report, available alumina ($A.Al_2O_3$) is abbreviated to AL, and reactive silica ($R.SiO_2$) is abbreviated to SI.

There are three major Mining Reporting Centers in the approved Mining Lease (ML1SA): North (previously Jarrahdale), Huntly in the central area, and Willowdale in the south. Mining Regions refer to subdivisions of the Reporting Centers that cover several years of mining activities, focused on a specific crusher location. Resource model areas (RMA) are further subdivisions of Mining Regions.

## 2.1 Site Visits

SLR Qualified Persons (QPs) for Geology/Resources and Mining/Reserves visited the sites between 21 October to 24 October 2025. The SLR Geologist and SLR Mining Engineer were accompanied by various Alcoa personnel to undertake site visits, inspections of various aspects of the Huntly and Willowdale mining areas. Further discussions on reconciliation, geological modeling, long term mine planning, and permitting were undertaken at the Perth office. Table 2-1 below provides a summary of the site visit. Alcoa provided permission to document the site visit with video, photos, and audio which were shared with the other SLR team members. Further, an SLR Environmental practitioner attended some of the corporate meetings regarding Mining Studies, environmental surveys, groundwater modelling, data

management and GIS, environmental approval status and Traditional Owner engagement (as part of the broader Modifying Factor review).

**Table 2-1: Site Visit Summary**

| Date | Day | Tasks / Areas of Investigation | Comments |
|---|---|---|---|
| 21-Oct | Tues | Willowdale Mine tour | Inspect pre-mining process and mining operation |
| | | Economics/financial model/mining studies/hydrogeology | Capital Plan, Environmental, and MTP discussions at Pinjarra Hub |
| 22-Oct | Wed | Mine tour for Huntly Mine Myara | Inspection of rehabilitation planning & process, and rehab operations |
| | | Database/capital plan/geographic information system (GIS) for environmental reporting and constraint management | Finance and GIS discussions at Pinjarra Hub |
| 23-Oct | Thurs | Residue planning/Value In Use (ViU), LTMP/ medium term plan (MTP) | LTMP for Huntly and Willowdale, MTP for Huntly |
| | | ViU cost support/Approvals/Indigenous engagement | Heritage process/MMP and Part IV Approvals/Reconciliation |
| 24-Oct | Fri | Reporting/Review feedback/Reconciliation | Meet with Global Planning Team |

## 2.2 Sources of Information

During the preparation of this Technical Report Summary, discussions were held with personnel from Alcoa Corporation and the Huntly and Willowdale Mines, as below:

**Table 2-2: List of Alcoa staff who had input into discussions with SLR QPs**

| Name | Position | Department | Area of Responsibility |
|---|---|---|---|
| Alex Hatch | Principal Geologist | Alcoa Global Planning | Geology - Review Coordinator |
| Wayne Baird | Pre-mining co-ordinator | Willowdale | Operational Planning |
| Vanessa Collins | Short Term Planning Superintendent | Willowdale | Short Term Planning |
| Trish Bostock | WA Mining Controller | WA Mining | Finance |
| Jason Dicandilo | Management Accountant - Huntly | WA Mining | Finance |
| Larissa Hackett | Mining Studies Manager | WA Mining | Mining Studies |
| Hendrik Enslin | Production Manager | Huntly Mine | Operations |
| Kylie Dixon | Geoscience Data Admin | Exploration | Drilling Database (acQuire) |
| Matt George | Regional Spatial Manager | Global Planning | GIS |
| Francois Vorster | Project Director | Major Projects | Myara North/Holyoake/O'neil |
| Matthew Cox | Impoundments Planning and Risk Manager | Global Impoundments | Impoundments Planning |
| Neylor Aguiar | Principal Mining Engineer | Global Planning | Long Term Mine Planning - Darling Range |



| | | | |
|---|---|---|---|
| John Un | Senior Mine Planning Engineer | Global Planning | Long Term Mine Planning - Darling Range (Ex MTP Huntly) |
| Jack Dalton | Strategic Finance Director | Financial Accounting | Finance |
| Angela Murphy | Cultural Heritage Lead | Sustainability | Indigenous engagement/Cultural Heritage |
| Kane Moyle | Director of Regulatory Approvals | Regulatory Approvals | Regulatory Approvals - MMP and transition |
| Ashley Bird | Regulatory Approvals Manager | Regulatory Approvals | Regulatory Approvals - Part 4/5/EPBC |
| Quentin Swart | Senior Resource Geologist | Global Planning | Geology - Resource Development |
| Lucas Tuckwell | Senior Resource Geologist | Global Planning | Geology - Resource Development |
| Karthik Sampath | Global Planning Director | Global Planning | Planning |
| Alex Greaves | Global Mine Planning Manager | Global Planning | Mine Planning |
| Tom Green | Resource Development Manager | Global Planning | Resource Development |
| Rishi Kumar | Senior Mining Engineer | Mining Excellence | Mining Improvement Projects - Reconciliation |

The documentation reviewed, and other sources of information, are listed at the end of this report in Section 24.0.

## 2.3 List of Abbreviations

Units of measurement used in this report conform to the metric system. All currency in this report is United States dollars (US$), unless otherwise noted.

| Abbreviation | Description |
|---|---|
| $ | United States Dollars |
| °C | degree Celsius |
| °F | degree Fahrenheit |
| 2D | 2-dimensional |
| 3D | 3-dimensional |
| 3DBM | 3D Block Model |
| a | Annum |
| A | Ampere |
| A.$Al_2O_3$ or AL | available alumina |
| AACE | American Association of Cost Engineers |
| AC | Air core |
| AFFF | Aqueous Film Forming Foams |
| AGD | Australian Geodetic Datum |
| Alcoa | Alcoa Corporation |

| | |
|---|---|
| Alcoa US | Aluminum Company of America Ltd |
| AMG | Australian Map Grid |
| AMPD | Absolute Mean Percentage Difference |
| AMSL | above mean sea level |
| AMWU | Australian Metal Workers Union |
| AofA | Alcoa of Australia Ltd |
| API | Alumina Price Index |
| ARO | Asset Retirement Obligations |
| ASX | Australian Stock Exchange |
| AWAC | Alcoa World Alumina and Chemicals |
| AWU | Australian Workers Union |
| B&P | Bias and Precision |
| bbl | barrels |
| BD | Bomb digest |
| BD-GC | bomb digest gas chromatography |
| BD-ICP | bomb digest inductively coupled plasma |
| BD-NDIR | bomb digest non-dispersive infrared |
| Bella | Bella Analytical Systems |
| BGL | Below ground level |
| BO | Boehmite |
| BSEC | Bauxite Strategic Executive Committee Bauxite |
| Btu | British thermal units |
| BV | Bureau Veritas |
| C$ | Canadian dollars |
| cal | calorie |
| CalVal | calibration and validation for FTIR |
| CAPEX | Capital Expenditure |
| cfm | cubic feet per minute |
| CIM | CIM (2014) |
| cm | centimeter |
| cm² | square centimeter |
| COGS | Cost of Goods Sold |
| CP(s) | Competent Person(s) |
| CPT | Cone penetration |
| CRA | Catchment Risk Assessment |
| Cu | Consolidated undrained |
| CV | Coefficient of Variation |
| d | Day |

| | |
|---|---|
| DBCA | Department of Biodiversity, Conservation and Attractions |
| DCCEEW | Department of Climate Change, Energy, the Environment and Water |
| DCF | Discounted Cash Flow |
| DEM | Digital Terrain Model |
| DEED | Department of Energy and Economic Diversity |
| DG | Discrete Gaussian |
| DGPS | (Differential) Global Positioning System |
| DH | Department of Health |
| dia | Diameter |
| DIBD | dry in situ bulk density ($g/cm^3$) |
| DJTSI | Department of Jobs, Tourism, Science and Innovation |
| DMIRS | Department of Mines Industry Regulation and Safety |
| DMPE | Department of Energy Mines, Petroleum and Exploration |
| dmt | dry metric tonne |
| DOMAF | domain |
| DPLH | Department of Planning, Lands and Heritage |
| DWER | Department of Water and Environment Regulation |
| dwt | dead-weight ton |
| E | Young's Modulus |
| EIA | Environmental Impact Assessment |
| EMS | Environmental Management System |
| EP | Western Australian Environmental Protection Act 1986 |
| EPA | Environmental Protection Authority |
| EPBC Act | Australian Environment Protection and Biodiversity Conservation Act 1999 |
| ETU | Electrical Trades Union |
| EWR | Ecological water requirements |
| FCP | Western Australian State Forest Products Commission |
| FE | Hematite |
| FEL | Front End Loading |
| FMS | Fleet Management System |
| FPC | Forest Products Commission |
| FS | Feasibility Study |
| ft | foot |
| ft/s | foot per second |
| $ft^2$ | square foot |
| $ft^3$ | cubic foot |
| FTIR | fourier transform infrared spectrometry |
| g | gram |

| | |
|---|---|
| G | giga (billion) |
| g/L | gram per liter |
| g/t | gram per tonne |
| G&A | General & Administrative |
| Gal | Imperial gallon |
| GC | gas chromatography |
| Geological Survey | Geological Survey of Western Australia |
| GHD | GHD Party Ltd |
| GIS | Geographical Information System |
| GKB | Gnaala Karla Booja |
| Gpm | Imperial gallons per minute |
| gr/ft³ | grain per cubic foot |
| gr/m³ | grain per cubic meter |
| GSM | gridded seam model |
| ha | hectare |
| HARD | Half Absolute Relative Difference |
| hp | horsepower |
| hr | hour |
| HRSG | Heat Recovery Steam Generator |
| Hz | Hertz |
| ICMM | International Council on Mining and Metals |
| ICP-OES | inductively coupled plasma optical emission spectrometry |
| IDW | inverse distance weighting |
| ID2 | inverse distance squared |
| in. | inch |
| in² | square inch |
| IRM | internal reference material |
| IRR | Internal Rate of Return |
| ISO | International Standardization Organization |
| J | Joule |
| JORC | JORC Code (2012) |
| JSW | JSW Drilling, Australian drilling contractor |
| JTSI | Department of Jobs, Tourism, Science and Innovation |
| k | kilo (thousand) |
| kcal | kilocalorie |
| kg | kilogram |
| kL | kiloliter |
| km | kilometer |

| | |
|---|---|
| km/h | kilometer per hour |
| km² | square kilometer |
| kPa | kilopascal |
| kV | kilovolt |
| kVA | kilovolt-amperes |
| kW | kilowatt |
| kWh | kilowatt-hour |
| KWI | Kwinana Mining Laboratory |
| L | liter |
| L/s | liters per second |
| lb | pound |
| LiDAR | Light Detecting and Ranging |
| LIMS | laboratory information management system |
| LME | London Metal Exchange |
| LOM | Life of Mine |
| LTMCP | Long-Term Mine Closure Plan |
| LTMP | Long Term Mine Plan |
| m | micron |
| m | meter |
| M | mega (million); molar |
| m² | square meter |
| m³ | cubic meter |
| m³/h | cubic meters per hour |
| Ma | Million years ago |
| MALSI | microwave available alumina (AL) and reactive silica (SI) |
| MASL | meters above sea level |
| MAZ | Mining Avoidance Zones |
| MD | microwave digest |
| MD-ICP | microwave digest inductively coupled plasma optical emission spectrometry |
| mg | microgram |
| mi | mile |
| min | minute |
| mL | milliliters |
| ML | Mineral Lease |
| mm | millimeter |
| MMDD | Dry mass cubic diameter |
| MMPLG | Mining and Management Program Liaison Group |
| MMPs | Mining and Management Programs |

| | |
|---|---|
| mph | miles per hour |
| MS | Ministerial Statement or Magnetic Susceptibility |
| MS728 | Ministerial Statement 728 |
| Mt | Million tons |
| MTP | Medium Term Plan |
| Mtpa | Million tons per annum |
| MVA | megavolt-amperes |
| MW | megawatt |
| MWh | megawatt-hour |
| NATA | Australian National Association of Testing Authorities |
| NI 43-101 | National Instrument 43-101 (2014) |
| NN | Nearest Neighbor |
| NPC | Net Present Cost |
| NPV | Net Present Value |
| NTU | Nephelometric Turbidity Units |
| NYSE | New York Stock Exchange |
| OK | ordinary kriging |
| OX | Oxalate |
| oz | Troy ounce (31.1035g) |
| oz/st, opt | ounce per short ton |
| PDWSA | Public Drinking Water Source Areas |
| PFAS | per- and polyfluoroalkyl substances |
| PLT | Point Load Testing |
| ppb | part per billion |
| ppm | part per million |
| PREU | Pinjarra Refinery Efficiency Upgrade |
| psia | pound per square inch absolute |
| psig | pound per square inch gauge |
| QA | Quality Assurance |
| QA/QC | Quality Assurance / Quality Control |
| QC | Quality Control |
| QP(s) | Qualified Person(s) |
| Q-Q plot | Quantile-Quantile plot |
| R.$SiO_2$ or SI | reactive silica |
| R&D | Research & Development |
| RC | Reverse Circulation |
| REF | reference method |
| ResTag | mineral resource estimation system |

| | |
|---|---|
| RL | relative elevation |
| ROM | Run of Mine |
| RPEE | Reasonable Prospects for Economic Extraction |
| RPZ | Reservoir Protection Zone |
| RTK | real time kinematic |
| s | second |
| SD | Standard Deviation |
| SEC | Securities and Exchange Commission |
| SI | Reactive Silica |
| S-K 1300 | Subpart 1300 of Regulation S-K |
| SLR | SLR Consulting Ltd |
| SMU | Single Mining Unit |
| Snowden | Snowden Mining Consultants |
| SOBR | stripping topsoil and secondary overburden removal |
| SPMS | Social Performance Management System |
| SPU | sample presentation unit |
| SRK | SRK Consulting (Australasia) Pty Ltd |
| st | short ton |
| STATS | Specialist Testing & Technical Services Pty Ltd |
| STE | sample to extinction |
| stpa | short ton per year |
| stpd | short ton per day |
| SU | Sulfate |
| SWIS | South West Interconnected System |
| t | metric tonne |
| T.$Al_2O_3$ | Total Alumina |
| T.$SiO_2$ | Total silica |
| TICTOC | Total Inorganic Carbon and Extractable Organic Carbon |
| tpa | metric tonne per year |
| tpd | metric tonne per day |
| $g/cm^3$ | grams per cubic centimeter |
| TRS | Technical Report Summary |
| TTC | Tetra Tech Coffey Pty Ltd |
| UCS | Unconfined Compressive Strength |
| US$ | United States dollar |
| Usg | United States gallon |
| Usgpm | United States gallon per minute |
| V | volt |

| | |
|---|---|
| ViU | Value in Use |
| W | watt |
| WA | Western Australia |
| WAFA | Western Australian Forest Alliance Inc |
| WANL | Western Aluminum NL |
| WMC | Western Mining Corporation Ltd |
| wmt | wet metric tonne |
| wt% | weight percent |
| XRD | x-ray diffraction |
| XRF | x-ray fluorescence |
| Xstract | Xstract Resources |
| $yd^3$ | cubic yard |
| yr | Year |



# 3.0 Property Description

## 3.1 Location

The Darling Range is located in the southwest of Western Australia and comprises an extensive uplifted plateau hosting bauxite deposits, which is host to several mining operations, including the Huntly and Willowdale mining areas, approximately 80 km and 100 km southeast of Perth, respectively. The nearest towns to the Reporting Centers are North Dandalup (approximately 15 km west of Huntly) and Waroona (approximately 20 km northwest of Willowdale). Both towns are within the Peel Region of southwest Western Australia and are on the route of the South Western Highway, a major national road connecting Perth with the south coast.

All spatial data used for Mineral Resource estimation are reported using a local grid based on Australian Map Grid 1984 (AMG84) system (Zone 50) and using Australian Geodetic Datum 1984 (AGD84) coordinate set (EPSG:20350). The approximate coordinates of the mining areas are 410000 m East and 6390000 m North (Huntly) and 410000 m East and 6365000 m North (Willowdale). The Huntly and Willowdale mining areas are separated by approximately 35 km (Figure 3-1).

The Pinjarra refinery is located adjacent to the east of the town of Pinjarra and is approximately 25 km southwest of the Huntly mining areas. The Wagerup refinery, supplied by Willowdale, is located immediately adjacent to the east of the South Western Highway, approximately 8 km south of Waroona and 20 km west of the Willowdale mining area. The Kwinana refinery, previously supplied by Huntly, was curtailed in 2024 and an announcement to permanently close was made in 2025. The refinery lies approximately 50 km northwest of Huntly in the city of Kwinana, a suburb approximately 40 km south of Perth.

## 3.2 Land Tenure

The Property is constrained by a single mineral concession referred to as Mineral Lease (ML) 1SA. The concession was originally granted on 25 September 1961, by the State Government of Western Australia under the Alumina Refinery Agreement Act, 1961, permitting the exploration and extraction of bauxite. ML1SA was granted for a period of four, 21-year periods, the fourth period of which is due to expire on 24 September 2045. The State Government concession agreement includes the potential for conditional renewal beyond 2045. This will require negotiation between Alcoa and the State Government prior to this date to agree on an extension of the agreement and is therefore not guaranteed.

Conditions which must be fulfilled by Alcoa to retain ML1SA include annual reporting requirements under several State Agreement Acts, Ministerial Statements, and Environmental Protection Acts. These are described in Section 3.6 below.

The current concession of ML1SA covers an area of 7,022.61 km², extending from the north of Perth on the eastern side to the town of Collie in the south (Table 3-1). Alcoa has the exclusive right to explore for and mine bauxite on all Crown Land within the ML1SA; however, a number of environmental and statutory constraints exist within the area, and Alcoa is not permitted to access bauxite from the areas covered under these constraints. For example, the 2023-2027 MMP (and roll-over MMPs) requires:

- A reduction in mining activities inside higher risk areas within drinking water catchments in comparison to the 2022-2026 MMP.
- Alcoa cannot undertake any new mining pit clearing in any areas with an average pit slope greater than 16% within any Reservoir Protection Zone (RPZ, 2 km from reservoir top water level).
- An increase in rehabilitation and reduction in open areas.



- A maximum annual clearing footprint of 800 ha.

The ML1SA area includes sub-lease arrangements made between Alcoa and the Worsley Alumina joint venture participants which include South32, Japan Alumina Associates (Australia) Pty Ltd and Sojitz Alumina Pty Ltd (Worsley Participants). The agreements, made in August 2001 and September 2016, provide bauxite mining concessions to the Worsley Participants. No Mineral Resources or Mineral Reserves attributable to the Darling Range mining areas have been declared within these sub-lease areas.

**Table 3-1: ML1SA License Details**

| Concession Name | Title Holder | Expiry Date | Area (km²) |
|---|---|---|---|
| ML1SA | Alcoa of Australia | 24/09/2045 | 7,022.61 |

Alcoa pays rental for each square mile of ML1SA in accordance with the Alumina Refinery Agreement Act 1961 (WA). In 2025, this amounted to A$13,560.

The boundary of the ML1SA concession area, including the limit of the Worsley Participants' area, is illustrated in Figure 3-1. The contained Reporting Centers and Mining Regions are shown in Figure 3-2, while the extents of the mined areas and Mineral Resources and Mineral Reserves are shown in Figure 3-3. The figures no longer include the location of the Kwinana refinery as this facility was closed permanently in 2025.

Mineral rights for the Property, excepting the sub-lease area, are 100% owned by Alcoa of Australia Limited (AofA), a wholly-owned subsidiary of Alcoa.

**Figure 3-1: ML1SA Lease Extents**

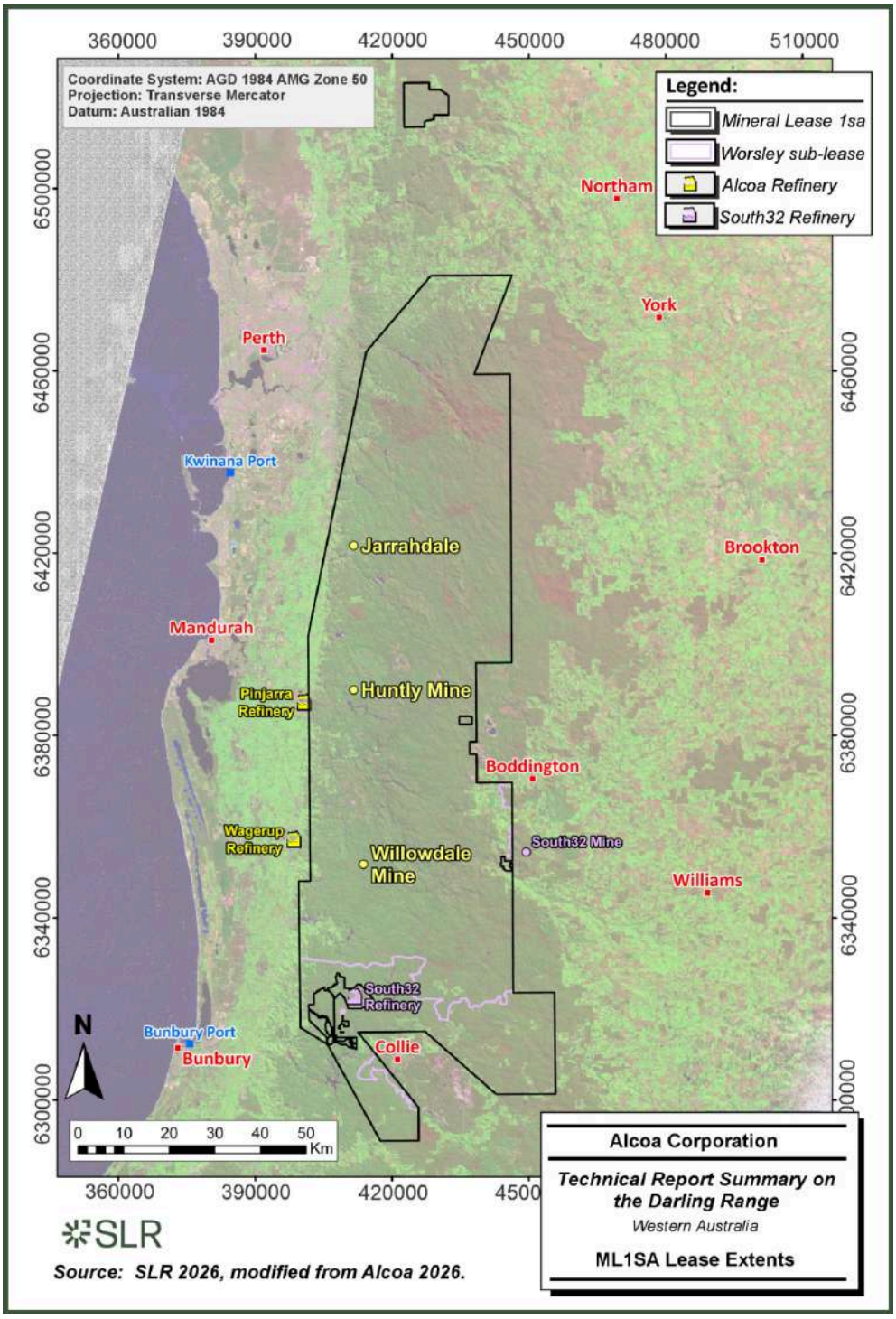


**Figure 3-2: Mining Reporting Centers, Mining Regions, and Production Sheets**

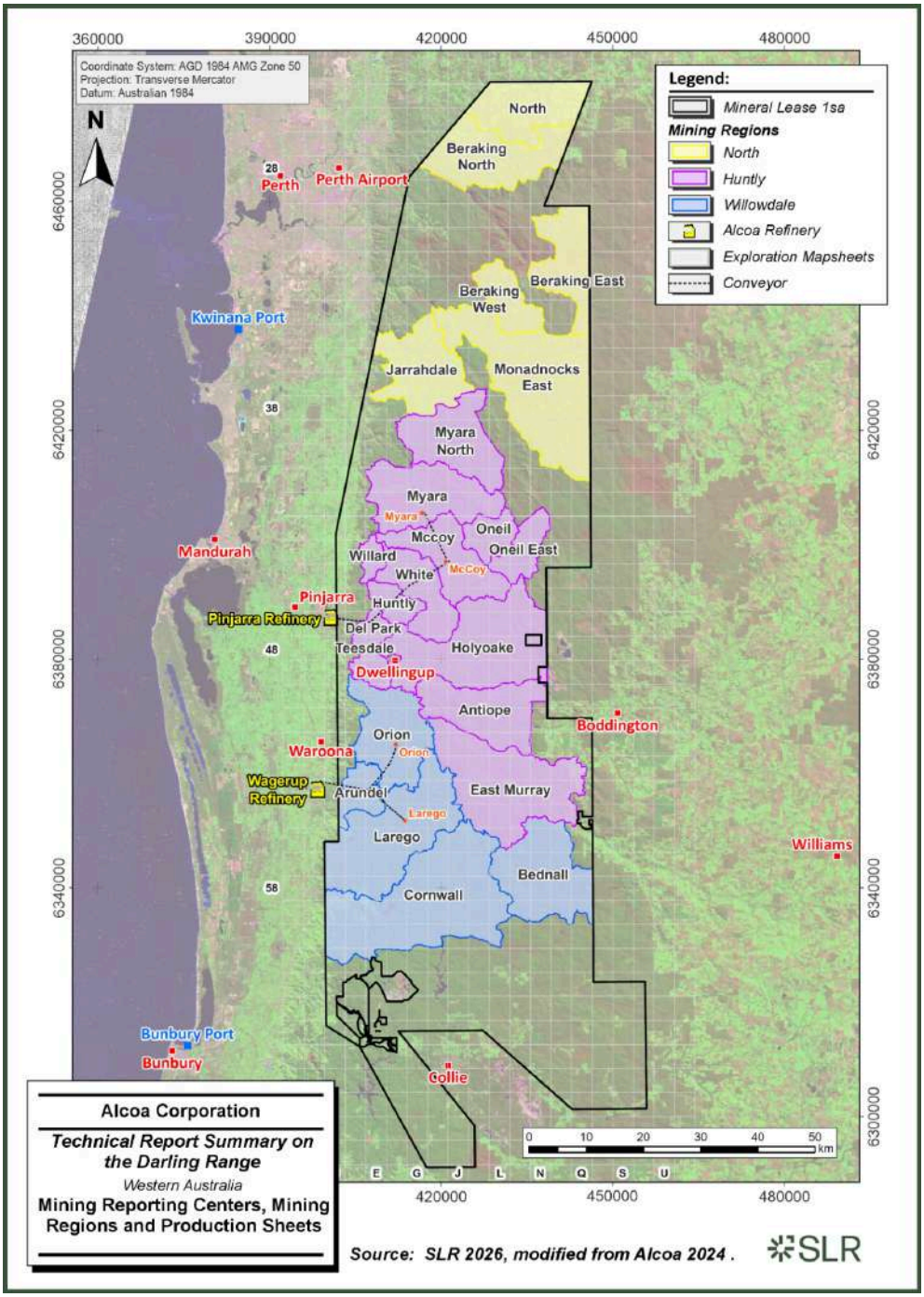
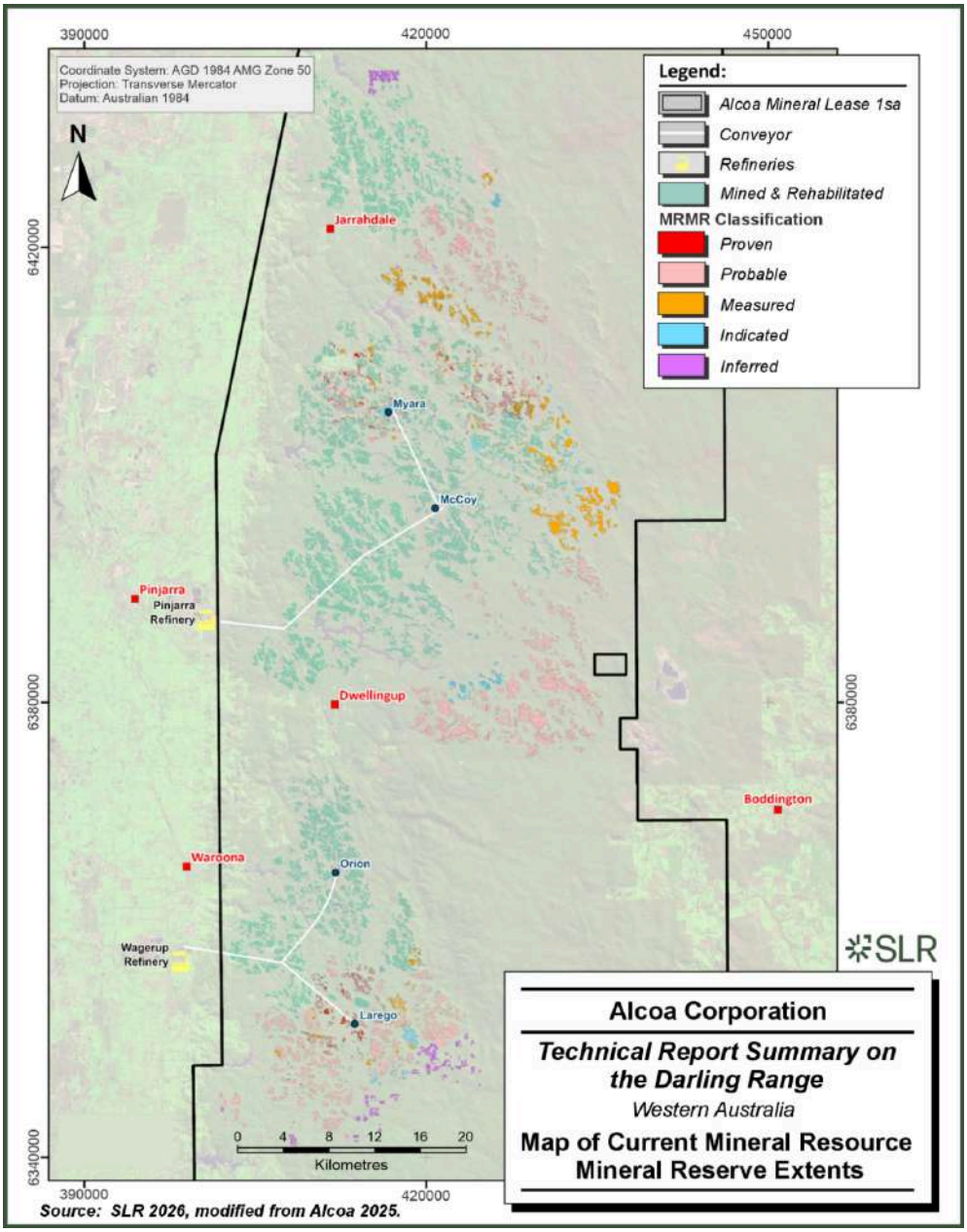


**Figure 3-3: Map of Current Mineral Resource and Mineral Reserve Extents**



## 3.3 Naming Conventions

Alcoa has developed a terminology to refer to various parts of the Mineral Lease. There are three major mining Reporting Centers in ML1SA: North (previously Jarrahdale), Huntly in the central area, and Willowdale in the south. The boundaries are nominal and may change to match the planned ore destination. The southernmost region of the North Reporting Center was reallocated to Huntly in 2017 and named Myara North.

Mining Regions are subdivisions of the Reporting Centers that cover several years of mining activities, focused on a specific crusher location. The boundaries are named after forestry blocks. A total of ten Mining Regions are represented in the current Mineral Resource estimate: one in North, six in Huntly, and three in Willowdale. Resource model areas (RMA) are further subdivisions of Mining Regions.

Mining Pits are named based on their sequence along haul roads. These names are used by the mining fleet when referring to local short-term production. The map reference system outlined below is used for drilling, estimation, and long-term planning.

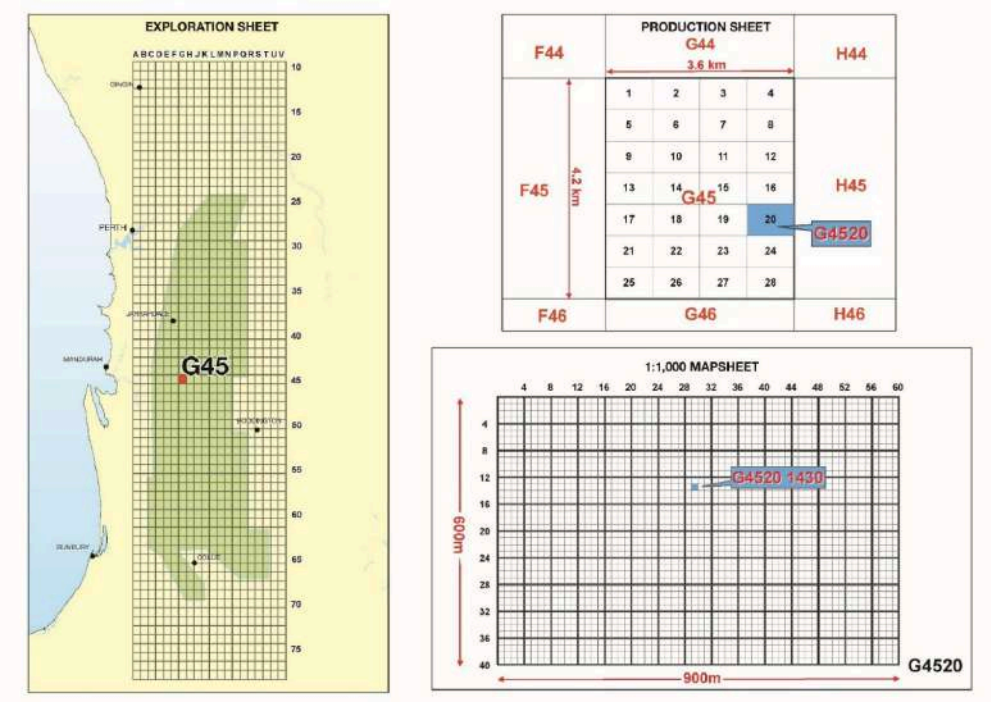
The Mineral Lease is divided into a grid of Exploration Sheets being rectangles 4.2 km (north) by 3.6 km (east). Each 15.12 km² Exploration Sheet is assigned a name and coded using letters A to V (west to east), and numbers 10 to 80 (north to south), e.g., G45.

Each Exploration Sheet is divided into 28 Production Sheets 900 m (east) by 600 m (north), an area of 0.54 km². The Production Sheets are assigned a number (1 to 28), sequentially 4 across (towards the east) and 7 down (towards the south), e.g., G4520.

Each Production Sheet is divided using a 15 m by 15 m grid resulting in 2,400 grid cells (40 north by 60 east). Each of these is regarded as a point and assigned a numeric code 1 to 40 towards the south and 1 to 60 towards the east. These are appended to the Production Sheet name to provide a grid point label, e.g., G4520 1430 and used on 1:1000 Map Sheets to define drill hole locations.

The Exploration Sheet, Production Sheet, and Map Sheet conventions are shown in Figure 3-4.

**Figure 3-4: Exploration Sheet, Production Sheet, and Map Sheet Conventions**




Source: SRK 2021

## 3.4 Encumbrances

Baseline constraints on mining activities within the ML1SA concession are in place, which prevent bauxite mining in these areas including (but not limited to):

- Within 200 m of the top water level margin of any water reservoir
- Within Serpentine Pipehead Dam Catchment
- National Parks
- Aboriginal Heritage Sites
- Old Growth Forest
- Formal Conservation Areas
- Within a 50 m buffer of Granite Outcrop (greater than 1 ha)
- The agreed Mining Avoidance Zones (MAZ) around the towns of Dwellingup and Jarrahdale.

Mineral Resources and Mineral Reserves have not been defined in these restricted areas. Operating rights are obtained by Alcoa through annual submission and approval of the Mining and Management Programs (MMPs) which include mining schedules and the authorizations provided by the Bauxite Strategic Executive Committee Bauxite (BSEC; previously the Mining and Management Program Liaison Group (MMPLG)).

Mining on a day-only basis is conducted in “noise zones” where noise from the mining operations will potentially exceed allowable levels as the operation actively seeks to maintain lower noise levels than those mandated.

## 3.5 Royalties

Alcoa is the holder of ML1SA. For bauxite that is mined and processed in Alcoa's Western Australian alumina refineries, Alcoa pays royalties on the alumina produced in accordance with the Alumina Refinery Agreement Act 1961 (WA).

## 3.6 Required Permits and Status

Alcoa operates under several State Agreement Acts as well as Ministerial Statements and environmental operating licenses issued under the Environmental Protection Act 1986 (WA) (EP) including:

- Alumina Refinery Agreement Act 1961 (WA);
- Alumina Refinery (Pinjarra) Agreement Act 1969 (WA);
- Alumina Refinery (Wagerup) Agreement Act and Acts Amendment Act 1978 (WA), which provided for the creation of the MMPLG (now BSEC);
- Alumina Refinery Agreements (Alcoa) Amendment Act 1987 (WA);
- Ministerial Statement 728 (as amended by Ministerial Statements 897, 1069 and 1157) (MS728);
- Ministerial Statement 646;
- Environmental Protection (Alcoa – Huntly and Willowdale Mine Sites) Exemption Order 2004 (Exemption Order);
- Environmental Protection (Darling Range Bauxite Mining Proposals) Exemption Order 2023;
- Approved 2023-2027 Mining Management Plan (2023-27 MMP);
- Roll-over approval in October 2024 of the 2023-27 MMP (and conditions) now covers the time period of 2024-2028. While the conditions of both approvals are identical; the approval noted some temporal conditions of the 2023-2027 approval had expired, and that Alcoa had met some conditions prior to the roll-over approval.
- The Company is aiming to have the 2025-2029 MMP in place in the first half of 2026.
- Environmental licenses L6210/1991/10 and L6465/1989/10 granted under Part V of the Environmental Protection Act 1986 (WA).

The MMPLG was first established in 1978 and is chaired by the Department of Jobs, Tourism, Science and Innovation (JTSI). It is now referred to as BSEC. Along with JTSI it is comprised of the following State Government agencies:

- Department of Biodiversity, Conservation and Attractions (DBCA)
- Department of Energy and Economic Diversity (DEED)
- Department of Energy Mines, Petroleum and Exploration (DMPE)
- Department of Health (DH)
- Department of Planning, Lands and Heritage (DPLH)
- Department of Water and Environmental Regulation (DWER)
- Forest Products Commission.

The MMPLG is recognized by the Minster for Environment in Ministerial Statements (95, 390, 564, 728, 897 and 1069) regarding expansion of Alcoa operations. The management and oversight of all Darling Range operations by the BSEC/MMPLG involves:

- Provide oversight to mining, infrastructure, processing and related operations within ML1SA;
- Advise on the environmental and social adherence of the 5-year MMPs developed by Alcoa on a recurring annual basis;
- Provide six-monthly authorizations for ground clearance for mining in accordance with the submitted and approved MMPs; and
- Provide oversight to ongoing rehabilitation of mined areas.

The permitting and approval processes, as provided by Alcoa, are summarized below:

- Clause 9 (1) of the 1961 State Agreement provides Alcoa the sole rights to explore and mine the bauxite deposits within ML1SA.
- Clause 5 of the Wagerup State Agreement specifies that Alcoa must consult with the DBCA in relation to the requirement to submit annual mine plans for mining associated with the Wagerup refinery.
- Under Clause 6 (1) of the Wagerup State Agreement, Alcoa has submitted several environmental review documents to the State Government for subsequent approvals of the Wagerup refinery construction and expansions. Within these environmental assessment documents, significant information on Alcoa's bauxite mining operations associated with the Wagerup refinery was included, resulting in several conditions in relation to Alcoa's bauxite mining operations associated with the Wagerup refinery being incorporated in the Ministerial Statements of which the current one is Ministerial Statement 728 (as amended). Procedure 3 of MS728 outlines Alcoa's requirements to have a publicly available Completion Criteria document for its bauxite mining operations, developed in consultation with the MMPLG/BSEC. Procedure 4 of MS728 outlines the MMPLG's/BSEC's authority to review and approve Alcoa's mining operations through the five-year Mine Plan process. To the extent the conditions on bauxite mining operations in Ministerial Statement 728 and the predecessor Ministerial Statements did not cover bauxite mining unrelated to the Wagerup refinery, Alcoa agreed to extend the conditions to the rest of its bauxite mining.
- Through the Wagerup State Agreement, MS728, and agreement between the State Government and Alcoa, the MMPLG/BSEC is responsible for reviewing and providing a recommendation to the Minister for State Development to approve Alcoa's five-year Mine Plans in concurrence with the Minister for the Environment and the Minister for Water.
- Alcoa's mining operations within ML1SA are also conducted in accordance with the Environmental Protection (Alcoa – Huntly and Willowdale Mine Sites) Exemption Order 2004 (Exemption Order) made by the Minister for the Environment. The Exemption Order is consistent with the Wagerup State Agreement that established the MMPLG/BSEC and MMP processes and it also reflects the procedures of MS728 that sets out the MMPLG's/BSEC's responsibility to review annual rolling 5-year mine plans for Alcoa's operations.
- The Exemption Order 2023 is in place while the EPA assesses the 2022-2026 and 2023-2027 MMP which were third party-referred to the EPA in February 2023.

Alcoa reports that all licenses and permissions for the current mining operations are valid, monthly and annual compliance reports submitted for review by SLR support this. On 28 February 2023, the Western Australian Forest Alliance Inc (WAFA) made two third-party referrals to the EPA under s. 38 of the EP Act. The referrals referenced Alcoa's Mining and Management Programs (MMPs) and its bauxite mining operations on the Darling Range in the southwest of WA for the years 2022 to 2026 and 2023 to 2027. Following receipt of the



referrals, the EPA sought further advice from Alcoa including detail on the scope of its planned/completed activities between 2022 to 2026 and 2023 to 2027. On 7 August 2023, EPA conducted a 7-day public comment on whether or not it should assess the proposals and, if so, what level of assessment is considered appropriate.

Section 38B of the EP Act provides that a proposal cannot be referred to the EPA more than once. In considering these referrals, the EPA undertook detailed investigations and enquiries to identify whether the proposals have been previously referred to the EPA.

Importantly, on 14 December 2023, the State Government announced the *Alcoa Transitional Approvals Framework* which enabled Alcoa to continue mining as defined in the 2023-2027 MMP (this approval was rolled over to 2024-2028 in October 2024, with all conditions consistent with the 2023-27 approval) while the formal EPA EIA is in progress. In most circumstances, activities under assessment must cease during the EPA's process, however, the State Government granted Alcoa an exemption under Section 6 of the EP Act (Exemption Order 2023) to continue operating subject to a series of conditions. Note, that the State Government reserves the right to, with reasonable notice, withdraw or amend the exemption at any point. The Premier rolled over the 2023-2027 approval to cover 2024-2028 with the same conditions in October 2024.

On 18 December 2023, the EPA published its public advice in relation to the third-party referrals. The EPA concluded that five mine areas at Huntly (Myara North, Holyoake, White Road and portions of McCoy and Myara), and two at Willowdale (Mt William/Arundel/part Larego and Willowdale North/part Orion) have been previously referred. The remaining mine areas, the subject of the referrals, were found to be validly referred and that the likely environmental effects are significant warranting formal assessment at the level of public environmental review (10 weeks), the EPA's assessment numbers for the 2022-2026 MMP and 2023-2027 MMP are 2384 and 2385, respectively.

The EPA prepared a single Environmental Scoping Document (ESD) for both assessments across the first half of 2024, in consultation with Alcoa. The final ESD was published on 29 August 2024. The ESD outlines the basis on which the EPA will assess the MMPs for 2022-2026, and 2023-2027. The ESD acknowledges the short term duration of the Proposals, whereby authorisation to clear and implement the Proposals is sought for a time period not exceeding the years 2026 and 2027 (respectively).

In addition, as reported for 2022 and 2023, Alcoa is seeking formal environmental impact assessment and approval from the State and Federal Government to transition mining from the current Huntly mine area to Myara North and Holyoake, and to increase production at the Pinjarra refinery by 5%. The proposed transition in mining area and production increase has been determined by the EPA to be a significant amendment to an approved proposal. The proposed changes to Ministerial Statement 646 (MS 646) for the Pinjarra Refinery Efficiency Upgrade (PREU), approved in 2004 will be considered by the EPA in accordance with Section 40AA of the EP Act; the PREU assessment is EPA's assessment number 2253.

The EPA acknowledges the unique relationships between assessments 2253, 2384 and 2385. 2384 and 2385 cover a shorter period of time and therefore focus on the avoidance of impacts in the execution of the MMPs up to 2027, whereas assessment 2253 is able to consider longer term mitigations across a wider area. In March 2025, Alcoa submitted a request (as amended) under Section 43A of the EP Act to combine assessments 2384 and 2385. The EPA accepted that request - Assessment 2385 now incorporates activities proposed under Assessment 2384 and Assessment 2384 was terminated under Section 40A of the EP Act. In the previous TRS, Alcoa had reported that all Environmental Review Documents were well progressed and they were targeting publication in the first half of 2025. This was achieved with the Environmental Review documents for Assessments 2385 and 2253 were both made available for public comment for the period Thursday, 29 May 2025 to Thursday, 21 August 2025. Over 59,000 public comments were received by the EPA, many of these were included on "pro forma" style submissions. There were approximately 6,000



individual submissions. Alcoa is working closely with the EPA to produce a high-quality Response to Submissions document, with a first tranche of responses submitted to the EPA on 16 January 2026. This included all Government agencies, Local Governments, Environmental NGOs, and thematic responses to all public submissions. The Company aims to submit a second and final tranche of all remaining comments to the EPA by end of March 2026.

Prior to Alcoa's referral of Myara North and Holyoake to the Federal government in 2022, Alcoa's operations at Darling Range had not been subject to formal assessment under the EPBC Act. On 18 February 2026, the Federal Minister for the Environment and Water announced Alcoa would enter into enforceable undertakings related to clearing that occurred between 2019 and 2025, and that the government had entered a strategic assessment agreement with Alcoa for its Huntly and Willowdale mining operations. Importantly, Alcoa was granted a national-interest exemption allowing for limited land clearing (aligned with existing state government conditions) and mining operations to continue for a period of 18 months while the strategic assessment is completed. Further information on the scope of the strategic assessment is not yet in the public domain.

## 3.7 Other Significant Factors and Risks

SLR is not aware of any environmental liabilities on the property. Alcoa has all the required permits to conduct the proposed work on the property. SLR is not aware of any other significant factors and risks that may affect access, title, or the right or ability to perform the proposed work program on the property.

# 4.0 Accessibility, Climate, Local Resources, Infrastructure and Physiography

## 4.1 Accessibility

As described in previous sections, the Darling Range Huntly and Willowdale operations are located approximately 150 km south of Perth. The Darling Range is readily accessible via road from Perth and surrounding areas. The mines are near the towns of Pinjarra and Waroona. Both towns are easily accessible via the national South Western Highway, a sealed single carriageway road, which starts on the southern side of Perth and continues for almost 400 km to the southwest corner of Western Australia.

Huntly is accessible from the South Western Highway via Del Park Road, a sealed single carriageway road which connects the town of North Dandalup in the north with Dwellingup in the south. From Del Park Road, a 3 km sealed road following the route of the bauxite conveyor to the Pinjarra refinery provides access to the Huntly site administration offices.

Willowdale is similarly accessible 19 km from the South Western Highway via Willowdale Road, a sealed single carriageway road to the south of Waroona.

There are several airstrips in the region, although the closest major airport is in Perth, approximately 70 km north of North Dandalup. The nearest commercial port is at Kwinana, approximately 40 km south of Perth (as illustrated in Figure 15-1).

An extensive haul road network and overland conveyors transport crushed bauxite from the main mining hubs to the Wagerup and Pinjarra refineries.

## 4.2 Climate

The southwest region of Western Australia exhibits a temperate climate, with very hot and dry summers (December to February) and mild winters (June to August). Rainfall is generally low and variable, ranging from an average rainfall of 19.1 mm during the three summer months and exceeding 200 mm during the three winter months (Australian Government, Bureau of Meteorology). Local climate conditions generally do not interrupt the mining schedule, which continues throughout the year. Occasionally however, significant rainfall inhibits access and can impact mining activities.

**Table 4-1: Historical Climate Data**

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| °C Mean Max | 29.9 | 29.8 | 27.1 | 22.6 | 18.7 | 16.1 | 15.1 | 15.8 | 17.4 | 20.2 | 23.9 | 27.5 |
| °C Mean Min | 14.4 | 14.7 | 13.1 | 10.4 | 7.8 | 6.5 | 5.6 | 5.5 | 6.5 | 8.1 | 10.5 | 12.7 |
| mm Mean Rainfall | 16.2 | 21.1 | 26.6 | 64.9 | 153.0 | 231.0 | 234.0 | 193.0 | 129.0 | 78.1 | 44.8 | 20.0 |

Notes:

1. Temperature and rainfall data sourced from the Australian Government Bureau of Meteorology, collected from the weather station at Dwellingup *http://www.bom.gov.au/climate/averages/tables/cw_009538.shtml*
2. Data includes that collected from 1935 to November 2025 (as available on 27 November 2025).

## 4.3 Local Resources

The Darling Range is located in an easily accessible region of southwest Western Australia with the Huntly and Willowdale mining areas both within 15 km of well-established towns which act as residential and commercial centers. Several other towns and smaller settlements are positioned along the South Western Highway, which acts as a major connection for the Darling Range to the city of Perth where a far greater range of general services is available.

## 4.4 Infrastructure

The following section refers to several named mining areas within the Huntly and Willowdale Reporting Centers, including Myara, Larego, Orion, and Arundel, each of which is illustrated in Figure 3-2 above.

Mining infrastructure in the Darling Range is generally concentrated in the Myara site in the northwest of the Huntly Reporting Center, and at the Larego site in the center of the Willowdale mining area (20 km southeast of Wagerup). Both operations include various ancillary facilities that are not listed exhaustively here, however both infrastructure areas include:

- Ore crushing and handling facilities;
- Ore stockpile stacker/reclaimer;
- Maintenance facilities;
- Sampling stations;
- Site offices including a production tracking room;
- Haul road networks;
- Overland conveyors, as illustrated on Figure 15-1; and
- Water supplies consisting of abstraction from licensed surface water sources supplemented with treated wastewater from vehicle washdowns, stormwater runoff, and maintenance workshops. Water sources are illustrated on Figure 15-1.

  The Huntly mine draws water from Banksiadale Dam and Boronia Waterhole. The mine also holds a license to draw water from Pig Swamp and Marrinup, although these are reported as being rarely utilized, and it is permitted to draw water from South Dandalup Dam under an agreement with the Water Corporation.

  Willowdale Mine draws water from Samson Dam, approximately 10 km southeast of Waroona.

Personnel are sourced from the area around Perth, Western Australia, which benefits from a skilled workforce due to the relatively large number of operating mines in the region. Personnel typically have private accommodation in the nearby city of Mandurah (60 km from the mine) and towns (Waroona, Hamel, Yarloop, Harvey, and Wagerup).

Huntly Mine has three power supplies fed from the Pinjarra refinery. A single 33 kilovolt (kVkKV) supply and two 13.8 kV supplies. The Pinjarra refinery is a net importer of power from the South West Interconnected System (SWIS), with internal generation capacity of 100 Megawatt (MW) from 4 steam driven turbine alternators. The steam is produced by gas fired boilers and a non-Alcoa gas turbine Heat Recovery Steam Generator (HRSG).

Willowdale Mine has a single 22 kV power supply fed from the Wagerup refinery. The Wagerup refinery is a net exporter of power to the SWIS, with internal generation capacity of 108 MW from three steam driven turbine alternators and one gas turbine. The steam is produced by gas fired boilers.



## 4.5 Physiography

The western edge of the Darling Range is characterized by scarps and incised valleys, landforms which are attributed to tectonic activity along the Darling Fault, the dominant structural feature in the region which acts as the western boundary of the deposits. This feature is observable in regional topographical survey information and satellite imagery to roughly follow the coastline of southwest Western Australia and is approximately demarcated by the extent of Jarrah Forest, a recognized bioregion.

The topography of the ML1SA concession generally comprises wide valleys and undulating hills separated by minor surface water drainage channels and streams. Vegetation across the ML1SA is dominated by several areas of State Forest including Dwellingup, Lane Poole, and Youraling. These include distinct areas of old growth forest within which mining is prohibited.

The typical elevation ranges from 300 m to 400 m in the mining areas, however the highest points of the region (outside of the mining areas) are approximately 550 m.

Topography data was acquired from:

- Drill hole collar survey data;
- Light Detecting and Ranging (LiDAR) surveys; and
- Landgate satellite data.

# 5.0 History

## 5.1 Prior Ownership

Prior to 1961, there were no records of ownership of the Darling Range mines. A Special Mineral Lease (ML1SA) was granted to Western Aluminum NL (WANL) in 1961. In the same year WANL joined Aluminum Company of America Ltd (Alcoa US). In 1977 WANL became Alcoa.

## 5.2 Exploration and Development History

The following text is sourced and modified from Hickman, *et al.*, 1992.

Bauxite occurrences were first recorded in the Darling Range in 1902. Bauxite was detected as a result of analyzing laterite from Wongan Hills, and subsequently through examination of lateritic road gravels from several localities in the Darling Range. The Geological Survey of Western Australia (Geological Survey) produced studies and publications, driving the bauxite exploration, though most attention was focused on localities in the Darling Range close either to Perth or to railway lines servicing towns such as Toodyay and York. The Geological Survey mapped the extent of laterite in the Darling Range (close to Perth) to determine whether it contained commercial deposits of iron or aluminum ore.

The earliest non-government exploration for bauxite was carried out in 1918 by the Electrolytic Zinc Co. of Australia Pty Ltd, deeming the deposits to be generally low grade and not of commercial value, though like earlier explorers, did not focus upon the underlying friable units.

Of 46 early samples of laterite analyzed in 1919, 26 contained 35% or more available alumina. It was then assumed that bauxite in the Darling Range was confined to the duricrust part of the profile, and not considered in the underlying friable units. By 1938 bauxite deposits were known to be common throughout the Darling Range over an area of 560 km long by 40 km to 80 km wide.

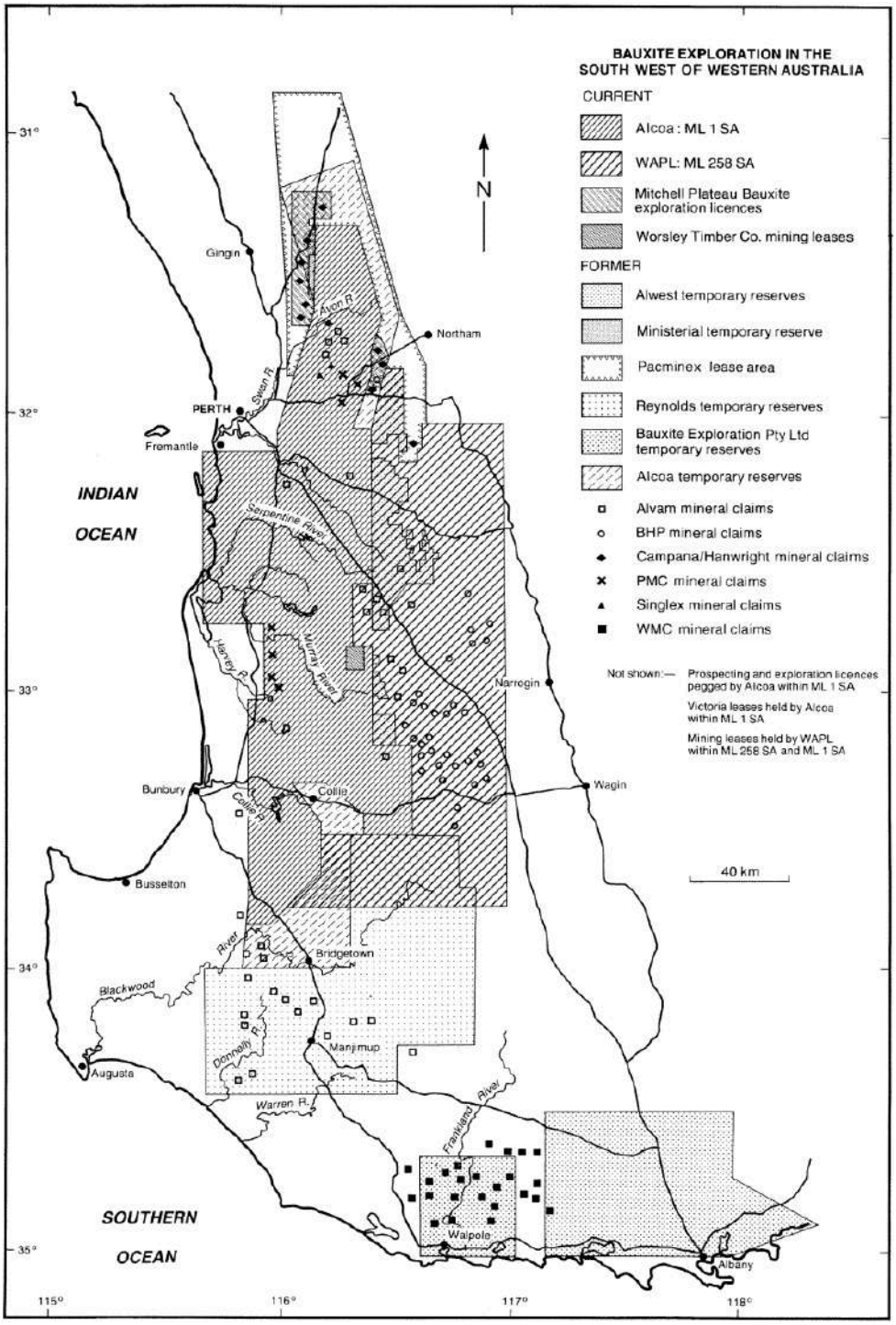
The Geological Survey maintained an interest in Darling Range laterite as an economic source of aluminum until the 1950s. However, by the late 1950s exploration had been taken over by mining companies.

No further private exploration took place until 1957 when Western Mining Corporation Ltd (WMC) began to explore for bauxite in the Darling Range. Following a regional reconnaissance, a joint venture company, WANL, formed by WMC with North Broken Hill Ltd and Broken Hill South Ltd, explored temporary reserves over a large portion of the southwest. Profiles were sampled from road cuttings, with samples collected at 400 m intervals along main roads. Selected lateritic ridges and plateaus were sampled at 90 m intervals. These areas were part of a Special Mineral Lease (ML1SA) granted to WANL in 1961.

In 1961, WANL joined with the Alcoa US, allowing additional systematic exploration of lease ML1SA (Figure 5-1). Holes were drilled initially on 370 m by 185 m centers. Progressive in-fill drilling down to a spacing of 45 m by 45 m blocked out the ore at Jarrahdale and was followed by grade-control drilling. Commercial mining was finally started in 1963 at the former Jarrahdale Reporting Center and continued until 1998, supplying bauxite to the Kwinana refinery.

In 1977 WANL became Alcoa. As of December 2025, the Huntly and Willowdale mining operations remain active. Huntly supplies approximately 16 million tonnes per annum (Mtpa) of bauxite to the Pinjarra refinery, while Willowdale supplies approximately 10 Mtpa of bauxite to the Wagerup refinery.

**Figure 5-1: Bauxite Exploration in the Southwest of Western Australia 1961**




Source: adapted from Hickman 1992

# 6.0 Geological Setting, Mineralization, and Deposit

## 6.1 Deposit Types

Bauxite deposits, economic concentrations of aluminum oxide, represent the world's major source of aluminum and consist primarily of the minerals gibbsite, boehmite, and diaspore. These are commonly found alongside iron oxide minerals including goethite and hematite, kaolinite clay minerals, and minor accessory minerals.

Bauxite formation is widely known to occur through two main depositional mechanisms:

- **Lateritic bauxite**: formed through intense chemical weathering and accumulation of residual and transported material on top of aluminosilicate-rich parent rocks. The Darling Range bauxite deposits are classified as lateritic bauxite deposits.
- **Karstic bauxite**: formed on top of carbonate / paleokarstic surfaces and karst depressions by the accumulation of aluminosilicate-rich clays at the time of chemical weathering and dissolution of carbonate rocks.

Lateritic bauxite deposits such as those in the Darling Range generally formed in tropical (hot and humid) environments through chemical weathering. As a result, lateritic bauxite deposits are known to exist across Central and South America, West Africa, Central Asia, and Australia.

## 6.2 Regional Geology

The bauxite deposits of the Huntly and Willowdale operations are located in the Darling Range region of southwest Western Australia. The predominant topographic feature of the region is the Darling Range Fault, a north-south trending scarp which extends approximately 220 km from Bindoon (70 km north-northeast of Perth) to Collie (160 km south-southeast of Perth).

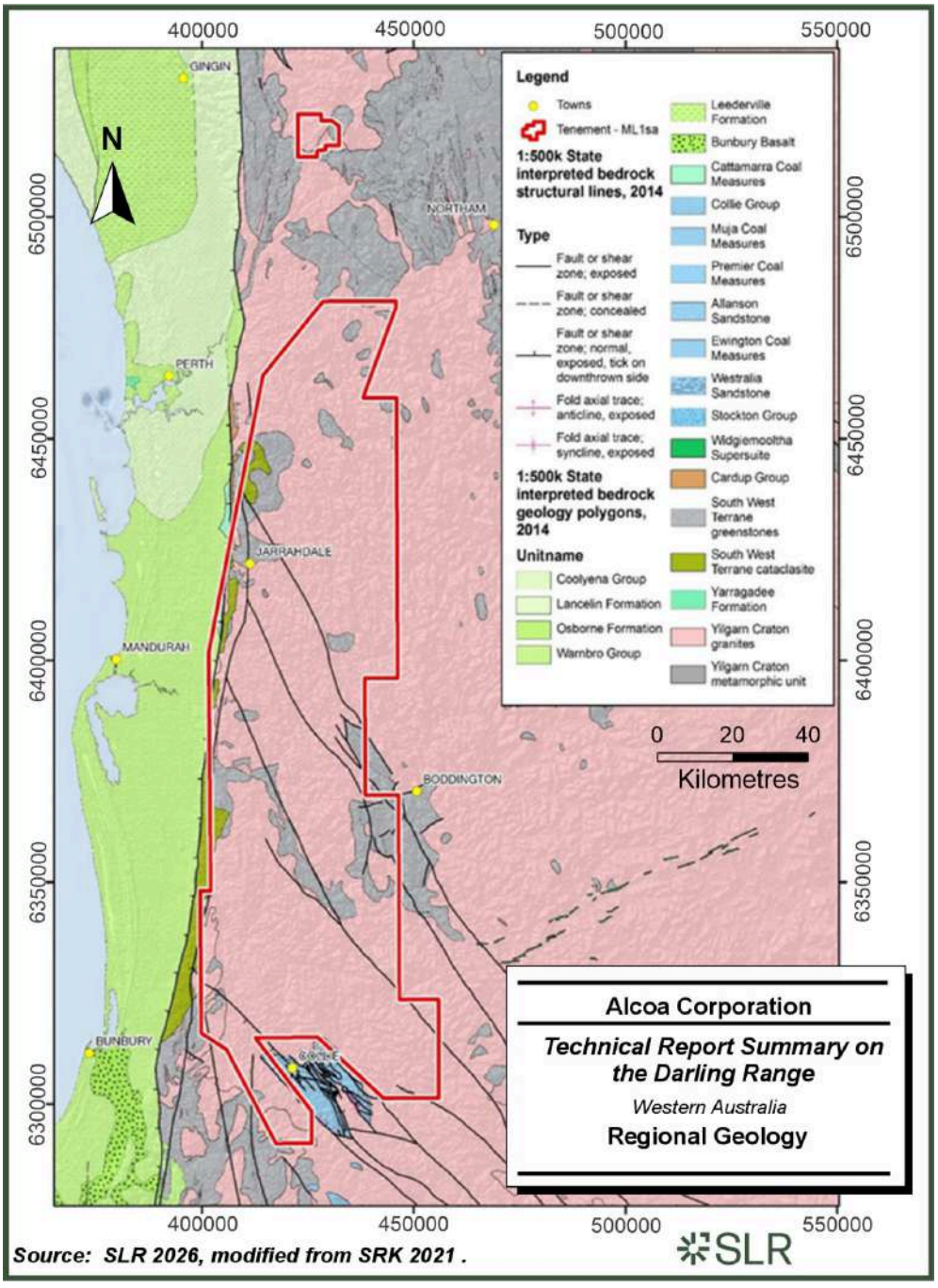
The Darling Range Fault is the structural boundary between two geological terranes: the Pinjarra Orogen to the west, now the sedimentary Swan Coastal Plain, and the Yilgarn Craton to the east, a gneissic granite complex with greenstones. To the east of the Darling Range Fault intense weathering and erosion of exposed Archean basement rocks of the Western Gneiss Terrane, the western portion of the Yilgarn Craton, formed widespread lateritic bauxite deposits by the intense weathering, accumulation and leaching of the aluminosilicate rich material of the bedrock granites (Hickman *et al*, 1992).

Alcoa's current bauxite mining areas of Huntly and Willowdale are on the eastern side of the Darling Range Fault, as low-lying plateaus separated by valleys in which alluvial deposits have accumulated. Figure 6-1 shows the regional geology of the southwest region of Western Australia and Alcoa's ML1SA lease boundary in relation to Perth, while Figure 6-2 shows the distribution of surficial deposits across the region.

The Jarrahdale, Del Park, Huntly and Willowdale areas that have been mined by Alcoa are on laterite within the Western Gneiss Terrane (Figure 6-2), formed over granites that have been intruded by numerous north trending tholeiitic, quartz dolerite dykes, of early to late Proterozoic age, with thicknesses ranging from 1 m to 200 m.

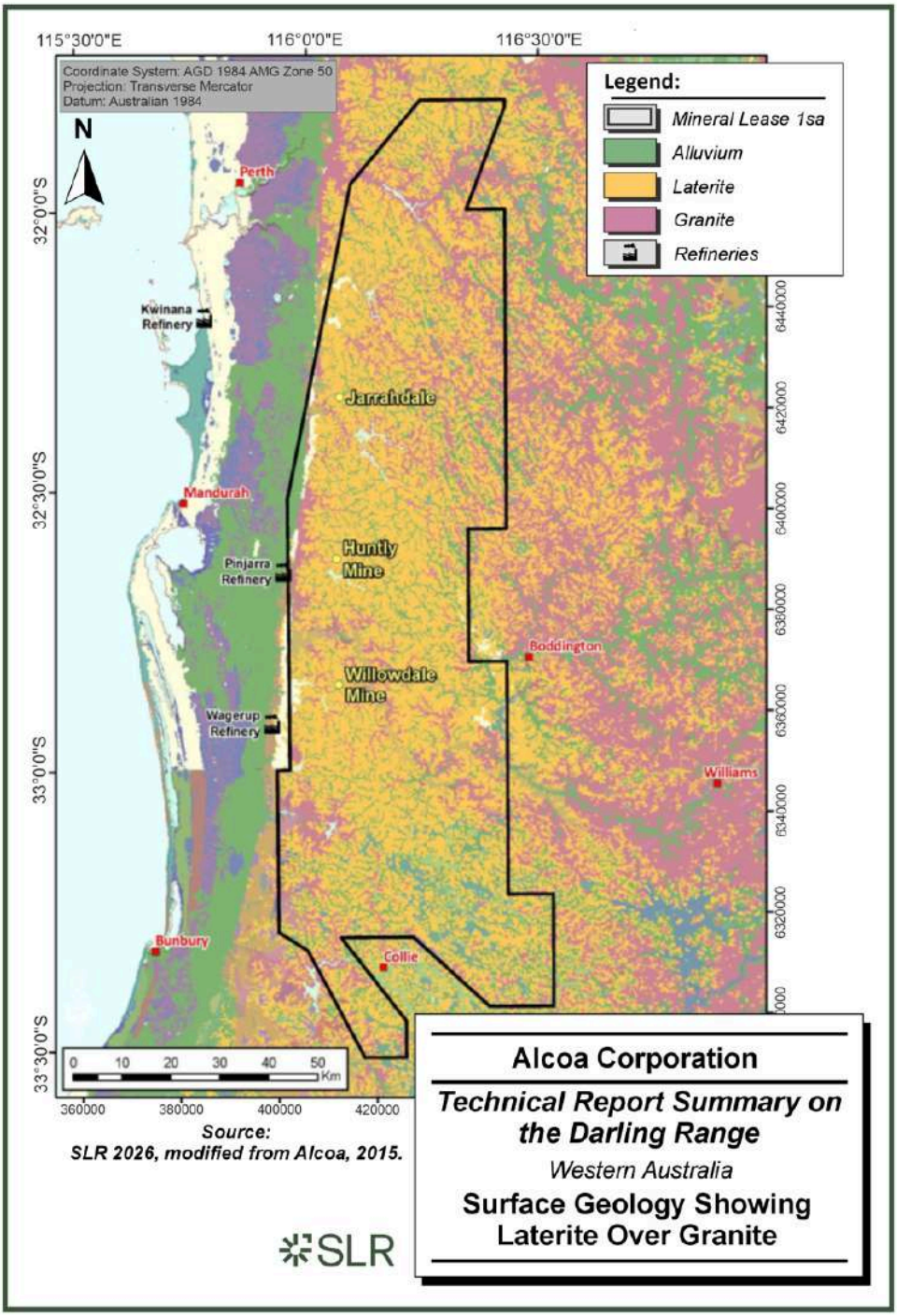
Lateritic bauxite developed from the Late Cretaceous (65 million years ago, Ma) to the Eocene (40 Ma), with several periods of erosion and intense weathering of the basement granites and dolerites. Subsequent reactivation of the Darling Fault combined with periods of erosion led to the establishment of plateaus and incised valleys, trending to wider valleys and low hills to the east which now characterize the physiography of the region.

**Figure 6-1: Regional Geology**




*Source: SLR 2026, modified from SRK 2021 .*

**Figure 6-2: Surface Geology Showing Laterite Over Granite**

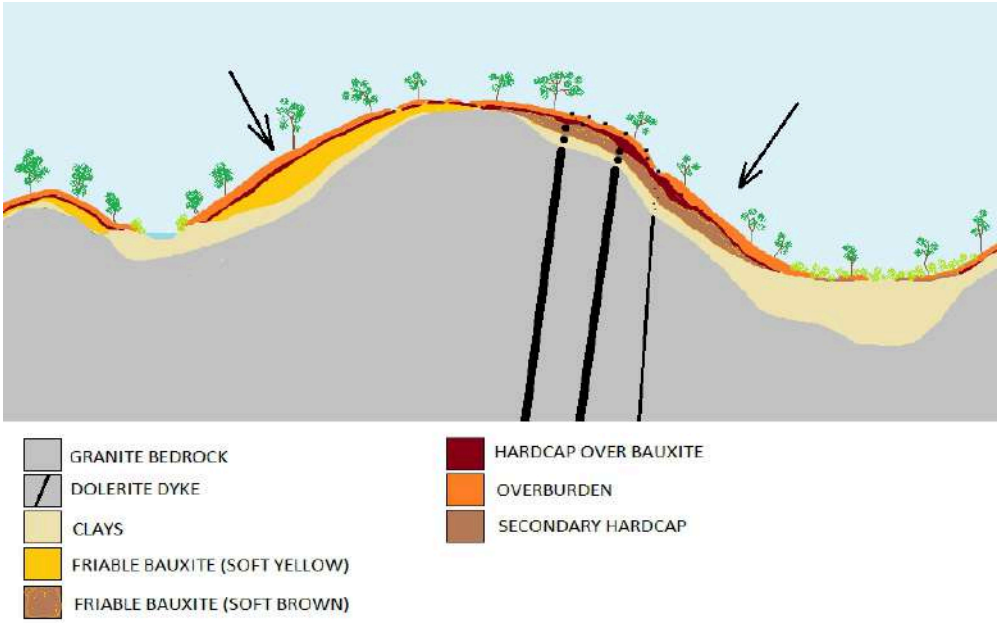


## 6.3 Local Geology

Laterite remnants are thickest and most extensive over a 150 km long region between the Avon and Harris Rivers, and within about 50 km of the Darling Scarp. The laterite occupies gently sloping (3° to horizontal) upland areas with an average elevation of 280 m to 300 m above sea level (MASL), and high annual rainfall. Steeper slopes may have a thin cover of partly transported laterite with bedrock near the surface. Above 340 m the laterite is penetrated by bedrock which rises above the general topographic level. Below 200 m drainage has removed pre-existing laterite. Blocks of laterite, released by headward erosion of streams, decay to lateritic gravels on the lower slopes of valleys, which pass laterally into alluvial sands and silt in the valley floors (Hickman *et al*, 1992).

Bauxite deposits typically occur as irregularly shaped lenses on the flanks of plateaus. Critical to this is the laterite position on the slopes (Figure 6-3): erosion generally dominates on steeper slopes, which prevent accumulation and effective bauxite formation, whereas flat areas lack the necessary sub-surface water flows which drive the removal of clays and the enrichment of soluble silicate minerals.

**Figure 6-3: Bauxite Deposit Formation Vertical Section Schematic – Relief Exaggerated**




Source: Alcoa 2021

## 6.4 Mineralization

Weathering, alteration and leaching of the granite bedrock has developed the bauxite mineralization which principally occurs as 65% microcrystalline gibbsite $Al(OH)_3$ with minor to rare boehmite $AlO(OH)$, and accessory minerals of 18% goethite $FeO(OH)$, 7% hematite $Fe_2O_3$, 9% quartz $SiO_2$, 1% kaolinite/halloysite $Al_2Si_2O_5(OH)_4$, and 0.5% anatase/rutile $TiO_2$.

Other minerals within the bauxite that may influence the alumina refinery performance include:

- **Boehmite:** generally occurring below 1%, this can cause premature precipitation of dissolved gibbsite resulting in alumina being lost to the red mud residues.
- **Organic Carbon:** as oxalate, typically less than 0.2%, (2.0 kg/t, measured as $Na_2C_2O_4$) this can result in reduced digestion efficiencies and cause crystal growth issues during precipitation.
- **Sulphate:** generally occurring at 0.25%, this can consume caustic soda during digestion resulting in lower yields.

## 6.5 Property Geology

Table 6-1 provides a summary of the typical stratigraphy defined by Alcoa across their Darling Range deposits. The Hardcap and Friable Zones represent the primary horizons of economic interest due to their concentrations of alumina. A generalized mineralogical profile through these horizons is provided in Figure 6-4 and a typical grade profile in Figure 6-5 showing the alumina and iron-rich Hardcap, with increasing silica and decreasing alumina through the Friable Zone.

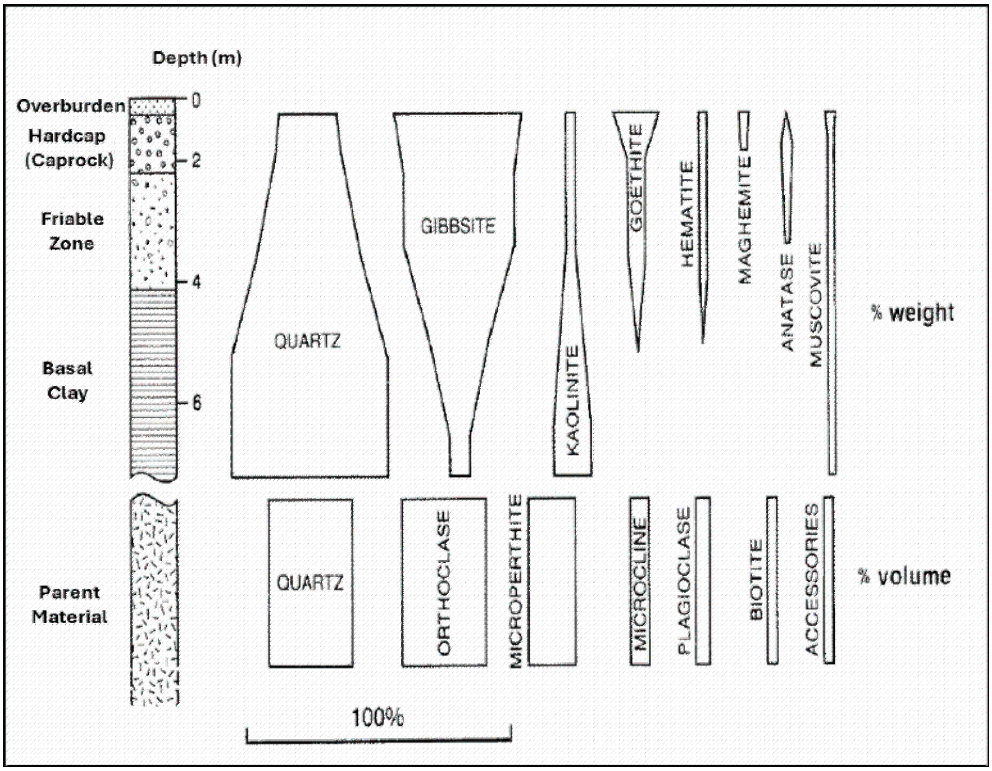
From a mineralogical perspective Gibbsite is the primary recoverable aluminium oxide element of economic interest with lesser Boehmite noted in some regions. Although not shown in Figure 6-4, Boehmite may be present at the top of the weathered profile and decreases in concentration with depth in certain areas. Boehmite content is estimated in the block model and is considered from a mining and blending strategy as it can impact Alumina recoveries at the refineries even though it rarely reaches levels above 1%.

**Table 6-1: Alcoa's Darling Range Deposit Typical Stratigraphic Column**

| Stratigraphic Horizon | Typical Thickness Range (m) | Description |
|---|---|---|
| Overburden | 0 to 0.5 | Mixed soils and clays, high in organic matter, generally forming a thin layer which can penetrate deeper if the underlying Hardcap surface is variable. |
| Hardcap (Caprock) | 1 to 3 | Ferricrete formed by the remobilization of iron into a layer comprising iron and alumina-rich nodules, which can exhibit the highest alumina concentrations across the deposit. Highly variable in thickness but generally 1 m to 3 m with a sharp contact against the underlying Friable Zone. |
| Friable Zone | 3 to 5 | Leached horizon resulting in the accumulation and enrichment of bauxite minerals. The Friable Zone comprises a mixture of the overlying Hardcap, clasts, Al and Fe rich nodules, and clays. Upper contact with the Hardcap is typically sharp but can be transitional in places. AL typically reduces with depth as SI increases, defining the lower boundary with the Basal Clay. |
| Basal Clay | - | Kaolinitic clay horizon, which transitions into a saprolitic zone above unweathered basement. This horizon is typically used as a marker indicating the full bauxite zone has been intersected and where drilling is often stopped. |

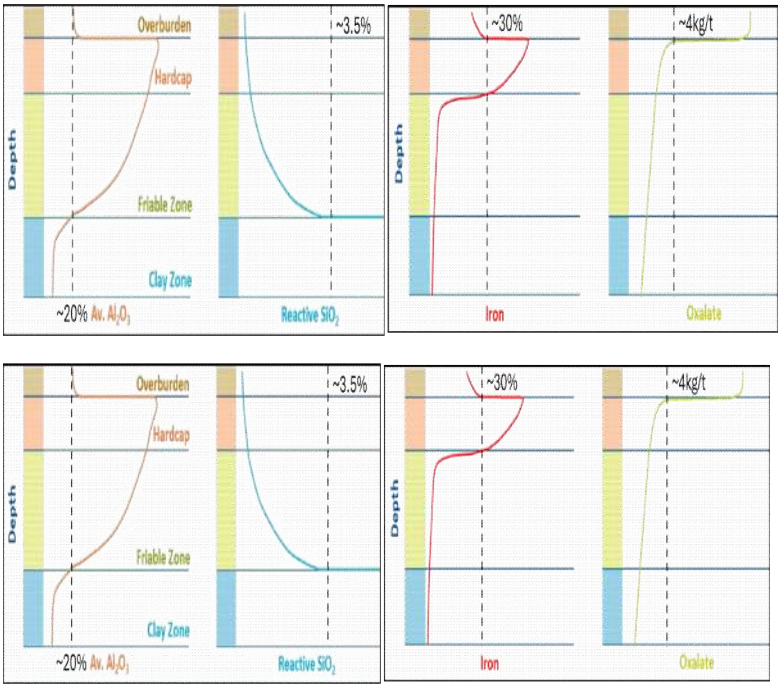


**Figure 6-4: Typical Alcoa Darling Range Mineralogy Profile**




Source: modified from Hickman et al 1992

**Figure 6-5: Typical Alcoa Darling Range Grade Profile**




Source: SLR 2026 modified from Alcoa 2015

Bauxite deposits across the Darling Range show high variability in both the thickness and relative proportion of each horizon. Table 6-2 provides an extract from the acQuire database for the Reporting Centers of Huntly, Willowdale, and North, showing the most common (modal) Depth to Top and Thickness of the four stratigraphic horizons, based on logged drill holes from 2016 to 2020.

**Table 6-2: Summary of Typical (Modal) Stratigraphic Horizons Within Each Reporting Center**

| Area | Description (m) | Overburden | Hardcap | Friable Zone | Basal Clay |
|---|---|---|---|---|---|
| Huntly | Depth to top | - | 0.64 | 1.51 | 4.54 |
| | Thickness | 0.64 | 0.87 | 3.04 | - |
| Willowdale | Depth to top | - | 0.58 | 1.51 | 4.91 |
| | Thickness | 0.58 | 0.93 | 3.40 | - |
| North | Depth to top | - | 0.64 | 1.78 | 4.45 |
| | Thickness | 0.64 | 1.14 | 2.67 | - |

Typical photos of the bauxite profile in current mining areas are provided in Figure 6-6.

**Figure 6-6: Typical Alcoa Darling Range Mining Sequence and Vertical Profile**

Vegetation cleared prior to mining

Topsoil and oxalate removed leaving Hardcap

Blastholes on Hardcap after sheeting with low grade

Hardcap (hard brown) Friable (soft yellow), relict fresh remnant Dolerite dyke boulder

Sandy topsoil, Hardcap (hard brown), Friable Zone (soft yellow), Basal Clay (white clay, lower right in the floor).

Source: SLR, 2021

# 7.0 Exploration

## 7.1 Exploration

WANL, which became Alcoa (in 1977), carried out exploration over much of the ML1SA lease area in the 1960s as mentioned in Section 5.2. Samples were assayed for AT only, and the retained data, referred to as the Imperial Drilling, comprises approximately 104,400 holes and approximately 670,000 samples. Samples were assayed for AT only, and the retained data, referred to as the Imperial Drilling, comprises approximately 104,400 holes and approximately 670,000 samples. The Imperial Drilling has not been used to prepare the current Mineral Resource estimate because the sample collection, preparation, and assaying techniques were not consistent with current practices and can no longer be validated.

Alcoa conducts resource definition drilling and exploration using vacuum drilling and RC AC drilling, which forms the basis for the estimated Mineral Resources and Mineral Reserves.

The Property is considered to be in the process of sustaining Mineral Reserves from already defined mineralization, rather than completing exploration for new, broader targets. Resource definition drilling is planned to continue throughout all areas where Alcoa has mining permits as described, to sustain the Mineral Reserves and future production.

Given the maturity of the Property and the reliance on drilling, the relevance of exploration work other than drilling is not considered relevant for the TRS by the SLR QP.

## 7.2 Drilling

### 7.2.1 Resource Definition Drilling

Resource definition drilling is initially done on a nominal regular grid spacing of 60 m by 60 m. Infill drilling programs are then scheduled as required to reduce the drill spacing to 30 m by 30 m, and then 15 m by 15 m.

The planned drill hole collars are assigned a hole identifier (Hole ID) using the code of the 15 m by 15 m grid point on the 1:1,000 Map Sheets (Section 3.3).

The long history of Alcoa's operations and large lateral extents of the Property has resulted in more than 3.2 million drill holes completed by Alcoa, most of which are located in depleted areas and are not relevant to the TRS. It is not considered practical or material to tabulate the Alcoa drill holes in full, and instead, the portion of drill holes informing the estimated Mineral Resources and Mineral Reserves (the resource database), is summarized by year and Reporting Center in Table 7-1, while a graphical summary is shown in Figure 7-1.

A total of 360,822 holes totaling 2,244,278 m drilled length and containing 3,986,403 samples were used for the Mineral Resource estimate. These holes were drilled between 1991 and 2025, with approximately 83% drilled after 2009.

Typical profiles for the bauxite on the Property, as defined by drilling results, are provided in Section 6.0. Representative plans of drilling and cross sections of drilling results for the MYN-M23 portion of the Myara North Mining Region and the HLY-H12 portion of the Huntly Reporting Center are shown in Section 11.0.



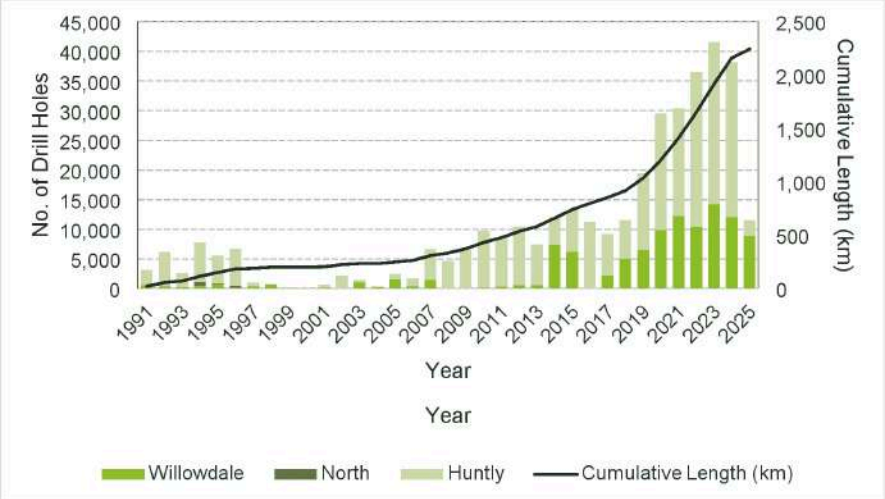
**Table 7-1: Resource Database Drill Hole Quantities by Year and Location**

| Year | Holes | | | | Meters | | | | Assay Count | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Huntly | North | Willowdale | Total | Huntly | North | Willowdale | Total | Huntly | North | Willowdale | Total |
| 1991 | 2,540 | 0 | 577 | 3,117 | 14,223 | 0 | 4,577 | 18,799 | 24,814 | 0 | 8,214 | 33,028 |
| 1992 | 5,773 | 0 | 424 | 6,197 | 32,933 | 0 | 3,261 | 36,194 | 57,357 | 0 | 5,805 | 63,162 |
| 1993 | 2,354 | 0 | 250 | 2,604 | 13,671 | 0 | 1,676 | 15,347 | 23,651 | 0 | 3,097 | 26,748 |
| 1994 | 6,645 | 632 | 508 | 7,785 | 37,275 | 4,019 | 2,808 | 44,102 | 63,646 | 7,103 | 5,016 | 75,765 |
| 1995 | 4,672 | 79 | 762 | 5,513 | 28,440 | 477 | 4,091 | 33,008 | 49,304 | 871 | 7,412 | 57,587 |
| 1996 | 6,251 | 336 | 156 | 6,743 | 34,428 | 1,522 | 965 | 36,914 | 59,029 | 2,667 | 1,769 | 63,465 |
| 1997 | 558 | 0 | 425 | 983 | 3,476 | 0 | 3,114 | 6,590 | 6,109 | 0 | 5,658 | 11,767 |
| 1998 | 79 | 0 | 621 | 700 | 1,845 | 0 | 3,817 | 5,662 | 3,528 | 0 | 6,941 | 10,469 |
| 1999 | 18 | 0 | 75 | 93 | 137 | 0 | 449 | 586 | 239 | 0 | 829 | 1,068 |
| 2000 | 22 | 0 | 0 | 22 | 187 | 0 | 0 | 187 | 344 | 0 | 0 | 344 |
| 2001 | 590 | 0 | 82 | 672 | 5,426 | 0 | 687 | 6,113 | 10,020 | 0 | 1,291 | 11,311 |
| 2002 | 2,114 | 0 | 24 | 2,138 | 18,267 | 0 | 146 | 18,414 | 33,400 | 0 | 271 | 33,671 |
| 2003 | 418 | 0 | 1,001 | 1,419 | 2,605 | 0 | 6,583 | 9,188 | 4,662 | 0 | 12,136 | 16,798 |
| 2004 | 0 | 0 | 312 | 312 | 0 | 0 | 1,650 | 1,650 | 0 | 0 | 2,988 | 2,988 |
| 2005 | 881 | 0 | 1,576 | 2,457 | 6,265 | 0 | 9,272 | 15,537 | 11,370 | 0 | 16,775 | 28,145 |
| 2006 | 1,404 | 0 | 351 | 1,755 | 10,470 | 0 | 2,158 | 12,628 | 19,295 | 0 | 3,954 | 23,249 |
| 2007 | 5,163 | 0 | 1,465 | 6,628 | 34,307 | 0 | 10,745 | 45,052 | 62,746 | 0 | 19,787 | 82,533 |
| 2008 | 4,566 | 0 | 65 | 4,631 | 27,072 | 0 | 460 | 27,532 | 47,633 | 0 | 853 | 48,486 |
| 2009 | 6,493 | 0 | 73 | 6,566 | 37,824 | 0 | 466 | 38,290 | 66,322 | 0 | 861 | 67,183 |
| 2010 | 9,611 | 0 | 122 | 9,733 | 56,329 | 0 | 697 | 57,026 | 97,685 | 0 | 1,265 | 98,950 |
| 2011 | 8,153 | 0 | 304 | 8,457 | 43,579 | 0 | 2,135 | 45,714 | 75,437 | 0 | 3,927 | 79,364 |
| 2012 | 9,826 | 0 | 601 | 10,427 | 53,994 | 0 | 4,499 | 58,493 | 94,055 | 0 | 8,290 | 102,345 |

| Year | Holes | | | | Meters | | | | Assay Count | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Huntly | North | Willowdale | Total | Huntly | North | Willowdale | Total | Huntly | North | Willowdale | Total |
| 2013 | 6,942 | 0 | 521 | 7,463 | 40,538 | 0 | 4,132 | 44,669 | 71,030 | 0 | 7,618 | 78,648 |
| 2014 | 4,701 | 0 | 7,346 | 12,047 | 24,706 | 0 | 54,419 | 79,125 | 43,192 | 0 | 100,368 | 143,560 |
| 2015 | 7,057 | 0 | 6,179 | 13,236 | 39,454 | 0 | 39,687 | 79,141 | 69,217 | 0 | 72,245 | 141,462 |
| 2016 | 11,221 | 0 | 0 | 11,221 | 63,433 | 0 | 0 | 63,433 | 110,474 | 0 | 0 | 110,474 |
| 2017 | 7,009 | 0 | 2,187 | 9,196 | 38,147 | 0 | 12,930 | 51,078 | 66,319 | 0 | 23,182 | 89,501 |
| 2018 | 6,557 | 0 | 4,988 | 11,545 | 37,169 | 0 | 27,695 | 64,864 | 65,631 | 0 | 49,314 | 114,946 |
| 2019 | 12,999 | 0 | 6,424 | 19,423 | 76,163 | 0 | 41,918 | 118,081 | 134,454 | 0 | 75,100 | 209,554 |
| 2020 | 19,686 | 0 | 9,811 | 29,497 | 105,706 | 0 | 62,526 | 168,232 | 184,610 | 0 | 112,640 | 297,250 |
| 2021 | 18,229 | 0 | 12,215 | 30,444 | 113,305 | 0 | 94,247 | 207,552 | 199,152 | 0 | 171,198 | 370,350 |
| 2022 | 26,152 | 0 | 10,326 | 36,478 | 161,708 | 0 | 76,053 | 237,761 | 287,351 | 0 | 137,880 | 425,231 |
| 2023 | 27,382 | 0 | 14,170 | 41,552 | 165,295 | 0 | 105,190 | 270,485 | 288,130 | 0 | 193,922 | 482,052 |
| 2024 | 26,158 | 0 | 12,049 | 38,207 | 156,649 | 0 | 87,020 | 243,669 | 273,006 | 0 | 159,513 | 432,519 |
| 2025* | 2,712 | 0 | 8,849 | 11,561 | 16,099 | 0 | 67,063 | 83,162 | 28,879 | 0 | 123,552 | 152,431 |
| **Total** | **254,936** | **1,047** | **104,839** | **360,822** | **1,501,125** | **6,018** | **737,135** | **2,244,278** | **2,632,091** | **10,641** | **1,343,671** | **3,986,403** |

* Drill holes completed until 30 June 2025.

**Figure 7-1: Resource Database Drill Holes by Year**




Source: SLR 2025

Due to the large quantity of drill holes distributed over the ML1SA lease of over 7,000 km², it is not feasible to show a plan view of the property with the locations of all drill holes and other samples. Figure 3-3, however, shows the lateral extent of Alcoa's mined areas and Mineral Resources and Mineral Reserves within the ML1SA lease.

### 7.2.2 Drilling Methods

The methods currently used for drill sampling in the Darling Range by Alcoa have been consistently used since the 1980s. Drilling is done using dedicated drills mounted on a fleet of tractors which can be driven off tracks into the forest, causing minimal damage or disturbance and obviating the need to clear drilling pads. Planned hole positions are located by the driller using Global Positioning System (GPS). The articulated tractors are highly maneuverable and there is only minor disruption to groundcover vegetation and saplings which may be eased out of the way (Figure 7-2).

**Figure 7-2: Resource Drilling Tractor Accessing the Forest**

Source: SLR 2021

Drilling is completed by Alcoa using vacuum drill rigs, by contractor Wallis Drilling Pty Ltd (Wallis) using their patented reverse circulation (RC) air core rigs, and by contractor JSW Drilling Pty Ltd (JSW) using a similar RC method. Wallis and JSW holes are both referred to as air core drilling.

In recent years the drilling period has been extended from 9 months to 10 months. More wet ground is now encountered and, where required, vacuum drilling is either deferred until the ground conditions improve, or is re-assigned for air core drilling.

Drilling is rapid with holes typically completed every 15 minutes from locating the collar position to completing the drilling, cleaning the sampling equipment and readying the samples for dispatch. While up to 16 rigs are currently used, the procedure is consistent across all rigs and virtually unchanged since the early 1990s at Jarrahdale. Minor modifications to the drilling procedures that have occurred include (in order of importance for their impact on the resource database):

- Drilling initially was done by vacuum rigs but this has been supplemented by the air core rigs.
- GPS methods have been introduced to locate the drill hole collar positions in 3D space, providing more precision on the hole and sample locations.
- The sample catching, splitting and logging procedures have been progressively upgraded, following review by various independent consultants (Holmes, 2018; Snowden, 2015; SRK, 2017, 2018, 2019b, 2021a; Xstract, 2016). The riffle splitting system has been enhanced through simple changes to provide a better, more robust method.
- The logging system has changed from manual paper plods to a completely digital recording system, albeit with paper backup where needed. Barcodes are now used on samples and matching these to the logs is now semi-automatic.
- The splitting and logging equipment on the drill rig has been progressively improved to make setup and pack-down more efficient and to protect the logging equipment during site moves.
- Rollover bars, guards, shields, lockouts and other safety protections have been added, and safety procedures have been enhanced with industry norms.
- Environmental protections and reporting have been enhanced to best practice in SLR’s opinion.

Samples used for Mineral Resource estimation are only acquired using vacuum drilling or air core reverse circulation. Both methods generally drill dry holes in that water is not added. Water ingress into vacuum holes destroys the sample circulation and wet holes are abandoned. Alcoa commenced air core drilling in 2015, with the initial plan being to phase out vacuum drilling. The prime advantage of air core over vacuum is sample recovery when holes do encounter groundwater.

In vacuum drilling the sample is finely ground and sucked up from the bottom of the hole by a top-mounted vacuum pump. In air core drilling, compressed air is blown down the annulus between the inner and outer drill string tubes, pushed out through ports on the face of the bit and then blows the sample through the center of the bit and up the drill string.



In both methods, the sample material is extracted from inside the bit, avoiding sample delineation error (contamination), and carried up the center of the drill string into the sampling container, avoiding sample extraction error (sample material left down the hole or lost as dust).

The air core drilling uses a blade bit with a nominal cutting diameter of 45 mm and an internal retrieval tube diameter of 22 mm (Figure 7-3). Alcoa increased the internal diameter to 25 mm in 2018 to reduce blockages. The particle size of drilled material is sufficiently small (less than 10 mm) to promote good sample splitting in dry conditions.

**Figure 7-3: Drill Bits, Reverse Circulation Drill String and Particle Size of the Sample Residue**

Scale pen diameter 13 mm
Source: SLR 2021

### 7.2.3 Drill Sampling

#### 7.2.3.1 Procedure

The sample catching, splitting, and logging procedures are the same for both vacuum and air core drilling (Figure 7-4).

The drilling and logging are controlled by the driller, where with sampling beginning at the base of the overburden and continuing until the driller considers that the basal clays have been penetrated for at least 1 m or for infill holes at a 15 m spacing to the depth defined on the drill hole plan from surrounding data. The depth of basal clays to be penetrated was increased to 2 m in 2019 for 60 m spaced holes and in 2021 for 30 m spaced holes. Alcoa estimates that, most recently, less than 5% of the limited depth holes terminate in bauxite.

Samples are collected at 0.5 m intervals, measured using a laser gauge mounted on the rig. At the end of each 0.5 m interval, the drilling is paused and the sample passes from the cyclone (for air core) into the collection flask. For vacuum drilling the collection flask is at the end of the vacuum system.

The sample, nominally 1.5 kg, is poured from the flask into a feed tray, distributed evenly, then on the vacuum rigs the tray is pivoted to feed a small 12-vane riffle splitter (the rotating tray is excellent but not yet fitted to the air core rigs). Where (usually) required, the splitting is repeated to give a retained split of 150 g to 200 g, small enough to be collected into a 120 mL measuring cup with minimal spillage. The riffle split subsample is poured into a barcoded Kraft packet and boxed for dispatch to the assay laboratory. The sample retrieval and splitting systems are cleaned with compressed air after each hole.

Over the period 2015 to 2021 the drill sampling procedures have been externally reviewed (Snowden, 2015; Holmes, 2018; and others) and various improvements have been made such as using riffle splitters with more vanes, using a pivoting tray to consistently feed the splitter, training in the correct splitting and retention of all the subsample, digital recording of logging, monitoring of accuracy with Standards, and monitoring of precision with duplicates.



**Figure 7-4: Sample Catching and Riffle Splitting Practices**

Source: SLR 2021

### 7.2.3.2 Recording Sampling Data

The drill hole and sample information are recorded digitally onto a tablet at the rig during drilling (Figure 7-5). The data is automatically loaded into an acQuire database. In previous years the same information was all recorded in a ticket book and manually transferred to the database. This approach remains as a backup method when needed. Data recorded includes hole number, drill rig number, driller name, offsider name, depth of overburden, depth of Caprock, map reference, material type code, and comments on the reason for ending the hole, e.g. if bedrock or water was encountered.

**Figure 7-5: Barcode Reader and Digital Recorder Mounted on the Drill Rig**

Source: SLR 2021

### 7.2.3.3 Sample Logging

The geology of the Darling Range bauxite is well understood. The material type codes have been simplified to meet the production needs of the operation and the drill crew has been trained in their identification, which is primarily based on color and hardness.

This results in logging of a reasonably consistent regolith profile formed by surface weathering of the few bedrock types (granite or dolerite). A comprehensive geological log is not produced but the material type codes can be ratified by the assay results. The material type codes are provided in Table 7-2.

**Table 7-2: Logging Codes for Material Type**

| Material Type | Description | Comment |
|---|---|---|
| HB | Hard brown | Hardcap and Friable Zone |
| HSB | Hard / soft brown | |
| SB | Soft brown | |
| SY | Soft yellow | |
| CLB | Clayish brown | |
| CLY | Clayish yellow | Basal Clay |
| BC | Brown clay | |
| YC | Yellow clay | |
| WC | White clay | |

| | | |
|---|---|---|
| DOL | Dolerite | Intrusion |
| GR | Granite | |
| WET | Wet | Other |
| ROD | Broken rod | |

### 7.2.4 Surveying

Alcoa has consistently drilled the Darling Range bauxite deposit on a 60 m by 60 m grid (with infills to 30 m by 30 m and 15 by 15 m) since the 1970s. Initially collar peg positions were surveyed using either a theodolite or Total Station. The 30 m and 15 m pegs were positioned between the 60 m pegs using tape and an optical square. Alcoa commenced using GPS survey control (RTK DGPS) in mid-2015.

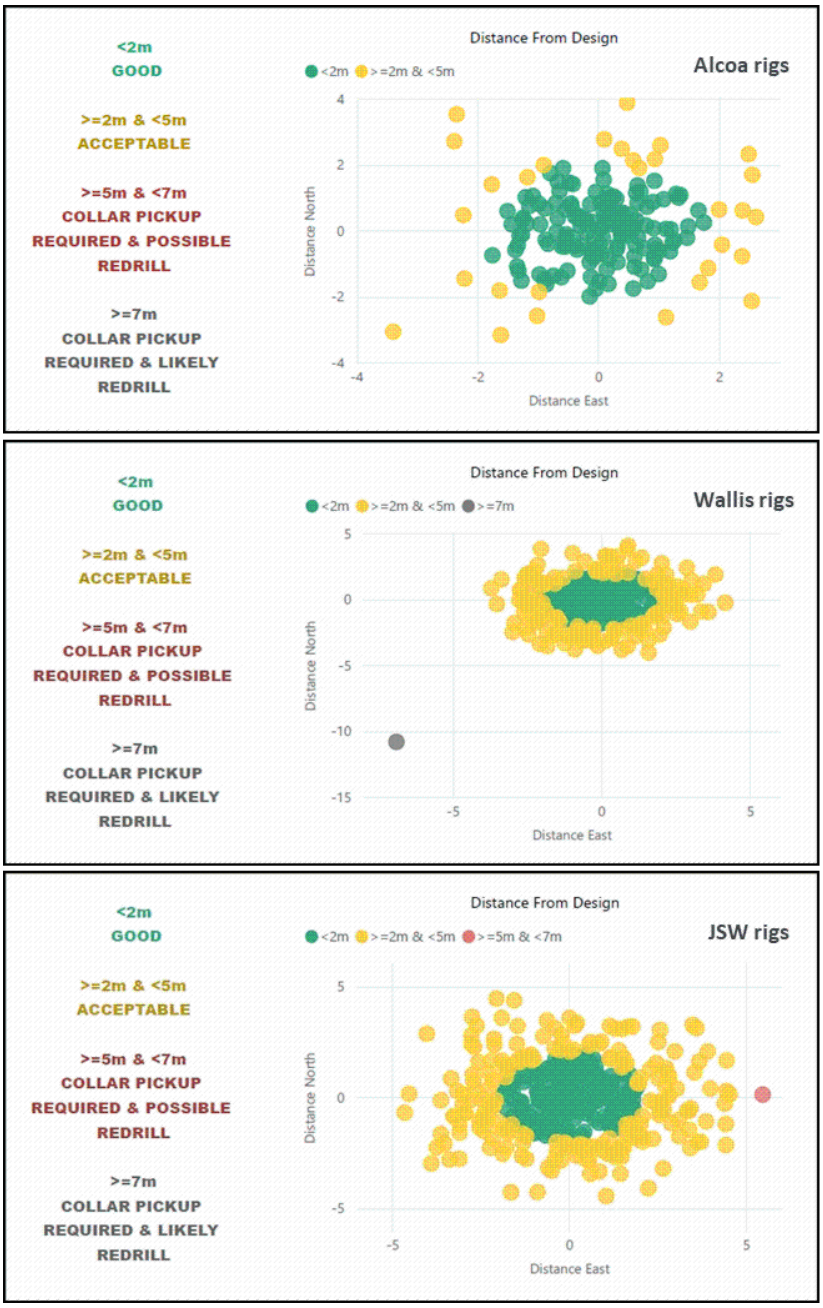
Drilling is conducted before any forest clearing activities, which are only carried out for mine development. Positioning the drill rigs is thus imperfect. If the actual coordinates are within 2 m of the planned coordinates, the hole is considered to be correctly located, and the planned coordinates are used in all subsequent processing. Holes that are collared more than 2 m away from the planned location are flagged accordingly in the database, but the planned coordinates are still used in preference to the actual locations. In 2015, Alcoa commenced check surveying of collar positions after drilling. Most of the holes drilled in 2016 and 2017 were check surveyed. Major discrepancies, such as large differences between the actual coordinates and the coordinates defined by the hole identifier, are investigated and corrected in the database.

The planned coordinates at the 15 m by 15 m grid points on Map Sheets (see Section 3.3) were used in preference to the actual coordinates. This choice stems from the fact that the original estimation approaches (ResTag and GSM, see Section 11.3) were based on the use of regularly gridded data. However, the current 3DBM methodology prioritizes the use of actual coordinates. The use of planned instead of actual coordinates does introduce some uncertainty in the local sample position and consequently the local estimates. It is noted that:

- The lateral error is random, small in magnitude compared to the smallest drill grid spacing (15 m) and monitored with deviations from plan greater than 7 m redrilled.
- Figure 7-6 demonstrates an example of the lateral error in collar position for the three rig types. Such charts are no longer generated by Alcoa, however manual survey checks are completed on approximately 10% of holes to confirm the rig GPS and hole position vs design.
- The error affects few holes (for example, in 2022/23 of the 60,754 holes drilled, 58% were within 2 m, and 99.8% within 5 m).
- The long range of the grade continuity of mineralization as shown by the variograms is several hundred meters.
- The local small-scale variations on the grade of mineralization due to variations in the amount of lateralization are uncontrolled and unpredictable.
- The effect is a controlled ‘random stratified grid’, given that the nominal collar position is always used for estimation and there is no evident bias.



**Figure 7-6: Error in Actual Collar Location from the Planned Position for the Three Drill Rig Types**

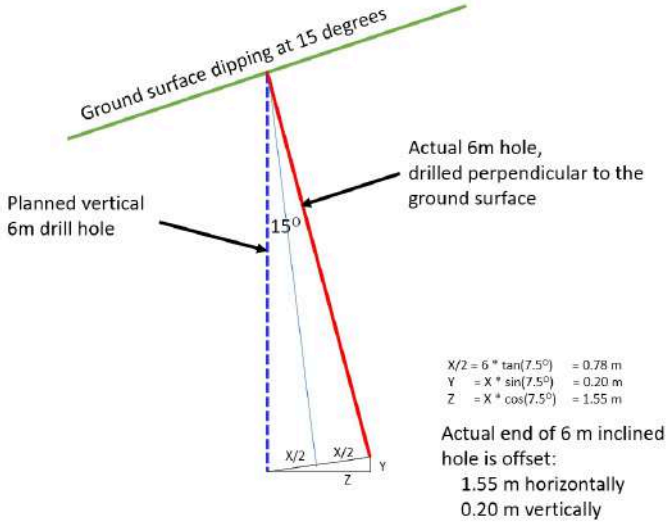



Source: Alcoa 2021

Downhole surveys are not performed in drill holes because of their generally shallow depth and narrow diameter, so all holes are assumed to be vertical.

The drill rigs have limited capacity to be levelled and cannot drill angled holes, so in some circumstances the holes may be drilled perpendicular to the natural surface. The rigs are designed to safely operate on gradients of up to 15°, so holes could be drilled up to 15° off the vertical. For a 6 m hole drilled at the planned collar position, the offset may be up to 1.55 m horizontally and 0.2 m vertically (Figure 7-7).

**Figure 7-7: Possible Lateral and Vertical Sample Location Error on 15° Sloping Ground**




Source: SLR 2021

The impact of differences between the actual locations of samples in 3D space compared to their nominal location on the mine plan is considered to not materially impact the Mineral Resource because the errors in the spatial controls on mining are likely to be of the same magnitude as the spatial errors in mining (±2 m laterally and ±0.3 m vertically). Mining is locally controlled by DGPS on mining equipment to meet short-term plans and visually for indications of the base of ore (e.g., white clay).

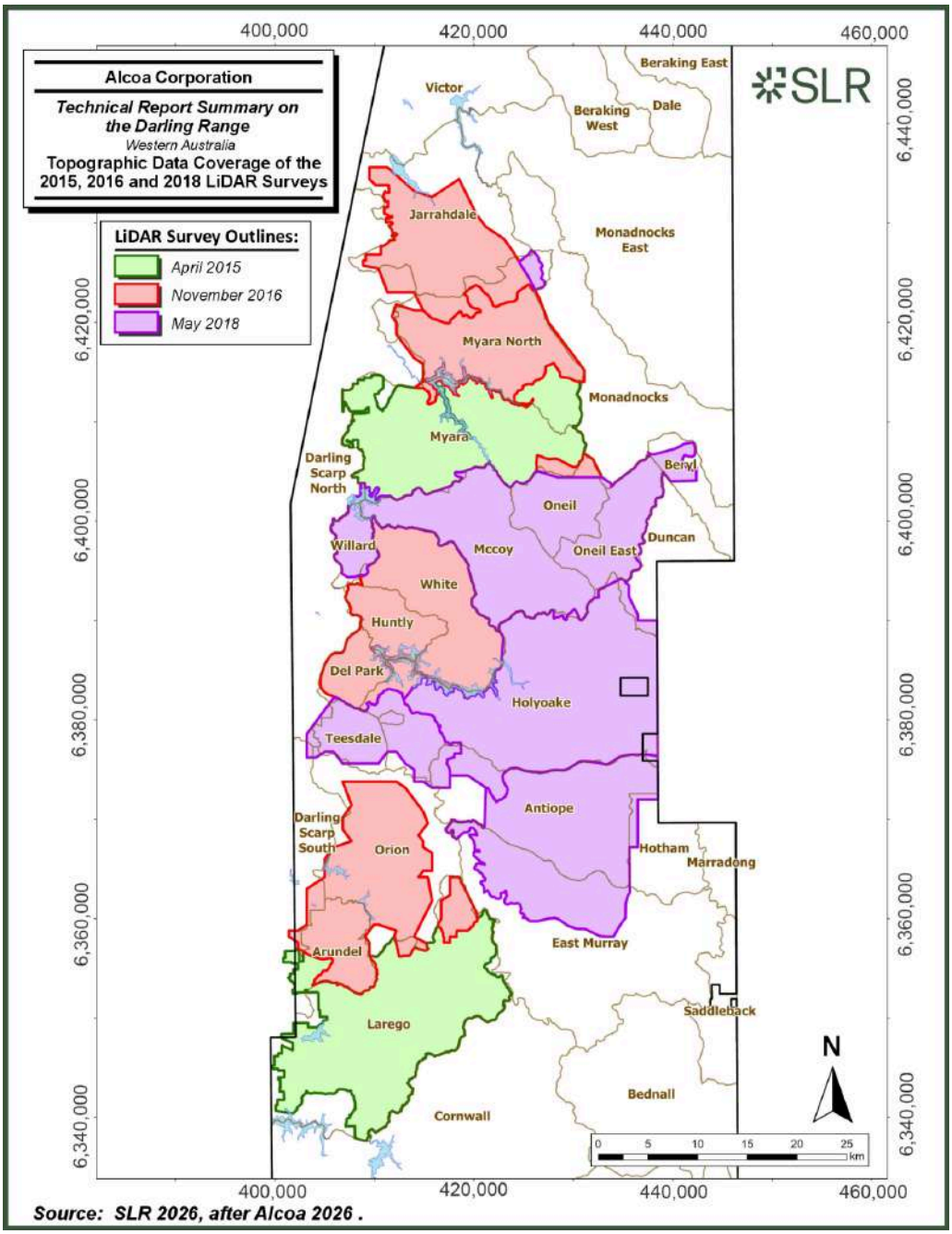
## 7.3 Topography

Topography data was acquired from:

- Drill hole collar survey data and check surveys performed using Trimble R10 real time kinematic differential global positioning system (RTK DGPS) equipment.
- LiDAR surveys conducted in April 2015, November 2016, and June 2018. A plan showing the LiDAR coverage for each survey is provided in Figure 7-8.
- Landgate satellite data collected in the late 1990s.

A digital elevation model (DEM) representing the natural surface was prepared by combining (in order of priority) the collar survey data, the LiDAR data, and the satellite data.

**Figure 7-8: Topographic Data Coverage of the 2015, 2016, and 2018 LiDAR Surveys**



## 7.4 Hydrogeology Data

Historically, no site-specific hydrogeological data was available on the basis that no hydrogeological considerations are required for the definition of mining plans in Alcoa's Darling Range operations. However, extension of mining activities into the proposed Myara North and Holyoake development envelopes was recently considered to potentially pose a risk to the multiple uses of groundwater in the area including drinking water production, timber harvesting, pine plantation and recreation.

Alcoa has collected groundwater level and groundwater quality data within the Myara North mine region since the 1970s, with available groundwater data typically concentrated within the eastern areas of the mine region. In contrast, only limited water level and water quality data had been obtained within the Holyoake mine area. As part of the 2020 to 2021 baseline monitoring program, the monitoring network and program was expanded to include:

- 18 new groundwater bores at 16 locations within the Myara North mine region, to supplement 25 existing Alcoa groundwater bores. Two sites included installation of a shallow and deep paired bores, providing data on groundwater for the upper 'perched' unit and the underlying more regional groundwater.
- 17 new groundwater monitoring bores were installed in 2020 within the Holyoake mine region, to supplement eight existing Alcoa groundwater bores.
- The baseline groundwater monitoring program comprised monthly water level dips and physico-chemical parameter measurements from October 2020, with groundwater samples collected for laboratory analysis of a broader suite of parameters in October 2020 and February 2021.

In consideration of the data obtained from the expanded monitoring network, several hydrogeologic and hydrologic investigations were undertaken by GHD Pty Ltd (GHD) throughout 2021 and into 2022, including:

- Implementation of a baseline surface and groundwater monitoring program including installation of a monitoring network.
- Groundwater modelling for Myara North and Holyoake mine regions.
- Drinking water risk assessment for Serpentine, Serpentine Pipehead, South Dandalup and Wungong Brook catchments.

Much additional work has been completed to support Alcoa's environmental impact assessment for Willowdale and Huntly. As documented in the Water Resources Management Plan (part of the Environmental Review Documentation for EPA Assessment 2385), groundwater monitoring locations for the Huntly and Willowdale mines are based on sub-catchment risk within Alcoa's mining lease. These locations aim to address key areas by:

- Baseline Monitoring to establish the pre-mining water quality in areas planned for mining.
- Background Monitoring to determine the water quality in catchments not currently or likely to be mined. Background monitoring informs the setting of the baseline condition.
- Operational Area Monitoring: Focusing on existing mining areas to manage drainage risks and detect contaminants like hydrocarbons.

The results of these investigations will be assessed as part of EPA Assessments 2253 and 2385, which includes the Huntly Bauxite Mine transition to Myara North and Holyoake (See Section 17.1.2).



The work completed by GHD has been incorporated into Alcoa's Catchment Risk Assessment (CRA). The CRA considers potential hazards to Public Drinking Water Source Areas (PDWSA) and other factors to evaluate mining related catchment risk. This is an iterative process that will allow refining of the model to ensure it is more accurate on the completion of each subsequent iteration. Iteration 1 was produced in 2022; it will be revised in consultation with DWER, DBCA and other relevant regulators. While the CRA is designed to inform mining risk (and lack of risk) the data and predictions can be applied to exploration. Ultimately, the CRA will help Alcoa understand in more detail the hydrological and hydrogeological risk down to a subcatchment level, supporting the development of future mining areas. The CRA is an integral part of the approved 2023-2027 MMP, and the roll-over approval of 2024-2028.

The adaptive monitoring strategy proposed in the Water Resources Management Plan will be updated as the EPA Assessment continues, and accounts for operational changes (e.g., transition from mining to rehabilitation, re-location of infrastructure) and climate change that may necessitate changes in monitoring locations and/or density.

## 7.5 Geotechnical Data

As the slopes are so shallow, no geotechnical considerations are required for the definition of mining plans in Alcoa's Darling Range operations.

Some limited material characterization is available within the historic reports carried out for the ROM and bauxite crushing facility and seven other mine infrastructure locations. The crusher site is situated south of Willowdale though the geology is considered similar across the sites. Testing includes cone penetration (CPT), basic laboratory classification, some limited consolidated undrained (Cu) triaxials and point load testing (PLT). Some historical data is available for strength testing within the caprock unit including unconfined compressive strength (UCS), young's modulus (E), tensile strength and abrasion. A factual laboratory report is available from the Wirtgen Group in Australia; that used six rock samples (post drilled from cobbles) taken at Huntly, with testing including UCS, tensile strength and Cerchar abrasivity. Details for the testing protocols/standards for the Wirtgen tests are not available. As such, it is considered that there is limited information available in terms of material characterization, strength testing, or pit wall design for the mine site.

Recent factual and interpretive results of a geotechnical investigation carried out by Tetra Tech Coffey Pty Ltd (TTC) in July 2023 for the Kisler Stage 1 area are available. Laboratory testing was carried under TTC direction by STATS Pty Ltd (Australia), a National Association of Testing Authorities (NATA) accredited laboratory located in Canning Vale WA, in accordance with the general requirements of Australian Standard AS1289. A NATA accreditation is to the International Standardization Organization (ISO)/ International Electrotechnical Commission (IEC) 17025 standard, which demonstrates that the laboratory operates competently and generates valid results. TTC states that the geotechnical laboratory assessment was conducted on representative soil and rock samples recovered from test pits and boreholes, with laboratory test certificates available. The investigations were carried out primarily within the footprint of the proposed Kisler facility, located approximately 10 km south-east of the Serpentine Main Dam. The generalized subsurface profile of the site is presented in Table 7-3, with the assumption that the actual interface between materials may be far more gradual or abrupt than those made based on the facts obtained. An additional assumption is made in that the site conditions as revealed through selective point sampling are indicative of actual conditions throughout an area.



Groundwater was not encountered at any of the test pit locations, to the maximum depth of investigation (i.e. 3.3 m BGL). Groundwater was not observable at the borehole locations due to the use of drilling fluid. However, all boreholes have been converted to monitoring bores for future groundwater monitoring purposes.

Based on the results of geotechnical investigation and Australian Standard 1170.4 – 2007 Structural Design Actions (Part 4: Earthquake actions in Australia), a sub-soil classification of “Class Ce – Shallow soil” is considered appropriate for the Kisler Stage 1 site at the time of investigation by TTC.

**Table 7-3: Generalized subsurface profile**

| Layer/Unit | Typical Depth to Top of Layer (m) | Typical Layer Thickness (m) | Description/Remarks |
|---|---|---|---|
| Sandy Silt / Silty Sand / Sandy Clay / Clayey Sand | 0.2 – 3.0 | 1.2 – To maximum depth of investigation | Low to medium plasticity, yellow-brown to brown, sand, fine grained, sub-angular, with some gravel. Predominantly encountered at most test locations throughout the course of investigation. |
| Clay | 0.00 – 11.0 | 3.0 – 5.4 | Medium to high plasticity, brown, yellow-brown, grey-brown, with some sand and gravel. |
| Silty Gravel / Clayey Gravel | 0.0 – 9.0 | 3.0 – 5.0 | Fine to coarse grained, sub-rounded and sub- angular, grey-brown and brown, clay, low to medium plasticity, with some sand, trace non-plastic fine. |
| Granite / Dolerite | 5.60 – 20.00 | To maximum depth of investigation | Medium to coarse grained, pale grey to grey, red- brown, generally very high to extremely high strength. Some boreholes showed very low to medium strength.<br>Granite was encountered at most borehole locations. Generally high to extremely high strength.<br>Dolerite was encountered at one location. Extremely high strength. |

## 7.6 Exploration Target

The Property contains additional areas which are considered prospective for bauxite mineralization, however no Exploration Target is disclosed.

## 7.7 Planned Exploration

The Property is considered to be in the process of sustaining Mineral Reserves from already defined mineralization, rather than completing exploration for new, broader targets. Resource definition drilling is planned to continue throughout all areas where Alcoa has mining permits as described, to sustain the Mineral Reserves and future production.

## 7.8 QP Opinion

The extents of the Darling Range plateau and associated bauxite deposits are well known. Ongoing drilling within these regions will continue to define zones of potentially economic bauxite. Exploration in regions far away from current infrastructure (crushers and conveyors) and processing plants is not a priority given the significant Mineral Resource and Mineral Reserve currently defined.

# 8.0 Sample Preparation, Analyses, and Security

Sample preparation is performed by Bella Analytical Systems Pty Ltd (Bella). Although the laboratory is located within Alcoa's curtailed Kwinana Refinery complex and only processes Alcoa material, it is independently owned and operated by Bella. A link exists between the Bella and Alcoa Laboratory Information Management System (LIMS) for the two-way exchange of data. Bella does not have Australian National Association of Testing Authorities (NATA) accreditation (SRK, 2019b), or other ISO certification.

All assays produced by Bella are monitored and controlled by Alcoa at the Kwinana Mining Laboratory (KWI), which, although it has a QA/QC system based on ISO 9001 protocols, only has one section of the laboratory certified to ISO 9001 for the purpose of certification of shipment assays of alumina.

The SLR QP recommends that ISO 9001 and ISO 17025 certification is pursued for the laboratories, to substantiate to technical personnel outside of Alcoa that the quality assurance programs in place meet ISO 17025 quality management system certification.

A robotic processing system is used to prepare each sample for Fourier Transform Infrared Spectrometry (FTIR) and Reference Method (REF) testing. This entails pulverizing each sample in a flow-through ring mill to a nominal grind size of 85% passing 180 µm, and then splitting off sufficient material to fill a barcoded scanning flask (20 mm high with an 80 mm diameter). The material from the ring mill is discharged through a rotary splitter, with approximately 80 g to 100 g of material retained for geochemical testing, and the remainder discarded. A duplicate sample is collected from 1% of the samples via a rotary splitter fitted with twin select chutes. These samples are used for REF testing (SRK, 2019b).

## 8.1 Sample Preparation

Upon receipt by Bella, the sample barcodes are scanned and checked against the submission data in the Bella LIMS. Each sample packet is then split open at the top, placed in a cardboard drying tray and oven-dried at 100°C for 10 hours. The packets are transferred to a customized holder in batches of approximately 60, and automatically fed to a bank of ten Rocklabs flow-through ring mills (Figure 8-1), each of which have three concentric milling rings. The barcode is read, the sample is pulverized, a subsample is rotary split, captured in a single-use plastic Petri dish with the barcode printed on the lid, then sent to the spectral analyzer for assay. The ring mills are air flushed and vacuumed between samples.

Each sample is pulverized to a nominal grind size of 85% passing 180 µm. The ring mill discharges through a chute and rotary splitter, retaining 80 g to 100 g and discarding the rest. One of the ring mills is set up to take two splits and these are used for pulp duplicate assays and to generate the reference (REF) samples (SRK, 2019b). These are sent to the KWI for wet chemical assay checking of the spectral assay. Pulverized samples are stored in a barcoded dedicated receptacle for assay (Figure 8-2). A grind control sample is run through five mills per week, as part of the check to monitor whether pulverization grind size meets required criteria (85% passing 180 um). Checks on pulverization to ensure grind size meets required criteria (85% passing 180 um) are completed on a weekly basis through all mills used for pulverization of Mineral Resource samples.

The robotic system can run 24 hours a day handling approximately 3,000 samples per day (Alcoa, 2019). Only the Mineral Resource estimation samples (exploration and resource definition) are processed at Bella with all other stockpile and processing control samples processed using the same methods as the REF samples.



**Figure 8-1: The Bella Robotic Sample Preparation using Rocklabs Ring Mills**

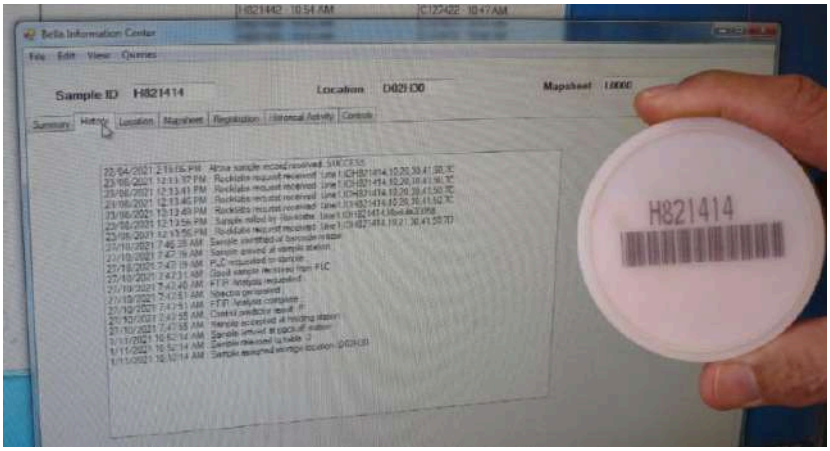
Source: SLR 2021

**Figure 8-2: The Pulverized Sample is Stored in a Barcoded Dedicated Receptacle for Assay**


Source: SLR 2021

A LIMS system controls the progress of the sample packet through the whole of the sample preparation and assay procedure enabling digital tracking of all stages (Figure 8-3). This ensures *inter alia* that the sample is valid, not previously assayed, and the assay looks like one for a bauxite sample. It also generates pulp duplicates at a frequency of 1 in 100 which are also the REF samples (SRK, 2019b).

**Figure 8-3: The Pulverized Sample is Tracked Digitally Through the Bella Preparation and Assaying**



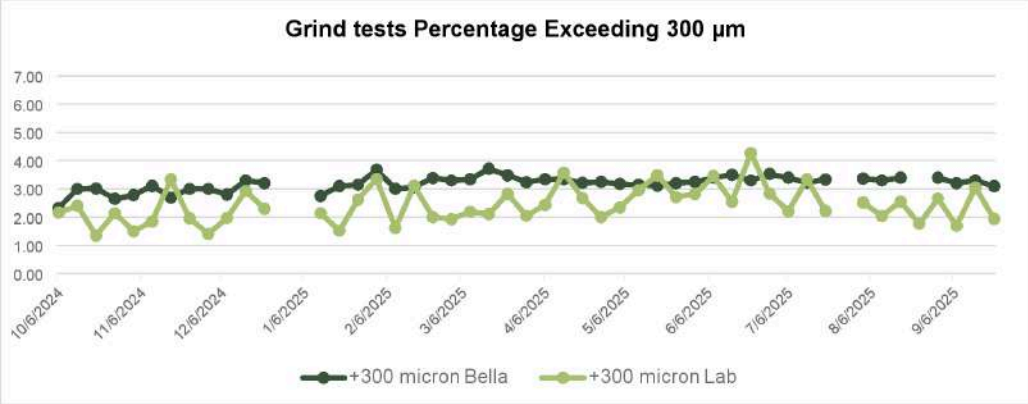

Source: SLR 2021

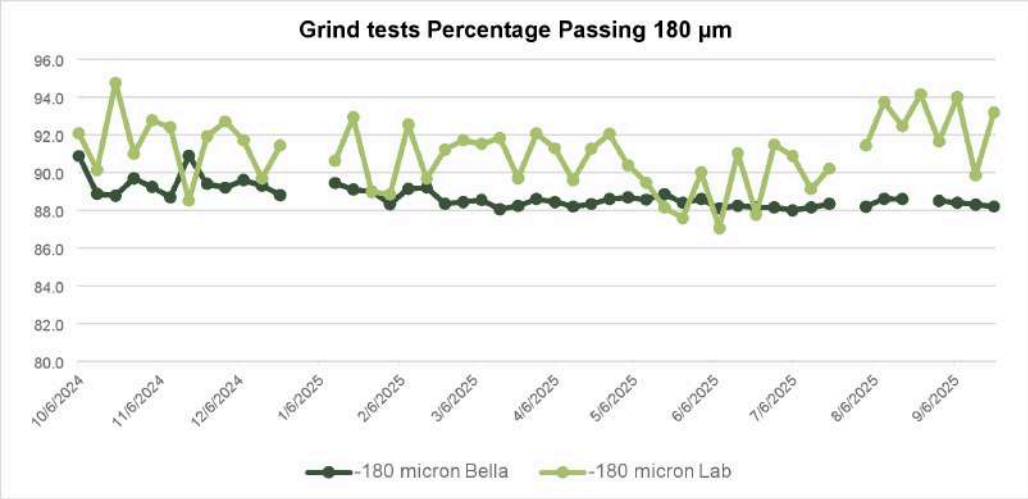
Grind size monitoring is carried out with the advantage of the robotic sample preparation being consistent grind size. A risk with all such systems is the possibility of contamination between samples. This is usually avoided by inserting blank samples of zero grade into the sample processing stream, although this has the potential for the blank samples themselves to contaminate the next sample being assayed.

Quality control (QC) procedures were developed and implemented to monitor the Bella robotic sample preparation system (Franklin, 2019), including:

- Temperature testing on the ovens. These are recorded between two and five times a year since 2017 at eight positions for each of four ovens and demonstrate consistent safe drying temperatures below 100°C (average 97.9°C for 352 readings) (Bella, 2021).
- Daily grind size checks using IRM KH13 (Section 8.3.3). The percentage passing 180 µm and percentage exceeding 300 µm is recorded at Bella on all ten ring mills at a rate of 1:200 for the resource drill samples, with independent checks by the KWI on a random selection of all samples milled for the week. These demonstrate satisfactory sample preparation, and the consistency of the Bella robotic system, which is critical for effective FTIR assaying
- Results for the period 6 October 2024 to 28 September 2025 indicate that all weekly averages met the target 85%, with low proportions exceeding 300 µm (Figure 8-4) (Bella, 2025).

**Figure 8-4: Sample Preparation Monitoring: Weekly Average Grind Sizes for the Robotic Sample Preparation Unit Tested by Bella and by KWI**






Source: Bella 2025

## 8.2 Analyses

### 8.2.1 Geochemical Analyses

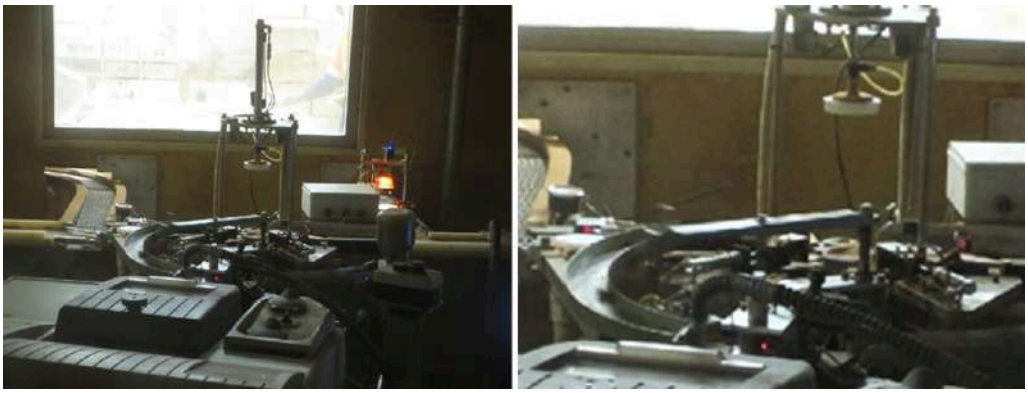
Assaying of the drill samples is based on a spectral method, using a Nicolet 6700 FTIR Spectrometer with a robotic feeder (Figure 8-5) (Franklin, 2019). FTIR obtains an infrared absorption spectrum from the sample. The FTIR spectrometer simultaneously collects high-resolution spectral data over a wide spectral range. A mathematical process (Fourier transformation) converts the raw data into the actual spectrum for subsequent determination of the component analytes.

All drill samples are currently assayed using a customized, bespoke FTIR method, with the final corrected results used for Mineral Resource estimation. Calibration and monitoring of the FTIR results are done using Reference Method (REF) assay results.

Bella generates the raw FTIR spectral dataset for each sample, which is transferred to the Alcoa LIMS system for post-processing. Alcoa performs all the Reference Method analyses at KWI.

The FTIR spectra are determined using a robotic scoop arm that collects an approximately 5 g aliquot of the pulp from the Petri dish and presents it to a platinum crucible. The material in the crucible is pressed flat to ensure an even surface for scanning. The crucible is then rotated several times through the spectrometer and 20 scans are conducted on the aliquot. The scans are processed and validated by the Bella system and when accepted, they are then transferred to the Alcoa LIMS system for post-processing and further validation.

**Figure 8-5: The Robotic FTIR Assaying Equipment**



Source: SLR 2021

Note: Shows the sampling scoop arm and pulp dish with the lid elevated

#### 8.2.1.1 FTIR Method Assays and the CalVal Dataset

The FTIR Method for bauxite assay uses infrared absorption spectra to characterize the presented sample for multiple analytes as element, compound, or mineral percentages. The approach has been developed using an extensive calibration and validation (CalVal) dataset, constant monitoring of Reference samples and Standards, and periodic revision of the prediction algorithms.

In 1990, an initial set of approximately 2,300 CalVal samples was collected covering the Darling Range tenement. A validated subset of CALVAL samples consisting of representative samples across the defined lithologies from multiple regions was used to develop the initial FTIR prediction model (Franklin, 2019). Extra CalVal samples have been added to the CALVAL dataset in recent years to help predictions in areas of low Reactive Silica (less than 0.5% SI) and high Total Iron (greater than 50% FE). The CalVal samples are run randomly through the FTIR equipment in triplicate, under differing conditions (time of day, season, operator, order, etc.) to test for external factors. The accuracy of FTIR results based on the prediction model algorithm are monitored using an internal check assay program of pulp samples at KWI (refer to Section 8.2.1.2 - REF assays) and by an independent 3$^{rd}$ party check assaying program at BV and Intertek (refer to Section 8.3.5.1).

Initially some FTIR analytes (Available Alumina, Total Iron, Carbonate, Sulphate, Total Silica, Total Phosphorus and Magnetic Susceptibility) were determined using a 'common' algorithm, whereas Reactive Silica, Oxalate, Extractable Organic Carbon, Total Alumina and Boehmite each used a specific algorithm (SRK, 2019b). Since 2017 specific algorithms have been used for all analytes. The algorithms are periodically updated, typically if there has been a change in equipment or Reference Method. Retaining all FTIR spectra now means additional analytes can be determined using specific algorithms, with three new analytes being added to Method Set MIC#00005 in 2021 (Potassium, Titanium and Gallium).

#### 8.2.1.2 Reference Method (REF) Assays

REF assaying is done by Alcoa on 1% of the drilling samples at KWI to validate and calibrate the FTIR assays (SRK, 2019b). This is a suite of assays and tests that are carried out by wet chemical and other means and has included:

- **XRF:** x-ray fluorescence spectroscopy
- **ICP-OES:** inductively coupled plasma optical emission spectrometry
- **XRD:** x-ray diffraction
- **MS:** magnetic susceptibility, a proxy for grindability
- **BD-ICP:** bomb digest in a caustic solution, with an ICP-OES finish
- **BD-GC:** bomb digest in a caustic solution, with a gas chromatography finish
- **BD-NDIR:** bomb digest in a caustic solution, with a non-dispersive infrared finish
- **MD-ICP:** microwave digest in a caustic solution, with ICP-OES finish

There are differences in the nature of these tests. Both XRF and ICP methods are instrument-based methods designed to replicate wet chemical analysis results, either total or partial assays depending on the digestion. Both XRD and MS methods are used to investigate mineralogy contents so they are regarded as proxies for assays. Bomb digest (BD) methods have been developed by the alumina refining industry to determine the expected yield of bauxite ore during processing. They are the basis for 'metallurgical assays' that are designed to replicate the physicochemical reactions in the refinery and accordingly may be customized for a particular ore type or process plant. At Alcoa some BD assaying has been replaced with a microwave digest (MD) method.

A summary of the assaying process used per element at KWI for the REF samples, which are used to calibrate and validate the FTIR Method, is provided in Table 8-1.

**Table 8-1: Assaying Methodologies for Resource Estimation Samples**

| Name | Analyte | Code | Units | Reference Method |
|---|---|---|---|---|
| Available Alumina | A.Al2O3 | AL | % | MD – ICP (MALSI) |
| Reactive Silica | R.SiO2 | SI | % | MD – ICP (MALSI) |
| Total Iron | $Fe_2O_3$ | FE | % | XRF |
| Oxalate | $NaC_2O_4$ | OX | kg/t | BD – GC |
| Carbonate | $Na_2CO_3$ | CO | kg/t | BD – NDIR (TICTOC) |
| Extractable Organic Carbon | C | EO | kg/t | BD – NDIR (TICTOC) |
| Total Phosphorous | $P_2O_5$ | PT | % | XRF |
| Sulphate | $Na_2SO_4$ | SU | kg/t | XRF |
| Total Silica | $SiO_2$ | ST | % | XRF |
| Magnetic Susceptibility | MagSus | MS | None | MS (CGS system) |
| Total Alumina | $Al_2O_3$ | AT | % | XRF |
| Boehmite | AlO(OH) | BO | % | XRD |

Source: Alcoa, 2019



The BD method involves adding a measured amount of 52.4% carbonate free caustic diluted to 8% to the sample aliquot (1 g), sealing it in a small 10 mL pressure vessel and then cooking it at 145°C (Alcoa, 2023). After cooling, the solution is assayed by titration or other methods to determine the alumina and silica contents. As the digestion of these elements by the hot caustic solution is determined by the physical conditions during digestion (mainly temperature and pressure) the results provide a proxy for the expected performance of ore of that nature in the alumina refinery plant. The resulting assays represent AL and SI, measured as percentages.

The MD method was introduced in 1996 to replace the BD methods for assaying of the Mineral Resource drill samples (resource definition and exploration). Atmospheric digestion is done in a microwave oven using a 13% caustic solution. The advantage of this is that it is faster, more repeatable and uses a smaller aliquot (0.5 g). The MD assays are collectively named ‘microwave available alumina and reactive silica’ (MALSI) (KWI, 2025). The BD methods are still used for the refinery monitoring samples including those taken from the sampling towers prior to the feed stockpiles of crushed ore.

Following digestion using either MD, BD, or wet chemical methods, the analytes are assayed (Table 8-1) using the following methods (Figure 8-6):

- For ICP the digestion liquor is read using a PerkinElmer Optima 8300 machine.
- For XRF an aliquot of 0.7 g is combined with a lithium borate flux, fused in platinum crucibles on a dedicated Phoenix 8-bank burner, and batches are assayed on an Axios Max PW4400 machine.
- For gas chromatography (GC) a 1.00 g aliquot is digested and the digestion liquor analysis is performed using an Agilent 7890B machine.
- For Total Inorganic Carbon and Extractable Organic Carbon (TICTOC) a 1.00 g aliquot is digested and the digestion liquor analysis is performed using an Analytical Aurora 1030 Total Organic Carbon Analyzer with carousel.

**Figure 8-6: Digestion and Assay Equipment used for REF Samples at the KWI Clockwise from top left: BD, MD, TICTOC, ICP, XRF, GC**

Source: SLR 2021

Details on the assaying method used for the final (Best) assay value for every sample interval are carried in the acQuire database.

For Mineral Resource estimation samples (resource definition and exploration), the Reference Method results are used to monitor the performance of the FTIR assaying, and to calibrate (adjust) the FTIR results on a batch-by-batch basis. The Reference Method is also used for all monitoring of the refinery performance including the grades of ore presented to the sampling towers at Pinjarra and Wagerup prior to stockpiling and reclaiming of the ore feed.

A consistent approach to sample collection, preparation and assaying for the samples used in Mineral Resource estimation has been used since 1980. Refinements to the assaying methods have comprised (SRK, 2019b):

- **1996:** Microwave digestion was introduced instead of bomb digestion for the REF samples.
- **1999:** The collection of the FTIR spectral data was outsourced to Bella, with direct control of processing and prediction still done by Alcoa.
- **2006:** Robotic sample preparation was introduced at Bella.
- **2006:** Digital retention of all FTIR spectral data was introduced, enabling additional post-processing of assayed samples for new analytes.
- **2017:** The calibration sets were rescanned with FTIR and an updated Method Set (MIC#00005), was developed.
- **2018:** Original wet chemical assays were replaced by FTIR for approximately 73,000 samples (drilled in Myara North from 1992 to 2002).
- **2019:** Original wet chemical or FTIR assays were replaced by FTIR for approximately 251,000 samples (drilled in Myara North from 1991 to 1997).
- **2021:** Change to updated Method Set (MIC#00006)
- **2025:** Implementation of Milestone S.R.L. ETHOS equipment for MD.

The impact of these changes and validation of the results were investigated by Alcoa personnel and independently by SRK (2021a). It was concluded that the assaying precision (i.e. repeatability) and accuracy (lack of bias, as demonstrated by quantile-quantile plots) did not show significant differences between the pre-2018 and post-2018 data sets.

### 8.2.2 Density Determinations

Dry bulk density testwork has been completed historically using a variety of sampling (grab samples, diamond drillcore, test pits) and testing methods. Statistical analysis of results has been completed based on logged geology and whether samples were within the Caprock zone, Friable zone, or Clay zone. For the Caprock zone a total of 421 samples (grab samples to diamond core) were used in the statistical analysis. Dry bulk density results for the caprock zone were typically in the range of 1.8 g/cm$^3$ to 2.5 g/cm$^3$ with a mean dry bulk density value of 2.05 g/cm$^3$ calculated. Caprock samples with a higher FE content have increased density values. The assignment of block dry density values within the Caprock zone uses an algorithm based on the estimated block FE value. A review of the mean bulk density results shows no notable differences in the average caprock dry density of samples across programs/years or from different regions. A total of 24 samples have been collected in the friable ore zone for bulk density testwork. The bulk density mean-average of the Friable zone is 1.90 g/cm$^3$.

The SLR QP considers that bulk density testwork to date is adequate to support the application of domain average density values to obtain a global tonnage estimate. A review of reconciliation metrics to date shows estimated Mineral Resource tonnages fall within a 5% to 10% tolerance of actual mined tonnages on a monthly basis. Ongoing bulk density testwork is considered warranted to support the application of current bulk density domain values to areas of future planned production.

The density estimation methodology is discussed in Section 11.8.

The available density test work data is summarized as follows.

#### 8.2.2.1 1980 to 1992

Senini (1993) collated and reviewed all previous bauxite density data, including that by Sadleir completed in 1986, and modified Sadleir's algorithm for calculation of density from individual 0.5 m sample assays of FE. Results are summarized in Table 8-2.

**Table 8-2: Summary of Density Test Data from 1980 to 1992**

| Year | Source | Material | Count | Mean DIBD ($g/cm^3$) | Min DIBD ($g/cm^3$) | Max DIBD ($g/cm^3$) | Mean FE (%) | Regression with FE | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Slope | Intercept |
| 1980 | DOSCO[1] | Hardcap | 18 | 2.200 | 1.98 | 2.52 | 19.35 | 0.0089 | 2.032 |
| 1986 | Sadleir (in Senini) | Hardcap | 14 | 2.364 | 2.08 | 2.75 | 20.88 | 0.0092 | 2.172 |
| 1992 | Senini | Hardcap | 67 | 2.409 | 1.81 | 3.10 | 21.00 | 0.0103 | 2.192 |
| 1986 | Sadleir (in Senini) | Friable Zone | 11 | 1.846 | 1.64 | 2.12 | 8.80 | 0.0015 | 1.830 |
| 1992 | Senini | Friabl Zone | 27 | 2.225 | 1.88 | 2.79 | 14.30 | 0.0045 | 2.89 |
| 1980 - 1992 | reported above | Granitic | 67 | 2.327 | 1.81 | 3.10 | 16.7– | | |
| 1980 - 1992 | reported above | Doleritic | 32 | 2.444 | 2.07 | 2.96 | 28.96 | | |

Source: Senini 1993. Note: [1] As cited in Senini 1993. No full citation available.

Challenges with this approach include:

- There are very few data points, unevenly distributed by material type and mining area.
- Methodologies for collecting and testing the samples are inconsistent (sand replacement method for Hardcap, driven cylinder for Friable Zone, water displacement are all noted).
- There is some lack of clarity on moisture, but it is assumed that the values are all in situ dry bulk density reported as $t/m^3$.

The differences between Hardcap and Friable (other material), and between material derived from granite or dolerite are clear.

Senini (1993) concluded that the DIBD should be estimated using a regression equation and this method is still used (Section 11.8).

#### 8.2.2.2 2013 to 2018 Drill Samples

Various further test programs have been attempted, including collection of all material from drill samples (assuming the drill hole volume is constant), taking wet and dry weights, and assaying for FE. This resulted in 51 samples from 8 holes at Huntly and 93 samples from 24 holes at Willowdale. Scatter plots produced by SRK 2021a showed significant scatter of all available data for both Hardcap and Friable (other) material.

#### 8.2.2.3 2016 to 2017 Pit Samples

Alcoa collected 2 kg to 5 kg grab samples from 16 Huntly pits (76 samples) and 10 Willowdale pits (41 samples). Water immersion density testing was completed by Bureau Veritas. The average of 2.01 t/m³ is significantly lower than that from the 2015 study of 2.23 t/m³. This methodology did not account for porosity and voids and samples were not adequately sealed.

FTIR assays for FE were compared to sealed and unsealed density estimates and it was found that Senini's regression equation better predicted the unsealed densities.

#### 8.2.2.4 2018 Downhole Density Estimates

In December 2018, Alcoa contracted downhole geophysical measurements in 54 air core holes drilled in the Larego area. The data from this study is not used for Mineral Resource estimation and instead, efforts are being focused on reconciling mine production and the 3DBM estimates.

#### 8.2.2.5 2019 Geotechnical Drilling Samples

In April 2019, 7 drillholes were completed around the Larego mining region at locations of proposed critical infrastructure. J & S Drilling used a Jacro 300 trailer-mounted drill rig to produced HQ3/61 mm wide core for geotechnical test work. Core was selected for measurements by an engineering geologist from Advisian. No assay data was collected. Selected samples were sent to Mining Civil Geotest in Perth for geotechnical laboratory testing. This included density and moisture content for 4 samples, all logged as clay (Alcoa, 2024).

#### 8.2.2.6 2023 Test Pits and Geotechnical Drilling

In May 2023, 10 test pits and 14 drillholes (NQ/47.6mm) were completed around the Myara mining region at the proposed Myara North ROM pad.

From the test pits, bulk samples were collected, and dry mass cubic decimeter (MMDD) was completed. The dry bulk density determined from the test pits ranged from 1.85 g/cm$^3$ to 2.09 g/cm$^3$.

A total of 35 samples from the geotechnical drilling were carefully measured lengthways with a minimum of 2 caliper readings taken of the core width, allowing a volume calculation of each sample. The samples were then dispatched to BELLA Laboratory, Kwinana, where they were dried for a minimum of 12 hours at 110°C. Each sample was then weighed with dry bulk density results calculated. Samples were then sent for full reference and FTIR analysis (Alcoa, 2024).

#### 8.2.2.7 2024 Petrophysical Drilling

In 2024, 16 holes were drilled using a small diamond rig producing PQ3/83 mm wide core to obtain a geophysics dataset for EM calibration. By using diamond drilling core, it allowed multi purposing of the holes including the provision for density test work. In areas where it was considered there was complete core recovery, samples were selected for density measurement. The sample was carefully measured lengthways and a minimum of 2 caliper readings taken of



the core width, allowing a volume calculation. The samples were then dispatched to the Alcoa Mining Laboratory in Kwinana. They were dried for a minimum of 12 hours at 110°C at BELLA Laboratory, Kwinana. The technicians at the Alcoa Mining Laboratory weighed and recorded each sample. The samples were sent for full reference and FTIR analysis (Alcoa, 2024).

Where possible, density measurements were completed in all zones sampled. 181 samples were measured for density across the entire bauxite profile.

#### 8.2.2.8 Density by Stratigraphy

For the Caprock density analysis, 421 samples ranging from grab samples to diamond core were used. No notable differences in the caprock dry density across programs/years.

A limited dataset is available for the Friable Zone due to difficulty of collection and cost of samples. A total of 24 samples were collected. The bulk density mean-average of the Friable zone based on these 24 samples is 1.90, however, with the removal of the 3 higher density samples, the mean reduces to 1.81. There are no notable differences in the Friable zone dry density across programs/years.

For the Basal Clay, 93 samples were collected, the majority of which are from the 2024 petrophysical program (Section 8.2.2.7). There are no notable differences in the clay dry density across programs/years (Alcoa, 2024).

### 8.2.3 Sample Storage and Archiving

Pulps for 15 m by 15 m drilling are discarded after data validation, while pulps for 60 m and 30 m spaced holes are archived until mining of the Mining Region is complete, according to the Discard Ore Development Samples procedure AUACDS-2053-108 (Alcoa, 2018).

## 8.3 Quality Assurance and Quality Control

Quality Assurance (QA) refers to systems and procedures implemented to maintain data quality during sampling, sample preparation, and analytical methods. Quality Control (QC) refers to the routine checks used to verify the quality of the data. Together, QA/QC protocols help to ensure sample representivity, analytical accuracy, and analytical precision.

The SLR QP reviewed QA/QC protocols, historical performance summaries, and completed a review of the QC data from Q4 2024 to Q3 2025. QA/QC results provide sufficient confidence in the accuracy and precision of FTIR assay results for use in resource estimation.

Ongoing refinement of Alcoa's current quality assurance practices is considered possible. Refer to recommendations in Sections 1.1.2.1 and 23.1 accordingly.

### 8.3.1 QA/QC Protocols

Alcoa's quality assurance program to monitor FTIR assaying performance at the Bella laboratory consists of the insertion of internal reference material (IRMs), external independent 3$^{rd}$ party check assaying program and active quality control monitoring of results by Alcoa's Geology team. Batches of samples are submitted to the Bella laboratory fortnightly.

Internal standards or reference material (IRMs) were sourced from Darling Range bauxite stockpile material. This material was pulverized and homogenized by Gannet Holdings Pty Ltd to obtain IRM for use in monitoring assay performance. A total of 11 IRMs (KH09 to KH18 and KH20) have been developed (refer to Table 8-3). IRMs are introduced by the Bella Laboratory every 50 samples during the FTIR analysis to check analytical accuracy and the chain of



process. All IRM sample insertions maintain consecutive numerical order within the sample batch supplied to Bella Laboratory.

Calibration is done at first to generate the reference mean of each IRM standard as well as the acceptable minimum and maximum values, totaling three standard deviations.

After the boxes of drill samples are received at Bella, packets of Reference Method samples (REF) are split out by the robotic sample preparation, based on a random selection by Alcoa LIMS, at a frequency of 1 in 100 (1%). These are submitted to the KWI in batches of 19 for REF assaying for use in batch correction of the FTIR Bella assays. As the FTIR assays are adjusted to match the REF assays (using a 'broken stick' curve adjustment to remove bias and maintain precision) it is expected that there should be minimal bias between REF and FTIR corrected results (FTIR_corr). However, the repeatability between the two methods is an important attribute of the quality of the assay results used for Mineral Resource estimation. Each batch of REF samples includes 1 Blank and 1 Standard. The REF samples are considered to serve the same purpose as pulp repeats in defining the repeatability of the assays. REF samples are discussed in more detail in Section 8.3.4.1. Alcoa's quality assurance program also sends checks of REF samples assayed at Bella and KWI to an independent laboratory, Bureau Veritas (BV) for check assaying.

In 2018, Alcoa introduced an alternative procedure to field duplicates, termed Sample To Extinction (STE). This involves taking the normal 0.5 m drill sample (referred to as the Parent) and collecting all the residue from that drilled interval (i.e. the riffle split reject, and previously any material left in the sampling cup). This residue is collected once per shift from each rig under supervision by the geologist. The residue is pulverized and homogenized, then three equal splits (referred to as the Daughters) are assayed. STE samples are discussed further in Section 8.3.6.

Following receipt of results from the laboratories, Alcoa geologists review the values of the daughter samples against each other and the original parent sample. Sample batches where daughter assays fall outside acceptable repeatability grade tolerances for pulp duplicates are repeated by the laboratory. Samples where parent sample assays fall outside acceptable grade tolerances for field duplicates indicates issues with sampling and investigation of sampling protocol at the rig by geologist occurs. Monthly and quarterly QA/QC reports are produced to detect and address potential temporal trends or issues in their results.

The following are the existing written QA/QC procedures available to all staff:

- Franklin (2019) describing the FTIR process.
- Use of the customized in-house Exploration PowerApps digital module to record and document field inspections by the geologist at the drill rigs (documenting visible contamination, Sample ID, Hole ID, splitting, chip size of sample, split volume, depth measurement, collection of STE samples, collection of further FTIR calibration and CalVal samples, as well as other prestart, safety, risk and Environmental, Health, and Safety inspections.
- Procedures for generating STE samples.
- Various PowerPoint presentations providing an overview of the laboratory procedures.



The SLR QP reviewed previous QA/QC performance results and analyzed the new QA/QC data compiled by Alcoa between November 2023 and September Q3 2025. This review indicates assay accuracy and precision are appropriate for samples to be used Mineral Resource estimation. A summary of findings of this analysis review are presented in the subsequent sub-sections.

### 8.3.2 Blanks

Blanks are not routinely introduced in FTIR submission batches into the robotic mills at Bella and there is no check on cross-contamination during sample preparation. Given the style of mineralization, the ore grades being assayed, and the volume of material milled compared to the final aliquot assayed, the absence of sample preparation blanks is not considered material. There is also no available blank sample on the market that would not introduce contamination of the mills by very low-grade samples at Bella. KWI laboratory submits blanks with a frequency of 1 to 19 in the REF samples sets compiled and dispatched regularly by Bella, however this information was not available for review.

### 8.3.3 Standards

Standards evaluate accuracy of the assaying by detecting the differences between a result and an expected value, also known as a bias. Alcoa has used a series of specially prepared Internal Reference Material (IRM) samples derived from Darling Range bauxite, pulverized and homogenized by Gannet Holdings Pty Ltd, labelled KH09 to KH20. Between Q42021 and Q32025, only IRM KH20 has been used at the Bella Laboratory and KH10 at KWI. Monitoring using these IRM samples provides arguably better assurance of assaying accuracy than commercial certified reference material samples given they represent the material and mineralogy of Darling Range bauxite. The IRMs have generally been sourced from stockpile material and used in both coarse-crushed and pulp form. The IRMs although developed by a recognized external 3rd party have not been externally certified. A summary of the IRMs used is provided in Table 8-3. The reference mean and standard deviation values used in the table below are sourced from the most up to date values provided (2025Q3).

**Table 8-3: IRMs Used for Drilling and REF Monitoring**

| Standard | Date | Comment | Analyte | Unit | Reference Mean / Expected Value | Standard Deviation |
|---|---|---|---|---|---|---|
| KH09 | May 1999 to present | Boehmite analysis, FTIR, MD-ICP, and XRF analysis Mining reference analysis (IRM) | [detail unavailable] | | | |
| KH10 | May 2012 to present | Mining reference analysis (IRM) | AL | % | 34.80 | 0.29 |
| | | | FE | % | 15.52 | 0.09 |
| | | | SI | % | 1.07 | 0.03 |
| KH11 | July 2008 to March 2015 | FTIR analysis (IRM) | [variable over lifetime] | | | |
| KH12 | July 2008 to April 2014 | Grind size control (IRM) | [no chemical analyses; grind control samples] | | | |



| | | | | | | |
|---|---|---|---|---|---|---|
| KH13 | April 2014 to present | Grind size control (IRM) | | | | |
| KH14 | March 2015 to October 2021 | FTIR analysis (IRM) | [variable over lifetime] | | | |
| KH15 | October 2015 to September 2017 | Preparation and analytical control – introduced at the drill rig (IRM) | [detail unavailable, due to short usage timeframe] | | | |
| KH16 | September 2017 to December 2018 | Preparation and analytical control – introduced at the drill rig (IRM) | | | | |
| KH17 | September 2017 to December 2018 | Preparation and analytical control – introduced at the drill rig (IRM) | | | | |
| KH18 | September 2017 to December 2018 | Preparation and analytical control – introduced at the drill rig (IRM) | | | | |
| KH20 | October 2021 to October 2025 | FTIR analysis (IRM) | AL | % | 33.14 | 0.63 |
| | | | FE | % | 15.54 | 0.64 |
| | | | SI | % | 1.02 | 0.05 |

Control of the accuracy of FTIR samples is currently monitored at Bella using IRM KH20. The IRMs are inserted every 50 FTIR samples.

SLR previously reviewed IRM performance for the period Q4 2023 to Q3 2024, which indicated acceptable performance. SLR also reviewed the IRM performance for KH10 and KH20 for the period Q4 2024 to Q3 2025 in the context of the failure limits set by Alcoa, which are three standard deviations (SD) from the expected value. SLR evaluated AL, SI, and FE through extended timeline series to identify potential bias trends or systematic outliers.

A total of 9,782 KH20 samples were analyzed, using Priority Codes P213 to P221. Priority Codes represent batches assayed by the FTIR Method using the same batch correction factors. A total of 440 KH10 samples were analyzed during the same period at KWI. IRM performance is summarized in Table 8-4.

**Table 8-4: IRM Performance in the Q4 2024– Q3 2025 QA/QC Program**

| IRM | Element | Unit | Year Quarter | N Samples | Mean | EV | SD | N Failures | Bias (%) | Failures (%) | Upper Limit | Lower Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| KH20_P213 | AL | % | 2024Q4 | 1,217 | 33.14 | 33.03 | 0.51 | 12 | 0.3 | 1 | 34.34 | 31.71 |
| | FE | % | | 1,217 | 15.69 | 15.85 | 0.59 | 35 | -1 | 2.9 | 17.18 | 14.52 |
| | SI | % | | 1,217 | 1.02 | 0.99 | 0.04 | 54 | 2.8 | 4.4 | 1.08 | 0.9 |
| KH10_P213 | AL | % | 2024Q4 | 47 | 35.16 | 35.13 | 0.58 | 0 | 0.1 | 0 | 36.93 | 33.34 |
| | FE | % | | 44 | 15.5 | 15.52 | 0.08 | 0 | -0.1 | 0 | 15.9 | 15.13 |
| | SI | % | | 47 | 1.01 | 1.01 | 0.03 | 0 | 0.5 | 0 | 1.08 | 0.94 |
| KH20_P214 | AL | % | 2024Q4 | 789 | 33.08 | 33.14 | 0.55 | 15 | -0.2 | 1.9 | 34.46 | 31.83 |
| | FE | % | | 789 | 15.53 | 15.54 | 0.56 | 12 | -0.1 | 1.5 | 16.87 | 14.21 |
| | SI | % | | 789 | 1.02 | 1.02 | 0.04 | 14 | 0 | 1.8 | 1.11 | 0.93 |
| KH10_P214 | AL | % | 2024Q4 | 46 | 35.06 | 35.13 | 0.68 | 0 | -0.2 | 0 | 36.93 | 33.34 |
| | FE | % | | 45 | 15.53 | 15.52 | 0.08 | 0 | 0 | 0 | 15.9 | 15.13 |
| | SI | % | | 46 | 1.01 | 1.01 | 0.02 | 0 | 0.3 | 0 | 1.08 | 0.94 |
| KH20_P215 | AL | % | 2025Q1 | 1,397 | 33.02 | 33.14 | 0.58 | 32 | -0.4 | 2.3 | 34.46 | 31.83 |
| | FE | % | | 1,397 | 15.63 | 15.54 | 0.56 | 23 | 0.6 | 1.6 | 16.87 | 14.21 |
| | SI | % | | 1,397 | 1.01 | 1.02 | 0.04 | 39 | -1.2 | 2.8 | 1.11 | 0.93 |
| KH10_P215 | AL | % | 2025Q1 | 42 | 34.96 | 35.13 | 0.68 | 0 | -0.5 | 0 | 36.93 | 33.34 |
| | FE | % | | 38 | 15.53 | 15.52 | 0.06 | 0 | 0.1 | 0 | 15.9 | 15.13 |
| | SI | % | | 42 | 1.01 | 1.01 | 0.03 | 0 | -0.4 | 0 | 1.08 | 0.94 |
| KH20_P216 | AL | % | 2025Q1 | 1,260 | 32.92 | 33.14 | 0.55 | 35 | -0.7 | 2.8 | 34.46 | 31.83 |
| | FE | % | | 1,260 | 15.68 | 15.54 | 0.55 | 18 | 0.9 | 1.4 | 16.87 | 14.21 |
| | SI | % | | 1,260 | 0.98 | 1.02 | 0.04 | 107 | -3.5 | 8.5 | 1.11 | 0.93 |
| KH10_P216 | AL | % | 2025Q1 | 55 | 34.89 | 34.8 | 0.32 | 0 | 0.2 | 0 | 36 | 33.6 |
| | FE | % | | 52 | 15.52 | 15.52 | 0.06 | 0 | 0 | 0 | 15.9 | 15.13 |
| | SI | % | | 55 | 1.08 | 1.07 | 0.04 | 1 | 0.6 | 1.8 | 1.19 | 0.95 |
| KH20_P217 | AL | % | 2025Q2 | 941 | 33.14 | 33.14 | 0.52 | 10 | 0 | 1.1 | 34.46 | 31.83 |
| | FE | % | | 941 | 15.67 | 15.54 | 0.55 | 12 | 0.9 | 1.3 | 16.87 | 14.21 |
| | SI | % | | 941 | 1 | 1.02 | 0.03 | 30 | -2 | 3.2 | 1.11 | 0.93 |
| KH10_P217 | AL | % | 2025Q2 | 56 | 34.81 | 34.8 | 0.32 | 0 | 0 | 0 | 36 | 33.6 |
| | FE | % | | 52 | 15.5 | 15.52 | 0.08 | 0 | -0.2 | 0 | 15.9 | 15.13 |
| | SI | % | | 56 | 1.06 | 1.07 | 0.04 | 0 | -0.5 | 0 | 1.19 | 0.95 |
| KH20_P218 | AL | % | 2025Q2 | 938 | 33.04 | 33.14 | 0.51 | 10 | -0.3 | 1.1 | 34.46 | 31.83 |
| | FE | % | | 938 | 15.66 | 15.54 | 0.55 | 10 | 0.7 | 1.1 | 16.87 | 14.21 |
| | SI | % | | 938 | 1 | 1.02 | 0.04 | 32 | -2.3 | 3.4 | 1.11 | 0.93 |
| KH10_P218 | AL | % | 2025Q2 | 48 | 34.81 | 34.8 | 0.31 | 0 | 0 | 0 | 36 | 33.6 |
| | FE | % | | 39 | 15.47 | 15.52 | 0.07 | 0 | -0.3 | 0 | 15.9 | 15.13 |
| | SI | % | | 48 | 1.07 | 1.07 | 0.03 | 0 | -0.2 | 0 | 1.19 | 0.95 |
| KH20_P219 | AL | % | 2025Q3 | 1,197 | 32.99 | 33.14 | 0.51 | 11 | -0.4 | 0.9 | 34.46 | 31.83 |
| | FE | % | | 1,197 | 15.81 | 15.54 | 0.57 | 32 | 1.7 | 2.7 | 16.87 | 14.21 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | SI | % | | 1,197 | 1.01 | 1.02 | 0.03 | 23 | -1.2 | 1.9 | 1.11 | 0.93 |
| KH10_P219 | AL | % | 2025Q3 | 48 | 34.88 | 34.8 | 0.31 | 0 | 0.2 | 0 | 36 | 33.6 |
| | FE | % | | 35 | 15.56 | 15.52 | 0.11 | 0 | 0.3 | 0 | 15.9 | 15.13 |
| | SI | % | | 48 | 1.07 | 1.07 | 0.03 | 0 | -0.3 | 0 | 1.19 | 0.95 |
| KH20_P220 | AL | % | 2025Q3 | 1,188 | 32.94 | 33.14 | 0.59 | 39 | -0.6 | 3.3 | 34.46 | 31.83 |
| | FE | % | | 1,188 | 15.53 | 15.54 | 0.61 | 33 | 0 | 2.8 | 16.87 | 14.21 |
| | SI | % | | 1,188 | 1.01 | 1.02 | 0.04 | 54 | -1 | 4.5 | 1.11 | 0.93 |
| KH10_P220 | AL | % | 2025Q3 | 53 | 34.83 | 34.8 | 0.41 | 0 | 0.1 | 0 | 36 | 33.6 |
| | FE | % | | 43 | 15.5 | 15.52 | 0.08 | 0 | -0.1 | 0 | 15.9 | 15.13 |
| | SI | % | | 53 | 1.07 | 1.07 | 0.03 | 0 | 0.2 | 0 | 1.19 | 0.95 |
| KH20_P221 | AL | % | 2025Q3 | 855 | 32.8 | 33.14 | 0.63 | 53 | -1 | 6.2 | 34.46 | 31.83 |
| | FE | % | | 855 | 15.57 | 15.54 | 0.64 | 20 | 0.2 | 2.3 | 16.87 | 14.21 |
| | SI | % | | 855 | 0.99 | 1.02 | 0.05 | 81 | -2.6 | 9.5 | 1.11 | 0.93 |
| KH10_P221 | AL | % | 2025Q3 | 45 | 34.75 | 34.8 | 0.29 | 0 | -0.2 | 0 | 36 | 33.6 |
| | FE | % | | 36 | 15.49 | 15.52 | 0.09 | 0 | -0.2 | 0 | 15.9 | 15.13 |
| | SI | % | | 45 | 1.07 | 1.07 | 0.03 | 0 | 0.3 | 0 | 1.19 | 0.95 |

Performance was reviewed on an individual Priority Code basis and throughout the Q4 2024 to Q3 2025 period.

The results from the IRM KH20, analyzed by the laboratory between Q4 2023 and Q1 2024, as shown in Figure 8-7, include batches P203, P204, P205, and P206. Figure 8-7 shows the P221 AL results for KH20 and KH10 on 10 June 2025, analyzed by Bella and KWI, respectively. KH20 exhibits a slight negative bias of -1.02% with a failure rate of 6.2% with most of these occurring below the lower limit, while KH10 exhibits a smaller negative bias of -0.15% and no failures.

Figure 8-8 shows the P216 SI results for KH20 and KH10 on 26 March 2025, analyzed by Bella and KWI, respectively. FTIR results for KH20 show on average a negative bias of -3.49% against the expected value (1.02% SI) with a failure rate of 8.5% with most of these occurring below the lower limit. A negative bias of FTIR results against the expected value for KH20 was also noted in other batches (priority codes) indicating the expected value may be incorrect, given IRM KH10 has a similar expected value (1.07% SI) and exhibits a slight positive bias of 0.65% and no failures.

Figure 8-9 shows the P219 FE results for KH20 and KH10 on 22 July 2025, analyzed by Bella and KWI, respectively. KH20 exhibits a small positive bias of 1.72% with a failure rate of 2.7% with most of these occurring above the upper limit, while KH10 exhibits a slight positive bias of 0.27% and no failures.

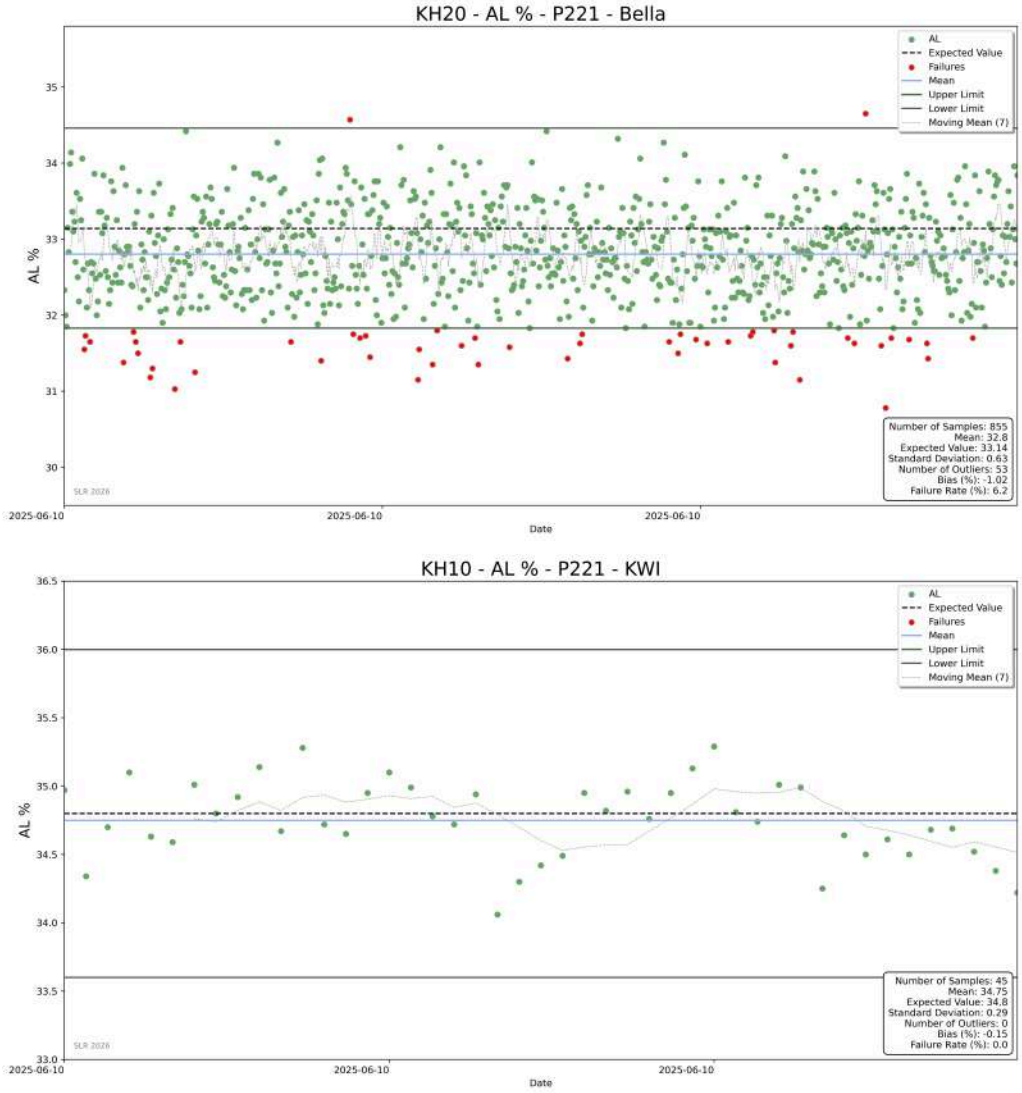
While the bias observed for analytes in each batch was less than 5% and generally indicates acceptable performance, the failure rates are relatively high in some cases, and the SLR QP recommends that such issues are routinely investigated and corrective actions taken. In particular a review on SI results for KH20 is considered warranted given the low bias present across multiple batches (priority codes). Furthermore, the IRM material (KH10 & KH20) currently inserted to monitor FTIR performance is representative of average bauxite grades (approximately 35% Al, 15% FE, 1.0% SI) and does not effectively monitor the performance of FTIR results for low grade bauxite near economic cutoff criteria or high Fe material within the caprock zone. The SLR QP recommends that new IRM’s representative of both low grade

clayey bauxite and high FE caprock material are developed and inserted into the current quality assurance program.

SLR recommend that initially two high FE caprock and two low grade clayey bauxite IRM's be added to each batch of samples sent to the laboratory with the insertion of current IRM's. Once a robust dataset has been attained on the newly proposed IRM's and statistical analysis has been completed to evaluate the performance of these standards then the insertion of one high FE caprock IRM and one low grade clayey bauxite IRM per batch of samples sent to the laboratory is recommended. The addition of these two new IRM's will result in improved quality assurance on FTIR results for FE and SI across the expected grade range of material contained within the economic bauxite zone.

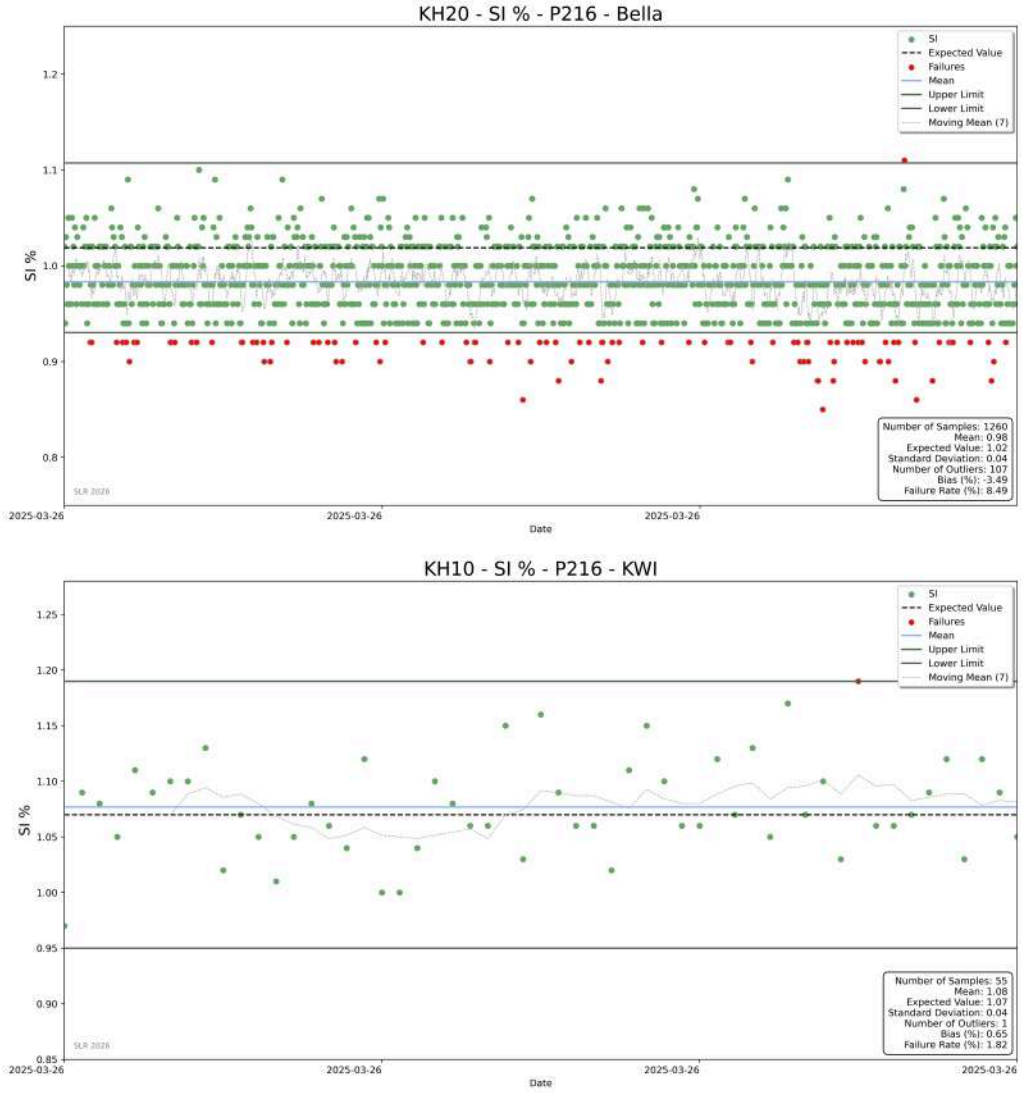


**Figure 8-7: P221, KH20 and KH10 IRM Performance of AL – June 2025**



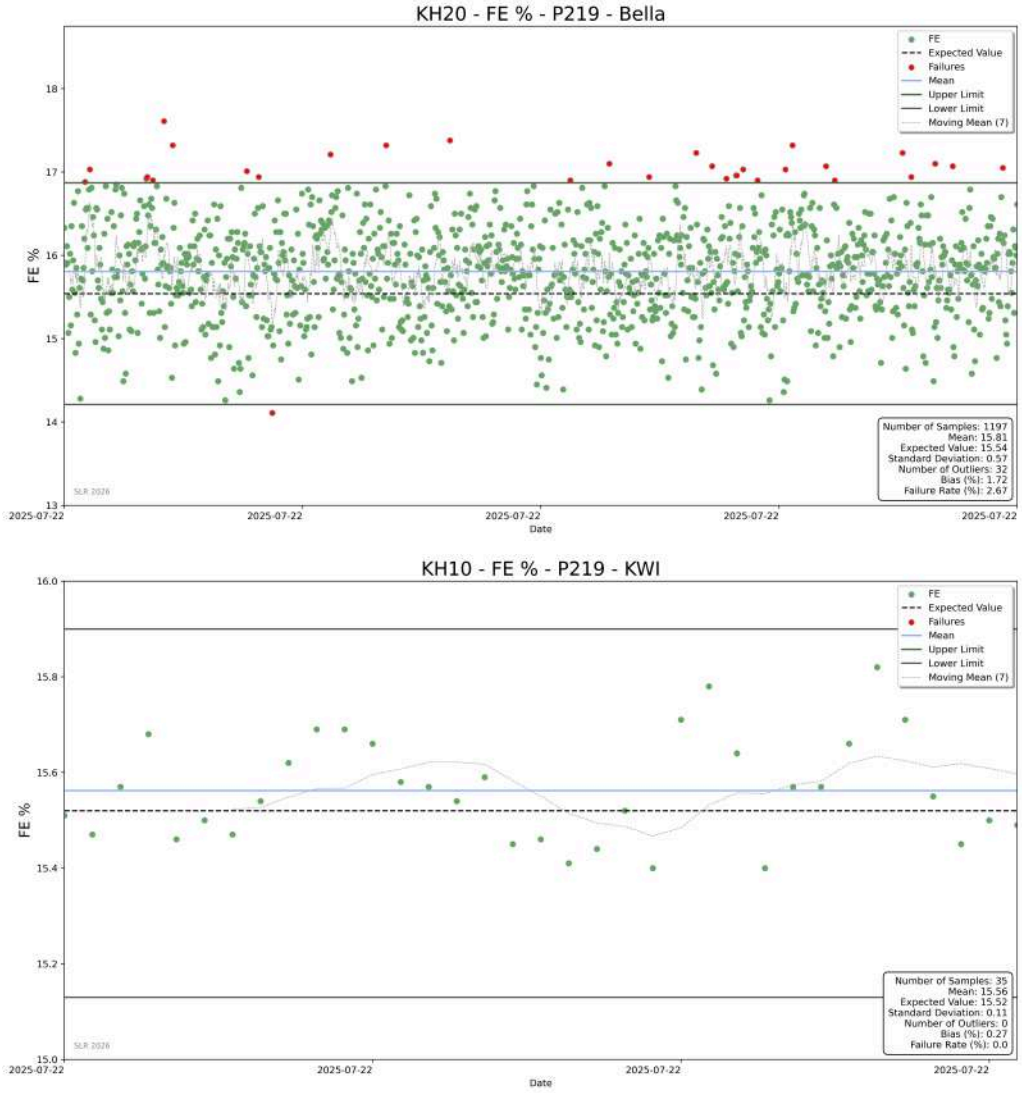

Source: SLR 2025

**Figure 8-8: P216 KH20 and KH10 IRM Performance of SI – March 2025**




Source: SLR 2025

**Figure 8-9: P219 KH20 and KH10 IRM Performance of FE – July 2025**




Source: SLR 2025

### 8.3.4 Duplicates

Duplicate samples help monitor preparation, assay precision, and grade variability as a function of sample homogeneity and laboratory error. Field duplicates are used to evaluate the natural variability of the original core sample, as well as detect errors at all levels of preparation and analysis including core splitting, sample size reduction in the preparation laboratory, subsampling of the pulverized sample, and analytical error. Coarse reject and pulp duplicates provide a measure of the sample homogeneity at different stages of the preparation process (crushing and pulverizing).

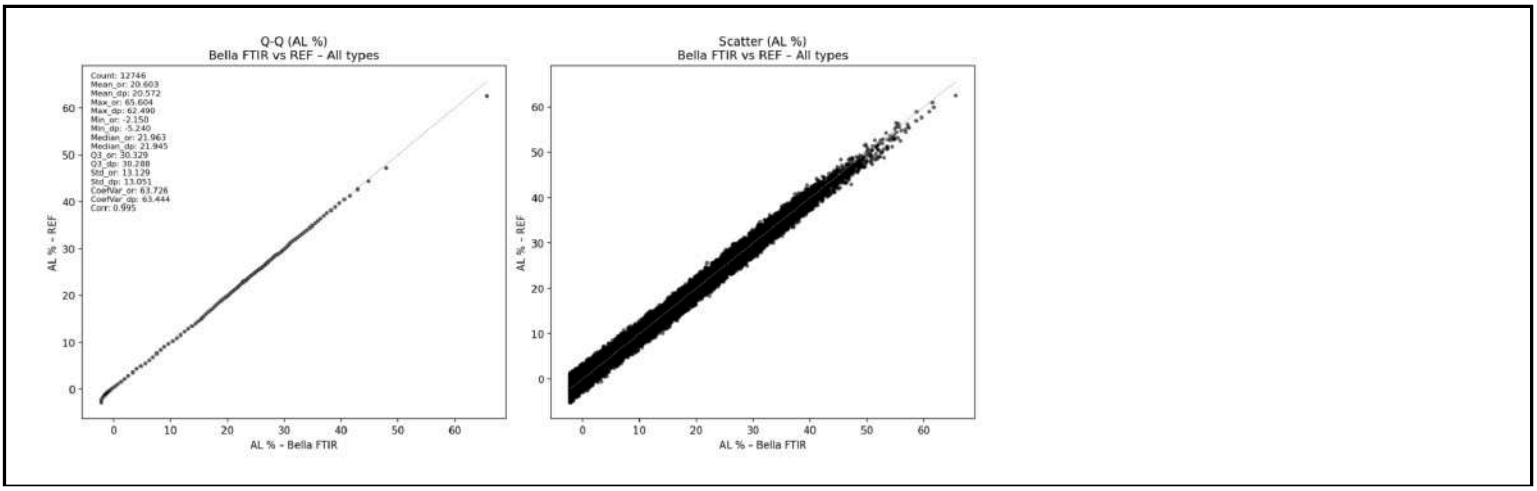
#### 8.3.4.1 REF Samples

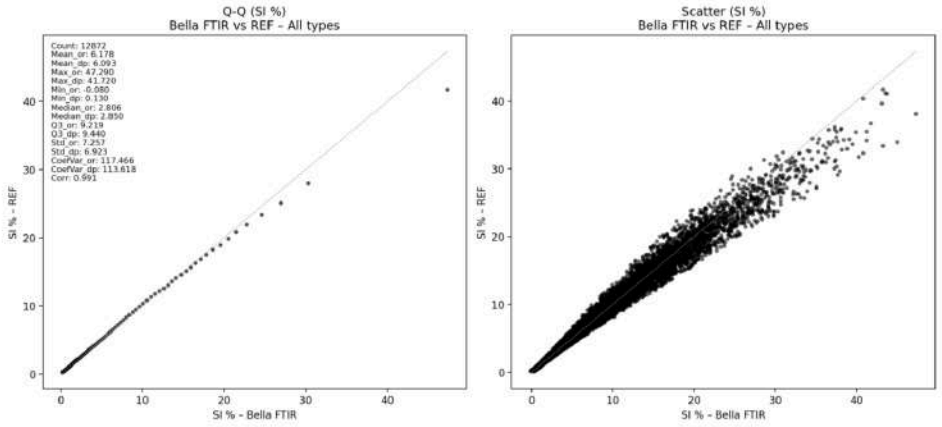
As part of Alcoa's sample assay checks, REF samples were completed to check against the Bella FTIR samples with both sample preparation and analyses conducted at the Bella Laboratory. REF samples are generated during milling of samples submitted for FTIR as described in Section 8.1. They are periodically sent in batches and assayed by the Bureau Veritas Minerals Pty Ltd (BV) laboratory as part of the 'Check Assaying' quality assurance program (Section 8.3.5).These REF samples make up 1% of the total routine FTIR samples. Good correlation is expected between the REF samples and the original FTIR sample.

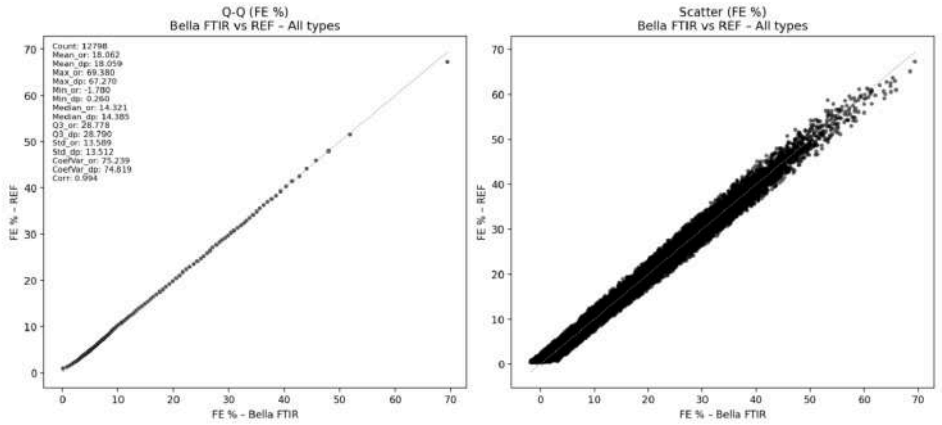
SLR was provided the respective REF and Bella FTIR in '2022_2023 Bella milled check samples_BV _corrected FTIR_10Apr2024.xlsx' and '2023_2024 REF check samples BV FTIR_corrected data_24Jun25.xlsx' where each analyte has an associated REF assay, Bella FTIR assay and BV FTIR assay. Figure 8-10 demonstrates the performance of the REF samples against the Bella FTIR samples between 2022 and 2024 for AL, SI, FE and OX.

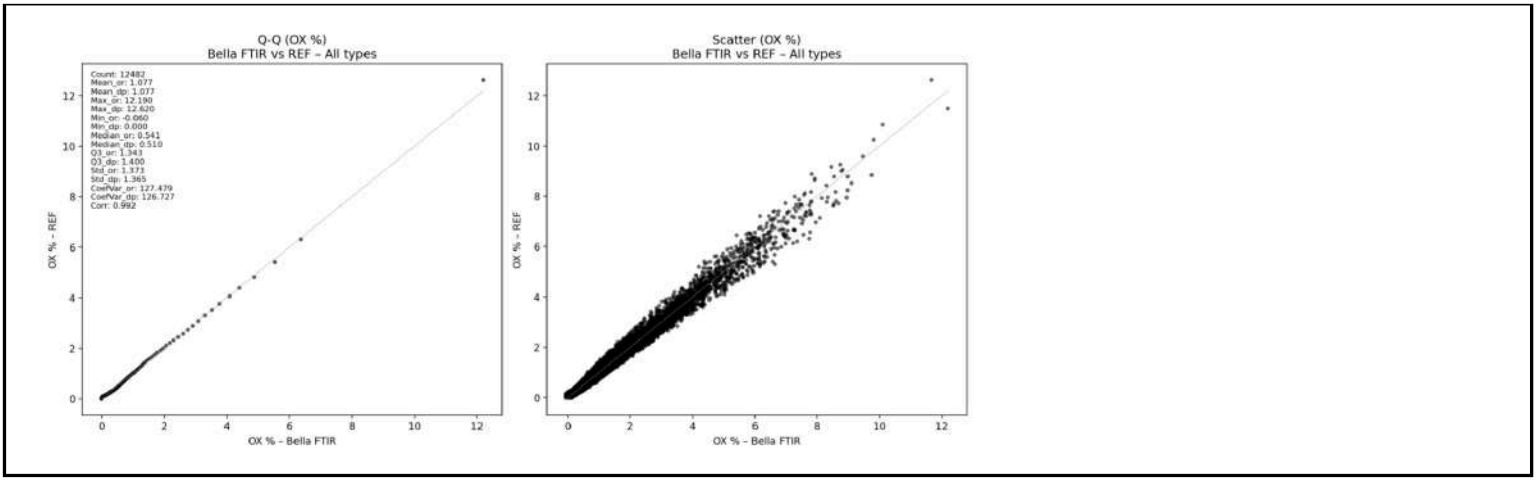
The results demonstrate a strong correlation between all of the REF samples and the FTIR samples with a correlation of >0.99 for all analytes.

**Figure 8-10: Bella FTIR vs Bella REF samples 2022-2024 for AL, SI, FE and OX**




Q-Q (SI %)
Bella FTIR vs REF – All types
Count: 12872
Mean_or: 6.178
Mean_dp: 6.093
Max_or: 47.290
Max_dp: 41.720
Min_or: -0.080
Min_dp: 0.130
Median_or: 2.806
Median_dp: 2.850
Q3_or: 9.219
Q3_dp: 9.440
Std_or: 7.257
Std_dp: 6.923
CoefVar_or: 117.466
CoefVar_dp: 113.618
Corr: 0.991
SI % - REF
SI % - Bella FTIR
Scatter (SI %)
Bella FTIR vs REF – All types
SI % - REF
SI % - Bella FTIR


Q-Q (FE %)
Bella FTIR vs REF – All types
Count: 12798
Mean_or: 18.062
Mean_dp: 18.059
Max_or: 69.380
Max_dp: 67.270
Min_or: -1.780
Min_dp: 0.260
Median_or: 14.321
Median_dp: 14.385
Q3_or: 28.778
Q3_dp: 28.790
Std_or: 13.589
Std_dp: 13.512
CoefVar_or: 75.239
CoefVar_dp: 74.819
Corr: 0.994
FE % - REF
FE % - Bella FTIR
Scatter (FE %)
Bella FTIR vs REF – All types
FE % - REF
FE % - Bella FTIR




Source: SLR, 2026

### 8.3.4.2 Field Duplicates

It is generally considered best practice to collect Field Duplicates in drill sampling programs. They should be collected at the same stage as splitting of the primary sample, i.e. from the same drilled interval, using the same splitter, or sometimes by re-splitting the reject.

The routine collection of Field Duplicates by Alcoa has been intermittent and the last extended period of sampling took place between February 2015 and January 2018, with duplicates submitted at a nominal frequency of 1 in 200, with no more than one duplicate per hole. SRK (2021a) examined 5,885 sample pairs for this period, from a mix of material types, locations, and drilling types. They concluded that the Field Duplicates showed no evidence of significant grade bias but that the precision was lower than expected for this style of mineralization. From graphs they presented, the 90% threshold for the half absolute relative difference (HARD) measure of precision was between 12% and 20%. Precision was poorer for boehmite and oxalate. No significant precision differences were evident between the vacuum and air core Field Duplicates, nor by year, nor between the Huntly and Willowdale Reporting Centers.

Alcoa and various independent reviewers (Holmes, 2018; SRK2021a) considered that there were limitations to the benefit of collecting field duplicates, due to the small sample volume of 150 mL, and some poor splitting equipment and procedures. In January 2018, Alcoa discontinued the routine collection of field duplicates. This process was replaced by the Sample to Extinction method, detailed in Section 8.3.6.

An updated field duplicate collection procedure was implemented in November 2024, limiting field duplicate collection to only sufficiently dry and non-contaminated samples. A dataset containing 162 field duplicates submitted within the period April 2025 to July 2025 and processed in batch P219 at Bella Laboratory was provided to SLR for review. HARD plots and scatter plots generated by SLR for the P219 field duplicate performance are shown in Figure 8-11 with 30% failure limits. A summary table is shown in Table 8-5.

Duplicate performance is considered adequate with a correlation of >0.98 for each analyte. The majority of failures are related to AL and FE, with no temporal bias noted. SLR is of the opinion that the results of the field duplicate sample analyses demonstrate good repeatability of assays indicating the sampling protocol is appropriate to obtain representative samples for use in Mineral Resource estimation.

The SLR QP recommends the re-implementation of the taking of field duplicates at the drill rig and throughout the drillhole to ensure representative samples are being attained at drill rig within the Caprock, Friable and Clay zones and to ensure information is obtained to substantiate that current sampling and splitting processes are robust and are not subject to bias.

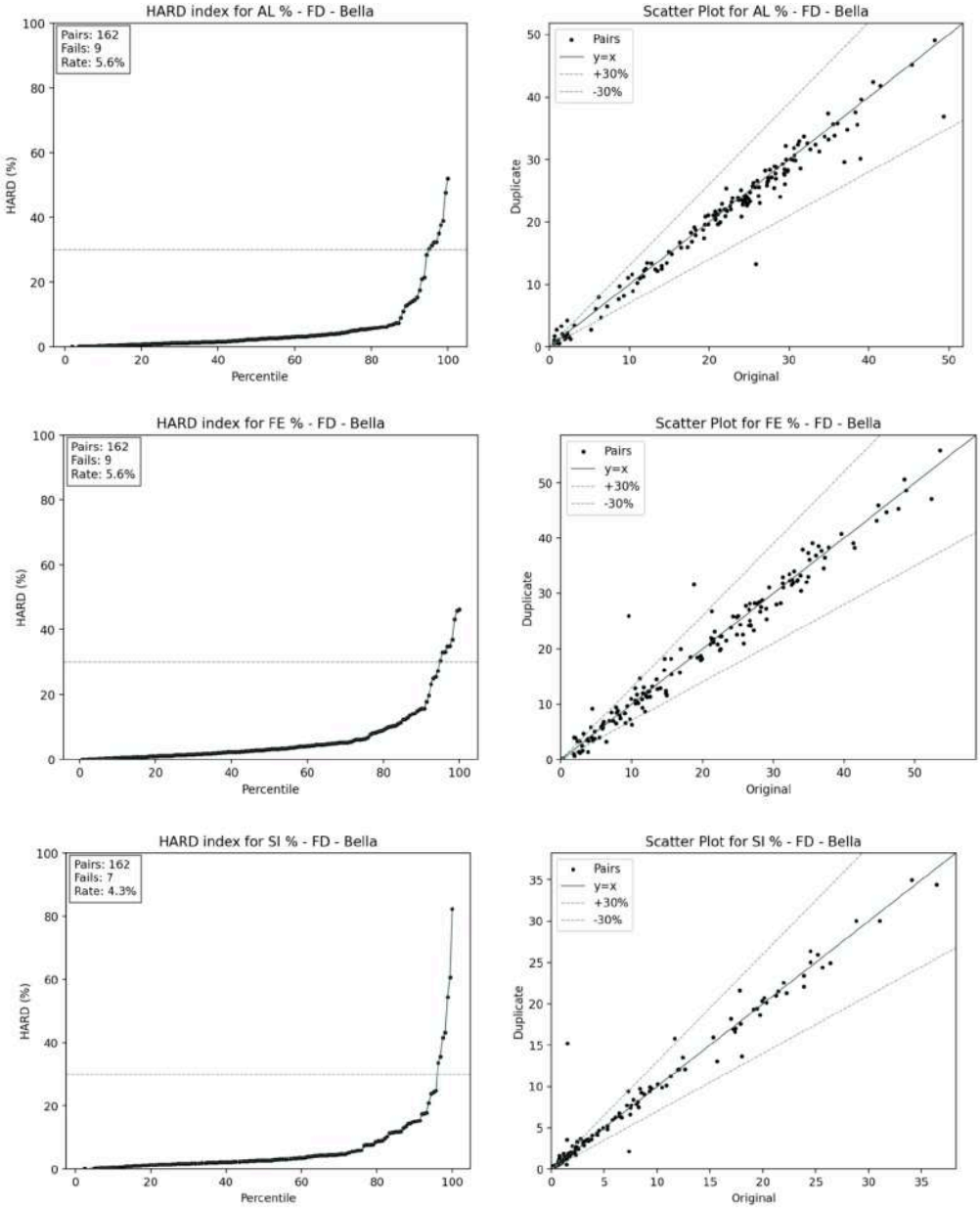
**Table 8-5: Duplicate Summary Table**

| Analyte | % Failure Criterion | N Sample Pairs | N Failures | % Fail Rate | Correlation |
|---|---|---|---|---|---|
| AL | 30% | 162 | 9 | 5.56 | 0.985 |
| FE | 30% | 162 | 9 | 5.56 | 0.982 |
| SI | 30% | 162 | 7 | 4.32 | 0.986 |

Source: SLR, 2025



**Figure 8-11: HARD and Scatter Plots of AL, FE & SI Field Duplicates April 2025 to July 2025**




Source: SLR 2025

### 8.3.5 Check Assays

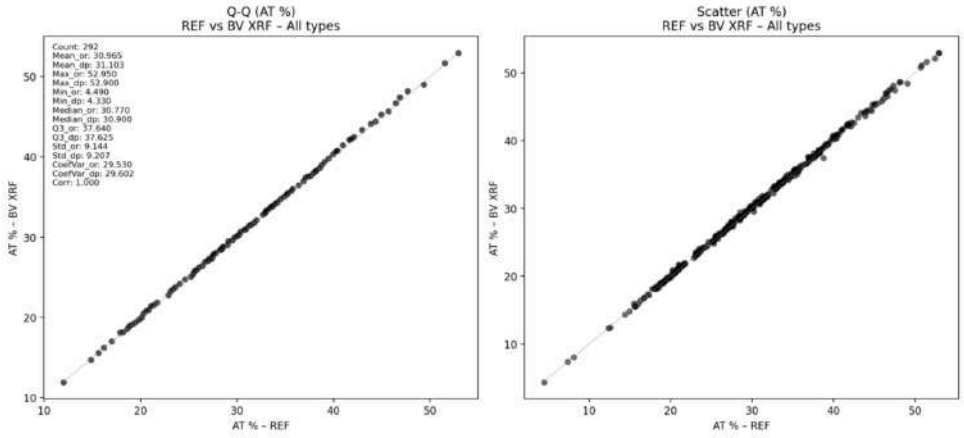
Alcoa sends a proportion (5%) of REF samples assayed at Bella Lab to an independent laboratory, Bureau Veritas Minerals Pty Ltd (BV), in Canning Vale, Western Australia for independent check assaying. Samples selected are from within the interpreted bauxite horizon (Caprock and Friable zone) and from different areas of the deposit.

#### 8.3.5.1 Bella REF versus BV XRF

BV holds NATA accreditation No.626 and it is accredited for compliance with ISO/IEC 17025 – Testing. SLR was provided FTIR assay data from Bella Laboratory for all REF samples as well as the XRF results for the proportion of samples that underwent check assaying at the BV laboratory. Results from the Bella FTIR process compare well with BV XRF check assay results and can be visualized in the form of scatter plots and quantile-quantile plots in Figure 8-12 to Figure 8-14 for AT, ST and FE.

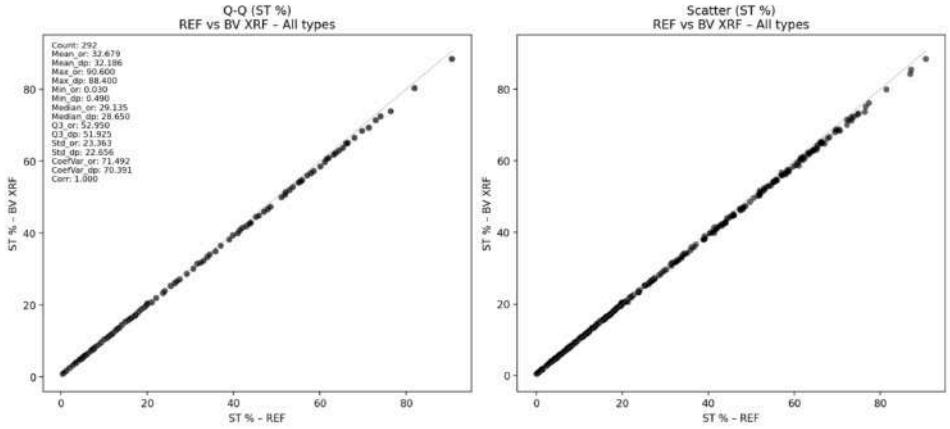
A total of 292 pairs were analyzed by SLR across AT, ST and FE. All analytes displayed very strong correlation across all grades. A slight high bias is noted in the BV XRF Fe results at higher grades whereas a slight low bias is noted in the BV XRF ST results at high grades.

**Figure 8-12: Scatter Plot, Quantile-Quantile Plot and Statistics of AT Umpire Laboratory Checks – Bella REF and Bureau Veritas XRF 2022-2024**



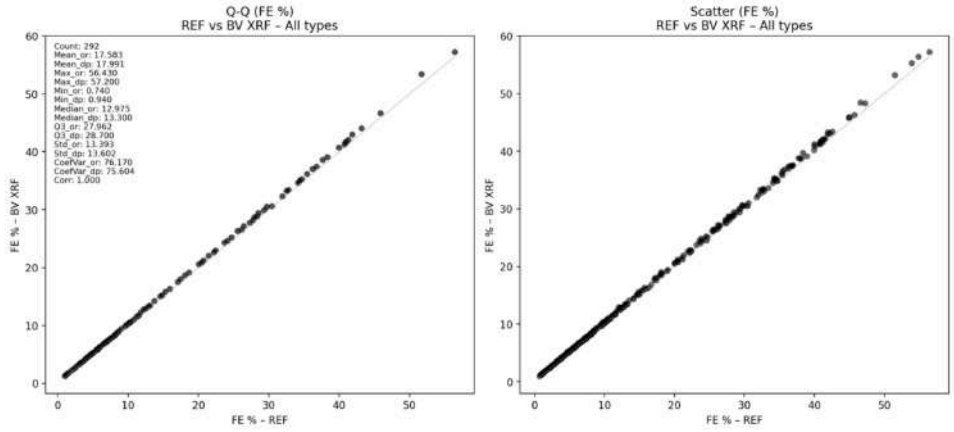

Source: SLR, 2025

**Figure 8-13: Scatter Plot, Quantile-Quantile Plot and Statistics of ST Umpire Laboratory Checks – Bella REF and Bureau Veritas XRF 2022-2024**




Source: SLR, 2025

**Figure 8-14: Scatter Plot, Quantile-Quantile Plot and Statistics of FE Umpire Laboratory Checks – Bella REF and Bureau Veritas XRF 2022-2024**




Source: SLR, 2025

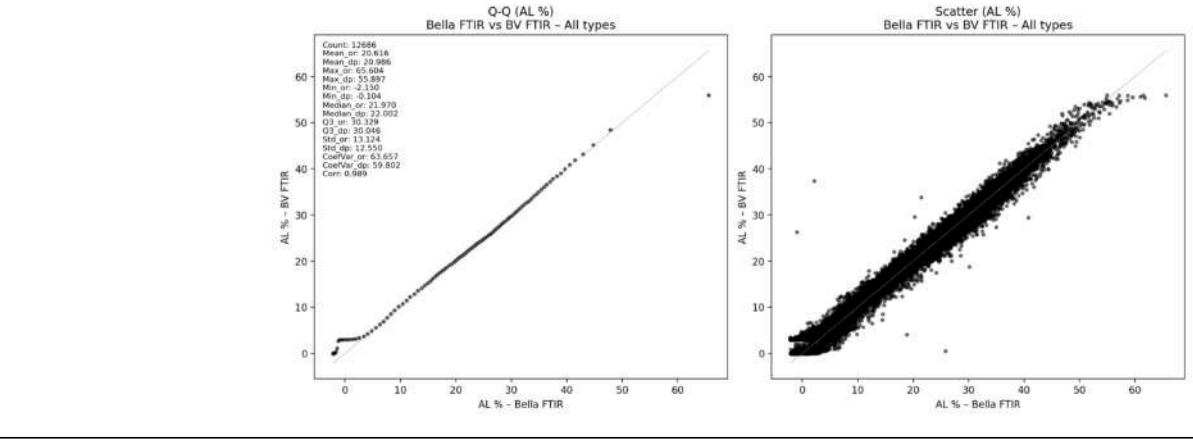
### 8.3.5.2 Bella FTIR versus BV FTIR

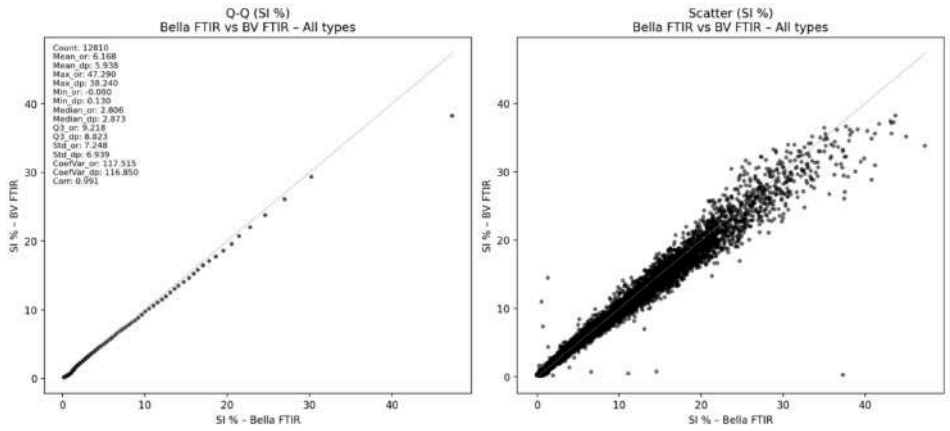
As part of SLR's QA/QC the Bella FTIR assays were also compared against the BV FTIR assays. This data was provided to SLR in '2022_2023 Bella milled check samples_BV _corrected FTIR_10Apr2024.xlsx' and '2023_2024 REF check samples BV FTIR_corrected data_24Jun25.xlsx' where each analyte has an associated REF assay, Bella FTIR assay and BV FTIR assay.

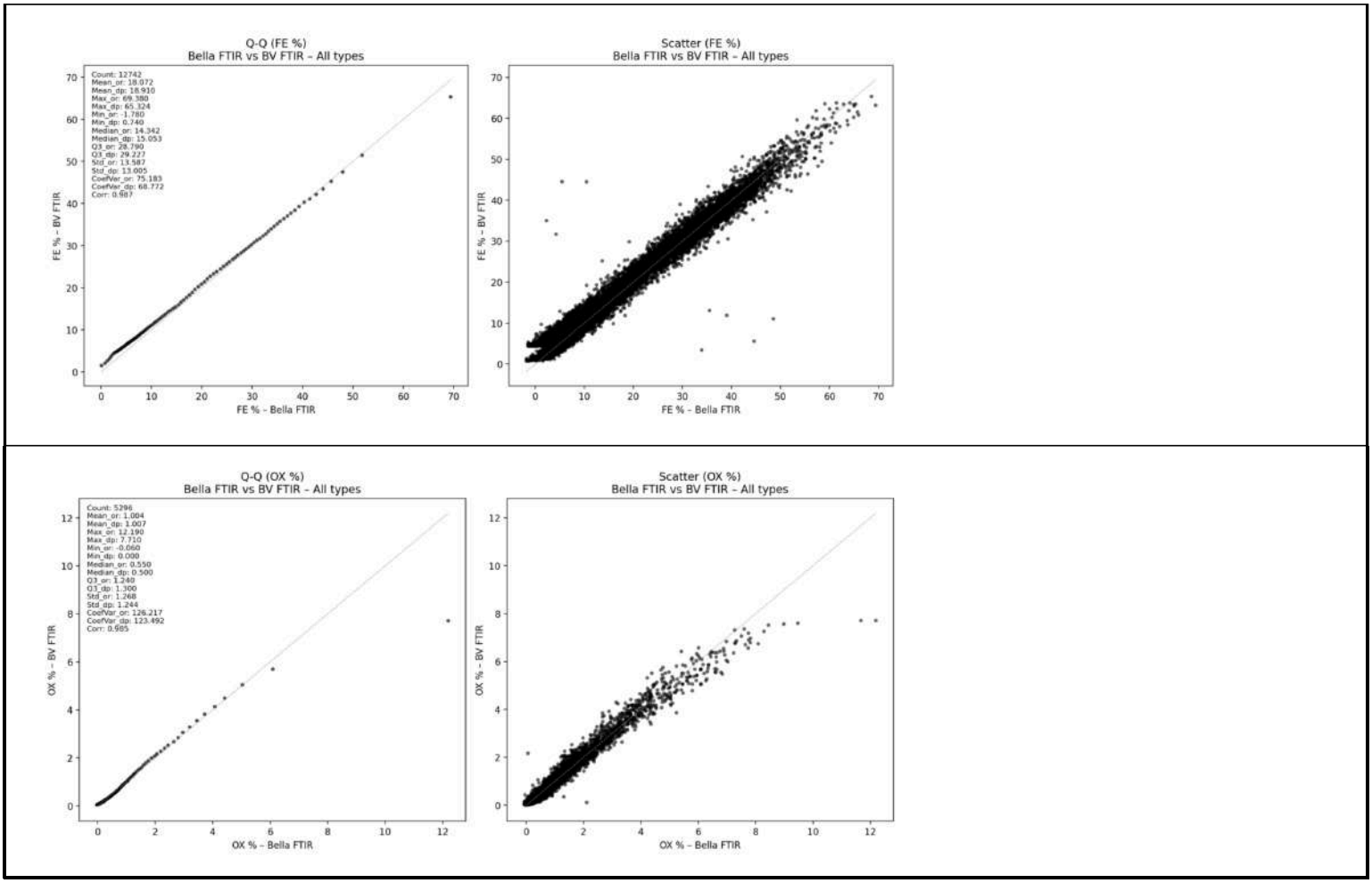
A strong correlation of >0.98 is noted for AL, SI, FE and OX. SI demonstrates high variability especially at high grades (>20% SI). It is important to note high SI grades (>3.5% SI) are

typically associated with samples in clay material which fall below the defined economic bauxite zone. It is noted that OX assay values are not available across all sample IDs compared to AL, SI and FE. Results are shown in Figure 8-15 below.

**Figure 8-15: Bella FTIR vs BV FTIR for AL, SI , FE and OX 2022-2024**






Source: SLR, 2026

### 8.3.6 Sample To Extinction (STE) Samples

Following several reviews of the data sets from 2018 to 2021 by independent consultants, biases and poor repeatability were identified.

Studies in 2016 (112 Parent-Daughter sets, reported by SRK 2021a) and 2018 (63 Parent-Daughters, reported by Barnes 2018b) showed good repeatability for the residue pulp repeats (i.e. between the Daughters) indicating acceptable pulverizing and correct splitting of the residue offsite. However generally poor repeatability was reported between the residue results (the average of the Daughters) and the normal drill sample (the Parent), with a suggestion of bias for some analytes.

This demonstrated that perhaps the splitting at the drill rig was incorrect, and also illustrated the sampling principle that pulverizing (reducing the particle size) before splitting will always reduce the error. On the basis of these studies and external review, modifications to the splitting procedure at the rig were carried out.

Since 2020, Alcoa has refined the STE sampling procedure to collect one sample per shift from each drill rig and assay three Daughters after pulverizing and splitting. The P200 STE dataset, reviewed by SLR, included results for parent-daughter pairs for AL, FE, SI, and ST across 381 pairs. The following plots are reproduced by SLR using the raw P200 data provided by Alcoa, which were analyzed in July 2023.

Comparisons were carried out for the analytes AL, SI, FE, and ST between:

- Daughter vs the Parent Samples
- Daughter 1 vs Daughter 2 vs Daughter 3 (Triplet Comparison)

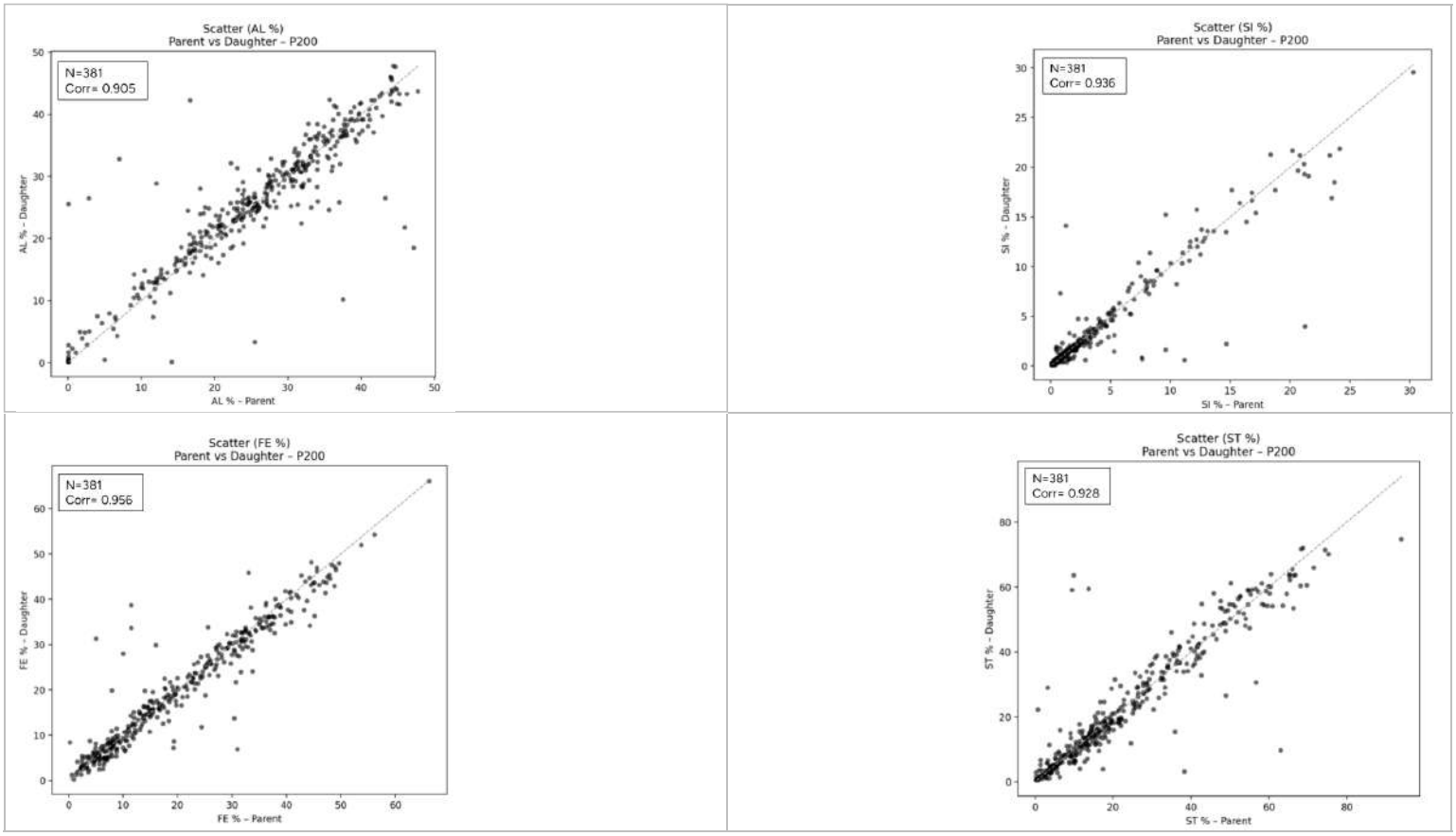
The evaluation of Parent-Daughter samples demonstrated reliable repeatability for the residue pulp repeats, indicating consistent test results across multiple trials. Correlation coefficients ranged from 0.9 to 0.95, indicating strong correlation. The Daughters (D1, D2, and D3) closely matched the original Parent sample, suggesting that the sample preparation and division methods were executed correctly.

The AL results demonstrate overall good reproducibility, with a correlation coefficient of 0.905 when comparing parent samples to D1 across 381 samples (Figure 8-16). SI results maintain a good correlation of 0.936 across 381 samples. FE results show a strong correlation coefficient of 0.956 across 381 samples. ST also shows a good correlation of 0.928 across 381 samples.

Triplet comparison results indicate good repeatability of the daughters, as shown in Table 8-6.

Overall, the results suggests that the split taken at the drill rig (parent sample, reduced to 150 g) provides a representative measure of the drill interval grade.

**Figure 8-16: Scatter Plots of Parent Analysis and Daughter 1 of AL, SI, FE, and ST for P200**




Source: SLR 2026

**Table 8-6: Triplet Comparison Summary Table for P200**

| Analyte | Parent % (Mean) | Daughter 1 % (Mean) | Daughter 2 % (Mean) | Daughter 3 % (Mean) |
|---|---|---|---|---|
| AL | 25.81 | 25.99 | 26.04 | 26.16 |
| SI | 3.49 | 3.36 | 3.43 | 3.28 |
| FE | 20.54 | 20.26 | 19.99 | 20.22 |
| ST | 24.22 | 24.16 | 24.51 | 24.12 |
| *N Samples* | *381* | *381* | *359* | *309* |

Source: SLR, 2026

### 8.3.7 Holyoake Reassay Program

Alcoa implemented the Holyoake check assay program in 2021. In 2025, SLR undertook a comprehensive re-evaluation of pre-2005 assays at Holyoake Mining Region, to monitor the quality of the historical data and guide daily production.

This dataset resulted in 15,280 matched pairs of pre-2005 assays and recent reassays of the archived pulp rejects.

Evaluation of the reassay program comparing historic FTIR results with more recent Holyoake duplicates demonstrates that the overall analytical agreement for both AL and SI is strong, with the majority of paired samples falling within tolerance limits of ±20%. This is reflected in the HARD index and scatter plots.

For AL, only 5.2% of pairs exceed the ±20% threshold, and the Q-Q plot shows good distributional alignment, however there is a slight positive bias present. Greater dispersion is seen on the SI plots with a clear positive bias present in high SI (>7% SI) samples in the re-assay data consistent with a higher failure rate of 10.9%. It is important to note that the identified SI bias in historic (pre-2005) assay results is associated with high SI clay samples.

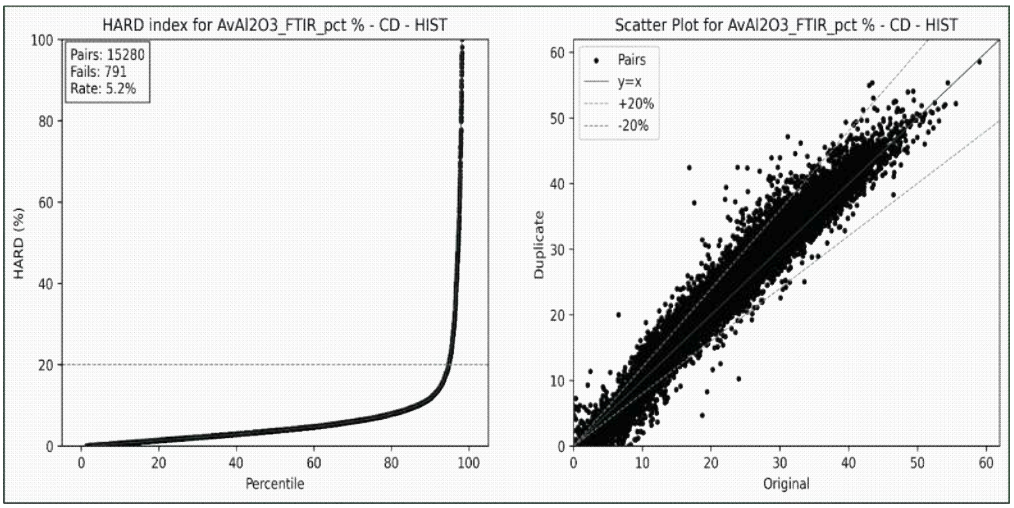
It is the SLR QP's opinion that the identified SI bias in historic FTIR results is not material to the reported Holyoake Mineral Resource as no material impact on the interpreted boundaries of the bauxite zone and estimated grades within the bauxite zone are likely given samples impacted by the bias fall outside of the economic bauxite zone. Estimates for small zones of internal clay within the overall economic bauxite zone will be impacted however changes in SI grade estimate for these small clay lenses are not considered material to the reported Mineral Resource.

The SI and to a lesser extent the AL bias identified in historic FTIR assays was due to the use of a less precise FTIR method pre-2005. Development of the FTIR process and associated methodology has led to improved precision and accuracy for all elements; with particular improvement noted for SI assays within clay rich material.

The SLR QP recommends that Alcoa continues the re-assay program for historic (pre-2005) samples in the Holyoake region which may potentially impact the accuracy of estimation of material which potentially meets RPEE. The SLR QP also recommends that new IRM's representative of both low grade clayey bauxite and high FE caprock material are developed and inserted into the current quality assurance program to ensure FTIR assays are accurate for this material. Grade trends and bias for Al and SI are illustrated in Figure 8-17 and Figure 8-18 with Table 8-7 summarising results.



**Figure 8-17: HARD Index Plot, Scatter Plot, and Quantile-Quantile Plot of AL Historical and Holyoake Results**



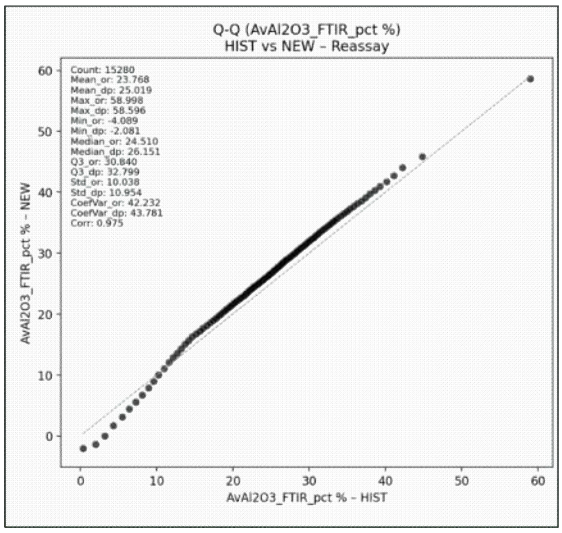
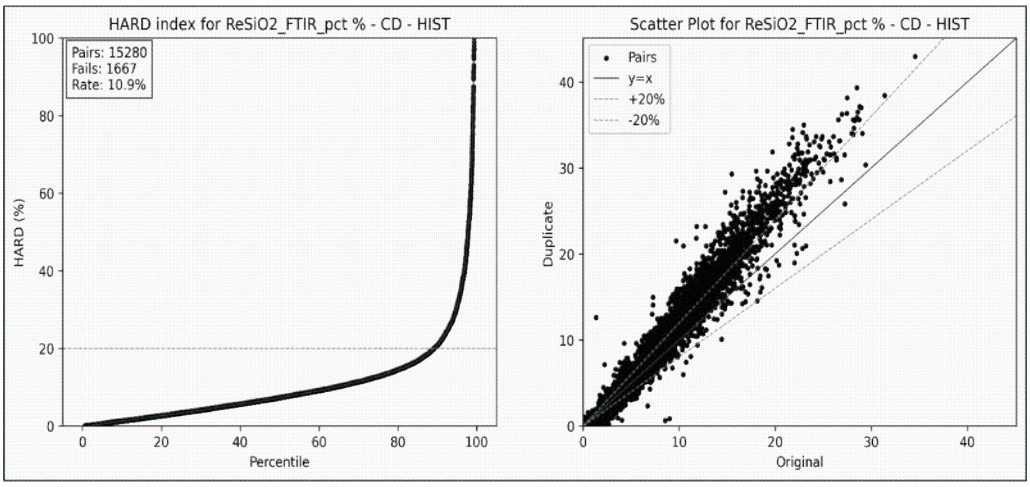



**Figure 8-18: HARD Index Plot, Scatter Plot, and Quantile-Quantile Plot comparing SI values of historic pre-2005 assay against re-assay results from the Holyoake Results**



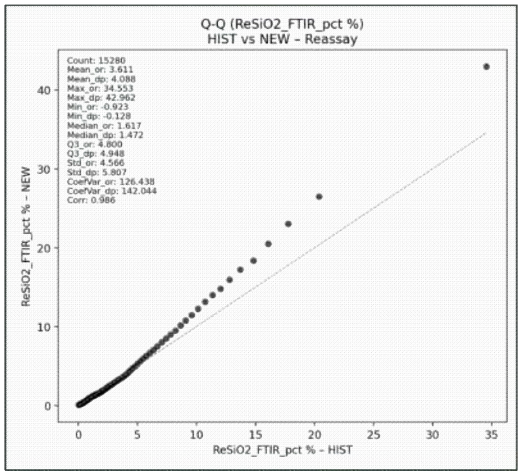



**Table 8-7: Summary Table of Reassay Statistics**

| | Analyte | Original | Duplicate |
|---|---|---|---|
| Number of Samples (N) | AL (%) | 15,280 | 15,280 |
| Mean (%) | | 23.77 | 25.02 |
| Maximum Value (%) | | 59.00 | 58.60 |
| Minimum Value (%) | | -4.09 | -2.09 |
| Median (%) | | 24.51 | 26.15 |
| Variance | | 30.84 | 32.80 |
| Std. Dev | | 10.04 | 10.96 |
| Coefficient of Variation | | 42.23 | 43.78 |
| Correlation Coefficient | | 0.975 | |
| % Difference Between the Means | | 1.25 | |
| Number of Samples (N) | SI (%) | 15,280 | 15,280 |
| Mean (%) | | 3.61 | 4.09 |
| Maximum Value (%) | | 34.55 | 42.96 |
| Minimum Value (%) | | -0.92 | -0.13 |
| Median (%) | | 1.62 | 1.47 |
| Variance | | 4.80 | 4.95 |
| Std. Dev | | 4.57 | 5.81 |
| Coefficient of Variation | | 126.44 | 142.04 |
| Correlation Coefficient | | 0.986 | |
| % Difference Between the Means | | 0.48 | |

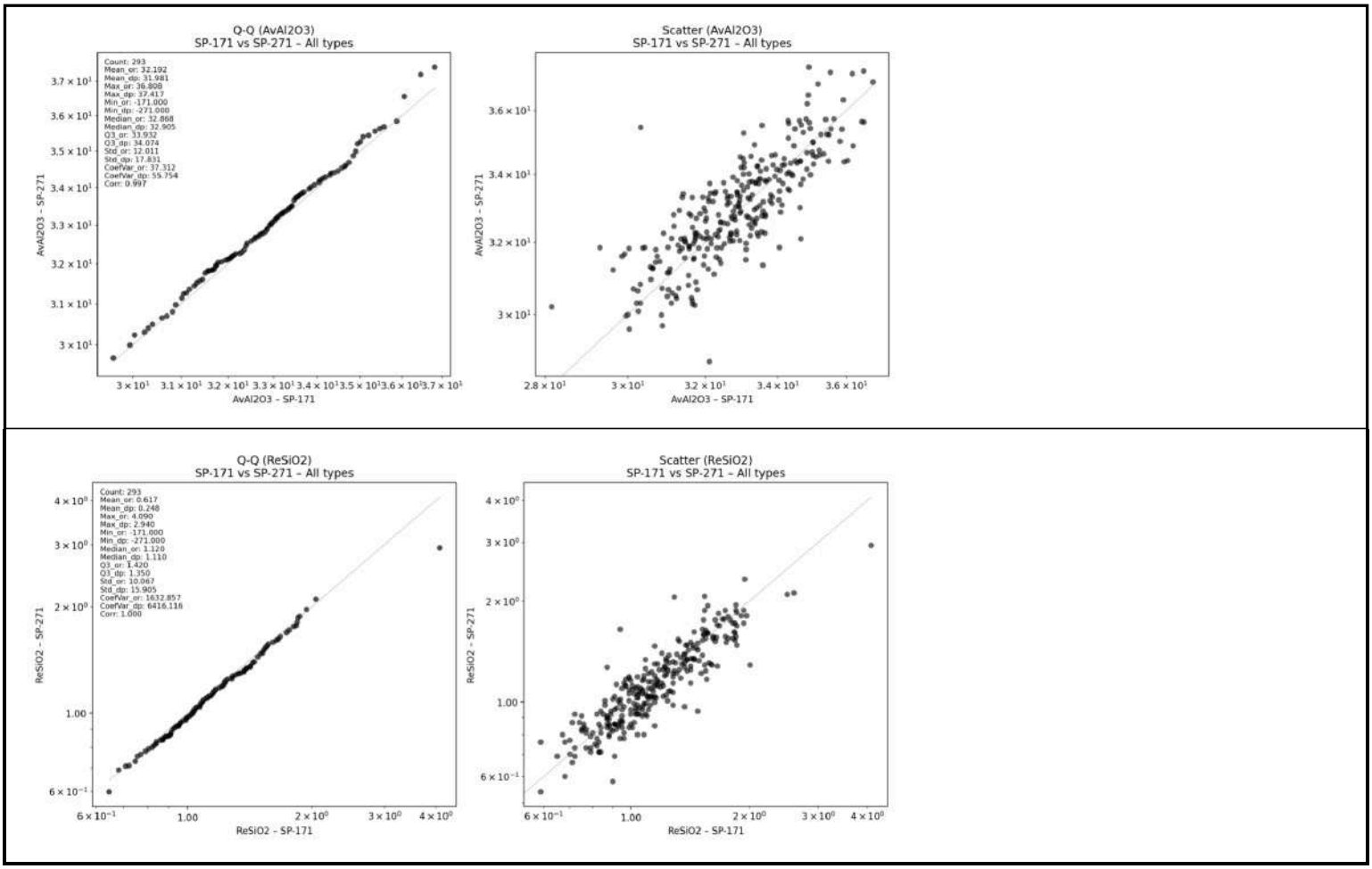
### 8.3.8 Stockpile Feed and Sampling

Refinery feed grade is monitored at Huntly and Willowdale using material collected at the Pinjarra and Wagerup sample plants. At each operation, the sample plants are located at the refinery end of the overland conveyors, just prior to the stockpile stackers.

The stockpile area at the Pinjarra refinery is fed by two conveyor belts (SP-171 and SP-271) that derive their ore from the same crusher (currently at Myara). Prior to the ore being combined from the belts and fed to the stockpile area, it passes through a sampling tower that alternatively takes a primary cut from each belt, dries, crushes, subsamples and combines them into two parallel samples for 12-hour shifts.

A comparison of the 293 paired samples from the Myara Mining Region (SLR, 2026) demonstrated high quality repeatability of the results and a lack of significant bias (Figure 8-19 and Table 8-8).

**Figure 8-19: Stockpile Belt Paired Samples for Myara in 2021 for AL and SI**




Source: SLR, 2026

**Table 8-8: Summary of Stockpile Belt Paired Samples for Myara in 2021**

| Analyte | Standard Deviation | 90th Percentile | Mean | Bias | Min | Max |
|---|---|---|---|---|---|---|
| AL (%) | 1.56 | 35.01 | 32.94 | 0.05 | 28.16 | 37.42 |
| SI (%) | 3.86 | 26.40 | 21.09 | 0.36 | 13.25 | 34.6 |
| FE (%) | 3.14 | 21.36 | 17.18 | 0.27 | 9.9 | 27.69 |
| AT (%) | 1.58 | 40.73 | 38.7 | 0.04 | 34.28 | 43.48 |
| ST (%) | 0.02 | 0.19 | 0.16 | 0.001 | 0.07 | 0.23 |
| SO (%) | 0.34 | 3.34 | 2.88 | 0.03 | 1.3 | 4.14 |
| OX (%) | 0.37 | 2.38 | 1.96 | 0.01 | 1.09 | 3.37 |
| BO (%) | 0.14 | 0.38 | 0.21 | 0.02 | 0.01 | 1.47 |

Source: SLR, 2026

## 8.4 Sample Security

Subsamples are collected by the drillers, sealed into Kraft packets with barcodes and submitted for assay. Cardboard boxes holding 50 packets are delivered at the end of each shift, by the drilling crew, to secure sample storage facilities. Unfilled boxes are stored in the drill support vehicle and completed in the next shift.

The filled sample boxes are stacked onto pallets in batches of 40 (i.e., 2,000 samples), wrapped with plastic and dispatched by courier to the Bella assay facility. Samples are sent to the KWI laboratory on a batch basis and checked on arrival at the laboratory. Once submitted to the laboratory they are stored in a secure facility. Any damage to or loss of samples within each batch (e.g. total loss, spillage or obvious contamination), is reported to the Alcoa Geological team and Database manager in the form of an email list of samples affected and detailing the nature of the problem(s).

All sample information and associated assay information at the laboratory is stored within a secure database / LIMS system which has user assigned permissions and passwords.

The acQuire database has user permissions where read/write access is limited to key personnel. All changes made at a database level are recorded and a history of changes can be reviewed by the database administrator or auditor as required.

## 8.5 QP Opinion

In the SLR QP's opinion, the sample preparation, security, and analytical procedures are adequate for the estimation of Mineral Resources and Mineral Reserves, and that the implemented quality assurance and quality control (QA/QC) program demonstrates acceptable accuracy and precision for samples post 2005. An identified SI bias in FTIR results (pre-2005) in the Holyoake region was rectified with the completion of a re-assaying program.

It is the SLR QP's opinion that the identified SI bias in historic FTIR results is not material to the reported Mineral Resource, as no material impact on the interpreted boundaries of the bauxite zone and estimated grades within the bauxite zone are likely, given that samples impacted by the bias typically fall outside of the economic bauxite zone.

The SLR QP recommends that new IRM's representative of both low grade clayey bauxite and high FE caprock material are developed and inserted into the current quality assurance program to ensure FTIR assays are accurate and precise for this material.



# 9.0 Data Verification

## 9.1 Alcoa Data Validation

Wherever possible the transfer of geological, sampling and assaying data is now carried out digitally.

The use of rugged field tablets was introduced after an external review (Snowden, 2015). The data recorded at the drill rig is uploaded daily via Wi-Fi for validation before being imported into the acQuire database. This allows the data to be captured, checked, approved, and then loaded without any further manual keystroke entry.

Sample preparation and assaying data are recorded at Bella (see Figure 8-3), allowing all aspects of the sample preparation to be tracked and transferred to KWI through direct connection to their Laboratory Information Management System (LIMS). After calibration and validation of the FTIR and REF assays, data is transferred digitally to the acQuire database.

Within the database, scripts are run to prioritize the results and to define the BEST value for each analyte (e.g. AL_BEST, SI_BEST, etc.). The downhole accumulations of all grades are calculated, and the base of mineralization is determined. Values such as density are calculated using regression equations (see Section 11.8.1). Values such as density are calculated using regression equations (see Section 11.8.1).

An events table is used to record the status of each hole at all stages as it progresses through the validation process from designed, to drilled, to dispatched, to lab pending, to validated.

The various downhole geological features are verified spatially, validated by geologists using the vertical position and assays, and where appropriate, metadata is added to record the basis of the interpretation.

The resource database is exported from the acQuire database using queries. The final Mineral Resource models are imported into the over-arching ArcMap environment for mine planning, and integration with the environmental and other planning protocols.

**Figure 9-1: Visual Display of Hole Status (logged and assayed) for Hole G39150224 in Serpentine RMA Subregion**


Source: Alcoa 2021

## 9.2 SLR Data Verification

The SLR QP completed a site visit and had discussion with Alcoa's Database Manager on the data import and validation processes. Independent checks on select drill holes were completed to investigate that the assays contained within the database across different drilling programs completed across multiple years were correct and were the same as those supplied from the laboratory on certified assay certificates.

SLR have undertaken data verification checks on the acQuire database previously (2024) for the Serpentine and Millars RMAs. The count of records in each table is summarized in Table 9-1 for these areas.

**Table 9-1: Count of Records by Database Table for Serpentine and Millar Database Extracts**

| Data Type | Table | Serpentine | Millars |
|---|---|---|---|
| Collars | *tblass* | 6,362 | 8,298 |
| Surveys | *tblsur* | 6,362 | 8,298 |
| Assays | *tblass* | 59,622 | 70,905 |
| REF Assays | *tblassrefs* | 611 | 711 |
| Lithology | *tblgeoLithology* | 69,564 | 82,762 |
| Geology Floor | *tblgeoGeolFloor* | 69,561 | 82,761 |
| Seam | *tblgeoSeam* | 69,564 | 82,762 |

Extensive checks were run to validate the integrity. These included searching for duplicate records, downhole gaps¸ interval overlaps, missing collar or survey records, etc.

The following observations were made:

- The SLR QP confirmed the absence of anomalous codes.
- Checks for assay closure (adding all assays to 100%) are done by Alcoa when the assay data is prepared for resource estimation. The availability of total oxide assays (e.g. AT and ST) has progressively increased over time.
- In several cases (156 for Serpentine, drilled between October 2019 and December 2019, and 114 for Millars) it was identified that the LithCode variable in the geoLithology table contained blank values at the top of the hole, followed by a zero-length interval containing a valid LithCode. This is due to the practice of not sampling the overburden, creating in some cases a short interval with no assay or LithCode. This type of database error is usually identified by a validation check for zero length intervals, however such intervals are allowed in the Darling Range database since the geological logging is expected to follow a vertical sequence (which is used for some of the interpretation scripts), and zero length intervals allow for pinching out of horizons.

Some calculation and range checks were run that highlighted gaps or anomalies in the scripts used to validate that data before resource estimation:

- There are 19 records with ST_BEST values greater than 100% in Serpentine and 2 in Millars. Such values should be investigated, and clamped or discarded. Such values should be investigated and clamped or discarded.



- There are a number of records (107 for Serpentine and 165 for Millars) where AL exceeds AT. There are also records (1,273 for Serpentine and 2,029 for Millars) where SI exceeds ST. These should be further investigated, and clamped or discarded, and future instances flagged during data loading so that when such results occur, there is recognition during the data loading that this is due to FTIR assays outside the normal calibration range, rather than due to sample mix-up or contamination.
- Checks on the regression calculation for density were completed for the Serpentine database. The data contained 1,187 records not flagged as Seam=CAP, that had density values ranging from 2.04 g/cm$^3$ to 2.28 g/cm$^3$. These were either 20% or 40% CAP and had a density value reflecting the length weighted average of the two domains assigned. Of the total 6,399 records with valid Seam and FE_BEST data, the SLR QP found that 5,566 (87%) were within ±0.1 of the database density value. The remaining 833 records with Seam=CAP and an FE_BEST assay were either 60% or 80% CAP and had a density value reflecting the length weighted average of the two domains assigned.

## 9.3 QP Opinion

The SLR QP is of the opinion that the sample database is reliable and adequate for the purposes of Mineral Resource and Mineral Reserve estimation.



# 10.0 Mineral Processing and Metallurgical Testing

Mineral processing and metallurgical test work samples representing the entirety of the Darling Range operations are not available. However, as an operating mine the Resource classification is upgraded to Measured well before extraction, with samples and test work conducted as part of these operations to confirm process suitability and compliance defining Reserves. Such testwork is carried out on samples analysed at the Pinjarra Refinery Laboratory; an Alcoa operated laboratory that is not certified but implements a robust QA/QC system based on ISO 9001 protocols.

SLR has reviewed the available Resource data to confirm that this operating data aligns with the life of mine (LOM) schedule for material to be mined over the next nine years. This material is sourced from four Mining Regions, representing the various types and styles of mineralization within the Darling Range operations.

It is important to note that there is no upgrading involved in the processing and therefore the processing recovery can be considered above 99% allowing for any losses in production.

The operating data between 2010 to September 2025 for the Willowdale operation and 2010 to September 2025 for the Huntly operations indicates that the product from the Darling Range operations consisted of an average AL grade of 32% and average ST grade of 19%. It is important to note that higher grades of SI are potentially deleterious (in that they would increase the refinery cost) but that it remained below 1.31% throughout the 14 years of operation (up to 2023) with the recent increase (2024 and 2025) associated with the reduction in available bauxite stocks in the current Mining Regions. SLR understands that according to the long term mine plan on an annual basis the ST content marginally increases towards 23% over the next three years, and then for the remainder returns to averages of 22.5%. The SI, on the same basis, remains at or below 2.1% (for the combined mine output) both in the short term and over the remaining period of the next nine years. This means there is no evidence of any problematic deleterious elements present in the Darling Range ore within the next nine years of production.

A summary of the product grades from the Darling Range operations are shown in Table 10-1, Table 10-2 and Table 10-3.

**Table 10-1: Product Grades of Darling Range Operation (Willowdale–Wagerup refinery feed)**

| Year | Moisture (%) | LOI (%) | AT (%) | ST (%) | FE (%) | $TiO_2$ (%) | AL (%) | SI (%) |
|---|---|---|---|---|---|---|---|---|
| 2010 | 8.0 | 22.3 | 38.1 | 21.8 | 17.5 | 1.43 | 32.8 | 1.13 |
| 2011 | 7.9 | 20.9 | 40.6 | 22.3 | 17.6 | 1.47 | 32.8 | 1.14 |
| 2012 | 8.0 | 21.0 | 38.1 | 21.1 | 18.1 | 1.58 | 33.0 | 1.16 |
| 2013 | 7.7 | 21.2 | 36.8 | 18.6 | 19.5 | 1.61 | 32.7 | 1.21 |
| 2014 | 7.9 | 21.2 | 37.2 | 18.1 | 19.3 | 1.62 | 33.1 | 1.17 |
| 2015 | 7.5 | 21.5 | 37.0 | 18.0 | 19.0 | 1.72 | 33.2 | 1.11 |
| 2016 | 7.8 | 21.6 | 37.6 | 16.7 | 20.6 | 1.75 | 33.1 | 1.14 |
| 2017 | 7.8 | 21.8 | 37.9 | 16.0 | 21.4 | 1.83 | 33.0 | 1.10 |
| 2018 | 8.0 | 21.6 | 38.3 | 15.9 | 21.3 | 1.88 | 33.0 | 1.13 |
| 2019 | 7.6 | 21.3 | 37.3 | 16.8 | 21.3 | 1.85 | 32.3 | 1.15 |
| 2020 | 7.8 | 21.5 | 37.4 | 14.1 | 23.3 | 2.10 | 32.5 | 1.07 |

| Year | Moisture (%) | LOI (%) | AT (%) | ST (%) | FE (%) | $TiO_2$ (%) | AL (%) | SI (%) |
|---|---|---|---|---|---|---|---|---|
| 2021 | 8.3 | 21.5 | 37.5 | 18.0 | 21.0 | 1.73 | 32.4 | 1.06 |
| 2022 | 7.8 | 21.1 | 37.5 | 17.9 | 21.3 | 1.85 | 32.3 | 1.02 |
| 2023 | 7.8 | 20.6 | 36.8 | 18.8 | 21.5 | 1.80 | 31.6 | 1.04 |
| 2024 | 7.9 | 19.1 | 33.8 | 23.3 | 21.3 | 1.87 | 28.1 | 2.00 |
| 2025* | 7.7 | 18.7 | 33.8 | 24.0 | 20.9 | 1.77 | 28.0 | 2.37 |

Note: LOI = Loss On Ignition

* Data available to 30 September 2025

**Table 10-2: Product Grades of Darling Range Operations (Huntly–Pinjarra refinery feed)**

| Year | Moisture (%) | LOI (%) | AT (%) | ST (%) | FE (%) | $TiO_2$ (%) | AL (%) | SI (%) |
|---|---|---|---|---|---|---|---|---|
| 2010 | 7.4 | 20.8 | 38.6 | 20.8 | 17.4 | 1.34 | 33.1 | 1.05 |
| 2011 | 7.8 | 21.0 | 38.8 | 20.0 | 18.0 | 1.41 | 33.0 | 1.04 |
| 2012 | 8.2 | 21.4 | 39.4 | 20.2 | 17.1 | 1.37 | 33.6 | 1.13 |
| 2013 | 8.1 | 21.5 | 39.8 | 19.5 | 17.1 | 1.35 | 33.9 | 1.12 |
| 2014 | 8.2 | 21.5 | 39.6 | 18.6 | 17.7 | 1.45 | 33.8 | 1.16 |
| 2015 | 8.0 | 21.6 | 39.3 | 19.5 | 17.3 | 1.41 | 33.8 | 1.08 |
| 2016 | 8.2 | 21.4 | 39.2 | 20.3 | 17.0 | 1.38 | 33.8 | 1.13 |
| 2017 | 8.3 | 21.3 | 39.3 | 19.6 | 17.5 | 1.42 | 33.9 | 1.11 |
| 2018 | 8.3 | 21.4 | 39.1 | 19.5 | 17.6 | 1.42 | 33.7 | 1.07 |
| 2019 | 8.1 | 21.3 | 38.9 | 20.1 | 17.2 | 1.38 | 33.5 | 1.12 |
| 2020 | 8.4 | 21.4 | 39.1 | 18.4 | 18.6 | 1.52 | 33.5 | 1.20 |
| 2021 | 8.9 | 21.1 | 38.8 | 19.7 | 18.3 | 1.48 | 33.0 | 1.24 |
| 2022 | 8.5 | 20.8 | 37.9 | 19.3 | 19.9 | 1.62 | 31.9 | 1.31 |
| 2023 | 9.1 | 19.7 | 35.6 | 20.0 | 21.9 | 1.84 | 29.6 | 1.64 |
| 2024 | 9.3 | 18.9 | 33.8 | 23.4 | 20.1 | 1.73 | 28.4 | 2.22 |
| 2025* | 9.1 | 18.7 | 34.4 | 22.5 | 21.3 | 1.82 | 28.1 | 2.43 |

* Data available to 30 September 2025

**Table 10-3: Historical Product Grades of Darling Range Operations (Huntly–Kwinana refinery feed)**

| Year | Moisture (%) | LOI (%) | AT (%) | ST (%) | FE (%) | $TiO_2$ (%) | AL (%) | SI (%) |
|---|---|---|---|---|---|---|---|---|
| 2006 | 7.8 | 21.7 | 39.3 | 18.7 | 18.0 | 1.37 | 33.9 | 1.10 |
| 2007 | 8.0 | 21.6 | 39.2 | 19.5 | 17.6 | 1.33 | 33.7 | 1.11 |
| 2008 | 7.9 | 21.3 | 39.1 | 20.1 | 17.3 | 1.34 | 33.8 | 1.09 |
| 2009 | 7.8 | 21.3 | 39.0 | 20.7 | 17.3 | 1.29 | 33.5 | 1.02 |
| 2010 | 7.5 | 21.4 | 38.6 | 20.8 | 17.4 | 1.26 | 33.1 | 1.04 |
| 2011 | 7.6 | 21.3 | 38.7 | 20.1 | 18.2 | 1.30 | 32.8 | 1.03 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 2012 | 8.2 | 21.5 | 39.4 | 20.3 | 17.0 | 1.25 | 33.5 | 1.13 |
| 2013 | 8.1 | 21.8 | 39.8 | 19.5 | 17.1 | 1.26 | 33.9 | 1.11 |
| 2014 | 8.2 | 22.0 | 39.6 | 18.8 | 17.7 | 1.37 | 33.7 | 1.17 |
| 2015 | 8.0 | 22.0 | 39.4 | 19.7 | 17.2 | 1.31 | 33.8 | 1.08 |
| 2016 | 8.2 | 21.7 | 39.1 | 21.3 | 16.1 | 1.32 | 33.8 | 1.03 |
| 2017 | 8.3 | 22.2 | 38.9 | 20.6 | 16.5 | 1.34 | 33.8 | 1.03 |
| 2018 | 8.3 | 22.1 | 38.6 | 20.8 | 16.7 | 1.33 | 33.9 | 1.05 |
| 2019 | 8.0 | 21.8 | 38.9 | 21.2 | 16.4 | 1.32 | 33.5 | 1.12 |
| 2020 | 8.4 | 21.7 | 39.1 | 19.8 | 17.6 | 1.44 | 33.5 | 1.16 |
| 2021 | 8.9 | 21.0 | 38.7 | 20.9 | 17.6 | 1.39 | 33.0 | 1.20 |
| 2022 | 8.5 | 20.8 | 37.6 | 20.7 | 18.6 | 1.50 | 31.9 | 1.26 |
| 2023 | 9.1 | 20.0 | 35.8 | 21.2 | 20.6 | 1.76 | 29.6 | 1.61 |
| 2024* | 8.0 | 19.0 | 34.6 | 24.5 | 19.6 | 1.70 | 28.1 | 2.33 |

* Data available to 30 April 2024. The Kwinana refinery is now permanently closed.

## 10.1 QP Opinion

The SLR QP is of the opinion that the Darling Range operation demonstrates that ore can be effectively crushed and supplied to a refinery for further upgrading to produce Alumina. The historical operational data confirms that the ore has consistently met refinery specifications without any deleterious elements. Since 2023, the composition of the ore has changed relative to the preceding approximately 10 years; namely increases to the ST and moisture alongside decreases to the LOI and AL. Refinery operations and mine throughput have remained sufficiently constant and as such it is reasonable to assume that the bauxite mined from Darling Range can be economically processed for the next nine years.

# 11.0 Mineral Resource Estimates

## 11.1 Summary

The Mineral Resource process used by Alcoa involves an integrated approach to data collection, bauxite delineation, and production planning aimed at the provision of feedstock that meets the requirements of the Wagerup and Huntly alumina refineries.

The total estimated Measured and Indicated Mineral Resource exclusive of Mineral Reserves as at 31 December 2025, has been estimated at 186.8 Mt at a grade of 30.0% AL and 1.8% SI. Of this, the Measured portion is estimated to be 133.6 Mt (or 72% of the total Measured and Indicated Resources) at 30.1% AL and 1.9% SI, the Indicated portion is estimated to be 53.2 Mt (or 28% of the total Measured and Indicated Resources) at 29.7% AL and 1.6% SI. The Inferred Mineral Resource is estimated to be 51.9 Mt at 31.9% AL and 1.1% SI (Table 11-1).

**Table 11-1: Summary of Darling Range Mineral Resources Exclusive of Mineral Reserves – Effective Date 31 December 2025**

| Category | Tonnage (Mt) | AL (%) | SI (%) |
|---|---|---|---|
| Measured | 133.6 | 30.1 | 1.9 |
| Indicated | 53.2 | 29.7 | 1.6 |
| **Measured + Indicated** | **186.8** | **30.0** | **1.8** |
| Inferred | 51.9 | 31.9 | 1.1 |

Notes:

1. The definitions for Mineral Resources in S-K 1300 were followed.
2. Mineral Resources are 100% attributable to Alcoa and are exclusive of Mineral Reserves.
3. Mineral Resources for the polygonal models are estimated at a geological cut-off grade, which generally approximates to nominal cut-off grades of 27.5% available alumina (AL) with less than 3.5% reactive silica (SI).
4. Mineral Resources estimated using a 3DBM approach are evaluated taking into account all estimated block grades with economic bauxite material defined based on a ‘Value in Use’ (VIU) calculation which takes into account individual and cumulative block grades to identify zones of economic bauxite which meet the minimum grade and quality specification required by the refinery taking into account mining considerations and blending opportunities. The VIU calculation used in the definition and reporting of Mineral Resources uses a life of mine (LOM) price of $500/t for alumina and $300/t for caustic soda, respectively.
5. A minimum total mining thickness of 1.5 m was used.
6. In situ dry bulk density is variable and is defined for each block in the Mineral Resource model.
7. A global downwards adjustment of tonnes by 5% is made to account for density differences based on historic mining performance.
8. The reference point for the Mineral Resource is the in situ predicted dry tonnage and grade of material to be delivered to the refinery stockpile following the application of a Mineral Resource pit.
9. Numbers may not add due to rounding.

The lateritic bauxites occur as surficial coverings of limited thickness, typically between 4 m to 8 m, but with significant lateral extent. The Mineral Resource comprises 9,085 Resource Blocks, over three main Reporting Centers (Huntly, North, and Willowdale), with a combined area of approximately 12,800 ha (Figure 3-2).

The resource database contains 360,822 drill holes completed between 1991 and the database closure on 30 June 2025, for a total drilled length of 2,244,278 m and 3,986,403 samples.

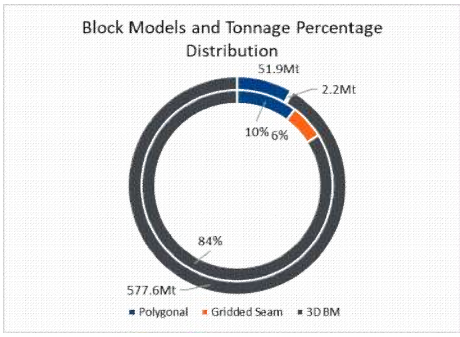
Historically, Mineral Resource estimation was by two dimensional (2D) plan-polygonal methods (ResTag). More recently, Mineral Resource estimation by Alcoa has evolved to include gridded seam models (GSM) and 3D block models (3DBM) using geostatistical techniques. Mineral Resource estimates based on GSM and 3DBM models (and some ResTag models) consider practical mining constraints.

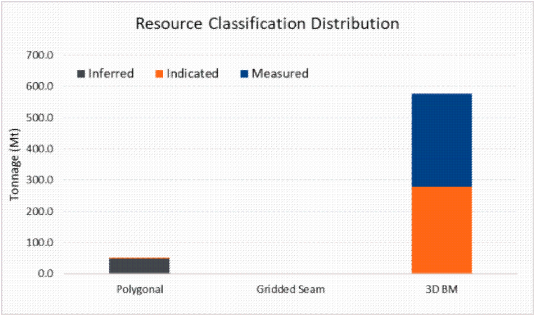
The delineation of Mineral Resources using 3D methods has focused on well drilled areas that fall within the nine-year mine plan. Approximately 577.6 Mt or 91% of the total Mineral Resource tonnage inclusive of Mineral Reserves and 184.6 Mt or 77% of the Mineral Resources exclusive of Mineral Reserves were estimated using a 3DBM approach. GSM models were typically constructed in areas with 15 m spaced drilling, which comprises eight models. Approximately 51.9 Mt or 8% of the Mineral Resources inclusive of Mineral Reserves and 51.9 Mt or 22% of the Mineral Resources exclusive of Mineral Reserves are based on ResTag estimates, which are mostly located in areas of wider-spaced (30 m and 60 m) drilling and are of lower confidence. All new Mineral Resource models and updates employ the 3DBM methods irrespective of drill hole spacing.

Figure 11-1 illustrates the tonnages and percentage proportions by model count for each modelling methodology.

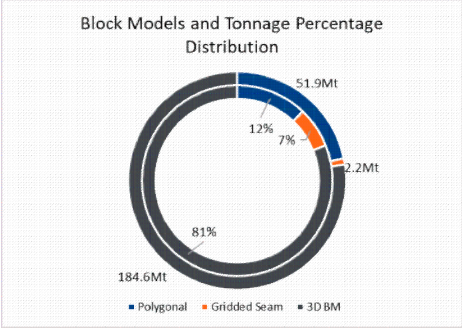
**Figure 11-1: Circle Charts and Bar Charts for Mineral Resource Inclusive of Mineral Reserves and Mineral Resources Exclusive of Mineral Reserves**

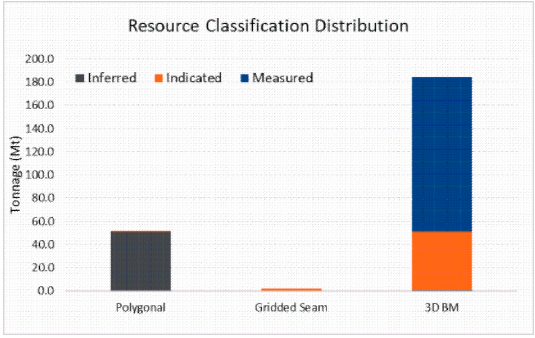
**Mineral Resources Inclusive of Mineral Reserves**




**Mineral Resources Exclusive of Mineral Reserves**




Notes:

1. Circle charts external circle shows Tonnage (Mt)
2. Circle charts internal circle shows proportion of model count (%)

For all three estimation methods, drill holes were flagged with geological units using multi-pass geochemical scripts that included thickness constraints. The GSM flagging process incorporated some additional mining constraints. Geological interpretations in both 2D and 3D were constructed with the flagged drill hole composite data, which constrain the spatial estimation of bauxite mineralization.

Mineral Resource estimation for GSM or 3DBM was completed to honor the geochemical variation present vertically in the weathered bauxite profile. Four main estimation domains (Caprock, Bauxite, Low Grade bauxite and Clay) were developed, for which nine elements (AL, SI, FE, ST, PT, OX, EO, CO, and SU) were estimated for all models, but only AL and SI are reported for the Mineral Resource. GSM uses inverse distance weighting (IDW) methods to assign grades to the bauxite profile, while 3DBMs use ordinary kriging (OK).

Validation methods employed by Alcoa differ slightly for the different model types, but include visual validation of estimated grades versus seam composites and statistical analysis between input composite statistics and estimate statistics, including the generation of swathe plots and comparisons between the previous estimate to identify areas of difference.

The SLR QP reviewed specific individual models with Alcoa staff. The audit process by SLR also included examination of the procedures used by Alcoa, independent review, discussions with staff, and various estimation validation checks, including a review of interpreted geological boundaries, domain global summary statistics, swath plots and visual checks. Independent checks within pit shells developed within MineSight software were completed to verify that the Python script used in the VIU process was correct and that the tonnages and grade reported from the VIU process corresponded with the results independently reported via MineSight software. and, visual checks against pit shells used for reporting., and change of support (COS) analysis. MYN-M23 (M23) from the Myara North Mining Region and HLY-H12 (H12) from the Huntly Reporting Center have been the focus of the validation since 2023 work, while R25 and R22 were reviewed in detail in the previous years.

Mineral Resources have been classified in accordance with the definitions for Mineral Resources in S-K 1300. Classification was determined primarily on drill hole spacing, with downgrades applied to models constructed primarily with pre-2010 drill holes, as this information is considered to be of lower confidence.

Reasonable prospects for economic extraction for the Mineral Resources have been demonstrated by economic mining of the defined bauxite zone over the life of the operation. Cut-off criteria applied in developing the reported Mineral Resource have been chosen taking into account economic criteria which include mining, haulage and processing costs taking into , consideration minimum quality specifications for the refinery to deliver a product which meets minimum acceptable saleable product standards.

Mineral Resources estimated using polygonal methods (ResTag and GSM) are reported above a cut-off value of ≥27.5% AL, ≤3.5% SI, and ≤4 kg/t OX, that is implicit in the delineation of the bauxite layer in the geological modelling stage.

Mineral Resources estimated using a 3DBM approach are economically evaluated based on a ‘Value in Use’ (VIU) calculation which takes into account individual and cumulative block grades to identify zones of bauxite which meet the minimum grade and quality specification required by the refinery taking into account mining considerations and blending opportunities. The VIU calculation used in the definition and reporting of Mineral Resources uses a life of mine (LOM) price of $500/t for alumina and $300/t for caustic soda, respectively. The SLR QP considers the geological interpretation, grade and density estimation, and demonstration of RPEE to be appropriate for the estimated Mineral Resources.

In the SLR QP’s opinion that with consideration of the recommendations summarized in Sections 1.0 and 23.0 of this report, any issues relating to all relevant technical and economic factors likely to influence the prospect of economic extraction can be resolved with further work.

Compared with the previous Mineral Resources exclusive of Mineral Reserves, which had an effective date of 31 December 2024, the updated estimate shows a 1.6 Mt (1%) reduction in total Measured and Indicated Mineral Resource tonnage, and a 49.5 Mt (-49%) reduction in Inferred Mineral Resource tonnage. The significant reduction in the Inferred tonnage is attributed to extensions to mining avoidance zones (MAZ) and classification upgrades following ongoing resource definition drilling.

## 11.2 Resource Database

### 11.2.1 Drill Hole Data

The resource database contains 360,822 drill holes completed between 1991 and the database closure on 30 June 2025, for a total drilled length of 2,244,278 m and 3,986,403 samples, as summarized in Table 11-2:

**Table 11-2: Resource Database Drill Hole Summary**

| Reporting Center | Drill Hole Count | Drill Hole Length (m) | Sample Count |
|---|---|---|---|
| Huntly | 254,936 | 1,501,125 | 2,632,091 |
| North | 1,047 | 6,018 | 10,641 |
| Willowdale | 104,839 | 737,135 | 1,343,671 |
| **Total** | **360,822** | **2,244,278** | **3,986,403** |

Drill hole collar, survey, and assay data are exported from the acQuire database for Mineral Resource estimation. Drill hole collar, survey, and assay data are exported from the acQuire database for Mineral Resource estimation.

For 3DBM model generation, data exports from acQuire utilize Python scripts for validation and initial processing according to Workflow 1 of the Alcoa DeepLime Geoportal Block Model Creation Procedure (Alcoa 2025a), including, but not limited to:

- Checking planned and actual collar coordinates fields for missing values.
- Checking planned collar coordinates fields for alignment with established grid system.
- Checking planned and actual collar elevation fields checked for missing values.
- Excluding holes where drill hole intervals lack AL, SI, and FE assays.
- Excluding holes from the database if located greater than 7 m horizontally from the planned location.
- Identifying and excluding duplicated holes.
- Resetting AT to AL where AL exceeds AT.
- Resetting SI to ST, where SI exceed ST.
- Calculating Assay Total = AT (AL if AT absent) + ST + FE + PT + (SU/17.74) + 2
- Excluding assays for samples where the Assay Total is below 70% or greater than 100%.

The output is a set of CSV files for collar, survey, assay, and geology.

The assay file contains variables including grades, cumulative grades, and historical domaining fields that are no longer used for the current geological modelling methodology. Table 11-3 shows the variables available in the assay output file.



**Table 11-3: Assay Table Variables**

| Variable | Description | Variable | Description |
|---|---|---|---|
| **Hole ID** | Drill hole identification | **Cumulatives Date** | Date Cumulatives script was run |
| **Project** | Mining region | **BO_BEST (%)** | Final bohemite AlO(OH) assay - based on DB priority, generally REF first then FTIR |
| **Sample ID** | Sample identification | **AL_BEST (%)** | Final available alumina (AL) assay |
| **From (m)** | Beginning of the sample | **EO_BEST (%)** | Final extractable organic carbon (C) assay |
| **To (m)** | End of the sample | **FE_BEST (%)** | Final hematite ($Fe_2O_3$)assay |
| **Seam** | Profile unit - derived from logging. CAP from logged Cap depth then FRI derived from set of rules that determine the first clay sample beneath it | **MS_BEST (Centimeter-Gram-Second (CGS x10$^{-3}$)** | Final magnetic susceptibility assay |
| **Storage Status** | Information of the sample's storage | **OX_BEST (kg/t)** | Final oxalate ($NaC_2O_4$) assay |
| **Cumulative Density (g/cm$^3$)** | Downhole cumulative density calculated in DB from top of CAP | **CO_BEST (%)** | Final carbonate assay |
| **Cumul_AL (%)** | Downhole cumulative AL calculated in DB from top of CAP | **SU_BEST (kg/t)**[1] | Final sulphate ($Na_2SO_4$) assay |
| **Cumul_AT (%)** | Downhole cumulative AT calculated in DB from top of CAP | **PT_BEST (%)** | Final total phosphorus ($P_2O_5$) assay |
| **Cumul_BO (%)** | Downhole cumulative BO calculated in DB from top of CAP | **SI_BEST (%)** | Final reactive silica (SI) assay |
| **Cumul_CO (%)** | Downhole cumulative CO calculated in DB from top of CAP | **ST_BEST (%)** | Final total silica ($SiO_2$) assay |
| **Cumul_EO (%)** | Downhole cumulative EO calculated in DB from top of CAP | **AT_BEST (%)** | Final total alumina ($Al_2O_3$) assay |
| **Cumul_FE (%)** | Downhole cumulative FE calculated in DB from top of CAP | **Density (g/cm$^3$)** | Density - calculated and stored as an assay - FE based algorithm for CAP otherwise 2. but are consistent with the values used other than for OVB and CLY |



| | | | |
|---|---|---|---|
| **Cumul_MS (CGSx10$^{-3}$)** | Downhole cumulative MS calculated in DB from top of CAP | **DOM1** | Levels of domain coding - Historical fields no longer used |
| **Cumul_OX (kg/t)** | Downhole cumulative OX calculated in DB from top of CAP | **DOM2** | |
| **Cumul_PT (%)** | Downhole cumulative PT calculated in DB from top of CAP | **DOM3** | |
| **Cumul_SI (%)** | Downhole cumulative SI calculated in DB from top of CAP | **DOM4** | |
| **Cumul_ST (%)** | Downhole cumulative ST calculated in DB from top of CAP | **DOM5** | |
| **Cumul_SU (kg/t)** | Downhole cumulative SU calculated in DB from top of CAP | **DOM6** | |
| **Cumulatives By** | Whoever ran the script to calculate Cumulatives | | |

[1] Note: $SO_3$ is determined from XRF in % and converted to $NaSO_4$ (digestion product) equivalent in kg/t.

The validation checks have been implemented progressively over time and not all data in the database has been subject to the Workflow 1 validation checks, evidenced by the presence of samples with AL exceeding AT and SI exceeding ST.

Other than collar elevation adjustments, no further data transformations are applied prior to estimation of Mineral Resources. Due to the large lateral extension of the project, SLR randomly selected two Mineral Resource models to be illustrated and detailed in the report; MYN-M23 (M23) from the Myara North Mining Region and HLY-H12 (H12) from the Huntly Reporting Center. Figure 11-2 illustrates the drilling in the M23 and H12 areas. Figure 11-3 and Figure 11-4 show the location of the M23 and H12 areas, respectively.

**Figure 11-2: M23 and H12 Drill Hole Assay Method**

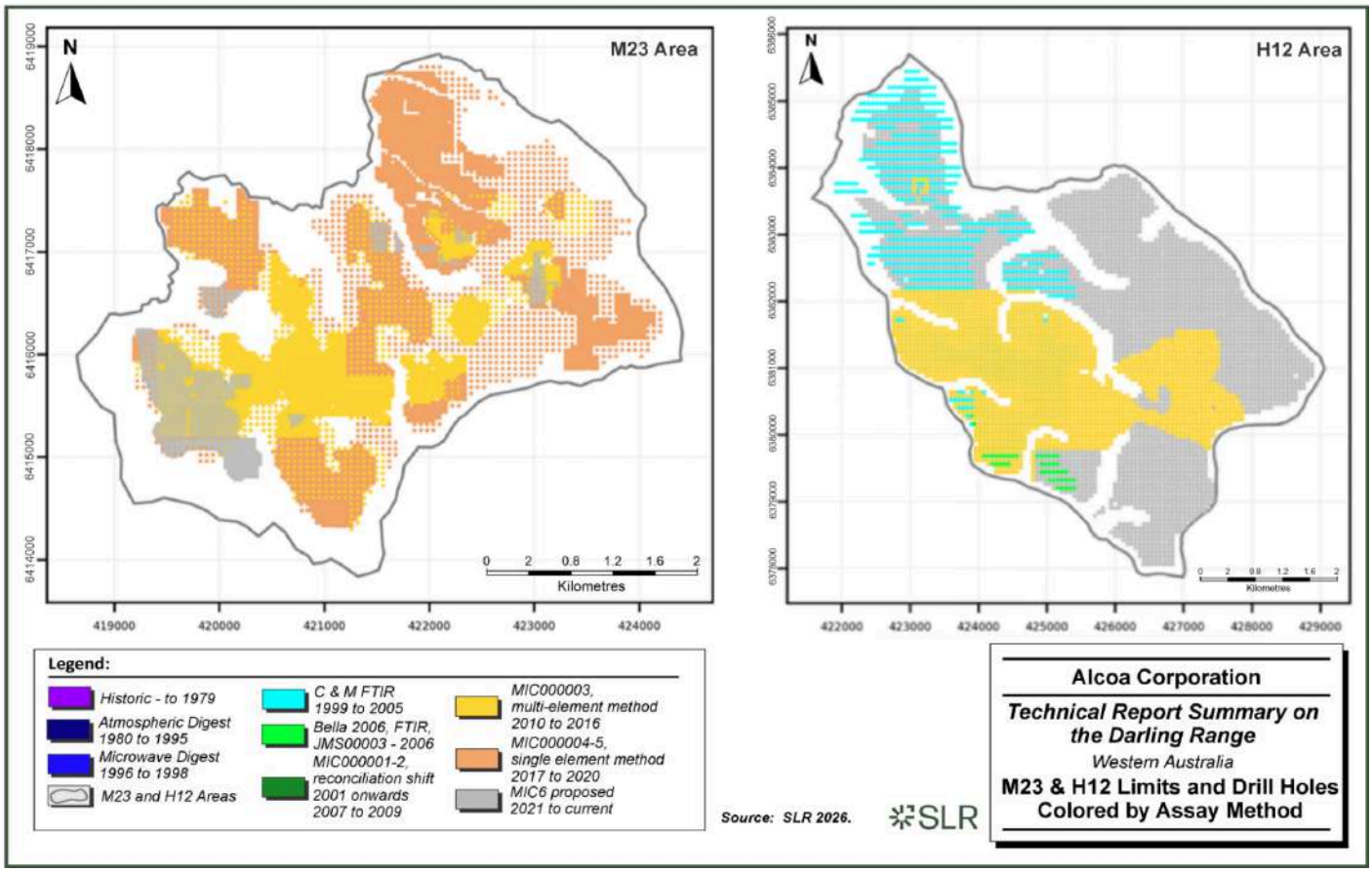


**Figure 11-3: Location of the M23 Resource Model Area (MYN-M23)**

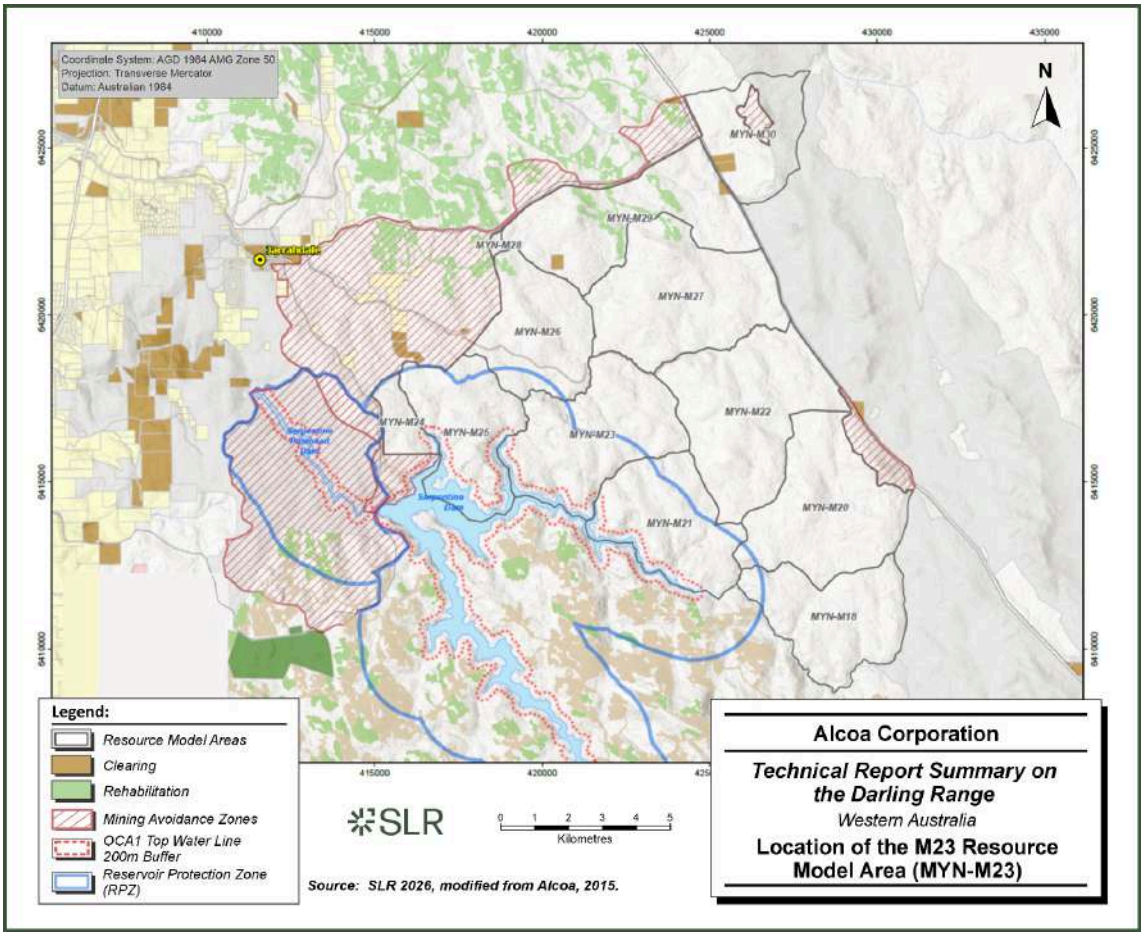
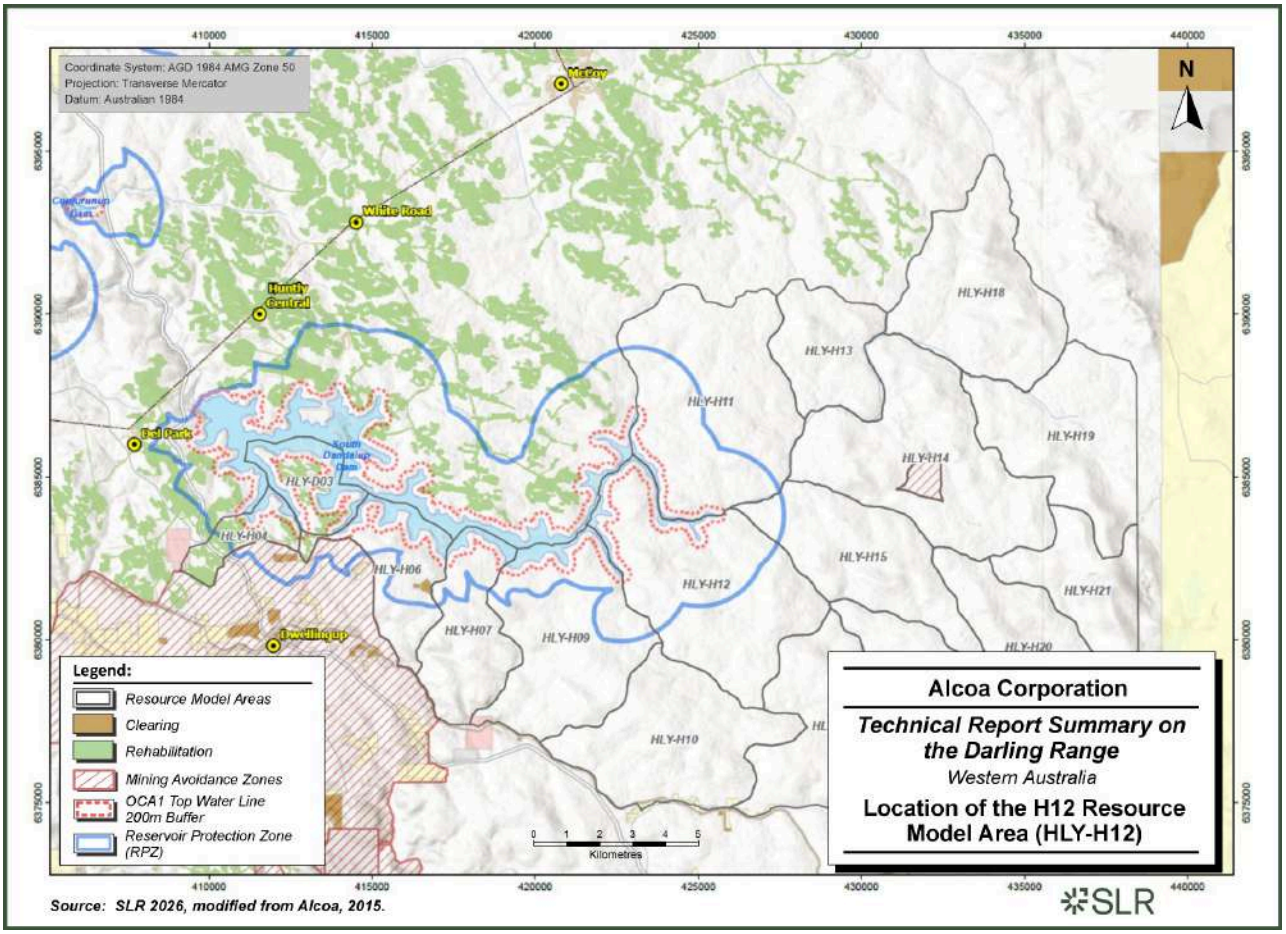


**Figure 11-4: Location of the H12 Resource Model Area (HLY-H12)**




*Source: SLR 2026, modified from Alcoa, 2015.*

### 11.2.2 Topographic Data

DEMs were generated from (in order of priority) historical manually surveyed (levelled) drill collar locations, survey data, raw LiDAR survey point cloud, and published 5 m interval contour Western Australian Land Information Authority (Landgate) satellite data. The DEM uses a 7.5 m by 7.5 m mesh.

Drill hole collar elevations were registered to the DEM for Mineral Resource estimation. DEM data selection is completed according to Workflow 2 of the Alcoa DeepLime Geoportal Block Model Creation Procedure (Alcoa 2025a), while DEM generation is completed in Workflow 3.

Drill hole collar elevations were registered to the DEM for Mineral Resource estimation.

## 11.3 Geological Interpretation

### 11.3.1 Polygonal ResTag Models

For polygonal ResTag Mineral Resource estimates, grade-based geological codes are assigned to drill hole intervals. These codes are used to define the top and bottom of the bauxite horizon in each hole, which is then used to estimate the bauxite volumes and average grades within polygons.

The top of the bauxite usually coincides with the base of the overburden, as defined in the drillers' logs. The base of the economic bauxite zone (termed the geological floor) is defined within the acQuire database using a multi-pass script that applies the following hierarchical set of rules to the sample grades:

**Pass 1:**

- Uphole search for two consecutive samples with individual AL values ≥27.0%;
- Record depth of the lower of the two samples;
- Check that the cumulative AL at that depth is ≥27.5%;
- Check that the individual SI at that depth is ≤3.5%;
- Check that the cumulative SI at that depth is ≤3.0%;
- Check that the cumulative OX at that depth is ≤4 kg/t;
- Check that the sampled depth is ≥2.0 m, but less than hole depth (if equal, see pass 3);
- If all criteria are met, set flag to "pass", set geological floor depth to lower sample depth; and
- Proceed to pass 2.

**Pass 2:**

- Uphole search for two consecutive samples with individual AL values ≥25.5%;
- Record depth of the lower of the two samples;
- Check that the cumulative AL at that depth is ≥27.5%;
- Check that the individual SI at that depth is ≤3.5%;
- Check that the cumulative SI at that depth is ≤3.0%;
- Check that the cumulative OX at that depth is ≤4 kg/t;



- Check that the sampled depth is ≥2.0 m, but less than hole depth (if equal, see Pass 3);
- If all criteria are met, set flag to “pass”, set geological floor depth to lower sample depth; and
- If any criteria fail, geological floor defined in Pass 1 is retained.

**Pass 3:**

- Uphole search for two consecutive samples with individual AL values ≥27.0%;
- Record depth of the lower of the two samples;
- Check that the cumulative AL at that depth is ≥27.5%;
- Check that the individual SI at that depth is ≤3.5%;
- Check that the cumulative SI at that depth is ≤3.0%;
- Check that the cumulative OX at that depth is ≤4 kg/t;
- Check that sampled depth = hole depth; and
- If all criteria are met, set flag to “pass – open”, set geological floor depth to lower sample depth.

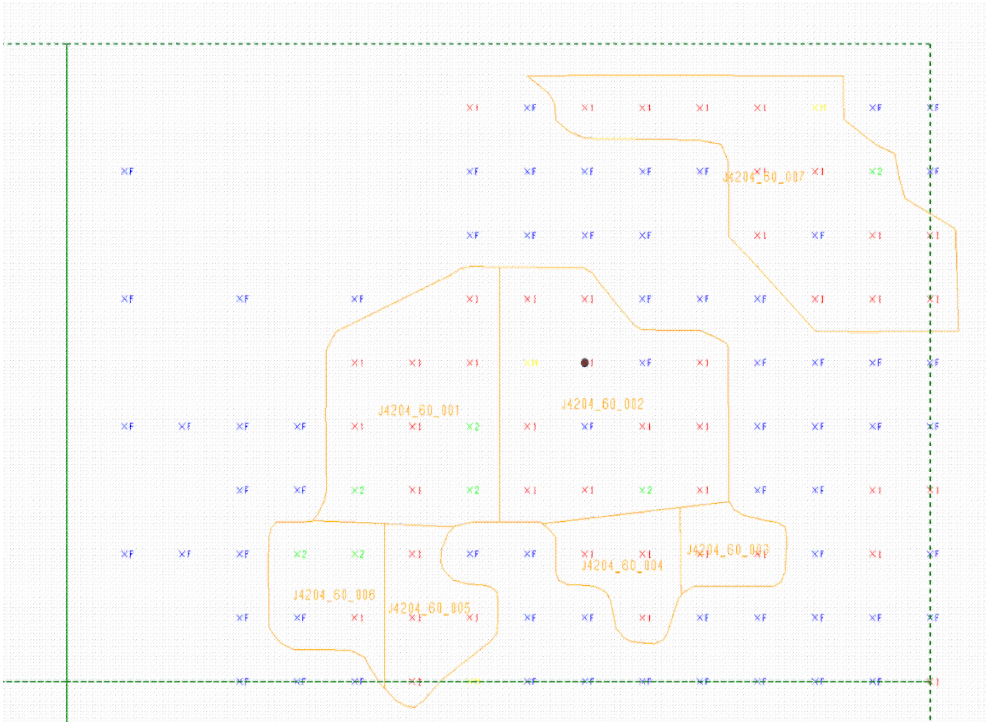
**Pass 4:**

- Uphole search for two consecutive samples with individual AL values ≥24.5%;
- Record depth of the lower of the two samples;
- Check that the cumulative AL at that depth is ≥25.0%;
- Check that the individual SI at that depth is ≤3.5%;
- Check that the cumulative SI at that depth is ≤3.0%;
- Check that the cumulative OX at that depth is ≤4 kg/t;
- Check that the sampled depth is ≥2.0 m, but less than hole depth (if equal, see pass 3); and
- If all criteria are met, set flag to “marginal”, set geological floor depth to lower sample depth.

The application of these rules assigns a geological floor depth to each hole, along with a Pass, Pass-Open, Marginal, or Fail flag. Holes flagged as Marginal or Fail are inspected by Alcoa staff members, with manual adjustments applied if warranted. For areas infilled to 15 m drill hole spacing, the geological floor model is replaced by a mining floor model, which is discussed in the following section.

Results of geological floor flagging are used to subjectively define the lateral extents of the Mineral Resource. Outlines are manually interpreted by Alcoa geologists in ArcGIS or MineSight software, and are guided by consistency in thickness, depth, and grade, minimum limits on the number of enclosed samples and the enclosed area, and local geomorphology. The polygons delineate separate areas that typically range in size from 10 ha to 100 ha, with most being around 30 ha. An example plan view is shown below in Figure 11-5.

**Figure 11-5: Plan View of Polygonal ResTag Approach (Pass = red, Pass Open = green, Marginal = yellow, Fail = blue)**




Source: Alcoa 2022

### 11.3.2 Gridded Seam Models

GSM models are located in areas of 15 m spaced infill drilling and include practical mining constraints as part of the ‘geological’ interpretation used for Mineral Resource estimates.

The base of overburden and the base of caprock are identified in each drill hole and used to generate wireframes. Instead of a geological bauxite zone floor, as used for the Polygonal estimates, GSMs use a mining floor. The mining floor is interpreted directly from the drill hole data presented on the 15 m spaced east-west cross sections, digitized in MineSight as strings, then linked to form wireframes.

The interpretation of the mining floor is a manual process performed by the site geologist, with the objective of achieving acceptable grades and practical mining outlines. The mining floors are defined using a set of guidelines instead of prescribed rules, including:

- Nominal cut-off grades of ≥27.5% AL and ≤3.5% SI are used for mining floor definition;
- If the SI grade in the sample immediately below the floor exceeds 5.0%, the floor is raised 0.5 m;
- A minimum face height (distance from mining floor to the base of overburden) is targeted;
- Face heights exceeding 4 m will require multiple cuts or bench mining;
- The overburden to face height ratio should not exceed 1;

- A maximum floor gradient of 1 in 7 is required between 15 m spaced holes (the gradient can be increased to 1 in 5 for second and third cuts);
- Benching should be invoked where the gradient constraints cannot be maintained; and
- The floor interpretations should be extended laterally into at least one of the surrounding waste holes.

The base of overburden and mining floor surfaces are used to flag the drill hole samples. For each drill hole, the samples located below the base of the overburden and above the mining floor are composited into a single interval, with composite grades length- and density-weighted. Additional drill hole composites are generated for second and third pass mining floors.

The composite data are examined in plan view, and polygons are digitized around the interpreted lateral extents of the mining zones using the following guidelines:

- Nominal cut-off grades of ≥27.5% AL and ≤3.5% SI for lateral boundary definition;
- The boundary is positioned at least 15 m away from holes with SI grades exceeding 5%;
- Buffer zones are placed around environmental constraints, and around bedrock outcrop;
- Internal waste zones should contain at least three drill holes;
- Individual polygons should have an area of at least 1 ha; and
- A width of at least 45 m should be retained for mining equipment movement.

The resulting polygons are divided into typically smaller ‘mining’ blocks that each contain approximately 20 kt to 40 kt of Mineral Resource.

### 11.3.3 3D Block Models

3DBM drill hole geological interpretation and wireframe is completed in DeepLime and MineSight software, respectively, according to Workflow 3 of the Alcoa DeepLime Geoportal Block Model Creation Procedure (Alcoa 2025a).

Like the Polygon and GSM interpretation approaches, a set of rules written in Python scripts are used to assign domain codes (DOMAF) to individual samples. The domaining process is implemented through a documented, version-controlled geochemical classification workflow that applies a defined hierarchy of grade thresholds and cumulative grade criteria (DeepLime 2025b). Multiple coding passes are undertaken to refine domain assignments and ensure stratigraphic and domain order consistency between overburden, caprock, bauxite, low-grade bauxite and clay units.

Dolerite dykes are also identified using geochemical criteria, with flags assigned to the bauxite profile denoting whether the material is derived from granite or dolerite.

The six main DOMAF codes are shown in Table 11-4, with approximate relationship to the Property stratigraphic horizons according to logged “geoseam”, although these do not always align:



**Table 11-4: DOMAF Code Definition**

| Stratigraphic Horizon (Geoseam) | DOMAF Code | DOMAF Definition |
|---|---|---|
| Overburden | 99 | Overburden |
| Hardcap (Caprock) | 10 | Caprock waste |
| | 20 | Caprock bauxite |
| Friable Zone | 30 | Bauxite |
| | 40 | Low-grade bauxite |
| Clay | 50 | Clay |

Geoseam geological wireframes are generated for the top of Hardcap, Friable Zone, and Clay using logged data.

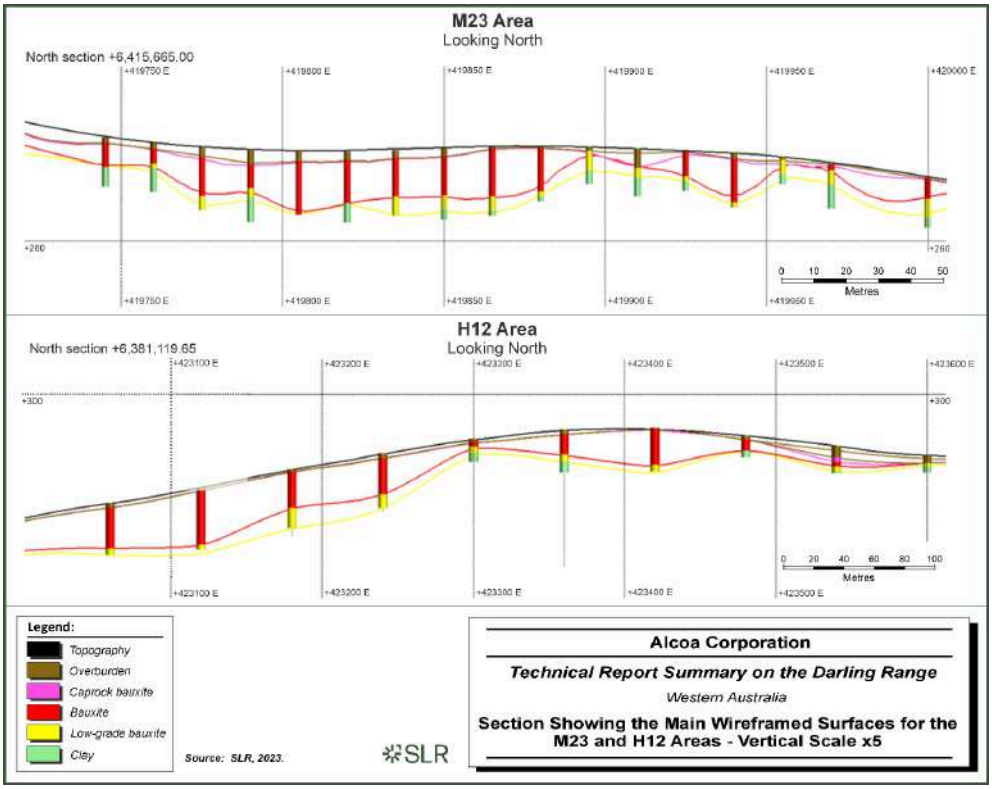
Further geological wireframes are generated for the top of DOMAF 10, 20, 30, 40, and 50 using the geochemically derived DOMAF coding.

Geological wireframes are generated on a 7.5 m by 7.5 m grid using an automated radial basis function (RBF) modelling process, interpolating the thickness of each unit. Where drill holes do not intersect the full bauxite profile or the domain contact is not properly defined due to missing assays, a conditional simulation algorithm is used to estimate the domain thickness from adjacent drill holes. The simulation algorithm employs a general variogram and selects the average of ten simulations for the missing data point. The grid mesh is then wireframed in MineSight to provide 3D surfaces. The base of clay (DOMAF 50) is arbitrarily set at 6 m below the top of that domain as drilling is terminated within the clay horizon.

Figure 11-6 illustrates an example of the modelled domains in M23 and H12.



**Figure 11-6: Section Showing the Main Wireframed Surfaces for the M23 and H12 Areas– Vertical Scale 5x**



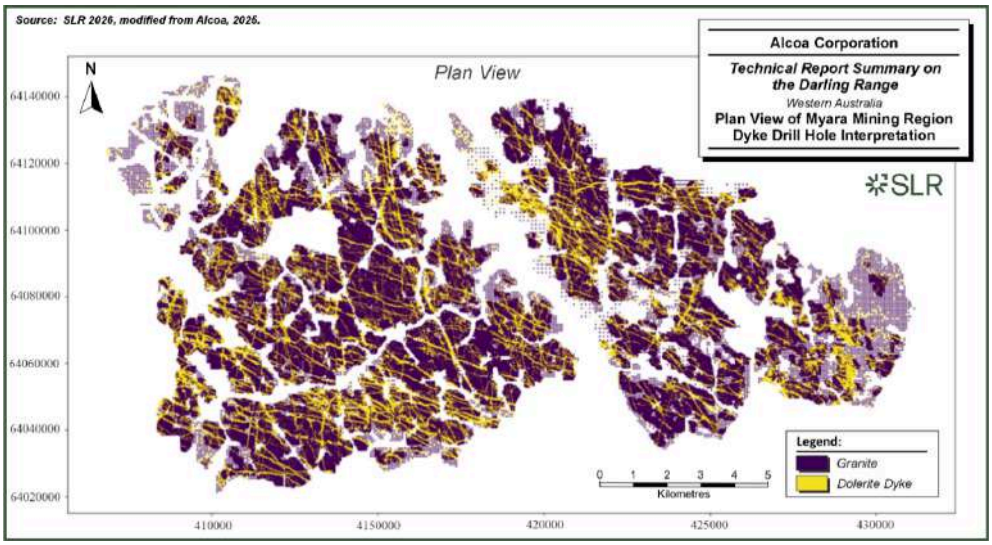

An updated workflow for interpretation of dolerite dykes was implemented in 2025 (Alcoa 2025b), improving differentiation between dolerite and iron-enriched hardcap material, supporting more accurate domaining, density assignment, and grade estimation. This utilizes an automated geochemical declustering workflow for the FE, SU, and ST assay populations. The methodology includes population-based sample classification, downhole averaging to determine hole-scale dyke likelihood, and threshold criteria to assign final hole-scale dyke classification. The dykes tend to be well defined only when drill hole spacings are reduced to 15 m by 15 m, as shown in Figure 11-7.

The interpretation of dykes is carried out manually using local orientation trends and may be based on one or more holes. The dykes are recorded as GIS polylines, with meta data recording the width of the dyke, with a default thickness of 10 m assigned if not recorded. The polylines are converted to polygons according to the assigned thickness. Dykes can constitute 15% of material in some areas, although unweathered dyke material can generally be screened out in the pit or prior to crushing as oversize boulders.

In general, lateral boundaries to economic bauxite will be defined half way between drillholes taking into account drillhole logging and assaying information to identify limits to the economic bauxite zone. In areas, such as plateau margins where steep topography may have prevented drilling then lateral limits to the interpreted bauxite zone are developed in section taking into account the drillhole spacing and the trend in grade and thickness identified from drillhole data and the position of the topographic surface. DOMAF surfaces, are converted to wireframe solids using interpreted limits to bauxite. The geological DOMAF and Geoseam domain proportions are flagged into the block models using a block

discretization of 5 x 5 x 2, while the “DYKE” variable is flagged using the defined polygons according to block centroids and assuming that dykes are vertical.

**Figure 11-7: Plan View of Myara Mining Region Dyke Drill Hole Interpretation**




All areas where mining is not allowed, including federal reserves, indigenous heritage sites, rivers, and associated protection buffers, are excluded after the geological modelling step.

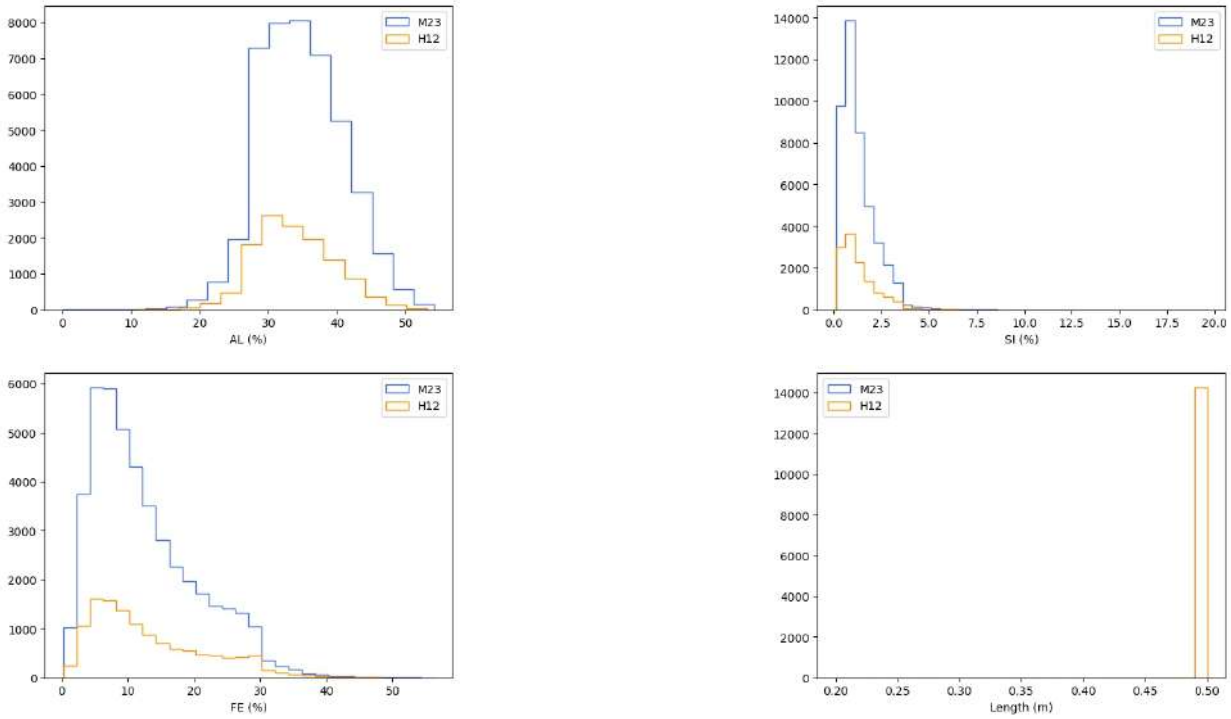
## 11.4 Resource Assays

Statistical data analysis is completed in DeepLime and Supervisor software. A univariate approach is normally used, however, FTIR and ICP scatter plots are also analyzed.

Global statistics by lithology and histograms are created for the statistical population assessment, validation after compositing and for checks against the resulting resource models. For the purposes of this report, a more detailed focus will be given for the caprock bauxite, bauxite and low-grade bauxite layers, as well as the main variables; AL, AT, FE, SI, and ST.

Histograms show that AL analytes have distributions that are close to Gaussian, while SI and FE are moderately to strongly positively skewed, as shown in Figure 11-8.

**Figure 11-8: Histograms for AL, SI, FE, and Length in Bauxite (DOMAF 30) for M23 and H12**




Source: SLR 2024

The summary statistics for the caprock bauxite (DOMAF 20), bauxite (DOMAF 30), and low-grade bauxite (DOMAF 40) are shown for the M23 and H12 areas in Table 11-5. The summary statistics for the caprock bauxite (DOMAF 20), bauxite (DOMAF 30), and low-grade bauxite (DOMAF 40) are shown for the M23 and H12 areas in Table 11-5.

**Table 11-5: Descriptive Statistics for the Main Variables for M23 and H12**

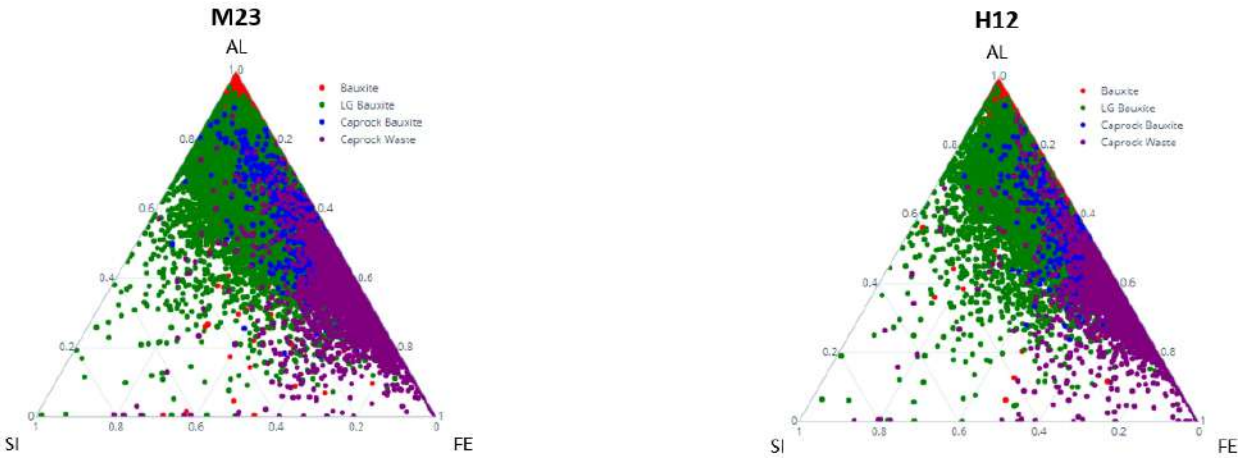
| Lithology | Variable | Count | Length | Mean | SD | Variance | Minimum | Q25 | Q50 | Q75 | Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **M23** | | | | | | | | | | | |
| Caprock Bauxite (DOMAF 20) | AL (%) | 5,226 | 2,613.0 | 26.83 | 3.96 | 15.72 | 7.75 | 24.57 | 26.47 | 29.25 | 54.73 |
| | AT (%) | 5,226 | 2,613.0 | 35.35 | 4.32 | 18.65 | 15.30 | 32.55 | 35.34 | 38.05 | 61.36 |
| | FE (%) | 5,226 | 2,613.0 | 33.13 | 7.85 | 61.69 | 0.25 | 30.46 | 33.73 | 37.68 | 59.65 |
| | SI (%) | 5,226 | 2,613.0 | 1.66 | 1.76 | 3.09 | 0.10 | 0.56 | 1.02 | 2.06 | 19.45 |
| | ST (%) | 5,226 | 2,613.0 | 9.32 | 8.13 | 66.04 | 0.25 | 3.96 | 7.07 | 11.61 | 64.66 |
| | Length (m) | 5,226 | 2,613.0 | 0.50 | 0.00 | 0.00 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 |
| Bauxite (DOMAF 30) | AL (%) | 44,460 | 22,230.0 | 34.87 | 6.13 | 37.53 | 0.10 | 30.39 | 34.56 | 39.00 | 55.00 |
| | AT (%) | 44,460 | 22,230.0 | 39.78 | 5.95 | 35.38 | 11.65 | 35.75 | 40.03 | 43.89 | 64.90 |
| | FE (%) | 44,460 | 22,230.0 | 12.50 | 7.89 | 62.24 | 0.25 | 6.39 | 10.49 | 17.12 | 57.66 |
| | SI (%) | 44,460 | 22,230.0 | 1.30 | 0.96 | 0.93 | 0.10 | 0.64 | 1.03 | 1.70 | 20.10 |
| | ST (%) | 44,460 | 22,230.0 | 24.57 | 12.67 | 160.41 | 0.25 | 14.86 | 22.43 | 33.82 | 80.17 |
| | Length (m) | 44,460 | 22,230.0 | 0.50 | 0.00 | 0.00 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 |
| | AL (%) | 21,007 | 10,503.5 | 24.59 | 4.89 | 23.89 | 0.10 | 21.71 | 24.29 | 26.69 | 53.94 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Low-grade Bauxite (DOMAF 40 | AT (%) | 21,007 | 10,503.5 | 31.63 | 5.89 | 34.64 | 6.09 | 27.54 | 30.90 | 35.37 | 62.25 |
| | FE (%) | 21,007 | 10,503.5 | 12.44 | 10.73 | 115.05 | 0.25 | 4.60 | 7.94 | 17.87 | 75.58 |
| | SI (%) | 21,007 | 10,503.5 | 4.11 | 2.98 | 8.88 | 0.10 | 2.06 | 3.57 | 5.26 | 35.71 |
| | ST (%) | 21,007 | 10,503.5 | 37.35 | 16.81 | 282.48 | 0.25 | 24.50 | 42.05 | 50.74 | 82.62 |
| | Length (m) | 21,007 | 10,503.5 | 0.50 | 0.00 | 0.00 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 |
| **H12** | | | | | | | | | | | |
| Caprock Bauxite (DOMAF 20) | AL (%) | 2,734 | 1,367.0 | 26.92 | 4.22 | 17.82 | 10.63 | 24.46 | 26.54 | 29.43 | 41.38 |
| | AT (%) | 2,306 | 1,153.0 | 34.79 | 4.12 | 16.95 | 19.41 | 32.20 | 34.85 | 37.34 | 50.27 |
| | FE (%) | 2,734 | 1,367.0 | 33.78 | 7.82 | 61.10 | 1.52 | 30.73 | 34.18 | 38.20 | 64.01 |
| | SI (%) | 2,734 | 1,367.0 | 1.61 | 1.77 | 3.14 | 0.10 | 0.54 | 0.94 | 1.92 | 16.28 |
| | ST (%) | 2,734 | 1,367.0 | 9.07 | 8.40 | 70.56 | 0.25 | 3.77 | 6.29 | 10.99 | 57.78 |
| | Length (m) | 2,981 | 1,490.5 | 0.50 | 0.00 | 0.00 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 |
| Bauxite (DOMAF 30) | AL (%) | 12,287 | 6,143.2 | 33.76 | 5.78 | 33.43 | 2.03 | 29.61 | 33.19 | 37.51 | 55.00 |
| | AT (%) | 10,651 | 5,325.2 | 38.22 | 5.54 | 30.73 | 15.54 | 34.53 | 38.23 | 42.00 | 67.96 |
| | FE (%) | 12,287 | 6,143.2 | 13.19 | 8.62 | 74.23 | 0.25 | 6.41 | 10.69 | 18.58 | 55.79 |
| | SI (%) | 12,287 | 6,143.2 | 1.30 | 0.99 | 0.97 | 0.10 | 0.61 | 1.02 | 1.70 | 14.71 |
| | ST (%) | 12,287 | 6,143.2 | 25.85 | 13.04 | 170.08 | 0.25 | 16.08 | 25.25 | 35.72 | 70.09 |
| | Length (m) | 14,275 | 7,137.2 | 0.50 | 0.00 | 0.00 | 0.20 | 0.50 | 0.50 | 0.50 | 0.50 |
| Low-grade Bauxite (DOMAF 40) | AL (%) | 8,489 | 4,244.5 | 24.40 | 4.95 | 24.54 | 0.10 | 21.50 | 24.23 | 26.79 | 48.61 |
| | AT (%) | 7,562 | 3,781.0 | 31.77 | 5.68 | 32.29 | 3.28 | 27.82 | 31.27 | 35.44 | 57.73 |
| | FE (%) | 8,489 | 4,244.5 | 14.11 | 11.25 | 126.51 | 0.25 | 5.16 | 9.72 | 22.13 | 64.77 |
| | SI (%) | 8,489 | 4,244.5 | 4.28 | 3.42 | 11.69 | 0.10 | 1.92 | 3.50 | 5.49 | 28.69 |
| | ST (%) | 8,489 | 4,244.5 | 34.83 | 17.14 | 293.95 | 0.25 | 19.83 | 38.84 | 48.83 | 79.03 |
| | Length (m) | 9,600 | 4,800.0 | 0.50 | 0.00 | 0.00 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 |

Clear depth-dependent grade trends exist for most analytes and are consistent with the mineralization style. These have been adequately accounted for by the geological interpretation and the use of unfolding methods during block grade estimation.

Figure 11-9 illustrates the compositions of the different layers according to AL, SI, and FE.

**Figure 11-9: Ternary Charts of Lithologies for M23 and H12**




Source: SLR 2024

Missing values, which mostly result from the validation routines, are kept as null in the database. Results below the detection limit are mapped to half of the detection limit.

## 11.5 Compositing

Drill holes have been consistently sampled at 0.5 m intervals following the intersection of the base of overburden to obtain samples every 0.5 m through the weathered laterite and bauxite zone into the underlying clays where drilling is commonly terminated. Equal sample support between samples has subsequently been achieved for the majority of samples. Some historic drilling was terminated at the first sign of clay and small residual samples have been taken in this situation.

The ResTag and GSM estimation approaches have used the original drill hole data intervals to generate interpreted geological surfaces to demarcate Overburden, Laterite, Friable and Clay material. Following the interpretation of geological surfaces, drill holes used for ResTag and GSM estimates were composited to:

- **ResTag:** a single interval for samples located below the base of the overburden and above the geological floor which is defined based on cumulative assay grades as described in Section 11.3.1. Grade compositing per drillhole was undertaken using length-weighted linear averages.
- **GSM:** a single interval for samples located below the base of the overburden and above the mining floor which is defined based on cumulative assay grades as described in Section 11.3.2. Additional composites were generated in areas where second and third pass mining floors were identified. Grade compositing per drillhole was undertaken using length-weighted linear averages.

From a 3DBM estimation perspective, compositing was completed using a 0.5m composite length which equated to the predominant drillhole sampling length. Compositing honoured DOMAF domain coding. Any small <0.25m residual composite intervals at the base of drillholes were merged with the preceding 0.5m composite interval if they were within the same DOMA F domain. Small <0.5m residual individual composites within the basal clay zone were retained to support estimation in the waste clay zone.

## 11.6 Treatment of High-Grade Assays

Alcoa managed high-grade samples through capping, without application of grade restriction.

### 11.6.1 Capping

High-grade caps for all analytes were applied to individual composites by Alcoa on a domain-by-domain basis following inspection of the data distributions for the model in question. SLR QP notes that the top-cuts of areas M23 and H12, are in the upper break of the probability plots. Table 11-6 shows the top-cuts used for the M23 and H12 areas.

Very few samples exceed the capping thresholds and are subject to capping.

**Table 11-6: Top-Cuts Used for M23 and H12**

| Area | Lithology | AL | AT | FE | SI | ST | BO | EO | OX | PT | CO | SU |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M23 | Caprock Bauxite | 48.44 | 70 | 80 | 12.86 | 56.98 | 8.89 | 9.89 | 15 | 0.248 | 11.9 | 15 |
| | Bauxite | 55 | 70 | 80 | 13.39 | 69.35 | 9.02 | 8.84 | 9.29 | 0.351 | 10.17 | 7.94 |
| | Low-Grade Bauxite | 55 | 70 | 63.21 | 24.82 | 95 | 6.18 | 9.97 | 8.32 | 1 | 9.6 | 15 |
| H12 | Caprock Bauxite | 55 | 70 | 80 | 49.063 | 95.26 | 15 | 15 | 15 | 1 | 34 | 15 |
| | Bauxite | 55 | 70 | 80 | 49.063 | 95.26 | 15 | 15 | 15 | 1 | 34 | 15 |
| | Low-Grade Bauxite | 55 | 70 | 80 | 49.063 | 95.26 | 15 | 15 | 15 | 1 | 34 | 15 |

### 11.6.2 Grade Restriction

No high-grade restriction was used by Alcoa in the estimation process, by which samples exceeding threshold values would be capped or discarded when located outside of a spatial search when estimating a given block.

## 11.7 Trend–Analysis

### 11.7.1 Variography

Only limited variogram analysis was carried out for Polygonal and GSM models, since the IDW estimation approach does not require variogram models.

For the 3DBMs, variogram analysis is routinely completed. Experimental variograms are calculated in unfolded space, with each DOMAF flattened to the upper contact of the unit.

Variograms are calculated for AL, SI, ST, and FE for the Bauxite Zone (DOMAF 20, 30, and 40), normalized to a sill of one, and modelled with three spherical models, as described in Table 11-7 and Table 11-8. Rotations are provided using MineSight ZXY convention. These individual variogram models are not used for the OK estimation; instead, a single variogram model was generated, which provided an acceptable fit to the four variables. This enabled correlations between analytes to be maintained during the change of support from drill hole samples to blocks.

**Table 11-7: Variogram parameters for M23**

| Domain | DOMAF 20,30,40 | | | | |
|---|---|---|---|---|---|
| Domain Name | Caprock Bauxite, Bauxite, and Low-Grade Bauxite | | | | |
| Element | AL | SI | FE | ST | Combined Variogram |
| Nugget C0 | 0.07 | 0.04 | 0.03 | 0.01 | **0.04** |
| First Structure C1 | 0.64 | 0.51 | 0.5 | 0.64 | **0.6** |
| Structure Type | Spherical | Spherical | Spherical | Spherical | **Spherical** |
| Range 1 (m) | 35 | 60 | 45 | 45 | **45** |
| Range 2 (m) | 20 | 50 | 40 | 40 | **40** |
| Range 3 (m) | 3 | 3 | 6 | 6 | **5** |
| Second Structure C2 | 0.14 | 0.15 | 0.23 | 0.21 | **0.16** |
| Structure Type | Spherical | Spherical | Spherical | Spherical | **Spherical** |
| Range 1 (m) | 55 | 100 | 120 | 105 | **85** |
| Range 2 (m) | 40 | 80 | 115 | 100 | **75** |
| Range 3 (m) | 4 | 6 | 7 | 7 | **6** |
| Third Structure C3 | 0.15 | 0.3 | 0.24 | 0.14 | **0.2** |
| Structure Type | Spherical | Spherical | Spherical | Spherical | **Spherical** |
| Range 1 (m) | 120 | 250 | 285 | 315 | **200** |
| Range 2 (m) | 95 | 185 | 155 | 190 | **150** |
| Range 3 (m) | 5 | 7 | 10 | 8 | **7** |
| Rotation Strike (°)(1) | 140 | 140 | 140 | 140 | **140** |
| Rotation Plunge (°)(2) | 0 | 0 | 0 | 0 | **0** |
| Rotation Dip (°)(3) | 0 | 0 | 0 | 0 | **0** |

**Table 11-8: Variogram parameters for H12**

| Domain | DOMAF 20,30,40 | | | | |
|---|---|---|---|---|---|
| Domain Name | Caprock Bauxite, Bauxite, and Low-Grade Bauxite | | | | |
| Element | AL | SI | FE | ST | Combined Variogram |
| Nugget C0 | 0.1 | 0.09 | 0.1 | 0.04 | **0.1** |
| First Structure C1 | 0.52 | 0.54 | 0.59 | 0.61 | **0.56** |
| Structure Type | Spherical | Spherical | Spherical | Spherical | **Spherical** |
| Range 1 (m) | 90 | 95 | 80 | 100 | **90** |
| Range 2 (m) | 70 | 80 | 80 | 90 | **80** |
| Range 3 (m) | 4 | 4 | 4 | 4 | **4** |
| Second Structure C2 | 0.34 | 0.12 | 0.05 | 0.15 | **0.15** |
| Structure Type | Spherical | Spherical | Spherical | Spherical | **Spherical** |
| Range 1 (m) | 200 | 230 | 200 | 250 | **220** |
| Range 2 (m) | 150 | 150 | 150 | 220 | **170** |
| Range 3 (m) | 5 | 5 | 6 | 6 | **6** |

| | | | | | |
|---|---|---|---|---|---|
| **Third Structure C3** | 0.04 | 0.25 | 0.26 | 0.2 | **0.19** |
| **Structure Type** | Spherical | Spherical | Spherical | Spherical | **Spherical** |
| **Range 1 (m)** | 500 | 500 | 600 | 800 | **550** |
| **Range 2 (m)** | 400 | 500 | 400 | 700 | **500** |
| **Range 3 (m)** | 6 | 6 | 7 | 7 | **7** |
| **Rotation Strike (°)(1)** | 120 | 130 | 130 | 120 | **125** |
| **Rotation Plunge (°)(2)** | 0 | 0 | 0 | 0 | **0** |
| **Rotation Dip (°)(3)** | 0 | 0 | 0 | 0 | **0** |

Variogram model nugget values are less than 10%. Total variogram model ranges span several hundred meters; however, 80% of the sill is generally reached within 100 m laterally. As expected, horizontal to vertical anisotropy ratios are high (typically exceeding 50:1), but with minor lateral anisotropy.

## 11.8 Bulk Density

Alcoa does not routinely collect dry bulk density data.

Dry bulk density testwork has been completed historically using a variety of sampling (grab samples, diamond drill core, test pits) and testing methods. Statistical analysis of results has been completed based on logged geology and whether samples were within the Caprock zone, Friable zone, or Clay zone. For the Caprock zone a total of 421 samples (grab samples to diamond core) were used in the statistical analysis. Dry bulk density results for the caprock zone were typically in the range of 1.8 g/cm$^3$ to 2.5 g/cm$^3$ with a mean dry bulk density value of 2.05 g/cm$^3$ calculated. Caprock samples with a higher $Fe_2O_3$ (FE) content have increased density values. The assignment of block dry density values within the Caprock zone uses an algorithm based on the estimated block FE value. A review of the mean bulk density results shows no notable differences in the average caprock dry density of samples across programs/years or from different regions. A total of 24 samples have been collected in the friable ore zone for bulk density testwork. The bulk density mean-average of the Friable zone is 1.90 g/cm$^3$.

The SLR QP considers that bulk density testwork to date is adequate to support the application of domain average density values to obtain a global tonnage estimate. A review of reconciliation metrics to date shows estimated Mineral Resource tonnages fall within a 5% to 10% tolerance of actual mined tonnages on a monthly basis. Ongoing bulk density testwork is considered warranted to support the application of current bulk density domain values to areas of future planned production.

Mineral Resource tonnages are subject to a 5% reduction factor, supported by reconciliation of Huntly and Willowdale production, which indicates that long-term average As Mined tonnages are approximately 5% higher than the actual production measured on calibrated weightometers.

While the approach used has merit, there are some obvious challenges:

- There are very few data points, unevenly distributed by material type and mining area
- Methodologies for collecting and testing the samples varied (sand replacement method for Hardcap, driven cylinder for Friable, water displacement are all noted)
- There is some lack of clarity on moisture, but it is assumed that the values are all in situ dry bulk density reported as t/m³.

The differences between hardcap (caprock) and Friable (other material) and between granitic or doleritic derivation are however clear.



Senini (1993) concluded that the dry *in situ* bulk density (DIBD) should be estimated using a regression equation which takes into account the Fe content present in Caprock material.

### 11.8.1 Density Estimation

For Mineral Resource estimation, each 0.5 m drill hole sample is assigned a DIBD value based on the logged material type and the FTIR FE grade, using Senini's 1993 regression equation (derivation discussed further in Section 8.2.2.1):

*Hardcap (Caprock) = 2.19 + 0.0103*FE*

*Friable (other) = 2.00 (used for all non-Hardcap material)*

If the sample is logged as a mix of Hardcap and Friable material, a volume-weighted average DIBD value is assigned. Despite different density characteristics, no differentiation is made between bauxite derived from granite and or dolerite, due to the relatively small proportion of the latter (less than 15%).

Since the implementation of 3D block modelling in 2018, densities are assigned after grade estimation, based on the Fe regression equation for and FE grade of Hardcap, and using a default DIBD of 2.0 t/m³ for all other material, weighted by the proportion of Hardcap or and other material. The overburden and clay units are generally also recorded as a block volume percentage, with a corresponding weighted contribution to the block DIBD, according to an overburden DIBD of 1.6 g/cm$^3$ and clay DIBD of 1.89 g/cm$^3$. Although Mineral Resources are reported on a dry basis, an assumed moisture content of 9% is still used for subsequent mine planning purposes.

### 11.8.2 Reconciliation of Density

Alcoa uses comparisons between the As Mined estimated dry tonnage with applied moisture content factors and wet tonnages from the sampling tower weightometers to apply adjustment factors to mine design estimates, scheduling and stockpile planning.

Mineral Resource tonnages are subject to a 5% reduction factor, supported by reconciliation of Huntly and Willowdale production, which indicates that long-term average As Mined tonnages are approximately 5% higher than the actual production measured on calibrated weightometers.

The SLR QP recommends that Alcoa investigate whether the 5% bias in the tonnage between the As Mined and sampling tower weightometers is persistent in the 3D block models. Ongoing bulk density and moisture content testwork within each of the identified bauxite domains for new regions of mining is recommended.

## 11.9 Grade Estimation

### 11.9.1 Polygonal ResTag Models

To the effective date of the report, 14 ResTag models represent approximately 51.9 Mt or 8% of the Mineral Resource tonnage inclusive of Mineral Reserves and 51.9 Mt or 22% of the Mineral Resource tonnage exclusive of Mineral Reserves.

For each drill hole contained within a polygon, the samples located below the base of the overburden and above the geological floor (which is defined based on cumulative assay grades as described in Section 11.3.1) are composited into a single interval. The following numbers are assigned to each polygon:

- Thickness = average length of contained composites;
- Grade = length-weighted average grade of contained composites (density weighting is not applied);



- Density = average density of contained composites;
- Volume = Polygon area by Thickness; and
- Tonnage = Volume by Density.

### 11.9.2 Gridded Seam Models

To the effective date of the report, eight GSM models represent approximately 2.2 Mt or 0% of the Mineral Resource tonnage inclusive of Mineral Reserves and 2.2 Mt or 1% of the Mineral Resource tonnage exclusive of Mineral Reserves.

For the GSM estimates, a single composite was generated for samples located below the base of the overburden and above the mining floor. Additional composites were generated in areas where second and third pass mining floors were identified.

GSM employs 15 m by 15 m cells centered on the nominal drill hole locations. Separate seams are created for the overburden, and for the interpreted Bauxite Zone (BXZ) between the overburden and the mining floor. BXZ is subdivided into separate seams where second and third mining cuts have been interpreted. Interpreted wireframe surfaces are used to assign a seam thickness to each cell, effectively the seam thickness of drill hole at the cell centroid.

Cell grade estimation used IDW techniques as follows:

- Hard boundaries, with each seam cell estimated using composites only from within the corresponding seam;
- IDW weighting factor of 1.2 for SI and 2 for all other variables;
- 1 by 1 by 1 cell discretization;
- Isotropic search distance of 180 m, and;
- Minimum of two and maximum of eight composites, with a maximum of two composites per quadrant

When drill holes are located near the centroid of cells, the resulting grade estimates tends towards a nearest neighbor estimate. As such, the GSM outcomes are equivalent to 2D polygon estimates, with the usual constraint of that method, specifically that the block variances are not smaller than the composite variances.

The GSM is constrained to the interpreted lateral extents of the mining zones. For each mining zone the following attributes are determined:

- Seam Thickness = average seam thickness of the contained GSM cells;
- Grade = weighted average grade of contained cells (density weighting is not applied);
- Density = average density of contained cells;
- Volume = mining zone area by Seam Thickness; and
- Tonnage = Volume by Density.



### 11.9.3 3D Block Models

In 2019, Alcoa began preparing Mineral Resource estimates using 3DBM techniques, with the aim to progressively replace all Polygonal and GSM models. To the effective date of the report, 114 3DBM represent approximately 577.6 Mt or 91% of the Mineral Resource tonnage inclusive of Mineral Reserves, while 94 3DBM represent approximately 184.6 Mt or 77% of the Mineral Resource tonnage exclusive of Mineral Reserves.

3DBM procedures have evolved over time, with some parts now automated or semi-automated. Changes in the 3DBM procedures have generally been minor and are not considered material to the resulting Mineral Resource estimates. The 3DBM grade estimation is completed according to Workflow 3 of the Alcoa DeepLime Geoportal Block Model Creation Procedure (Alcoa 2025a), which estimates grades for each DOMAF domain per block.

Block models are generated using the ML1SA lease area grid with a globally defined origin that ensures that the majority of the drill holes are located closer to the block corners rather than the centroids. The block size is 15 m by 15 m by 0.5 m.

The block grade estimation includes OK interpolation of AL, SI, ST, FE, EO, PT, CO, SU, OX, BO, and AT, using the same flattening approach used in the variogram analysis, in which each DOMAF is flattened to the upper contact of the unit (Section 11.7). Hard boundaries between DOMAF 10, 20, 30, and 40 were implemented in models completed since 2022, while previous block models used soft boundaries between these domains.

A three-pass search strategy is used for the bauxite domains and only one pass for DOMAF 50. Search parameters are presented in Table 11-9. It is important to note that the major and semi-major orientations are in the unfolded horizontal plane, and that a maximum limitation of three samples from any one drill hole was applied. Thus, a minimum of four holes is required for pass one, two holes for pass two, and one hole for pass 3.

**Table 11-9: Ordinary Kriging Search Parameters (MineSight ZXY rotation)**

| DOMAF | Pass | Bearing (Z) | Search Radius (m) | | | Number of Samples | | |
|---|---|---|---|---|---|---|---|---|
| | | | Major | Semi-Major | Minor | Min | Max | Max Per Hole |
| 10, 20, 30, 40, & 50 | 1 | Variable | 55 | 55 | 5 | 12 | 27 | 3 |
| | 2 | Variable | 110 | 110 | 10 | 4 | 27 | 3 |
| | 3 | Variable | 500 | 500 | 50 | 3 | 27 | 3 |

Note: Bearing is variable and determined by lateral direction of maximum continuity

Following estimation, any block grades below the lower detection threshold are assigned to the lower threshold value, while and any block grades above the upper detection threshold are assigned to the upper threshold value. Such values can arise due to negative kriging weights resulting from the screening effect.

Default grades are assigned to overburden (DOMAF 99).

DIBD is not estimated into individual blocks, but is calculated following grade estimation, based on the block domain compositions (see 11.8.5).

In Workflow 4, a combined total grade is calculated according to the proportions of each DOMAF within a given block. The blocks are constrained by the bauxite limits, while sterilized areas are subtracted from the model. In cases where a mined floor was recorded, depletion can be applied vertically as well as laterally.

The OK estimation approach is designed to maintain correlations between analytes and estimation totals that are consistent with the composites.

Block tonnages are factored to reflect the proportion of the block contained below the topographic surface and within the mining solid.

SLR summarized tonnage and average AL and SI grades for ten block models as shown in Table 11-10, for which there is data to enable a comparison between a soft and hard boundary estimation of the bauxite zone (approximately equivalent to DOMAF 20, 30, and 40). Overall, the AL grades increased by 7% and SI grades decreased by 23%, and the tonnage is higher in most cases, reflecting the additional drilling.

**Table 11-10: Tonnage and Grade Information Comparing use of Hard and Soft Boundaries**

| Model | Original Model | | | 3DBM Model | | | Difference | | |
|---|---|---|---|---|---|---|---|---|---|
| | Tonnage (000 t) | AL (%) | SI (%) | Tonnage (000 t) | AL (%) | SI (%) | Tonnage (000 t) | AL (%) | SI (%) |
| Holyoake Central | 25,211 | 31.97 | 1.94 | 25,919 | 34.12 | 1.23 | 3% | 7% | -36% |
| Windsor | 8,935 | 32.82 | 2.67 | 8,798 | 33.69 | 2.38 | -2% | 3% | -11% |
| Cooke | 15,421 | 30.85 | 2.22 | 18,976 | 31.99 | 1.95 | 23% | 4% | -12% |
| Serpentine | 16,444 | 32.00 | 1.96 | 20,299 | 32.75 | 1.72 | 23% | 2% | -12% |
| Gleneagle | 26,333 | 31.58 | 1.67 | 35,144 | 34.69 | 1.14 | 33% | 10% | -32% |
| Buckley | 17,998 | 33.74 | 1.68 | 27,435 | 35.39 | 1.27 | 52% | 5% | -24% |
| Cobiac | 23,498 | 31.15 | 1.70 | 30,865 | 34.81 | 1.18 | 31% | 12% | -31% |
| Frollett | 12,556 | 30.07 | 1.68 | 18,587 | 33.59 | 1.31 | 48% | 12% | -22% |
| Yarri | 10,044 | 30.90 | 2.04 | 30,362 | 32.51 | 1.62 | 202% | 5% | -20% |
| Millars | 26,156 | 30.64 | 2.21 | 24,987 | 32.32 | 1.88 | -4% | 5% | -15% |
| **Total** | **182,596** | **31.55** | **1.93** | **241,372** | **33.71** | **1.48** | **32%** | **7%** | **-23%** |

## 11.10 Block Model Validation

### 11.10.1 Polygonal ResTag and Gridded Seam Modelling

Alcoa uses a similar general approach to validate both the Polygonal and GSM resource models which includes:

1. Visual validation of cell estimated grades versus seam composites;
2. Comparison between composite and estimate global statistics;
3. Swath plots comparing composite and estimate grades; and
4. Comparison between models when upgraded with new information.

Estimated grades were compared visually to the drill hole composite grades to ensure that the cell grade estimates appeared consistent with the drill hole seam composite data.

As GSMs were effectively nearest neighbor estimates, checks by SRK (2021a) on several GSM models indicated excellent global and local correlation between the estimated cell grades and the input seam composite grades.

Polygonal estimates were updated by Alcoa when drill hole data is infilled from 60 m and 30 m spacings, and previously replaced with GSM models after 15 m infill drilling, although 3DBM models are now produced routinely at this stage.

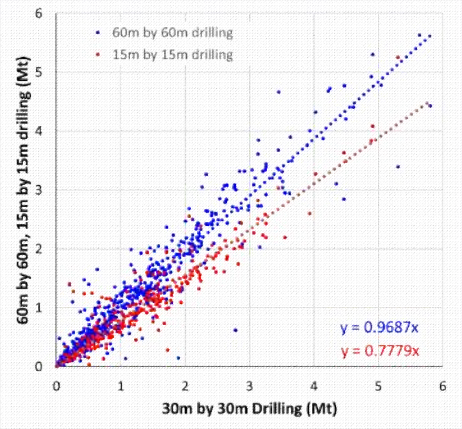
#### 11.10.1.1 Validation Completed by SLR

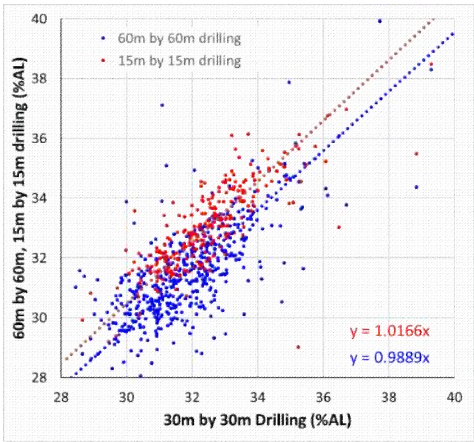
SLR undertook independent checks on datasets and GSMs for the F54 and F55 blocks to confirm that the modelling procedures had performed as intended. Results were verified and no material issues were noted.

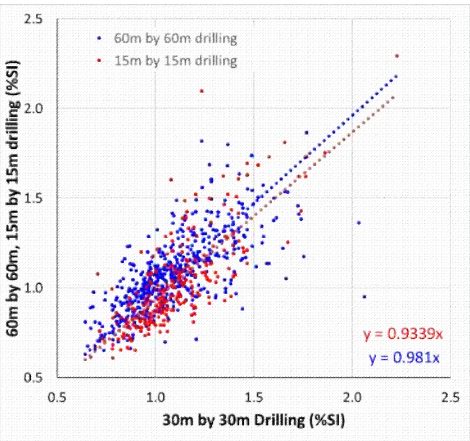
Changes in tonnages and average grades (AL, SI, OX) are presented as scatterplots in Figure 11-10 for Map Sheets at Huntly where infill drilling to 30m by 30m and 15m by 15m has occurred. This analysis shows the extent of change in the reported tonnage and grade that has occurred in the reported Mineral Resource between different drill spacings and subsequently gives insight into the risk in the reported Mineral Resource. Each data point within Figure 11-10 represents a Map Sheet. It is noted that:

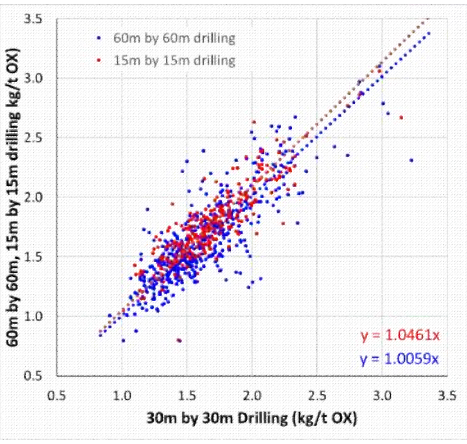
- Material differences in reported tonnages represented by the scatter around the 45° line in the top left-hand plot are evident for individual Map Sheets when comparing the results from 60m by 60m drilling against 30m by 30m drilling. Positive and negative variance are noted with correlation at 0.987 indicating no particular bias is present.
- Globally, there is only a 3% change in resource tonnage when infilling from 60 m to 30 m, but a 22% drop in tonnage when the deposit is further infilled to 15 m drill centers. The latter is mainly due to a change in the geological interpretation from a geological to a mining floor.
- Decreasing the drill spacings from 60 m to 15 m results in an average reduction in SI of 10%, an increase in OX of 5%, but little change to AL. These grade changes are likely due to the preferential loss of deeper DOMAF 40 material that is high in SI and low in OX when mining constraints are considered. Similar grade-tonnage relationships related to infill drilling were noted at Willowdale by SLR.
- Applying a global correction factor to Polygonal model tonnages generated from 30 m and 60 m spaced drill hole datasets is not considered appropriate as local differences are highly variable and not considered to be predictable, as shown by the red dots in the top left-hand plot below.

**Figure** 11-10: Comparison Scatterplots for Huntly (Tonnage, AL, SI, OX)






Source: SLR, 2021.

### 11.10.2 3D Block Modelling

Alcoa staff perform block model validation for the individual areas, including visual validation of block model coding and estimated grades against composites, comparison of global summary statistics for estimated blocks and composites, and swath plots comparing block grades and composites. This forms part of Workflow 3 of the Alcoa DeepLime Geoportal Block Model Creation Procedure (Alcoa 2025a).

#### 11.10.2.1 Validation Completed by SLR

SLR evaluated the information provided in the block model summary files supplied by Alcoa and conducted independent checks on the datasets and block models for the M23 and H12 areas, obtaining results that were consistent with those provided by Alcoa.

SLR performed individual inverse distance squared ($ID^2$) and nearest neighbor (NN) estimates to assist in block model validation.

Visual validations, comparative global summary statistics, and swath plots were built for the main estimation variables, and compared with the parallel estimates completed by SLR. The results of these comparisons for the M23 and H12 areas are provided in the following subsections.

**Statistical Validation**

Statistics of the blocks estimated by OK were compared against the capped composites, and the $ID^2$ and NN estimates. Table 11-11 and Table 11-12 present the comparative global summary statistics for the M23 and H12 areas.

Overall, smaller differences are observed for the AL estimation of the bauxite (DOMAF 30) and low-grade bauxite (DOMAF 40) within the M23 area, and more significant differences are observed for the SI estimation of both areas. These differences may be related to differences in the parameters used for the independent estimates completed by SLR, and/or small discrepancies in the sample selection used for the estimation due to the parallel workflow used by SLR.

Despite the discrepancies, the statistical comparisons are considered reasonable and support the estimated Mineral Resources.

**Table 11-11: Composites, OK, ID$^2$, and NN Summary Statistics for M23**

| M23 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Variable | Statistical Parameter | Caprock Bauxite | | | | Bauxite | | | | Low-Grade Bauxite | | | |
| | | Samples | OK | ID$^2$ | NN | Samples | OK | ID$^2$ | NN | Samples | OK | ID$^2$ | NN |
| AL | Count | 5,226 | 19,988 | 19,988 | 19,988 | 44,460 | 157,444 | 157,444 | 157,444 | 21,007 | 101,770 | 101,770 | 101,770 |
| | Mean | 26.83 | 26.54 | 26.19 | 26.27 | 34.87 | 34.81 | 31.92 | 31.58 | 24.59 | 24.99 | 22.8 | 21.62 |
| | SD | 3.95 | 1.96 | 4.02 | 6.81 | 6.13 | 3.66 | 4.93 | 8.7 | 4.89 | 2.46 | 4.02 | 8.36 |
| | Variance | 15.61 | 3.85 | 16.16 | 46.32 | 37.53 | 13.4 | 24.33 | 75.62 | 23.89 | 6.04 | 16.15 | 69.83 |
| | Minimum | 7.75 | 15.96 | 3.75 | 0.1 | 0.1 | 14.26 | 6.37 | 0.1 | 0.1 | 9.85 | 2.21 | 0.1 |
| | Q25 | 24.57 | 25.32 | 24.14 | 23.34 | 30.39 | 32.36 | 28.75 | 26.54 | 21.71 | 23.44 | 20.71 | 17.71 |
| | Q50 | 26.47 | 26.18 | 26.16 | 26.71 | 34.56 | 34.4 | 32 | 32.21 | 24.29 | 24.72 | 22.9 | 22.55 |
| | Q75 | 29.25 | 27.49 | 28.34 | 30.12 | 39 | 37 | 35.29 | 37.56 | 26.69 | 26.31 | 24.95 | 26.36 |
| | Maximum | 48.44 | 44.72 | 46.46 | 51.45 | 55 | 52.67 | 51.84 | 55 | 53.94 | 44.67 | 49.55 | 55 |
| SI | Count | 5,226 | 19,988 | 19,988 | 19,988 | 44,460 | 157,444 | 157,444 | 157,444 | 21,007 | 101,770 | 101,770 | 101,770 |
| | Mean | 1.66 | 1.87 | 2.77 | 2.9 | 1.3 | 1.46 | 2.23 | 2.29 | 4.1 | 4.6 | 5.55 | 5.99 |
| | SD | 1.74 | 1.15 | 2.46 | 3.87 | 0.95 | 0.68 | 1.55 | 2.84 | 2.96 | 1.76 | 2.6 | 4.76 |
| | Variance | 3.02 | 1.32 | 6.05 | 14.97 | 0.9 | 0.46 | 2.42 | 8.06 | 8.76 | 3.1 | 6.77 | 22.64 |
| | Minimum | 0.1 | 0.1 | 0.12 | 0.1 | 0.1 | 0.12 | 0.22 | 0.1 | 0.1 | 0.1 | 0.42 | 0.1 |
| | Q25 | 0.56 | 1 | 1.19 | 0.74 | 0.64 | 0.91 | 1.2 | 0.76 | 2.06 | 3.45 | 3.72 | 2.65 |
| | Q50 | 1.02 | 1.67 | 2.18 | 1.48 | 1.03 | 1.4 | 1.85 | 1.37 | 3.57 | 4.51 | 5.09 | 4.58 |
| | Q75 | 2.06 | 2.43 | 3.57 | 3.35 | 1.7 | 1.98 | 2.77 | 2.57 | 5.26 | 5.52 | 7.02 | 7.82 |
| | Maximum | 12.86 | 8.94 | 31.19 | 40.2 | 13.39 | 9.13 | 24.21 | 38.9 | 24.82 | 20.93 | 32.32 | 40.18 |
| FE | Count | 5,226 | 19,988 | 19,988 | 19,988 | 44,460 | 157,444 | 157,444 | 157,444 | 21,007 | 101,770 | 101,770 | 101,770 |
| | Mean | 33.13 | 32.7 | 31.04 | 30.33 | 12.5 | 12.77 | 12.72 | 12.28 | 12.44 | 11.49 | 11.07 | 10.83 |
| | SD | 7.85 | 5.31 | 7.13 | 10.55 | 7.89 | 5.3 | 5.74 | 9.04 | 10.72 | 6.31 | 6.9 | 9.88 |
| | Variance | 61.69 | 28.24 | 50.84 | 111.37 | 62.24 | 28.1 | 32.93 | 81.81 | 114.97 | 39.77 | 47.55 | 97.62 |

| M23 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Variable | Statistical Parameter | Caprock Bauxite | | | | Bauxite | | | | Low-Grade Bauxite | | | |
| | | Samples | OK | $ID^2$ | NN | Samples | OK | $ID^2$ | NN | Samples | OK | $ID^2$ | NN |
| | Minimum | 0.25 | 3.72 | 2.53 | 0.25 | 0.25 | 0.95 | 1.7 | 0.25 | 0.25 | 0.25 | 0.42 | 0.25 |
| | Q25 | 30.46 | 30.88 | 28.08 | 25.78 | 6.39 | 8.74 | 8.32 | 5.44 | 4.6 | 6.81 | 5.97 | 4.05 |
| | Q50 | 33.73 | 33.23 | 32.46 | 32.58 | 10.49 | 12.45 | 11.53 | 9.47 | 7.94 | 9.96 | 8.99 | 6.92 |
| | Q75 | 37.68 | 35.79 | 35.48 | 37.75 | 17.12 | 15.86 | 16.01 | 16.92 | 17.87 | 14.56 | 14.11 | 13.93 |
| | Maximum | 59.65 | 54.35 | 54.97 | 71.06 | 57.66 | 42.37 | 43.65 | 80 | 63.21 | 48.8 | 51.35 | 63.21 |

**Table 11-12: Composites, OK, ID$^2$, and NN Summary Statistics for H12**

| H12 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Variable | Statistical Parameter | Caprock Bauxite | | | | Bauxite | | | | Low-Grade Bauxite | | | |
| | | Samples | OK | ID$^2$ | NN | Samples | OK | ID$^2$ | NN | Samples | OK | ID$^2$ | NN |
| AL | Count | 2,981 | 64,964 | 64,964 | 64,964 | 14,275 | 297,393 | 297,393 | 297,393 | 9,600 | 205,206 | 205,206 | 205,206 |
| | Mean | 26.87 | 26.94 | 26.67 | 26.29 | 33.66 | 33.57 | 31.76 | 30.85 | 24.40 | 24.49 | 23.70 | 23.36 |
| | SD | 4.17 | 2.35 | 3.52 | 6.44 | 5.76 | 3.72 | 4.15 | 7.85 | 4.92 | 2.62 | 3.22 | 6.66 |
| | Variance | 17.41 | 5.52 | 12.40 | 41.45 | 33.23 | 13.81 | 17.25 | 61.56 | 24.23 | 6.86 | 10.38 | 44.40 |
| | Minimum | 10.63 | 16.63 | 0.22 | 0.10 | 2.03 | 9.80 | 1.87 | 0.10 | 0.10 | 7.53 | 0.93 | 0.10 |
| | Q25 | 24.45 | 25.48 | 24.88 | 23.34 | 29.55 | 30.91 | 29.10 | 26.92 | 21.52 | 22.96 | 21.91 | 20.34 |
| | Q50 | 26.49 | 26.60 | 26.52 | 26.39 | 33.11 | 33.18 | 31.54 | 31.01 | 24.23 | 24.27 | 23.51 | 23.70 |
| | Q75 | 29.41 | 28.27 | 28.68 | 29.72 | 37.39 | 35.81 | 34.22 | 35.79 | 26.77 | 25.78 | 25.28 | 27.08 |
| | Maximum | 41.38 | 38.01 | 44.45 | 48.30 | 55.00 | 53.74 | 53.92 | 55.00 | 48.61 | 42.03 | 43.18 | 49.51 |
| SI | Count | 2,981 | 64,964 | 64,964 | 64,964 | 14,275 | 297,393 | 297,393 | 297,393 | 9,600 | 205,206 | 205,206 | 205,206 |
| | Mean | 1.59 | 1.50 | 2.02 | 2.48 | 1.29 | 1.31 | 1.82 | 2.10 | 4.22 | 4.29 | 4.78 | 5.03 |
| | SD | 1.73 | 1.04 | 2.13 | 3.48 | 0.97 | 0.65 | 1.21 | 2.69 | 3.36 | 2.16 | 2.52 | 4.20 |
| | Variance | 2.99 | 1.09 | 4.54 | 12.13 | 0.94 | 0.42 | 1.46 | 7.22 | 11.32 | 4.67 | 6.35 | 17.66 |
| | Minimum | 0.10 | 0.12 | 0.13 | 0.10 | 0.10 | 0.10 | 0.12 | 0.10 | 0.10 | 0.10 | 0.13 | 0.10 |
| | Q25 | 0.54 | 0.73 | 0.78 | 0.54 | 0.61 | 0.81 | 1.02 | 0.69 | 1.85 | 2.82 | 3.02 | 2.07 |
| | Q50 | 0.94 | 1.22 | 1.33 | 1.12 | 0.99 | 1.22 | 1.54 | 1.26 | 3.45 | 4.01 | 4.40 | 3.87 |
| | Q75 | 1.89 | 1.94 | 2.47 | 3.00 | 1.68 | 1.72 | 2.27 | 2.31 | 5.47 | 5.28 | 5.97 | 6.49 |
| | Maximum | 12.08 | 9.48 | 30.96 | 32.19 | 9.69 | 8.81 | 24.69 | 31.65 | 23.16 | 19.91 | 26.87 | 34.39 |
| FE | Count | 2,981 | 64,964 | 64,964 | 64,964 | 14,275 | 297,393 | 297,393 | 297,393 | 9,600 | 205,206 | 205,206 | 205,206 |
| | Mean | 33.64 | 33.30 | 33.21 | 32.11 | 12.94 | 13.70 | 13.82 | 13.91 | 13.93 | 13.76 | 13.29 | 13.21 |
| | SD | 7.90 | 5.17 | 6.02 | 9.13 | 8.48 | 5.97 | 6.21 | 9.67 | 11.16 | 7.51 | 7.81 | 10.76 |
| | Variance | 62.44 | 26.69 | 36.23 | 83.31 | 71.96 | 35.62 | 38.62 | 93.54 | 124.59 | 56.47 | 60.92 | 115.88 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Minimum | 1.52 | 3.09 | 0.66 | 0.25 | 0.25 | 1.16 | 1.54 | 0.25 | 0.25 | 0.25 | 0.36 | 0.25 |
| | Q25 | 30.63 | 30.66 | 30.70 | 28.01 | 6.32 | 9.08 | 9.06 | 6.31 | 5.11 | 7.89 | 7.28 | 4.94 |
| | Q50 | 34.06 | 33.65 | 33.79 | 32.88 | 10.48 | 12.88 | 12.64 | 10.99 | 9.48 | 12.48 | 11.22 | 8.88 |
| | Q75 | 38.12 | 36.47 | 36.95 | 37.37 | 18.14 | 17.59 | 17.41 | 19.55 | 21.67 | 18.15 | 17.62 | 20.83 |
| | Maximum | 64.43 | 54.00 | 59.79 | 64.43 | 55.79 | 46.11 | 49.60 | 64.01 | 58.53 | 50.54 | 53.11 | 58.53 |

### Visual Validation

The SLR QP completed visual validation on several cross sections in different orientations, comparing block grades and composite grades. No major discrepancies were identified, with the estimated block grades generally providing a good representation of the local composite grades, and with reasonable interpolation that reflects the domain and topography wireframes.

Figure 11-11, Figure 11-12, and Figure 11-13 show example cross sections for AL, SI, and FE, respectively.

**Figure 11-11: Visual validation of Blocks and Composites for AL**

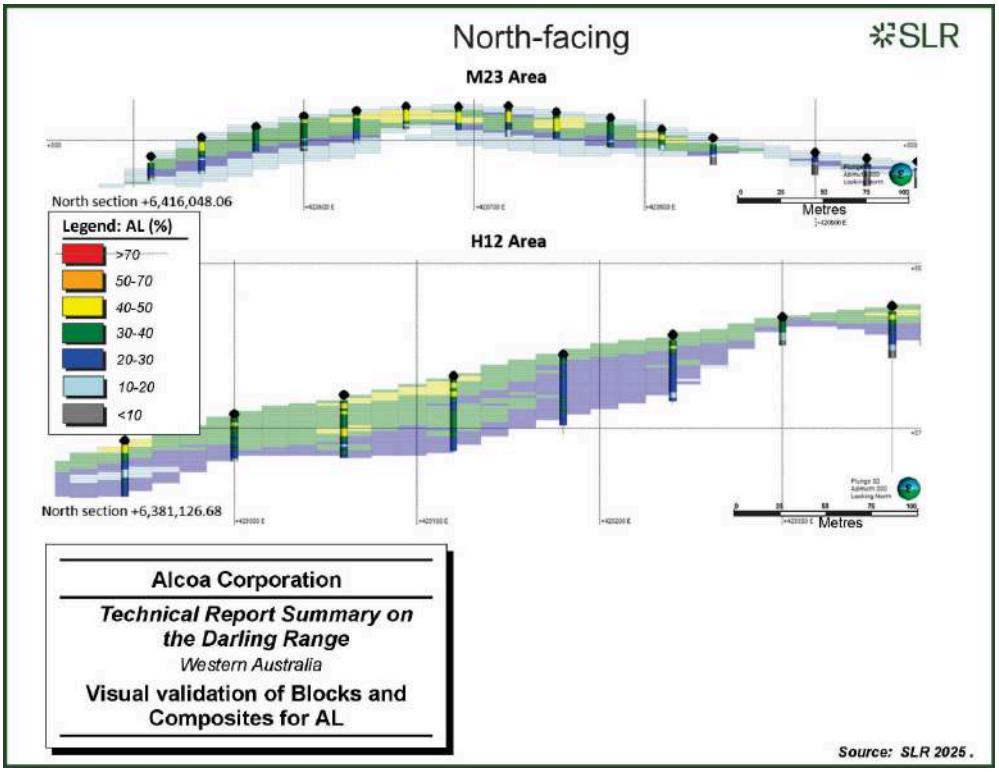


**Figure 11-12: Visual validation of Blocks and Composites for SI**

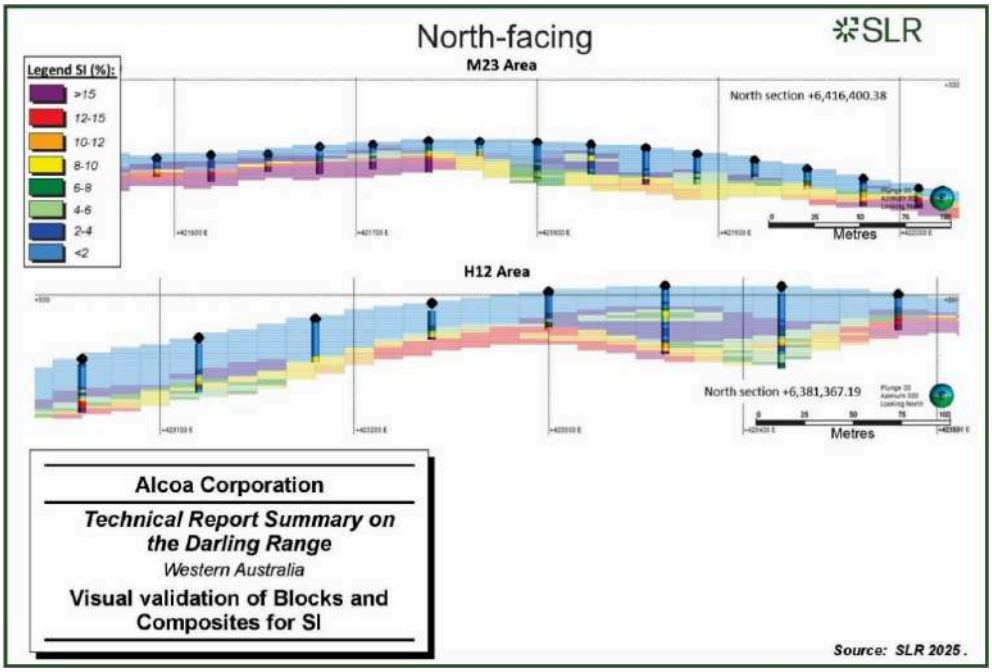
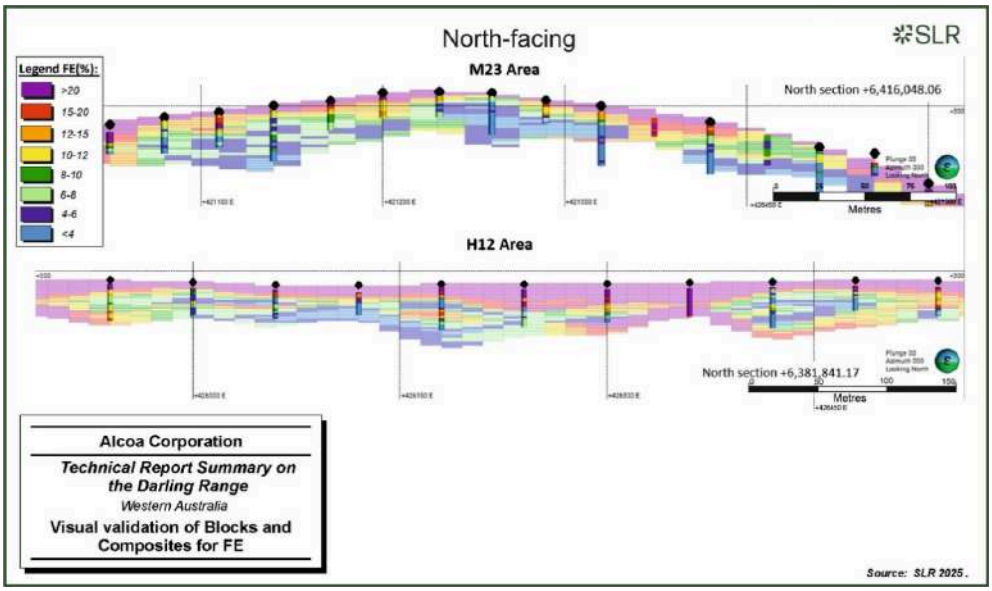



**Figure 11-13: Visual validation of Blocks and Composites for FE**



**Swath Plots**

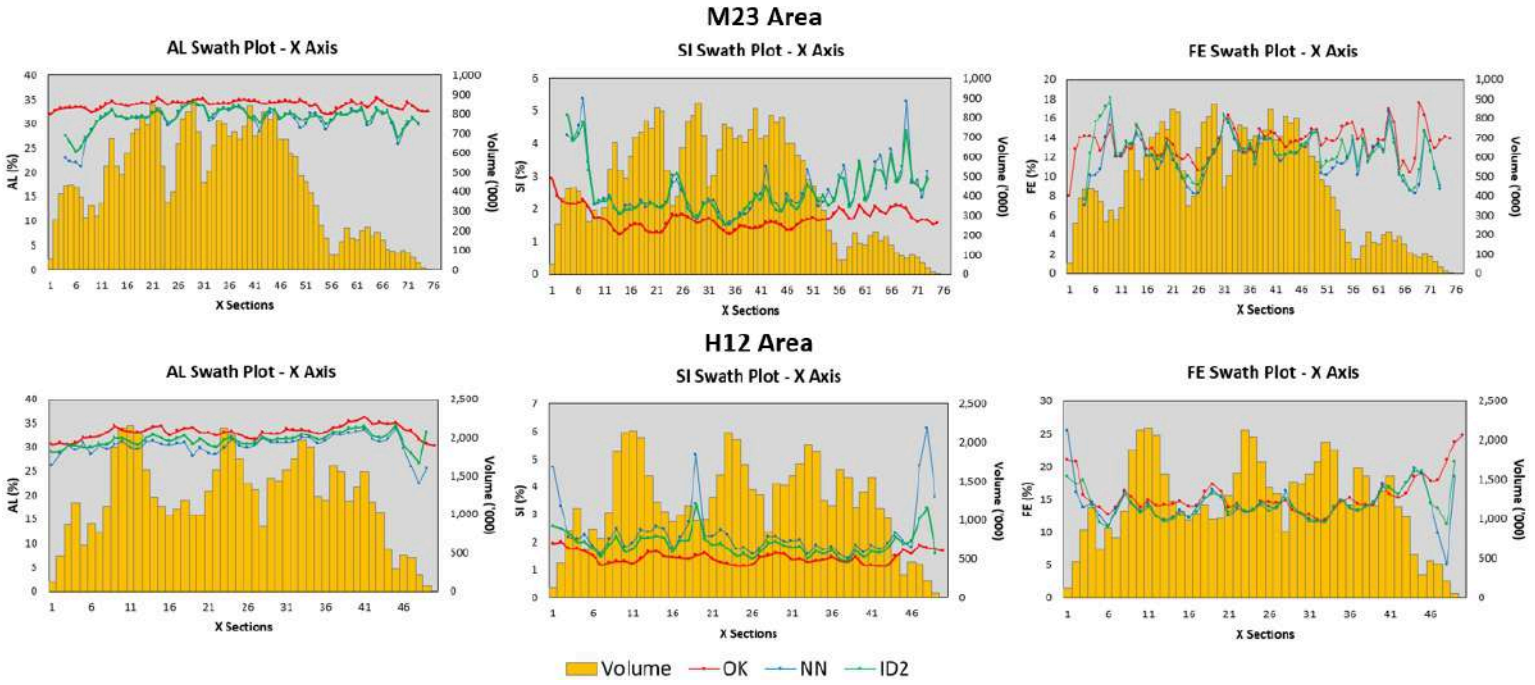
SLR generated swath plots comparing the OK, $ID^2$, and NN estimations on the X, Y, and Z directions.

The OK AL and SI grades exhibit opposite behaviors when compared with the $ID^2$ and NN estimates, with AL values approximately 8% higher and SI values approximately 5% lower within the bauxite (DOMAF 30). Additionally, the $ID^2$ and NN estimates exhibit a more variable average grade locally, whereas the OK behavior is more consistent, which suggests a potential over-smoothing of the estimation for these variables. The different estimation methods show similar local and global trends for FE.

Although some variation is expected due to the differences in the estimation workflows, SLR recommends that additional estimation validation procedures be incorporated, such as comparison with $ID^2$ and NN, and a smoothing evaluation.

Figure 11-14 illustrates the AL, SI, and FE swath plots in the X direction for the bauxite (DOMAF 30) of both areas. Swaths of 5 m and 10 m were used for M23 and H12, respectively.

**Figure 11-14: Swath Plots in X direction for AL, SI, and FE for M23 and H12 areas – Bauxite (DOMAF 30)**




Source: SLR 2025

### 11.10.3 Reconciliation

Alcoa's staff is working on an integrated reconciliation process for all operating mines, aimed at standardizing reconciliation terminology, metrics, and standards. The chosen solution was Snowden Optiro's Reconcilor web application. Implementation of the system began development in 2023 and entered the testing phase for Darling Range in 2024 to calibrate the inputs and outputs. The system was fully implemented with 12 months of data as of September 2025.

#### 11.10.3.1 Sampling Tower Data

Refinery feed grade is monitored for the Huntly and Willowdale Reporting Centers using material collected at the Pinjarra and Wagerup sampling towers prior to arrival of the stockpile stackers.

Alcoa mine planning personnel rely upon historical comparisons between the As Mined estimates, which means the tonnage and grade based on the block model using a mined-out perimeter or surface, and the sampling tower data to apply adjustment factors to mine design estimates, to assist with scheduling and stockpile planning activities. The Grade adjustments are not applied to the global reported Mineral Resource estimates as they are considered to be local factors.

Reconciliation of the LTMP can identify discrepancies between the estimated material and actual production, although Mineral Resource tonnages are estimated on a dry basis, whereas sampling tower weightometer data is on a wet basis. Accounting for assumed moisture, tonnage reconciliation indicates a long term overestimation of LTMP tonnages of 5%, which justifies a 5% tonnage reduction factor applied to the global reported Mineral Resources estimates (Section 11.8.2).

Sampling tower performance was shown to have good precision for all analytes other than BO, and the repeatability results were of high quality.

#### 11.10.3.2 Resource to Sampling Tower Comparison

Alcoa reconciles the LTMP with the sampling tower estimates on a monthly basis once mining is completed for a given area. It is important to note that most of the Mineral Resources are prepared using 30 m or 60 m spaced data, whereas As Mined to sampling tower reconciliation is based on portions of the Mineral Resource infilled to 15 m spaced data, which also include additional mining constraints.

Figure 11-15 and Figure 11-16 show the annual relative grade differences for both Huntly and Willowdale respectively over the past ten years. Figure 11-15 and Figure 11-16 show the annual relative grade differences for both Huntly and Willowdale respectively over the past ten years. These plots indicate:

At Huntly, the sampling tower SI grades have generally been higher than As Mined, although with a bias of less than 14% between 2016 and 2024, although this increased to 22% in 2025. Conversely sampling tower ST grades have been generally lower than As Mined, with a bias of less than 9%. AL and FE grades at the sampling tower are generally slightly higher than the As Mined.

At Willowdale, the sampling tower SI grades have also been generally higher than As Mined, with a bias of generally less than 14%, although this reached 29% in 2021, 23% in 2024, and 38% in 2025. Conversely sampling tower ST grades have been generally lower than As Mined, with a bias of less than 5% in most years. AL and FE at the sampling tower generally fluctuate slightly higher or lower than the As Mined.

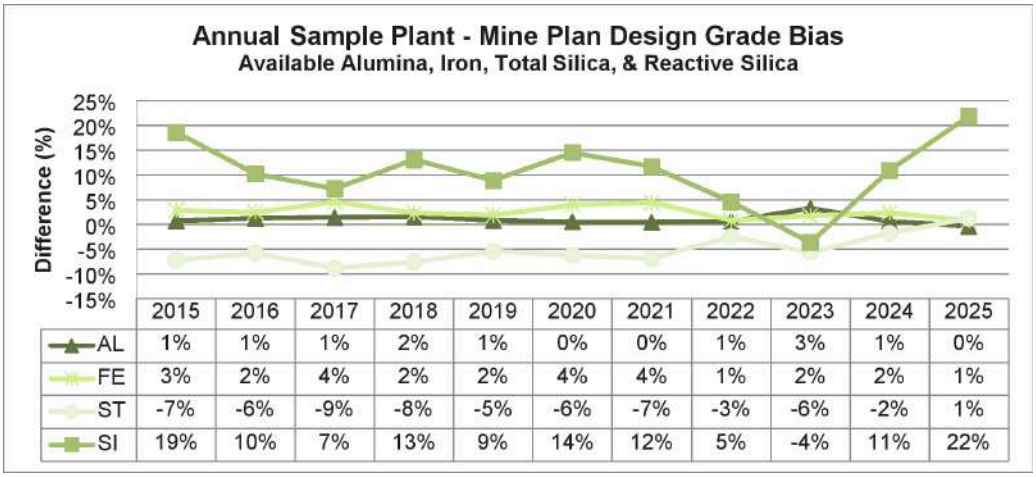
The sources of the reconciliation differences shown in Figure 11-15 and Figure 11-16 are not known, but the following factors could contribute:

- LTMP were prepared using FTIR assay data, whereas the sampling tower samples are assayed using the same techniques as the REF Method (see Table 8-1 in Section 8.2.1.2) but with BD rather than MD. Table 8-1Alcoa assumes that this is more accurate, but that is difficult to confirm for partial digestion methods such as AL, SI, and OX.
- Changes in the modelling procedures from ResTag, to GSM, to 3DBM. The latter method has only recently been introduced and represents a limited portion of the LTMP processed in recent years.
- The As Mined grades and tonnages could include some additional dilution and ore loss relative to the planned mine design.
- Differences between the Pinjarra (inspected and validated by SLR, see Section 2.1) and Wagerup sampling towers.

Incremental reconciliation improvements – particularly regarding SI - appear to have started around 2010, which may reflect an improvement in data quality (drilling and assaying procedures) around this time. Consequently, Mineral Resources using data collected prior to approximately 2010 are considered to be of lower confidence and the classification of resource models constructed from this data has been downgraded accordingly.

Reconciliation data in recent years generally falls within acceptable limits (+/-10%) for AL on an annual basis to support the classifications used for reporting of Alcoa's Darling Range Mineral Resources, although both Reporting Centers show significant increases in sampling tower SI grades relative to the LTMP in 2025. The SLR QP recommends that reconciliation continues to be closely monitored and that the increased bias in 2025 is investigated further.

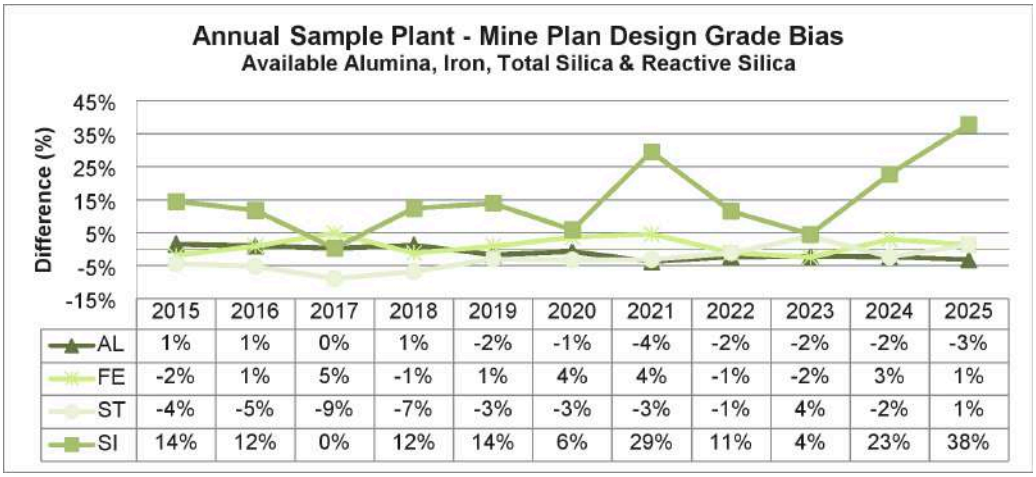
**Figure 11-15: LTMP versus Sample Plant Reconciliation – Huntly**




| | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| AL | 1% | 1% | 1% | 2% | 1% | 0% | 0% | 1% | 3% | 1% | 0% |
| FE | 3% | 2% | 4% | 2% | 2% | 4% | 4% | 1% | 2% | 2% | 1% |
| ST | -7% | -6% | -9% | -8% | -5% | -6% | -7% | -3% | -6% | -2% | 1% |
| SI | 19% | 10% | 7% | 13% | 9% | 14% | 12% | 5% | -4% | 11% | 22% |

Source: SLR 2025

**Figure 11-16: LTMP versus Sample Plant Reconciliation – Willowdale**




| | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| AL | 1% | 1% | 0% | 1% | -2% | -1% | -4% | -2% | -2% | -2% | -3% |
| FE | -2% | 1% | 5% | -1% | 1% | 4% | 4% | -1% | -2% | 3% | 1% |
| ST | -4% | -5% | -9% | -7% | -3% | -3% | -3% | -1% | 4% | -2% | 1% |
| SI | 14% | 12% | 0% | 12% | 14% | 6% | 29% | 11% | 4% | 23% | 38% |

Source: SLR 2025

The SLR QP recommends that Alcoa continue implementation and development of the reconciliation system to understand and adjust differences in density and reactive silica, as well as to track the monthly performance of geological models against what is reported from the refinery.

## 11.11 Classification

Mineral Resources are classified into Measured, Indicated, and Inferred categories, which are consistent with those defined by the SEC in S-K 1300.

The Mineral Resource estimate for Darling Range is produced by aggregating many different models, produced using data of different qualities at different drilling densities, and generated using different estimation procedures. The Mineral Resource classification has been applied to the various models based on consideration of the quality and quantity of the input data, confidence in the geological interpretation, and confidence in the outcomes from the various estimation methods. The main factors that govern Mineral Resource classification are the drill hole spacing, the quality of data collected, and the estimation technique.

A drill hole spacing study (SRK, 2019a) aimed at quantifying the differences in the reliability of local estimates with different drill spacings, used a similar approach to Alcoa's 3DBM procedures. The study concluded that drill spacings of 30 m by 30 m and 60 m by 60 m were adequate to support the definition of Measured and Indicated Mineral Resources, respectively.

Due to the different block model types, the following adjustments in the classification were made, to reflect the uncertainty for each:

### 11.11.1 Gridded Seam Models

For GSM models where the drill hole spacing is 30 m by 30 m, the Measured portion was downgraded to Indicated, unless on a tighter 15 m by 15 m drilling grid. The additional data density overcomes the potential deficiency of the GSM method.

Some of the Measured portion estimated using a significant amount of pre-2010 drill sampling was also downgraded to Indicated, reflecting the lower confidence in the older drilling data, since subsequent data quality has improved due to refined drilling, sampling, and assaying procedures.

### 11.11.2 ResTag Models

For ResTag models where the drill hole spacing is 60 m by 60 m, the Mineral Resource classification was limited to Inferred.

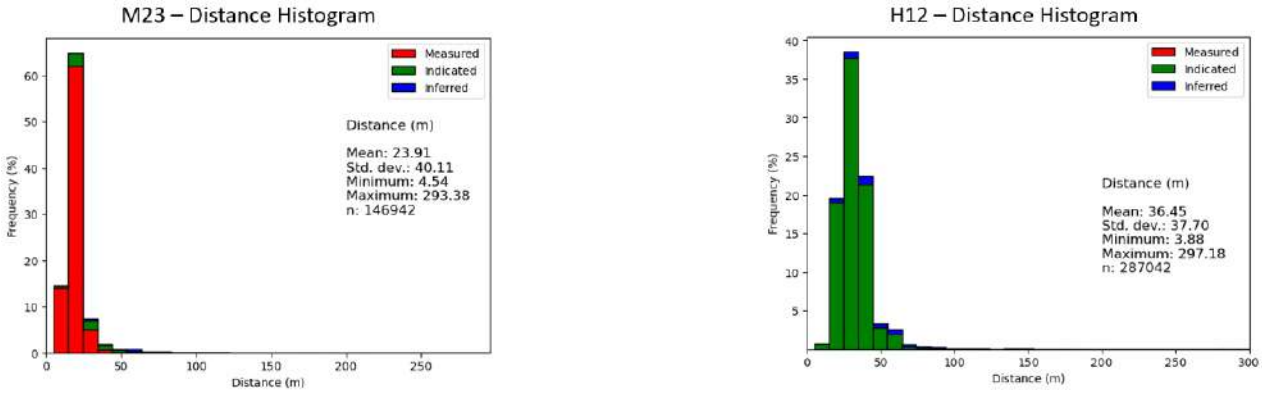
### 11.11.3 3D Block Models

For the 3DBM, Mineral Resource classification was assigned using a DeepLime automated workflow, which incorporates three independent measures of estimation confidence: drill hole spacing, assay data confidence, and geological interpretation confidence (DeepLime 2025a). This is performed according to Workflow 3 of the Alcoa DeepLime Geoportal Block Model Creation Procedure (Alcoa 2025a). Drill spacing classification polygons are generated based on consistent drilling patterns, with buffer distances equal to half the nominal spacing. Assay data confidence is assessed based on the vintage of analytical methods, with drilling completed prior to 1999, between 1999 and 2010, and post-2010 assigned differing confidence levels. Geological interpretation confidence is assessed based on whether model blocks occur above or below the base of informing drill hole data. These three components are combined within the workflow to generate the final Mineral Resource classification code applied to each block. During development of the workflow, it was determined that additional estimation performance metrics (such as kriging efficiency) were not required, as drill spacing was found to adequately reflect estimation confidence.

Mineral Resource classification criteria are applied in the horizontal plane and are consistent for the entire laterite vertical profile. Thus, interpretation of the roof and floor of the Bauxite Zone are implicitly assumed to be of similar confidence. In some areas, the geological floor may be erratic for Polygonal models and of lower confidence than the roof, but these areas are typically excluded when mining constraints are applied to the GSM and 3DBM models.

Figure 11-17 shows histograms of the distance to the closest sample for the M23 and H12 areas, colored by Mineral Resource classification. The SLR QP recommends risk-based (conditional simulation) techniques are considered to quantify uncertainty and support Mineral Resource classification.

**Figure 11-17: Volume-Weighted Histograms of Resource Classification by the Distance to Closest Sample for M23 and H12**

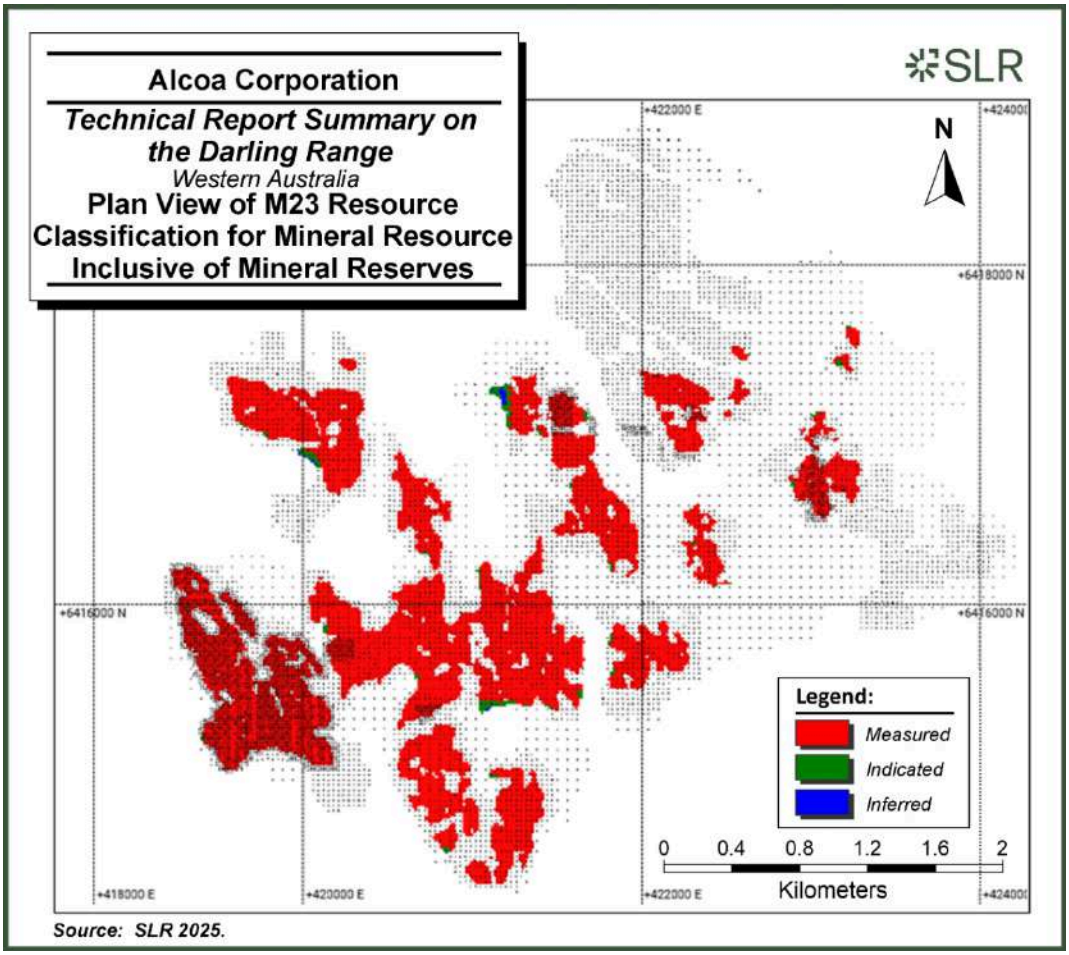



Source: SLR 2025

The Mineral Resource classification for the M23 and H12 Mineral Resources inclusive of Mineral Reserves are shown in Figure 11-18 and Figure 11-19.

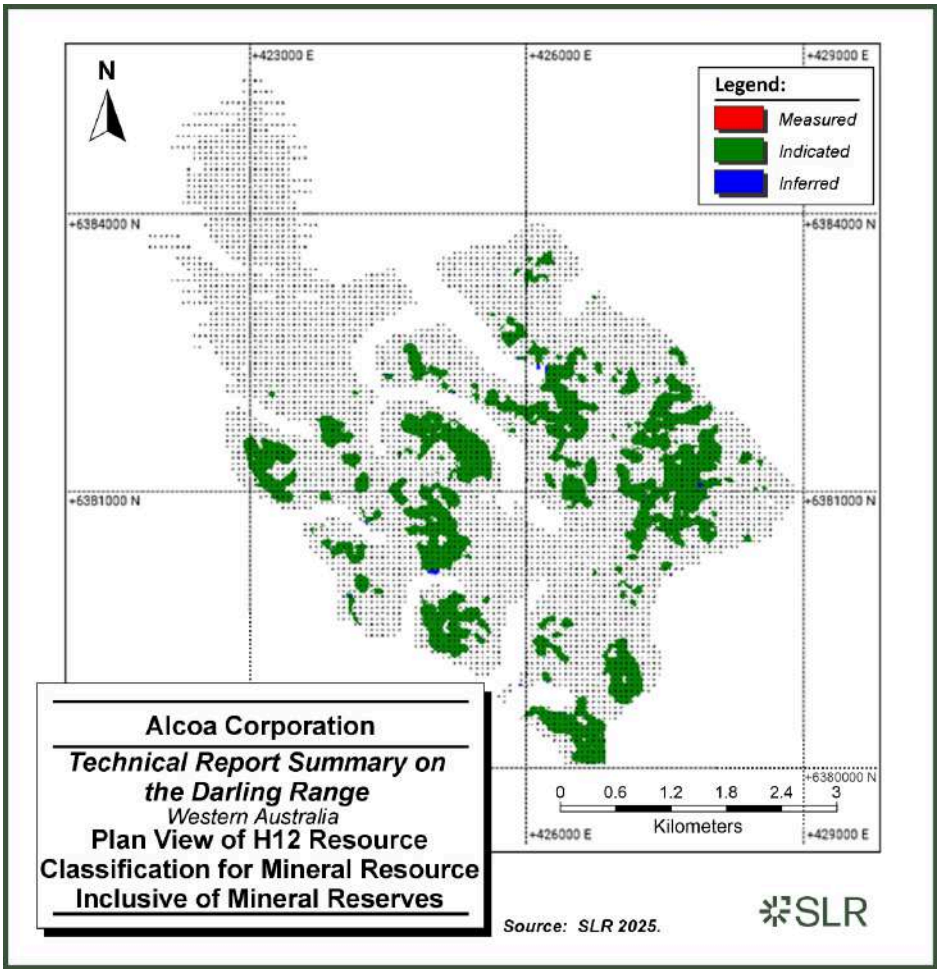
Blocks within M23 area are dominantly assigned Measured classification due to the 15 m by 15 m and 30 m by 30 m drill hole spacing, while blocks within the H12 area are dominantly Indicated classification, due to the 60 m by 60 m drill hole spacing. The final classification polygons ensure contiguous zones for each category, preventing small isolated zones, and assign Mineral Resource classification to the full vertical profile.

**Figure 11-18: Plan View of M23 Resource Classification for Mineral Resource Inclusive of Mineral Reserves**




*Source: SLR 2025.*

**Figure 11-19: Plan View of H12 Resource Classification for Mineral Resource Inclusive of Mineral Reserves**



The SLR QP is of the opinion that the Mineral Resource classification approach appropriately reflects the expected confidence in the estimated Mineral Resource, in accordance with the S-K 1300 definitions.

## 11.12 Mineral Resource Reporting

Key refinery target grade requirements for AL, SI, and OX, along with practical mining considerations, have been taken into account when defining Mineral Resources using GSM and 3DBM modelling methods. Polygonal models do not account for mining constraints other than a 1.5 m minimum thickness.

ML1SA contains sub-regions for which mining permission has not been granted, due to forestry, environmental, social, or other constraints. These areas have been excluded from the estimated Mineral Resources.

For Mineral Resource reporting, block tonnage estimates have been reduced by 5% on the basis that:

- Reconciliation data at both Huntly and Willowdale indicate that the As Mined tonnage estimates over the past 20 years have been consistently higher than the stockpile received tonnages after the sampling tower by approximately 5%; and
- Stockpile estimates are derived from weightometers prior to the sampling towers, which are regularly checked and calibrated.

### 11.12.1 Reasonable Prospects for Economic Extraction

Reasonable prospects for economic extraction for the Mineral Resources have been demonstrated by economic mining of the defined bauxite zone over the life of the operation. Cut-off criteria applied in developing the reported Mineral Resource have been chosen taking into account economic criteria which include mining, haulage and processing costs, and required minimum quality specifications for the refinery to deliver a product which meets minimum acceptable saleable product standards.

Mineral Resources estimated using polygonal methods (ResTag and GSM) are reported above a cut-off value of ≥27.5% AL, ≤3.5% SI, and ≤4 kg/t OX, that is implicit in the delineation of the bauxite layer in the geological modelling stage.

Mineral Resources estimated using a 3DBM approach are evaluated taking into account all estimated block grades through the weathered profile (Laterite, Friable and Clay zones) with economic bauxite material defined based on a ‘Value in Use’ (VIU) calculation which takes into account individual and cumulative block grades to identify zones of economic bauxite which meet the minimum grade and quality specification required by the refinery taking into account mining considerations and blending opportunities. Zones of low grade (18% to 27.5% AL) and thin internal waste clay zones can be included within the reported Mineral Resource if the cumulative grades of the economic bauxite zone meet minimum cumulative grade and quality specifications (≥20% AL, ≤3.5% SI) delivering a blended product which meets minimum acceptable refinery requirements of ≥28% AL and ≤2.0% SI.

The VIU calculation used in the definition and reporting of Mineral Resources uses a life of mine (LOM) price of $500/t for alumina and $300/t for caustic soda, respectively. These prices were determined based on historical market trends. The $500/t alumina price roughly corresponds to the maximum Alumina Price Index (API) average price over a six-month period in the past ten



years, while the $300/t caustic soda price reflects the minimum caustic price over the same time frame, adjusted for delivery costs to relevant refinery locations.

The time frame used to estimate these commodity prices aligns with the long-term strategic planning window (2026–2034), which considers average pricing trends for mine scheduling. These prices are in accordance with the criteria of reasonable prospects for economic extraction (RPEE). The selected values are reviewed periodically and will be updated if material changes occur.

Only economic bauxite material that falls within designed pit limits within allowable mining regions is contained within the reported Mineral Resource. The estimated Mineral Resources are constrained by a minimum thickness of 2 m.

The SLR QP considers that the reported Mineral Resource meets RPEE. Further refinement and alignment of reported Mineral Resources to minimum practical mining limitations is considered warranted to ensure robust recoverable resource estimates are attained. A review of assigned cost and price assumptions and minimum mining thickness criteria is also recommended to evaluate whether marginal material at depth and thin zones adjacent to currently designed pits meet RPEE and should be included within the reported Mineral Resource.

### 11.12.2 Exclusion of Mineral Reserves

Explain Alcoa's process for reporting Mineral Resources exclusive of Mineral Reserves:

- Measured and Indicated blocks located within the lateral Mineral Reserve extents but not meeting the Mineral Reserve criteria are not reported as Mineral Resources exclusive of Mineral Reserves. This includes blocks located below the Mineral Reserve pit design.
- Inferred blocks located within the scheduled Mineral Reserves are reported as Mineral Resources exclusive of Mineral Reserves.

### 11.12.3 Mineral Resource Tabulation

A summary of the Mineral Resource estimates exclusive of Mineral Reserves for the three ML1SA Reporting Centers is shown in Table 11-13, with an effective date of 31 December 2025.

**Table 11-13: Darling Range Mineral Resources Exclusive of Mineral Reserves by Reporting Center – Effective Date 31 December 2025**

| Category | Mine | Tonnage (Mt) | AL (%) | SI (%) |
|---|---|---|---|---|
| Measured | Huntly | 113.7 | 30.2 | 2.0 |
| | North | 0.0 | 0.0 | 0.0 |
| | Willowdale | 19.9 | 29.8 | 1.5 |
| | **Sub-total** | **133.6** | **30.1** | **1.9** |
| Indicated | Huntly | 39.1 | 29.6 | 1.7 |
| | North | 0.8 | 32.3 | 1.4 |
| | Willowdale | 13.2 | 29.7 | 1.2 |
| | **Sub-total** | **53.2** | **29.7** | **1.6** |



| | | | | |
|---|---|---|---|---|
| Measured + Indicated | Huntly | 152.8 | 30.0 | 1.9 |
| | North | 0.8 | 32.3 | 1.4 |
| | Willowdale | 33.1 | 29.7 | 1.4 |
| | **Sub-total** | **186.8** | **30.0** | **1.8** |
| Inferred | Huntly | 0.6 | 31.4 | 1.7 |
| | North | 15.1 | 31.6 | 1.0 |
| | Willowdale | 36.2 | 32.0 | 1.2 |
| | **Sub-total** | **51.9** | **31.9** | **1.1** |

Notes:

10. The definitions for Mineral Resources in S-K 1300 were followed.
11. Mineral Resources are 100% attributable to Alcoa and are exclusive of Mineral Reserves.
12. Mineral Resources for the polygonal models are estimated at a geological cut-off grade, which generally approximates to nominal cut-off grades of 27.5% available alumina (AL) with less than 3.5% reactive silica (SI).
13. Mineral Resources estimated using a 3DBM approach are evaluated taking into account all estimated block grades with economic bauxite material defined based on a 'Value in Use' (VIU) calculation which takes into account individual and cumulative block grades to identify zones of economic bauxite which meet the minimum grade and quality specification required by the refinery taking into account mining considerations and blending opportunities. The VIU calculation used in the definition and reporting of Mineral Resources uses a life of mine (LOM) price of $500/t for alumina and $300/t for caustic soda, respectively.
14. A minimum total mining thickness of 1.5 m was used.
15. In situ dry bulk density is variable and is defined for each block in the Mineral Resource model.
16. A global downwards adjustment of tonnes by 5% is made to account for density differences based on historic mining performance.
17. The reference point for the Mineral Resource is the in situ predicted dry tonnage and grade of material to be delivered to the refinery stockpile following the application of a Mineral Resource pit.
18. Numbers may not add due to rounding.

### 11.12.4 Comparison with Previous Estimate

The current EOY2025 Mineral Resources exclusive of Mineral Reserves is compared with the previous EOY2024 Mineral Resources exclusive of Mineral Reserves in Table 11-15.

Overall, the Measured and Indicated Mineral Resources decreased approximately 1.6 Mt (-1%), from 188.4 Mt to 186.8 Mt, while the Inferred Mineral Resource decreased approximately 49.5 Mt (-49%), from 101.4 Mt to 51.9 Mt.

The contribution of different factors to the change in tonnage is shown in Table 11-14.

**Table 11-14: Contribution to Change in Mineral Resource Exclusive of Mineral Reserve Tonnage**

| Category | Measured | | Indicated | | Inferred | |
|---|---|---|---|---|---|---|
| **Total** | **Tonnage (Mt)** | | **Tonnage (Mt)** | | **Tonnage (Mt)** | |
| **EOY2024** | **139.6** | | **48.7** | | **101.4** | |
| **EOY2025** | **133.6** | | **53.2** | | **51.5** | |
| **Difference Relative to EOY2024** | **Mt** | **%** | **Mt** | **%** | **Mt** | **%** |
| Mining Depletion | -2.4 | -2% | -2.6 | -5% | 0.0 | 0% |
| Constraints | -6.6 | -5% | -2.3 | -5% | -7.7 | -8% |
| MAZ | 0.0 | 0% | -6.5 | -13% | -15.8 | -16% |
| Re-optimization | 0.0 | 0% | 0.0 | 0% | 0.4 | 0% |
| Exploration | 0.0 | 0% | 0.0 | 0% | -26.3 | -26% |
| Schedule change | 2.9 | 2% | 15.9 | 33% | 0.0 | 0% |
| **Total** | -6.0 | -4% | 4.5 | 9% | -49.5 | -49% |

The decreases are primarily due to the following changes:

- **Mining depletion:** Recovery and/or abandonment to allow rehabilitation.
- **Constraints:** Changes to environmental, community or mining constraints.
- **MAZ:** Extensions to Mining avoidance zones.
- **Exploration:** Upgrades to Inferred ore due to resource definition activities.

Partially offset by increases due to:

- **Schedule changes:** Migration of Mineral Reserves to Mineral Resources.
- **Re-optimization:** Schedule re-optimization resulting in additional Inferred Mineral Resources at Myara and Myara North Mining Regions.

**Table 11-15: Comparison of Mineral Resources Exclusive of Mineral Reserves by Reporting Center – Effective Date 31 December 2025 and Effective Date 31 December 2024**

| Category | Mine | EOY2025 Mineral Resource | | | EOY2024 Mineral Resource | | | Difference (%) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Tonnage (Mt) | AL (%) | SI (%) | Tonnage (Mt) | AL (%) | SI (%) | Tonnage | AL | SI |
| Measured | Huntly | 113.7 | 30.2 | 2.0 | 106.1 | 30.4 | 1.89 | 7% | -1% | 7% |
| | North | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0% | 0% | 0% |
| | Willowdale | 19.9 | 29.8 | 1.5 | 33.5 | 30.4 | 1.39 | -41% | -2% | 7% |
| | **Sub-total** | **133.6** | **30.1** | **1.9** | **139.6** | **30.4** | **1.77** | **-4%** | **-1%** | **10%** |
| Indicated | Huntly | 39.1 | 29.6 | 1.7 | 40.7 | 30.3 | 1.46 | -4% | -2% | 16% |
| | North | 0.8 | 32.3 | 1.4 | 0.8 | 32.3 | 1.38 | 3% | 0% | 0% |
| | Willowdale | 13.2 | 29.7 | 1.2 | 7.1 | 29.9 | 1.16 | 86% | -1% | 4% |
| | **Sub-total** | **53.2** | **29.7** | **1.6** | **48.7** | **30.3** | **1.42** | **9%** | **-2%** | **10%** |
| Measured + Indicated | Huntly | 152.8 | 30.0 | 1.9 | 146.8 | 30.4 | 1.77 | 4% | -1% | 10% |
| | North | 0.8 | 32.3 | 1.4 | 0.8 | 32.3 | 1.38 | 3% | 0% | 0% |
| | Willowdale | 33.1 | 29.7 | 1.4 | 40.7 | 30.3 | 1.35 | -19% | -2% | 2% |
| | **Sub-total** | **186.8** | **30.0** | **1.8** | **188.4** | **30.4** | **1.68** | **-1%** | **-1%** | **9%** |
| Inferred | Huntly | 0.6 | 31.4 | 1.7 | 9 | 35.7 | 1.25 | -93% | -12% | 34% |
| | North | 15.1 | 31.6 | 1.0 | 15.1 | 31.6 | 1 | 0% | 0% | 0% |
| | Willowdale | 36.2 | 32.0 | 1.2 | 77.3 | 32.2 | 1.24 | -53% | -1% | -7% |
| | **Sub-total** | **51.9** | **31.9** | **1.1** | **101.4** | **32.4** | **1.2** | **-49%** | **-2%** | **-7%** |

Notes:

1. The definitions for Mineral Resources in S-K 1300 were followed.
2. Mineral Resources are 100% attributable to Alcoa and are exclusive of Mineral Reserves.
3. Mineral Resources for the polygonal models are estimated at a geological cut-off grade, which generally approximates to nominal cut-off grades of 27.5% available alumina (AL) with less than 3.5% reactive silica (SI).

4. Mineral Resources estimated using a 3DBM approach are evaluated taking into account all estimated block grades with economic bauxite material defined based on a ‘Value in Use’ (VIU) calculation which takes into account individual and cumulative block grades to identify zones of economic bauxite which meet the minimum grade and quality specification required by the refinery taking into account mining considerations and blending opportunities. The VIU calculation used in the definition and reporting of Mineral Resources uses a life of mine (LOM) price of $500/t for alumina and $300/t for caustic soda, respectively.
5. A minimum total mining thickness of 1.5 m was used.
6. In situ dry bulk density is variable and is defined for each block in the Mineral Resource model.
7. A global downwards adjustment of tonnes by 5% is made to account for density differences based on historic mining performance.
8. The reference point for the Mineral Resource is the in situ predicted dry tonnage and grade of material to be delivered to the refinery stockpile following the application of a Mineral Resource pit.
9. Numbers may not add due to rounding.



### 11.12.5 Mineral Resource Uncertainty

The estimation of Mineral Resources for any commodity, including bauxite, is subject to significant risks, including those described below and elsewhere in the discussion of risks associated with mining and processing of bauxite to produce alumina. An investor should carefully consider these risks. If any of the described risks occur, the Darling Range bauxite mining and processing business, financial position and operational results could be materially affected adversely.

The purpose of Technical Report Summaries issued under S-K 1300 and other similarly purposed International Codes (JORC, 2012; NI 43-101, 2014) is to ensure that known risks are disclosed by the SLR QP subject to expectations of Transparency, Materiality, and Competency. This Technical Report Summary addresses the technical risks associated with the Geology, Sampling, Assaying, Data Management in Sections 6.0 to 9.0 and Mineral Resource Estimation in Section 11.0.

The SLR QP considers that no material technical risks are identified in those Sections.

The risks described below are not comprehensive and there may be additional risks and uncertainties not presently known, for example due to market or technology changes, that are currently deemed immaterial but may also affect the business.

The SLR QP considers that the following risks specifically pertain to the Mineral Resources declared for the Property.

#### 11.12.5.1 Specific Identified Risks

- Continuous improvement of all aspects of Alcoa's Mineral Resource definition programs means that changes have been incrementally refined with respect to previous procedures. Thus, estimates for most of the Mineral Resources are variants of those devised in the late 1980s and early 1990s and are not consistent with current conventional practices. This is reflected in the large proportion of Inferred Mineral Resource. The successful operation of Alcoa's operations on the Property demonstrated over an extended period indicates that it is unlikely that any aspects of the data collection and Mineral Resource definition process are significantly flawed, although there are recognized shortcomings.
- Drill hole samples represent a very small volume of material relative to the much larger volume estimated in the block model. This results in local errors and biases that are not recognized. Robust sample preparation and geostatistical estimation are used to identify and overcome these errors, supported by closed-loop reconciliation with the stockpile tower samplers. These systems may not identify changes in the underlying geology or other data as the area to be delineated expands over time.
- The Mineral Resource estimates may not contain adequate or relevant data if the bauxite is supplied to other refineries, if processing methods change, or if characterization of a new analyte is required.
- The older ResTag and GSM estimation procedures, which represent most of the Inferred Mineral Resources, are relatively inflexible, and may not contain the level of detail necessary to adequately support mining optimization studies. This has been largely addressed by the recent move to 3DBM models, which more easily enable the preparation of models that contain sufficient resolution and detail to support conventional mining optimization studies. These models will allow incremental improvements to address challenges in meeting target grade specification, resolving reconciliation issues, or tailoring the estimation parameters and procedures to prepare models that better reflect local changes in mineralization characteristics. The 3DBM modelling procedures offer more flexibility in moderating adverse effects of



sampling imprecision compared to the older procedures and in producing grade tonnage curves to meet various impurity constraints (when modelled).

- Alcoa does not routinely collect dry bulk density data. Consequently a limited density dataset is present to support currently applied block density values and tonnage estimates. Reconciliation results to date have highlighted a consistent 5% positive bias in estimated tonnage on a monthly basis against the actual As Mined tonnage recorded by weightometers. Ongoing dry bulk density and moisture content testwork is considered warranted to substantiate tonnage estimates of future planned production areas. Given the tonnage bias identified the reported Mineral Resource is currently subject to a 5% tonnage reduction factor.
- The defined base of bauxite surface is not a distinct boundary and is a function of weathering processes and can be somewhat gradational and variable on a local scale. Consequently, risk exists in the estimated tonnes and grade of economic bauxite particularly at the base of the interpreted bauxite zone. Reconciliation results in recent years (2024, 2025) of SI grades of mined material against estimated SI grades from the block model have shown a notable bias. Mined SI grades have been typically >15% higher than those predicted. This bias coincides with the removal of a 0.5 m mining buffer zone above the base of interpreted bauxite to maximise bauxite recovery.

#### 11.12.5.2 Generic Mineral Resource Uncertainty

- Estimates of Measured and Indicated Mineral Resources are uncertain. The volume and grade of any converted Mineral Reserves results from mine planning accounting for Modifying Factors.
- Inferred Mineral Resources are too speculative geologically to have economic considerations applied to them to enable them to be categorized as Mineral Reserves.
- Should changes be required due to exigent circumstances, it may take some years from exploration until commencement of production, during which time the economic feasibility of production may change.
- Alcoa cannot be certain that any part or parts of a deposit or Mineral Resource estimate will ever be confirmed or converted into Regulation S-K Subpart 1300 compliant Mineral Reserves or that mineralization can in the future be economically or legally extracted.

To ameliorate such risks the Mineral Reserves declaration is limited to material for which extraction is currently planned within the LTMP. The Mineral Resources excluding Mineral Reserves indicate the likely potential beyond that time frame, given all the limitations on future knowledge outlined above.

## 11.13 QP Opinion

The SLR QP considers the geological interpretation and grade estimation processes to be appropriate. Further refinement and definition of the geochemical variation present vertically in the weathered bauxitic profile will occur once 3D block model estimates are developed within areas which are currently estimated using the ResTag 2D polygonal estimation approach. A total of 51.9 Mt or 22% of the reported Mineral Resource exclusive of Mineral Reserves as at 31 December 2025 comes from estimates completed using the ResTag 2D polygonal estimation approach. The SLR QP considers that no material change in the reported Mineral Resource will occur in these areas with the implementation of a 3DBM approach.

In SLR QP's opinion, the Mineral Resource classification approach appropriately reflects the expected confidence in the estimated Mineral Resource, in accordance with the S-K 1300 definitions.

The SLR QP considers that Alcoa have appropriately substantiated that the reported Mineral Resource meets RPEE.

In the SLR QP's opinion that with consideration of the recommendations summarized in Sections 1.1.2.1 and 23.1 of this report, any matters relating to all relevant technical and economic factors likely to influence the prospect of economic extraction can be resolved with further work.



# 12.0 Mineral Reserve Estimates

## 12.1 Summary

A Mineral Reserve has been estimated for Alcoa's Darling Range bauxite mining operations in accordance SEC S-K 1300 definitions. The estimate is also consistent with the guidelines of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Mineral Reserves (the JORC 2012 Code).

The SLR QP inspected Alcoa's Willowdale operations on 21 October 2025 and Huntly on 22 October 2025. Alcoa's Mine Planning department was visited 23 & 24 October 2025 to review the LTMP, Medium Term Plan (MTP) and to interview relevant personnel on these dates. This supports prior review and discussions and on other occasions (2021 to 2024). A full account of the site visit to the mines, offices, and the refineries is provided in Section 2.1.

The Mineral Reserve is classified with reference to the classification of the underlying Mineral Resource and with reference to confidence in the informing Modifying Factors. The SLR QP considers the Proven and Probable classification to be appropriate to the deposit and associated mining operations.

The reference point for the Mineral Reserve is prior to the processing plant at the refinery.

The Proven Mineral Reserve is a subset of Measured Resources only. The Proven Mineral Reserve is included in the Long Term Mine Plan (LTMP) and is approved for mining.

The Probable Mineral Reserve is estimated from that part of the Mineral Resource that has been classified as Indicated or from Measured Resources that are included in the LTMP but not yet approved for mining.

Variable cut-off grades are applied in estimation of the Mineral Reserves, and these are related to operating cost and the nature of the Mineral Resource in relation to blending requirements. The Mineral Reserve estimate is expressed in relation to available alumina (AL) and reactive silica (SI), this being the critical contaminant in relation to the Refinery.

Mineral Reserve estimates for the Darling Range Property are shown in Table 12-1, with an effective date of 31 December 2025.

**Table 12-1: Summary of Darling Range Mineral Reserves – Effective 31 December 2025**

| Region | Class | Tonnage (Mt) | AL (%) | SI (%) |
|---|---|---|---|---|
| Huntly | Proven | 22.7 | 28.6 | 1.9 |
| | Probable | 235.8 | 31.6 | 1.5 |
| | **Total** | **258.5** | **31.3** | **1.6** |
| Willowdale | Proven | 10.8 | 30.7 | 1.7 |
| | Probable | 123.7 | 31.1 | 1.4 |
| | **Total** | **134.5** | **31.1** | **1.4** |
| Total | Proven | 33.4 | 29.3 | 1.8 |
| | Probable | 359.5 | 31.4 | 1.5 |
| | **Total** | **392.9** | **31.2** | **1.5** |

Notes:

1. The definitions for Mineral Reserves in S-K 1300 were followed.
2. Mineral Reserves are stated on a 100% ownership basis following Alcoa Corporation's acquisition of Alumina Limited.

3. The target grade for mine planning has generally between 29 to 33% available alumina (AL) and around 1.5% reactive silica (SI) and varies locally. Related to the last two years production and the MTP from 2026 to 2028 these target AL grades are expected to be lower, generally between 28.5% and 30%, while SI levels are higher, ranging from approximately 1.8% to 2.25%. From 2029 onward, AL grades improve to 31–32.5% and SI drops to about 1.3%–1.5%, trending toward ~1.15% by 2034, as the schedule moves from lower-quality to higher-quality ore zones.
4. Mineral Reserves are estimated at an economic cut-off which considers grade, operating costs and ore quality for blending. The economic cut off has been estimated using a base alumina price of $400/t for Alumina. Various deductions for caustic ($500 /t), other alumina production costs, along with mining related costs and a metallurgical recovery factor for extractable alumina of 93% have been applied during optimization to provide economically minable shells for the purpose of the LTMP.
5. Minimum mining widths are not used due to the surficial nature of the Mineral Resource, rather a minimum mining block size of 15m by 15m by 1m deep is applied.
6. The reference point for the Mineral Reserve is the refinery processing plant gate, with crushing, washing (as applicable), and transportation being the only process employed.
7. Bulk density is variable, dependent on the nature of the Mineral Resource and is separately estimated in the Mineral Resource model.
8. The moisture factor used to convert wet tonnes to dry tonnes is 0.91
9. Numbers may not add due to rounding.

The SLR QP is not aware of any risk factors associated with, or changes to, any aspects of the Modifying Factors such as mining, metallurgical, infrastructure, permitting, or other relevant factors that could materially affect the current Mineral Reserve estimate.

The LTMP requires that permitting for operational dependencies is achieved timeously. The LTMP also requires two crusher moves (which are costed for). Longer annual average haul distances of 20km will be utilized at Huntly from 2029 to 2032 and the deliverable tonnage to the refinery is forecast to be 18Mtpa (wet) until 2034. Previously the haulage distances were around 10km.

The SLR QP considers that the accuracy and confidence in the Mineral Reserve estimate to be appropriate for the classification applied, which is supported by both the conservative operational processes and the long operational history.

The Modifying Factors are summarized as follows:

- Only Measured and Indicated Mineral Resources are considered.
- Only mineralization defined in mine planning work has been considered. This includes Measured and Indicated material, subject to the application of mining Modifying Factors.
- Indicated Mineral Resources are classified as Probable Mineral Reserves, subject to the Modifying Factors and mine scheduling constraints.
- Measured Mineral Resources are classified as Proven Mineral Reserves or Probable Mineral Reserves, subject to the Modifying Factors and mine scheduling constraints.

## 12.2 Comparison with Previous Estimate

A comparison of the current Alcoa Mineral Reserve estimate with the 2024 Mineral Reserve estimate is presented in Table 12-2. Overall, Proven and Probable Mineral Reserves decreased by approximately 30.8 Mt (6.2%), from 423.7 Mt in 2024 to 392.9 Mt in 2025.

Over the same period, the weighted average AL grade increased by about 0.55 percentage points (from 30.7% to 31.25%), while SI decreased by approximately 0.06 percentage points (from 1.56% to 1.50%), indicating a slight improvement in overall reserve quality despite the reduction in total tonnage.

Year-on-year changes in Mineral Reserves reflect a combination of ongoing resource definition, economic optimization, and mine-plan updates, partially offset by surface access deferrals, MMP-related constraints, and normal mining depletion during 2025. Collectively, these factors resulted in a net reduction in Proven and Probable Mineral Reserves.

**Table 12-2: Comparison with Previous Mineral Reserve Estimates**

| Category | Mine | 2025 Mineral Reserve | | | 2024 Mineral Reserve | | | Difference | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Tonnage dmt (Mt) | AL (%) | SI (%) | Tonnage dmt (Mt) | AL (%) | SI (%) | Tonnage (Mt) | AL (%) | SI (%) |
| Proven | Huntly | 22.7 | 28.6 | 1.9 | 12.4 | 28.3 | 1.9 | 10.3 | 0.3 | 0.1 |
| Proven | Willowdale | 10.8 | 30.7 | 1.7 | 13.7 | 30.6 | 1.8 | -2.9 | 0.1 | -0.1 |
| Proven | Sub-total | **33.4** | **29.3** | **1.8** | 26.1 | 29.2 | 1.6 | 7.3 | 0.1 | 0.2 |
| Probable | Huntly | 235.8 | 31.6 | 1.5 | 254.3 | 30.6 | 1.8 | -18.5 | 1.0 | -0.3 |
| Probable | Willowdale | 123.7 | 31.1 | 1.4 | 143.3 | 31.2 | 1.2 | -19.6 | -0.1 | 0.2 |
| Probable | Sub-total | **359.5** | **31.4** | **1.5** | 397.6 | 30.8 | 1.6 | -38.1 | 0.6 | -0.1 |
| Proven & Probable | Huntly | 258.5 | 31.3 | 1.6 | 266.7 | 30.5 | 1.8 | -8.2 | 0.8 | -0.2 |
| Proven & Probable | Willowdale | 134.5 | 31.1 | 1.4 | 157 | 31.1 | 1.2 | -22.5 | -0.0 | 0.2 |
| Proven & Probable | Sub-total | **392.9** | **31.2** | **1.5** | 423.7 | 30.7 | 1.6 | -30.8 | 0.5 | -0.1 |

Notes:

1. Numbers may not add due to rounding.

## 12.3 Modifying Factors

A Mineral Reserve is the economically mineable part of a Measured and/or Indicated Mineral Resource. It includes diluting materials and allowances for losses, which may occur when the material is mined or extracted and is defined by application of Modifying Factors that demonstrate that, at the time of reporting, extraction could reasonably be justified.

- **Mining:** Alcoa's Darling Range mining operations are conventional open pit mines and have been operating for over 60 years. The practicalities of mining and associated sustaining capital and operating costs are well understood and have been incorporated in Alcoa's technical assessments to the satisfaction of the SLR QP. An updated economic benefit basis which uses a base alumina price of $400/t has been used by Alcoa to assess the economics of mining operations. The SLR QP is satisfied that the base alumina price of $400/t, and caustic price of $500/t, are reasonable, and the resulting benefit incorporates all related costs associated with mining, processing of the bauxite ore and the subsequent refining to produce alumina. As described above in Section 12.2, the operations have undergone recent changes that have directly affected the MTP resulting in lower AL and higher SI in the short term (36-month) plan. For a more substantive description of Alcoa's Darling Range mining operations, refer to Section 13.0. The mining schedule is discussed further in Section 12.6.
- **Processing:** This Mineral Reserve is stated with reference to the refinery processing plant gate, with crushing and conveying being the sole processes employed. Bauxite is refined to alumina in the refinery using the Bayer process, which has been employed at the Darling Range operations for many years. For a more substantive description of Alcoa's Darling Range processing operations, refer to Section 14.0.
- **Metallurgy:** The mining operations are given an ore specification by the sole customers, the refineries. Blending is undertaken at the pit, before the crusher, to ensure that these specifications are met. The SLR QP is satisfied that the procedures employed by mining technical staff have been developed over a lengthy period and are appropriate for the suppression of metallurgically deleterious material in ore sent

to the refineries. For a more substantive description of Alcoa's Darling Range metallurgy, refer to Section 10.0.

- **Infrastructure:** The SLR QP has observed the Darling Range mine infrastructure to be well established, maintained and to a high standard. The operations are located near a major city, with excellent transportation, facilities, and workforce. Provision is made in Alcoa's Life of Mine (LOM) plans for sustaining capital for infrastructure replacement. For a more substantive description of Alcoa's Darling Range infrastructure, refer to Section 15.0.
- **Economic:** Costs and pricing have been reviewed and the SLR QP is satisfied that the pit optimization, scheduling, and analysis undertaken by mine technical staff is appropriate to the operation and that the costs are well understood. For a more substantive description of Alcoa's Darling Range economics, refer to Section 19.0.
- **Marketing:** All bauxite is delivered at cost to Alcoa's Darling Range refineries, the sole customer for the mines. The refineries produce alumina, which is further refined into aluminum metal at Alcoa's aluminum plants or exported. Alumina and aluminum are internationally traded commodities and subject to normal market forces and cycles. For a more substantive description of Darling Range's market aspects, refer to Section 16.0.
- **Legal:** The SLR QP observes that the Darling Range operations have been in operation for a long time (+60 years) and are licensed in relation to obligations under Western Australian legislation. The primary operational approval for Darling Range is provided under the Mining Management Plan 2023-2027 by the statutory Mining and Management Program Liaison Group (MMPLG; now Bauxite Strategic Executive Committee Bauxite (BSEC)). The 2023-2027 MMP approval was rolled over to cover the time period of 2024-2028 in October 2024.
- The MMPLG/ BSEC consists of representatives from across government and is responsible for reviewing mine plans and associated activities and making recommendations to the Western Australian Minister for State Development.
- **Environmental:** The SLR QP observes that the Darling Range operations have a long history of progressive rehabilitation of mined-out areas. There are restrictions placed on some mining areas that are related to proximity to water catchments, places of social importance and fauna habitat. The current primary operational approval is by the MMPLG/BSEC. For a more substantive description of Alcoa's Darling Range environmental obligations, refer to Section 17.0.
- **Social:** The SLR QP observes that the Darling Range operations have long been a major employer and economic contributor to the region and that the operations have numerous well-established community and social initiatives. A skilled workforce resides in the area, as do many service industries. The SLR QP does not consider social risk to be material to the Darling Range operations, beyond potential delays to environmental approval processes (e.g., appeals against the EPA Report part of Assessment 2385, and/ or post-approval legal challenges; Section 17.0).
- **Governmental:** Western Australia and Australia in general are stable, developed democracies with an advanced economy. Governmental relations with the Darling Range operations are currently facilitated by the BSEC (previously the MMPLG), which has representation from the relevant government departments. The SLR QP does not consider governmental risk to be material to the Darling Range operations.

## 12.4 Basis of Estimate

Historically, Alcoa did not report material in the Measured Mineral Resource category, reporting mineralization in areas of 15 m by 15 m spaced drilling as Mineral Reserves



reported to the prior SEC standard. Alcoa has subsequently incorporated S-K 1300 and JORC Modifying Factor considerations into its mine planning processes and this was observed and confirmed on site.

The SLR QP has used the 31 December 2025 Mineral Resource estimate as the basis for its Mineral Reserve estimate. The bauxite operations are operating mining projects with a long history of production for which establishment capital has been repaid and for which sustaining capital and supported operating costs have been observed to be applied in economic analysis. Consequently, the SLR QP considers that support by a Feasibility Study is demonstrated by the demonstrable history of profitable operation and the level of technical support for the Modifying Factors and Front-End Loading (FEL 2), or pre-project planning study, for the major Myara North capital crusher move. Additional capital costs for the forward mines move to Holyoake have also been reviewed. The SLR QP has reviewed the operating and planning procedures and parameters for the operations and considers that the work completed is sufficient to allow definition of Mineral Reserves.

Proven Mineral Reserves are derived from scheduled Measured Mineral Resources which are included in the Long Term Mine Plan (LTMP) and approved for mining. Probable Mineral Reserves are derived from scheduled Measured Mineral Resources which are not yet approved for mining, or from scheduled Indicated Mineral Resources. The Mineral Resource estimate reported in this document (Section 11.0) is exclusive of the Mineral Reserve.

Consequently, Modifying Factors that relate to community and environmental considerations are formally assessed. The SLR QP considers that as a result there is low risk to not establishing Proven Reserves relating to the project.

The SLR QP has formed an independent view of the Modifying Factors applied in the estimation of the Mineral Reserve. This view is supported by examination and verification of mine planning data and procedures and historic reconciliation information. The SLR QP has interviewed technical staff responsible for Alcoa’s operations and reviewed the operating, planning and forecast reports for the operations supplied by Alcoa.

The mine planning process excludes mineralization that is not considered recoverable due to various constraints, defining no Mineral Resource or Mineral Reserve within these zones. Such constrained zones include Aboriginal heritage sites and old-growth forest; however, these are proactively and dynamically updated by Alcoa through engagement with stakeholders, such as the community, and in response to government requests.

## 12.5 Dilution and Ore Loss

Dilution and ore loss are not reported separately to the Mineral Reserve. Internal and edge dilution is modelled at the mine planning stage through the application of 15 m by 15 m mining blocks to the Mineral Resource model. These regularized blocks contain proportional estimates of ore and contaminants and are optimized through the application of a Lerchs-Grossman algorithm developed specifically for the operation. This variation of the conventional Lerchs-Grossman algorithm is applied vertically, given that the shallow nature of the mineralization precludes geotechnical considerations. Blocks that do not satisfy grade and contaminant parameters against revenue are thus excluded from the mine plan.

Mining dilution is controlled by excavation of dilution at the top of the mineralization (a source of oxalate or organic contamination) and the pit floor (SI contamination). The upper contact is a sharp geological contact on an undulating surface. GPS-controlled machinery is used to locate these intersections.



**Figure 12-1: Undulating Hanging Wall Hardcap Surface; and Footwall (white clay, lower right in the floor)**

Source: Left: Pearman 2015 Right: SLR 2021

Organic material reacts with sodium hydroxide in the refinery to form oxalate, which is considered to be a contaminant. Alcoa has developed a process known as Secondary Overburden Removal (SOBR) whereby the soil and clay on top of the hardcap that covers the mineralization and contains this organic material is removed by either scraper, surface miner or small excavator. This removes as much carbonaceous material overlying the undulating hardcap layer as possible. Further description of SOBR is given in Section 13.1.

A surface miner has previously been employed as required at the Huntly mine to cut highly contaminated overburden to the hardcap contact. Historically, this results in a 2.9% ore loss, which is considered in the Mineral Reserve estimation.

The lower mineralization contact is gradational, and dilution is minimal on contaminants other than SI. This contact is defined through drilling and chemical analysis and excavation is controlled by GPS to modelled surfaces.

The Grade Control process checks the accuracy of excavation and assesses adherence to excavation of the target floor.

## 12.6 Extraction and Mine Planning

### 12.6.1 Long Term Mine Plan (LTMP)

Alcoa prepares an LTMP annually. The first five years of this plan is submitted to the statutory BSEC (previously MMPLG) for approval of mining areas. The LTMP includes a mine production schedule that demonstrates scheduling of mineralization classified as Mineral Resources for estimation as Mineral Reserves. This schedule contemplates higher confidence Mineral Resources during the early production periods, with lower confidence mineralization planned in subsequent periods (Figure 12-2 and Figure 12-3).

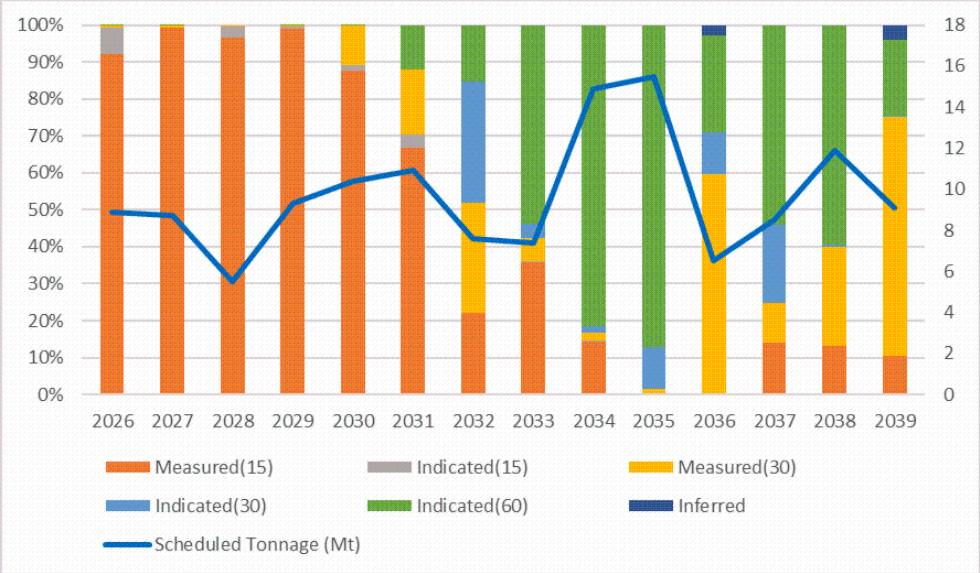
The schedule has several operational parameters in addition to statutory limitations (refer to Section 12.3 above):

- The mineralization lies under haul roads and extraction is delayed until the road is no longer required.
- Mineralization is near a planned crusher location and mining has been delayed until the crusher is installed.
- Contaminants exclude a parcel from blending in the schedule.

- The mining areas are small and demonstrate low mining efficiency and mining has been delayed.

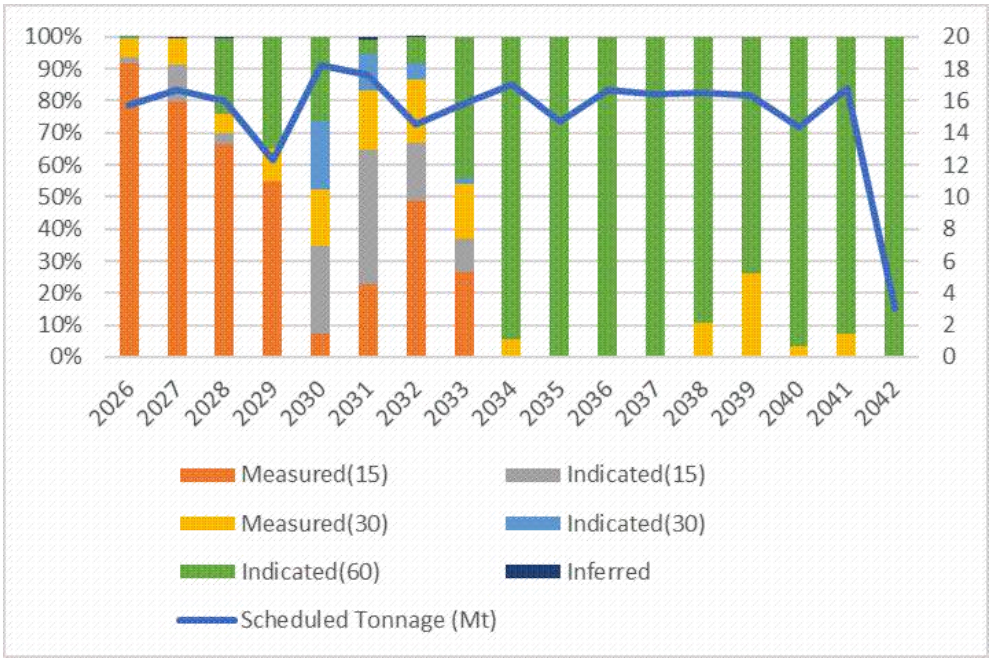
Confidence in the Mineral Reserves is predicated on confidence in the underlying Mineral Resources in the mining schedule. Continuous Mineral Resource definition drilling maintains an inventory of sufficient confidence to maintain Mineral Reserves.

**Figure 12-2: Willowdale LTMP Resource Confidence (drill hole spacing in meters shown in brackets)**




Source: Alcoa 2025

**Figure 12-3: Huntly LTMP Resource Confidence (drill hole spacing in meters shown in brackets)**




Source: Alcoa 2025

### 12.6.2 Mine Planning

Alcoa has been actively refining the mine planning process in such a way that the Mineral Resource and Mineral Reserve Models are updated continuously using various scripts and rationalizing of computer software. This process is mostly complete, the SLR QP observed its progress both on the mine sites and at the mine planning office in Perth.

The mine planning process commences with receipt by the mine planning department of the regularized and classified electronic Mineral Resource model from the geologists. The regularization process sees the blocks agglomerated into blocks of 15 m by 15 m by 0.5 m vertically. Grade, bulk density and contaminant parameters are estimated into the model, which is expressed as a percentage model. This model is then manually checked and validated.

Electronic files are centrally stored, and the master versions are copied by relevant personnel for manipulation.

Optimization of the pits is undertaken using a bespoke variant of the Lerchs-Grossman algorithm designed to operate vertically. The algorithm accumulates blocks vertically on 0.5 m increments, commencing at a minimum thickness of 2m, to find the pit floor.

The optimization is driven by Net Present Cost (NPC), rather than the conventional Net Present Value (NPV). The optimization considers a number of cost and consumption inputs which include caustic, lime, electricity, gas, and power to be deducted from the base alumina price of $400/t.

Geotechnical constraints are not relevant, given that the pits are generally around 4 m in depth and placed on gently undulating country (Section 7.5). Contour mining is applied in areas of greater topographic relief, whereby mining progresses across the contour, maintaining as consistent a pit floor as possible.

Optimization parameters are calculated for each block, including costs associated with drilling, blasting and ripping and haulage cost, which is estimated from major haulage roads and minor pit access roads against gradient. Electronic surface models are prepared to constrain the optimization; these are informed by LiDAR radar surveys and model the topography, the base of overburden and the base of mineralization, derived from chemical analysis of resource definition drilling samples. Caprock requires drilling and blasting, and modelled surfaces are contoured for thickness, which is derived from examination of drill logs and high-Fe assays.

Pit shells are visually assessed for practicality and minimum mining widths and any impractical pit shells are removed. Minimum mining widths vary according to topography and material type.

Individual areas are optimized separately, and the resultant pit shells are combined to provide grade and contaminant specifications for LOM scheduling. Haul roads are divided into 50 m segments and loaded to a script which calculates both the haul distance (HD), the equivalent flat haul distance (EFH), and the gradient for all block centroids to all haul road nodes. The script then selects the shortest EFH for each block with a gradient of less than 8% and tags each block with the corresponding haul distance (HD) to the crusher which will be used to calculate the haulage cost for each block for the pit optimization process.

The model is then depleted for mined material and blocks that have been otherwise committed for development or have been mined out and also for environmental constraints.

Environmental constraints include proximity to streams, designated heritage areas (both Aboriginal and European) and the water catchment offset. GIS software is used to continuously generate electronic shape files that are converted daily to string files for import into the mine design software. These are then used to deplete the model in relation to environmental constraints.

Mineralization that has been identified as being under infrastructure is scheduled for mining only after that infrastructure has been removed in the LOM plan.

Noise zones are those where noise from the mining operations will potentially exceed allowable levels and the operation actively seeks to maintain lower noise levels than those mandated. Mining in these areas is undertaken on day shift only and attracts higher costs than conventional owner-operator mining, which is applied to most of the operation.

The regularized model is then coded for the above parameters and checked. All the above processes are logged, checked, and validated both electronically and visually. Electronic scripts are then run in the mine planning software, resulting in the reporting of Mineral Reserves.

The Value in Use (VIU) revenue for mined ore is defined from an in-house optimization and integrated mine planning process. This VIU is calculated by subtracting the costs associated with mining and refining activities from the base alumina price. The costs considered in this calculation include various consumable inputs such as caustic, lime, electricity, gas and power, all of which are deducted from the base alumina price of $400/t.

A discount rate of 10.00% is mandated by the Finance Department and applied to the NPV scheduler during the mine planning process.

The SLR QP notes that costs and revenues used in this process demonstrate reasonable variations consistent with market trends over time and that revenue has remained constant over the past year.

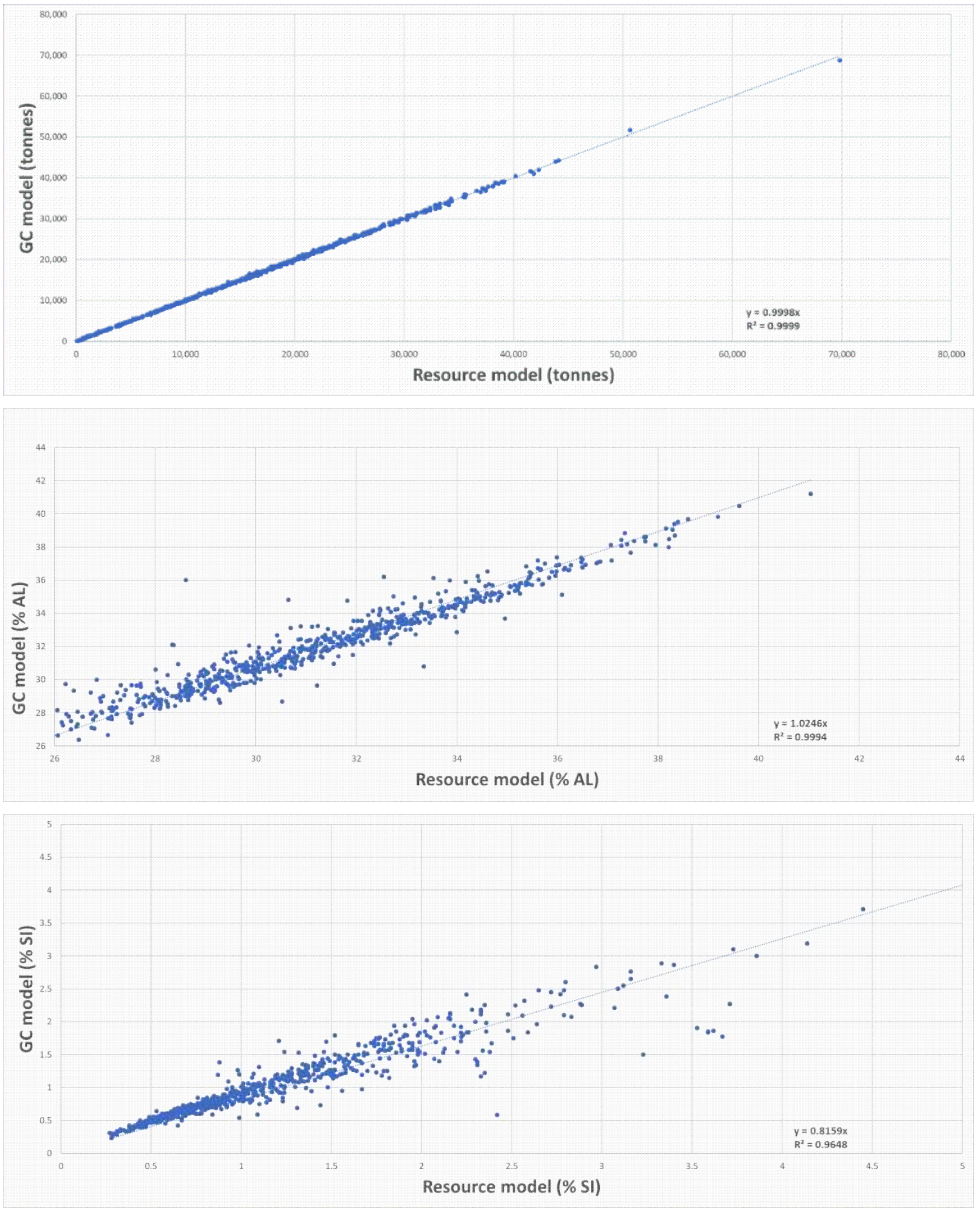
In practice, the Grade Control Model is used to direct mining at the bench scale, because it has more up-to-date drilling data than the Mineral Resource Model. Reconciliation is undertaken between the Mineral Resource, Mineral Reserve and Grade Control Models, with the SLR QP observing the reconciliations between Mineral Resource and Grade Control

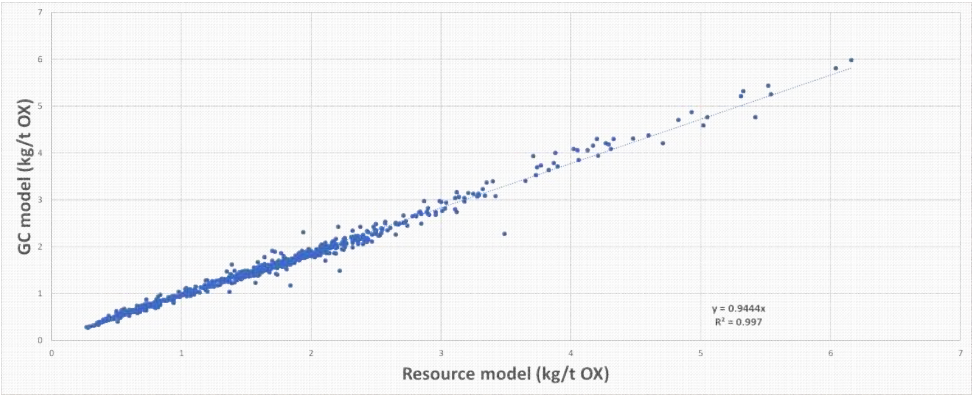


Models to be within acceptable parameters. Reconciliation of the Mineral Reserve model has not been regularly undertaken in the past and this process was observed to be in development.

Figure 12-4 shows an example of the reconciliation between Resource and Grade Control models undertaken regularly by Alcoa.

**Figure 12-4: Example of Reconciliation Between Mineral Resource and Grade Control Models for Tonnage, Al, Si, and OX**






Source: Alcoa 2022

The resultant pit shells are scheduled using specialist automated mine scheduling software. A text file containing the model and its parameters is exported to the scheduling software, which is programmed with current wait times and the current mining capacity of 18.5 Mtpa (wet) (Huntly) & 11 Mtpa (wet) (Willowdale). The software calculates and defers, as much as possible, capital haul road development costs for each block and identifies an optimal schedule.

Sustaining capital is calculated and added for haul road maintenance and equipment replacement. Not all machinery is capitalized, some being leased, and this is included in the operating cost. Review of ownership costs against leasing is constant and appropriate factors applied to the model.

The resultant model is coded for grade and contaminants and blocks are flagged with the appropriate mining sequence. Mineral Reserve blocks are contained within the LTMP schedule. The model is then re-exported as a text file and distributed to the relevant mine planning departments and mine closure engineers for detailed planning.

### 12.6.3 Abandoned Resources

Some planned mining areas that are included in the schedule are unable to be totally mined for a variety of operational reasons. These reasons usually relate to updates to environmental constraints, hard ground, contamination, and access difficulties that are encountered when developing a new mining area. This process drives the continuous development of new mining areas to maintain production capacity. Potential for abandoned resources is quantified through the application of a recovery factor that assumes up to 40% material lost.

## 12.7 Economic Cut-off Grade

An economic cut-off grade has been used for mine production planning. The process is based on mine optimization to define economic boundaries of minable bauxite in measured or indicated classification from the resource model. The economic cut-off grade is dependent on various operating costs deducted against a base alumina price. The base alumina price has been estimated as a 9 year average (2026 to 2034). Mining cost estimations are also based over 9 years as related to the LTMP. The deductions and basis are shown in Table 12-3. This benefit has been updated for the 2025 LTMP by Alcoa's Mine Planning Department and was reviewed by the SLR QP during the 2025 site visit to the mine planning department. It is the view of the SLR QP that the economic cut-off grade reflects a reasonable market expectation for the sales of bauxite from the Darling Range based on alumina price movements and associated trend over the previous ten years. SLR have

reviewed the various detailed inputs and are satisfied that the economic parameters applied to the cut-off grade definition are appropriate. Mining and refinery costs form part of the LTMP (2026-2034), with some key variables summarized in the table below.

**Table 12-3: Highlighted Cut Off Grade Variables**

| Plan Input Assumption | Units | Value |
|---|---|---|
| Base Alumina Price | USD/t | 400 |
| Caustic Price (delivered) | USD/t | 500 |
| Recovery | % | 93 |
| Exchange Rate | $A/USD | 0.7 |
| Moisture Factor | - | 0.91 |

The economic cut-off is determined by subtracting all incurred costs from the base alumina price. Operating costs are primarily influenced by haulage distance and the reliance on contract mining. Contract mining may be used in areas where operations are limited to day shifts due to environmental restrictions. Haulage costs increase as the distance between the mined ore and the crusher station increases, which depends on the mine layout.

The current economic cut-off process described presents grades generally above 25.5% for AL and below 3.5% for SI. As previously reported an optimization process is followed that considers the costs associated with mining and processing the ore from each resource pit. Each resource area block model has its cut-off calculated before pit optimization is performed. Commodity pricing is described previously in Section 12.6.2.

## 12.8 Metallurgical Factors

The Huntly and Willowdale Darling Range mining operations currently feed the Wagerup and Pinjarra refineries. The Huntly mine provides feed for the Pinjarra refinery and the Willowdale mine provides feed for the Wagerup refinery. As announced in January 2024, the Kwinana refinery ceased production in the second quarter of 2024 as part of the phased curtailment. Following an announcement in September 2025, the refinery is now permanently closed. Ore is transported via conveyor belt from the relevant crushers, and the battery limit for the mining process is the refinery gate. The two remaining refineries are established, mature, and use the conventional low-temperature Bayer refining processes.

The refineries are designed to accommodate long-term average bauxite and impurity grades from the mines. Internal Alcoa specification contracts are established between the refineries and each of the mining operations and these contracts are updated annually and contemplate a five-year mine plan. These contracts set impurity targets, the key impurities being SI, oxalate, and iron. It is noted that short term (i.e. up to 2028) supply AL grades will be at lower acceptance limits and SI will be at towards upper acceptance limits. Mineral processing testing is discussed in Section 10.0, and processing and recovery in Section 14.0.

The internal LOM (nominally 2045) specification for bauxite is based on a 27.5% AL cut-over acceptance grade, which is supported by the MTP, LTMP and extensive operating history at the refineries. The figures below show the LTMP for Al schedule for both Huntly (Figure 12-5) and Willowdale (Figure 12-6).



**Figure 12-5: LTMP: Huntly**


Source: Alcoa, 2026

**Figure 12-6: LTMP: Willowdale**


Source: Alcoa, 2026

Deleterious elements are managed within contracted limits by blending at each mine, with the aim of minimizing variation. The refineries conduct metallurgical test work to ensure that any potential effects of variance caused by new mining areas are understood.

Geometallurgical analysis is conducted on drill hole samples using FTIR analysis as a primary method. A subset of the samples is assayed using conventional analytical procedures, with the results used for FTIR batch calibration and QA purposes. The Mineral Resource model is coded for geometallurgical grades for available alumina and reactive silica. This information is reported in the Mineral Resource estimate as well as the Mineral Reserve estimate.

The Mineral Reserve is based on geometallurgical criteria that have been set by the refineries as suitable for producing alumina to agreed product marketing specifications.

## 12.9 QP Opinion

The SLR QP considers that, because of the integrated process by which Measured and Indicated Mineral Resources translate to Mineral Reserves for Alcoa's Darling Range operation, there are no foreseeable risks associated with Modifying Factors (mining,

processing, metallurgical, infrastructure, economic, marketing, legal, environment, social, or government) that materially affect the Mineral Reserve estimate at 31 December 2025.

The operations are sensitive to the economics related to the actual grade mined, as such lower alumina or higher reactive silica grades or a combination of both remain the main risk to the overall economics. Alcoa has demonstrated through its grade control program an effective control to minimizing the dilution and mining at its forecast grades. Grade control is particularly important along ore-waste boundaries to maintaining expected mined grades, Alcoa demonstrates processes to handle and define boundaries to mitigate these risks.

Haul distance is considered a major cost driver due to the hauling cost making up a significant portion of the mining cost. Hauling directly links to fuel cost and maintenance, the combination of an increased hauling distance as well as an increase in fuel cost and maintenance would result in a significant impact on the operational costs. Haul distances to Reserve blocks typically increase over time until such time there is a plant relocation and so there is an expected increase in hauling distance in the medium term. It is noted because of permitting challenges that there are some significant increases during the MTP schedule in haulage distances. Alcoa has previously managed such risks by defining when the major plant needs to be relocated, however permitting challenges in the short term need to be overcome with some longer than normal average haulage distances.

Alcoa may be unable to obtain or retain necessary permits, which could adversely affect its operations. The Darling Range operation is subject to extensive permitting requirements. The requirements to obtain and/or achieve or maintain full compliance with such permits can be costly and involve extended timelines and possible delays. Alcoa strives to obtain and comply with all required permits but there can be no assurance that all such permits can be obtained and/or always achieve or maintain full compliance with such permits.



# 13.0 Mining Methods

## 13.1 General Description of Operations

The Huntly and Willowdale mines employ conventional open pit mining practices and equipment. The fleet is mixed between contract and owner-operator, depending on the nature of the task at hand. Owner operator equipment is used for mining the bulk of the Mineral Reserve; mining is day shift only in environmentally (noise) sensitive areas and at the perimeter of the mining area.

The Huntly mine currently operates at a nominal mining capacity in order to supply approximately 16 Mtpa to the Pinjarra refinery. The Willowdale mine further supplies 10 Mtpa to Wagerup refinery.

The Darling Range operations currently have a nominal expected LOM until 2045 (when ML1SA expires), although provision exists for Alcoa to apply for a further mineral lease (Section 3.2). As an annual rolling process, a Long Term Mine Plan (9-10 years) for the estimation of Mineral Reserves (Section 12.6.1) is developed from Measured & Indicated classified Mineral Resources. Appropriate modifying factors are applied to facilitate the conversion of the Resources to Reserves. The Reserves currently extend beyond the mine schedule (LTMP) that forms the basis of the 9-year LOM plan (see also Section 19.0). Mining units of 15 m by 15 m by 0.5 m vertically are in use at the operations (Section 12.6.2).

Dilution and ore loss are not reported separately to the Mineral Reserve (Section 12.5). Internal and edge dilution is modelled at the mine planning stage through the application of 15 m by 15 m mining blocks to the Mineral Resource model. These regularized blocks contain proportional estimates of ore and contaminants and are optimized through the application of an algorithm of a similar nature to Lerchs-Grossman developed specifically for the operation. This variation of the conventional Lerchs-Grossman algorithm is applied vertically, given that the shallow nature of the mineralization precludes geotechnical considerations. Blocks that do not satisfy grade and contaminant parameters against revenue are thus excluded from the mine plan.

The Mining recovery is addressed through the RPEE and constraint allowances applied during Reserve conversion; these allowances also cover for the effective recoveries of ~95.6% (Huntly) and ~98% (Willowdale).

Figure 3-3 shows the outlines of mined areas, Mineral Resources, and Mineral Reserves, which are collectively taken as representing the final pit outline, as currently understood. This does not account for any required extensions or additional licenses and assumes that all Mineral Resources and Mineral Reserves are ultimately mined.

### 13.1.1 Clearing

Following definition of Mineral Reserve blocks, vegetation is cleared ahead of mining by an Alcoa managed contractor on behalf of the Western Australian State Forest Products Commission (FPC), saleable timber being harvested for use. Clearing approval is sought ahead of mining allowing time for harvesting of saleable timber before vegetation clearing.

### 13.1.2 Stripping

After vegetation clearing and harvesting of saleable timber, Alcoa operations commence stripping topsoil and Secondary Overburden Removal (SOBR) using small excavators, scrapers, and trucks. Soil is stockpiled at the site, away from the proposed pit, for rehabilitation purposes. Soil is stockpiled in windrows in such a manner that it maintains its organic viability.



The dieback fungus (*Phytopthora spp*.) is endemic in parts of the mining areas, which are flagged by Alcoa and precautions are taken to contain the fungus, which is lethal to the eucalyptus forest. The SLR QP observed these precautions, which include separation of machinery fleets in areas where dieback is present and washing of machinery before entry into different areas. This represents a minor short-term scheduling challenge, though it is well managed.

### 13.1.3 SOBR

The SOBR process is specialized and aims to remove as much overburden and organic material from the top of the mineralization as possible. This organic material reacts with caustic soda in the refinery to produce oxalates, which are deleterious to the process. After scrapers have removed the topsoil and overburden, small (60 t class) excavators equipped with swivel buckets are used to scrape clay containing organic material from the undulating surface of the hardcap that sits on top of the mineralization. This is later used to backfill mined out areas.

**Figure 13-1: SOBR**

Source: SLR 2022

The SOBR process is applied to those areas where Hardcap has been identified by resource definition drilling, using the drillers' logs. The Hardcap is drilled and blasted before mining with the rest of the bauxite sequence.

In areas without Hardcap, wheel tractor-scrapers of 24 m³ capacity remove soil overburden, scraping directly to the top of the mineralization model surface, being controlled by GPS. This material is similarly stockpiled for rehabilitation or used as backfill in exhausted mining areas.

**Figure 13-2: Topsoil Removal (Background), Blasting of Hardcap, and Marking of Ore (foreground)**

Source: SLR 2021

When required a surface miner is employed in limited areas of Hardcap in the vicinity of blasting-sensitive infrastructure such as power lines. The surface mining may also be employed in lieu of SOBR where appropriate, for example, where there are high levels of contaminants in the Hardcap. During both the 2023 and 2024 visits it was noted that as there were no operations of sensitivity around infrastructure the surface miner was not required.

### 13.1.4 Mining

Mining progresses on 4 m benches, utilizing a contour-mining sequence, cutting benches across the topography, working from top to bottom, maintaining the flattest floor obtainable to a maximum gradient of 1:7. Most of the mineralization lies beneath a gently undulating topography and contour mining is minimal.

**Figure 13-3: Contour Mining**

Source: SLR 2021

On completion of overburden removal, the exposed surfaces are sheeted with 0.25 m of suitable mineralized material taken from the dozed second cut in adjacent pits. Where Hardcap is present, a drill rig is mobilized, and the Hardcap drilled and blasted on an appropriate pattern to fragment the Hardcap.

Trucks haul the mined ore to fixed crushers, which crush the material to varying sizes (refer to Section 14.0) before conveying down the escarpment to the refinery where it is stockpiled to give surge capacity.

No visual grade control is applied, the ore contacts being gradational. Grade control is achieved by mining to electronic ore surfaces derived from drill assays, control being achieved using GPS equipped equipment, the GPS being regularly calibrated.

Blending takes place at the pit face before which the crushed ore from different pits is assessed using specialist short-term mine planning software and pit production is scheduled to achieve the desired blend.

The SLR QP is of the opinion that considering the style of mineralization, the average depth of the deposit, and the material characteristics of the overburden material whereby it is amenable to ripping / excavation using conventional earth-moving equipment, the open pit mining method adopted at Darling Range is the most appropriate method for the Mineral Reserves.

## 13.2 Haul Roads and Infrastructure

### 13.2.1 Haul Roads

Haul roads are the limiting factor to the mining operations. Major haul roads are established to each mining area, honoring the topography at the least possible gradient. Roads are unsealed and formed by conventional bulldozer and grader and sheeted with appropriate material. Once established, haul road maintenance was observed to be continuous and

forms part of the operating cost for each mining area. Haul roads are observed by the SLR QP to be treated as sustaining capital in an appropriate manner.

**Figure 13-4: Truck on Haul Road**


Source: SLR 2021

**Figure 13-5: Haul Roads with Berms**

Source: SLR 2021

Secondary haul roads to individual mining areas are formed in the same manner, with provision for rehabilitation once mining is complete.

The Darling Range climate is subject to wet winter months and trafficability of haul roads during these months is included in mine planning. Redundancy during wet months is planned for, allowing well drained areas to be mined in the wet.

There are some restrictions to the establishment and operation of haul roads, and these are incorporated into the road design and operation:

- Water runoff from the roads is impounded in sumps and these were observed to be well formed and appropriate, being regularly dewatered, emptied of sediment and cleaned. This water is retained within the operational area.
- Dieback control necessitates separation of machinery between that which operates in dieback-prone and dieback-free areas. This presents short-term scheduling challenges that were observed to be well controlled.
- Proximity to a major water catchment restricts the volume of hydrocarbons that may be taken into particular areas around the catchment. This was observed to be adhered to, with particular road rules and scheduled delivery of approved volumes of hydrocarbons along haul roads that are specially formed with impoundments in the event of spillage.

The SLR QP has observed that Alcoa's Darling Range operations have a well-established system for haul road design, construction, maintenance and regulation and that this does not present a major impediment to mining efficiency.

### 13.2.2 Infrastructure

The main elements of infrastructure at Alcoa's Darling Range mining operations are the location of crushers and conveyors to the refineries. These crushers form hubs for the mining operations, connected by the primary haul roads and are scheduled to be moved every ten years or so, in accordance with the requirements of the mining schedule and the location of ore as the mines progress. This crusher movement is planned well in advance and is treated as sustaining capital expenditure.

The crushers would be regarded as on relatively light duty for a mining operation and are well maintained. Similarly, the conveyors, which operate all year round and are covered, negating any potential effect of weather.



**Figure 13-6: Covered Conveyor**

Source: SLR 2021

Both the crushers and conveyors were observed to be in excellent condition and subject to scheduled maintenance, including replacement of conveyor belts.

Alcoa plans additional stockpiling compared to the historical direct feed mine to crusher operation as part of the LTMP 2025. In this change stockpiling and reclaim will be utilized to smooth feed grade to the crushers from the variable grades to be mined. Whilst adding a marginal operating cost for the rehandle it is envisaged this provides a cost and rehabilitation benefit in completely mining out pits rather than having to return periodically as grade dictated previously.

Other ancillary equipment includes offices, ablutions, crib-rooms, and workshops, all of which were observed to be in excellent condition.

## 13.3 Geotechnical and Hydrogeology Considerations

Based on their long operating history, Alcoa's approach to mine stability has largely been based on strong pit performance. Mining at Alcoa's Darling Range operations is very shallow, pits being an average of 4 m deep. Consequently, geotechnical considerations are negligible other than immaterial localized batter failures. Similarly, the mining areas are elevated and well drained and groundwater and surface water hydrology is not material in these areas other than the catchment, impoundment, and decantation of runoff during the wet winter months. No drainage diversion occurs or is necessary because the mineralization sits between the stream beds and the bauxite occurs above the groundwater table. Deeper bauxite may be seasonally affected by the water table and is scheduled to be mined in summer. Backfilling of these places occurs before the rain raises the water table.

Contour mining (Figure 13-7) is practiced in areas of relatively steep topography, maintaining access ramps at less than 1:8 gradient and mining across the contour and downwards, creating a flat working floor. Hydrological considerations in these areas include management of runoff during the wet winter months and trafficability.

Mine overburden is progressively backfilled into adjacent exhausted pits (Figure 13-8), topsoiled, landscaped (Figure 13-9), and rehabilitated by re-establishment of native vegetation (Figure 13-10), creating a stable post-mining landform that replicates the pre-existing environment. Recommended pit design constraints are shown in Table 13-1.

**Table 13-1: Alcoa Recommended Pit Design Constraints**

| Feature | Constraint |
|---|---|
| Pit total void Crest/Toe offset | 0.15m |
| Maximum floor cut for a digger | 4m. Recommended 3.5m |
| Maximum floor cut for a loader (depending on loader size) | 7m. Recommended 6m (depending on loader size) |
| Dozer Push | Recommended 50m but can be dependent on the pit and extraction |
| Minimum Cut depth (non terrace) | Huntly 2m, WDL 1.5m |
| Maximum Cut depth before a berm | 8m cut, then a 7.5m berm is required |
| Offset to Non blasted ground | 7.5m |

WSP-Golder were engaged by Alcoa to undertake a desktop study and gap analyses in February 2023 as part of broader scope to develop a ground control management plan for their Huntly and Willowdale operations. As part of the study, critical geotechnical hazards were identified with any associated failure mechanisms. These include rock fall, excavator stability whilst loading, dump / stockpile stability and land slips / rotational failure of batters. Surface water and groundwater are closely interlinked and are considered a major trigger for initiating all of these events. A geotechnical training package has been developed in order to provide training to mine operating staff. Ideally, all employees should be able to identify warning signals and are responsible for making the mine a safe place to work. All hazards are site specific related to Huntly and Willowdale operations. Recommendations for controls have been provided and can be applied as part of standard work procedures.

Alcoa mines areas of both flatter and steeper terrain, adopting higher walls and multi batter slopes where gradients are higher. It is recommended material strength characterization and stability analyses are continually investigated in particular for areas with planned high walls. A forward work plan with more detailed recommendations is available.



**Figure 13-7: Contour Mining**

Source: SLR 2021

**Figure 13-8: Soil Being Returned for Backfilling and Landscaping the Pit**

Source: Alcoa 2018

**Figure 13-9: Landscaped Mining Area, Prior to re-vegetation and return to Forest**

Source: SLR 2021

**Figure 13-10: Rehabilitated Pit Through Re-plantation of Native Vegetation**

Source: SLR 2021

## 13.4 Mine Equipment

Mining is undertaken by 250 t and 200 t-class excavators top-loading 140 t and 190 t capacity rigid-bodied mining trucks (Figure 13-11). This fleet was observed by the SLR QP at Huntly to be aged. The equipment has undergone relatively light duties for a mining fleet, which prolongs its life. Sustaining capital is being invested in equipment replacement and modernization at Willowdale, progressively working toward Huntly. New equipment includes 250 t-class excavators and 140 t-class trucks.

A full list of equipment at Darling Range is provided in Table 13-2.

**Figure 13-11: Ore Mining at Darling Range**

Source: SLR 2021

**Table 13-2: Darling Range Operations Equipment List**

| Location | Classification | Type | No. Units |
|---|---|---|---|
| Huntly | Primary | Excavator | 7x CAT 336D<br>2x Komatsu PC2000<br>4x Hitachi 2600-7 |
| | | Haul truck 1 | 4x CAT 789C (190T)<br>9x CAT 789D (190T)<br>6x Komatsu 730E-10<br>4x Komatsu HD 1500 |

| | | | |
|---|---|---|---|
| | Ancillary | Bulldozer / Loader | 9x CAT D11R<br>3x Komatsu 475<br>2x Komatsu 375<br>3x CAT 993K<br>2x CAT 980 Loaders<br>1x CAT 908K<br>1x Komatsu WA320 |
| | | Grader | 3x CAT 16M<br>1x CAT 24M |
| | | Scrapers | 5x CAT 637G |
| | | Low Loaders | 1x CAT 793 (450T)<br>1x CAT 777G (150T) |
| | | Water truck | 3x CAT 785C |
| | | Drills | 3x Epiroc D50 (Blast)<br>5x WB93 (Exploration)<br>1x JCB 5CX (Exploration) |
| Willowdale | Primary | Excavator | 3x Hitachi ZX360<br>1x CAT 336D<br>1x Komatsu PC2000<br>2x Komatsu PC3400 |
| | | Haul truck 1 | 6x Komatsu 730E (190T)<br>2x Komatsu HD 1500 |
| | Ancillary | Bulldozer / Loader | 4x CAT D11T<br>1x Komatsu 475<br>2x CAT 993K<br>1x Komatsu WA270<br>1x Komatsu WA320<br>1x Komatsu WA470 |
| | | Grader | 1x CAT 16H<br>1x CAT 18M |
| | | Scrapers | 3x CAT 637K<br>1x CAT 637G |
| | | Low Loaders | 1x CAT 785D (220T)<br>1x CAT 793 (450T) |
| | | Water truck | 2x CAT 777F<br>2x Komatsu 730E |
| | | Drills | 2x Epiroc D50 (Blast) |

### 13.4.1 Contractors

Alcoa's practice in noise sensitive areas such as the perimeter of the operation near residents is to operate on day shift only and attract higher operating costs than the main production areas. The flexibility required in these areas may preclude the use of the primary owner-operator fleet and equipment is dry or wet hired or mining takes place under conventional schedule of rates contracts.

Alcoa also engages contractors for aspects of haul road construction services, in select areas of pit development, and during landscaping activities for rehabilitation after mining.

This practice has led to the establishment of a secondary contracting industry around the Darling Range operations. Contractors are overseen by Alcoa personnel.

### 13.4.2 Ancillary Equipment

Ancillary equipment at Alcoa's Darling Range operations includes a fleet of bulldozers, graders and loaders that are primarily used for haul road formation, pit development (for the removal of overburden and blasted caprock) and ground preparation for digging, landscaping, clean-up, and road maintenance.

The SOBR process requires small excavators, articulated trucks, scrapers, and specialist skills to grub organic-containing clay from the top of the mineralization.

**Figure 13-12: Blasthole Drill Working on Hardcap**


Source: SLR 2021

All ancillary equipment was observed to be in good and well-maintained conditions, the conditions being relatively light duty in comparison to other Western Australian mining operations. The current mining areas are shown in Figure 3-2.

## 13.5 Personnel

The main production mining operations are primarily Owner-operated using Alcoa equipment and employees. Contractors are also used for certain activities on site.

Three unions are recognized at the operations:

- The Australian Workers Union (AWU), which covers most of the operations workers.
- Australian Metal Workers Union (AMWU), which covers the metal trades, being fitters, boilermakers and mechanics.
- Electrical Trades Union (ETU), which covers the electricians.

Lost time during strikes is generally uncommon. The Enterprise Agreements (EA) have varied timing for expiration. The AMWU Agreement, negotiated in early 2023, will expire in April 2027. The ETU EA was negotiated at the end of 2021, with a four year term and the AWU Agreement was negotiated in the fourth quarter of 2023, with a two and a half year term. As of the date of this TRS a new EA had been agreed with the ETU but had not yet been ratified.

Alcoa's Darling Range operations were observed to have a stable workforce, drawn from the surrounding areas. The location is highly desirable in the Western Australian mining context and skilled personnel are readily attracted to the operations. Primary haul roads are named after personnel with greater than forty years' service and there are many of these.

Employee turnover is below industry standard, as the drive in, drive out nature of the work attracts many to work at Alcoa.

As of December 2025, the Huntly and Willowdale operations together employ 1,181 employees consisting of 37 technical, 124 management, and 849 operations employees. Additionally, 171 employees are centrally employed on the combined operations.

A breakdown is shown in Table 13-3 (current vacancies not accounted for).

**Table 13-3: Darling Range Personnel**

| Location | Classification | No Personnel |
|---|---|---|
| Huntly<br>688 | Technical | 25 |
| | Management | 83 |
| | Operations | 580 |
| Willowdale<br>322 | Technical | 12 |
| | Management | 41 |
| | Operations | 269 |
| Central<br>171 | Technical | 46 |
| | Management | 21 |
| | Operations | 104 |
| **Total** | | **1,181** |



# 14.0 Processing and Recovery Methods

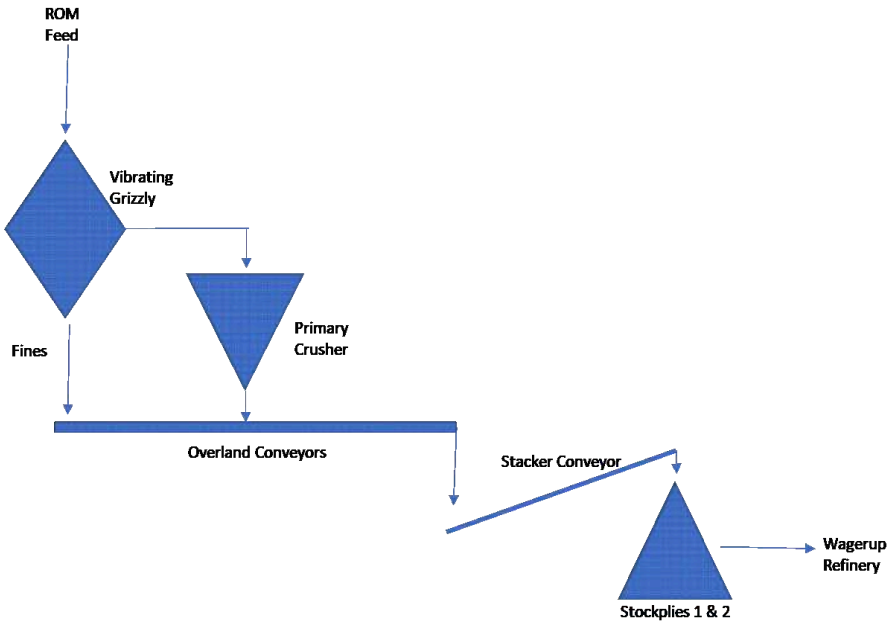
## 14.1 Process Description

The process plant for the Darling Range operations consists of two separate crushing facilities at the Huntly and Willowdale mines. Both facilities crush the ROM and convey the crushed ore to two separate refineries.

The Willowdale operation consists of a single stage crushing flowsheet and includes a series of conveyors to transport the crushed ore at an annual throughput of 10 Mtpa. The ROM is discharged from trucks on a dump hopper. An apron feeder transfers the ore from the dump hopper to a vibrating grizzly with an aperture of 180 mm. The grizzly oversize is discharged into a single toggle jaw crusher which crushes the ore to a top size of 180 mm. A hydraulic rock breaker is installed at the crusher to break the larger rocks that do not pass through the crusher opening. The crushed product and the grizzly undersize are discharged on to a discharge conveyor and subsequently discharged on to an overland conveyor. The discharge conveyor is fitted with a tramp magnet to remove any metal that is present along with the crushed ore product. The overland conveyor, which is 9.4 km long, transports the crushed ore to an intermediate transfer station. The ore is then transported by a second overland conveyor, 8.8 km long, to the transfer station located at Wagerup. An apron feeder is used to transfer the crushed ore from the Wagerup transfer station on to a stockpile conveyor and subsequently discharge on a stacker conveyor. The stacker conveyor discharges the ore into two separate stockpiles. The crushed ore is then reclaimed from there for processing in the Wagerup refinery. The total capacity of the stockpiles is approximately 0.7 Mt and sufficient for three weeks of feed to the refinery.

A simplified block flow diagram of the Willowdale operation is shown in Figure 14-1.

**Figure 14-1: Simplified Block Flow Diagram of the Willowdale Operation**




Source: SLR, 2022

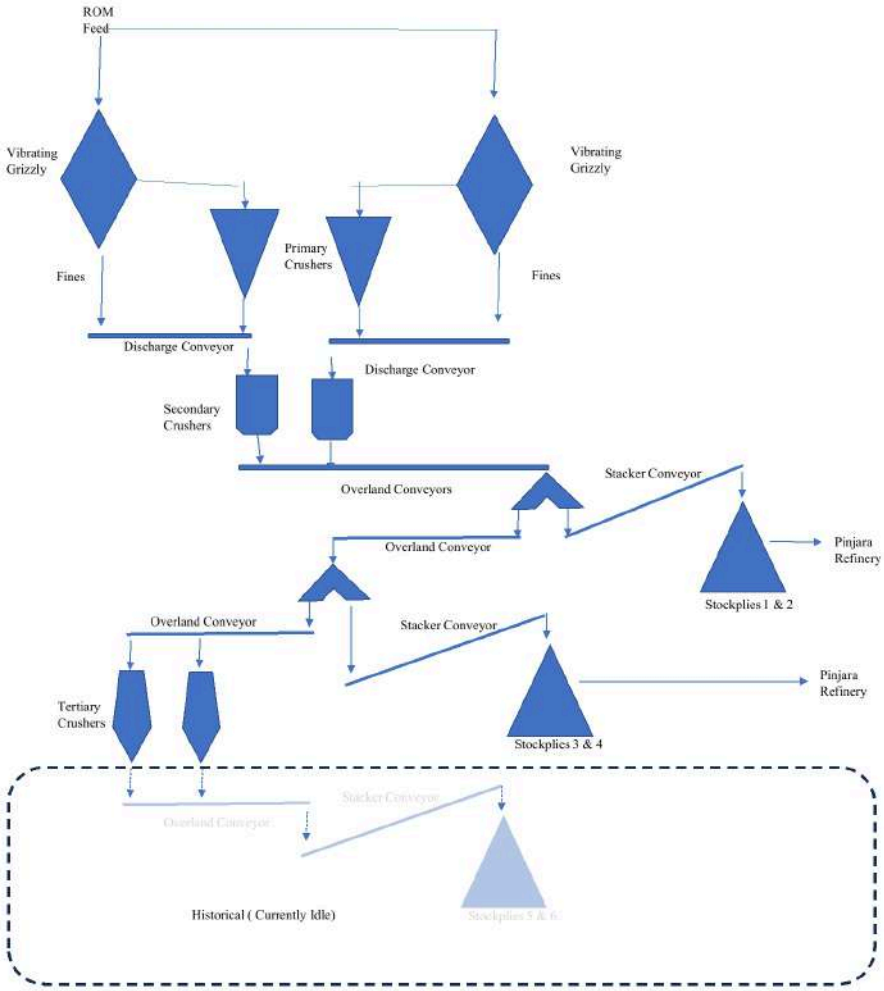
The Huntly operation consists of multiple stages of crushing and includes a series of conveyors to transport the crushed ore to the refinery at an annual throughput of 16 Mtpa. The primary crushing is achieved by two similar crushing circuits operating in a parallel configuration. The ROM is discharged from trucks on dump hoppers. Apron feeders transfer the ore from the dump hopper to vibrating grizzlies with an aperture of 180 mm. The grizzly oversize fractions are fed to jaw crushers which crush the ore to a top size of 200 mm. The crushed product and the grizzly undersize are discharged on to discharge conveyors and transferred to the secondary crushers (sizers). The discharge conveyors are each fitted with a tramp magnet to remove any metal that is present in the crushed ore. Secondary crushing is achieved in sizers with the objective of reducing the ore particle size to a top size of 100 mm. The secondary crusher product is transported by three overland conveyors (operating in series with two intermediate transfer stations in between) to a transfer station and randomly split into two by a splitter bin.

One fraction from the splitter bin is transferred by another overland conveyor and discharged into a stockpile conveyor via an apron feeder. The stockpile conveyor transfers the ore and subsequently discharges onto a stacker conveyor. The stacker conveyor discharges the ore into two separate stockpiles identified as Stockpile 1 and Stockpile 2. The crushed ore is then reclaimed from there for processing in the Pinjarra refinery. The second fraction of the ore is transported by an overland conveyor to an apron feeder, to a transfer conveyor and then to an adjustable splitter chute located at a separate transfer station. One of the splits from the splitter chute previously led to the Kwinana refinery, prior to permanent closure in 2025. Currently the whole stream is destined for Pinjarra refinery.

The fraction for the Pinjarra refinery is transported by stockpile conveyor and subsequently discharged on to two sperate stockpiles (identified as Stockpile 3 and Stockpile 4) via a stacker conveyor. The ore is then reclaimed from the stockpiles for processing in Pinjarra refinery along with the ore from Stockpile 1 and Stockpile 2.

The Kwinana elements of the process plant infrastructure (namely System 4) are no longer included, following the refinery’s permanent closure. A simplified block flow diagram of the full Huntly operation, excluding the Kwinana (System 4) elements, is shown in Figure 14-2.

**Figure 14-2: Simplified Block Flow Diagram of the Huntly Operation**




Source: Alcoa 2026

## 14.2 Primary Equipment List

The primary equipment lists of the full Willowdale and Huntly operations are shown in Table 14-1 and Table 14-2.

**Table 14-1: Primary Equipment List (Willowdale)**

| Equipment | Quantity | Installed Power (kW) |
|---|---|---|
| Apron feeder | 1 | 264 |
| Vibrating grizzly | 1 | 75 |
| Primary Crusher | 1 | 355 |
| Discharge conveyor | 1 | 132 |
| Overland conveyor | 1 | 2,500 |
| Overland conveyor | 1 | 1,800 |
| Apron feeder | 1 | 75 |
| Stockpile conveyor | 1 | 300 |
| Stacker boom conveyor | 1 | 110 |

**Table 14-2: Primary Equipment List (Huntly)**

| Equipment | Quantity | Installed Power (kW) |
|---|---|---|
| Apron feeder | 1 | 260 |
| Vibrating grizzly | 1 | 55 |
| Primary Crusher | 1 | 250 |
| Discharge conveyor | 1 | 140 |
| Secondary crusher | 1 | 1,000 |
| Apron feeder | 1 | 260 |
| Vibrating grizzly | 1 | 75 |
| Primary Crusher | 1 | 250 |
| Discharge conveyor | 1 | 140 |
| Secondary crusher | 1 | 1,000 |
| Overland conveyor | 1 | 7,500 |
| Overland conveyor | 1 | 5,000 |
| Overland conveyor | 1 | 6,100 |
| Apron feeder | 1 | 75 |
| Overland conveyor | 1 | 1,500 |
| Apron feeder | 1 | 55 |
| Apron feeder | 1 | 75 |
| Overland conveyor | 1 | 1,350 |
| Apron feeder | 1 | 110 |
| Stockpile conveyor | 1 | 225 |
| Stacker boom conveyor | 1 | 110 |



## 14.3 Consumables and Power

The power consumption of the Huntly operation is approximately 5,500 MWh to 6,500 MWh per month. The Willowdale power consumption is approximately 2,000 MWh per month.

The process plant is a dry crushing operation and therefore water is only required for dust suppression and is included as part of mine water consumption. Water is not required as a consumable for the plant.

Other consumables of the process plant include crusher liners, screen panels and spares for feeders and conveyors. These are kept on site and replaced as part of the routine maintenance schedule according to manufacturer's guidelines.

Personnel requirements for the operation and maintenance of the plant as described are included in Table 13-3.

## 14.4 QP Opinion

The SLR QP is of the opinion that the selected processing method and the flowsheet are suitable for Darling Range operations. It is important to note that the ore head grades meet the refinery specifications for processing in terms of AL and SI grades, this means the ore can be directly shipped to the refineries for further processing without any upgrading in the mineral processing plant. The crushing circuit reduces the particle size suitable for conveying as well as to meet particle size specified by the refineries.

# 15.0 Infrastructure

The infrastructure for the mining operations is established and operational. In 2021, the infrastructure hub for Willowdale was relocated 16 km southwards from Orion (after having been based there for 21 years) to the Larego site which is located about 20 km north-east of the town of Harvey. The hub hosts administrative offices, as well as crushing facilities and maintenance facilities. The Orion site is currently being rehabilitated with infrastructure decommissioning planned for completion by 2030. Final closure and relinquishment of the Orion area can only be complete once any requirement under the Contaminated Sites Act 2003 are met (as is the case for any mining area in Western Australia).

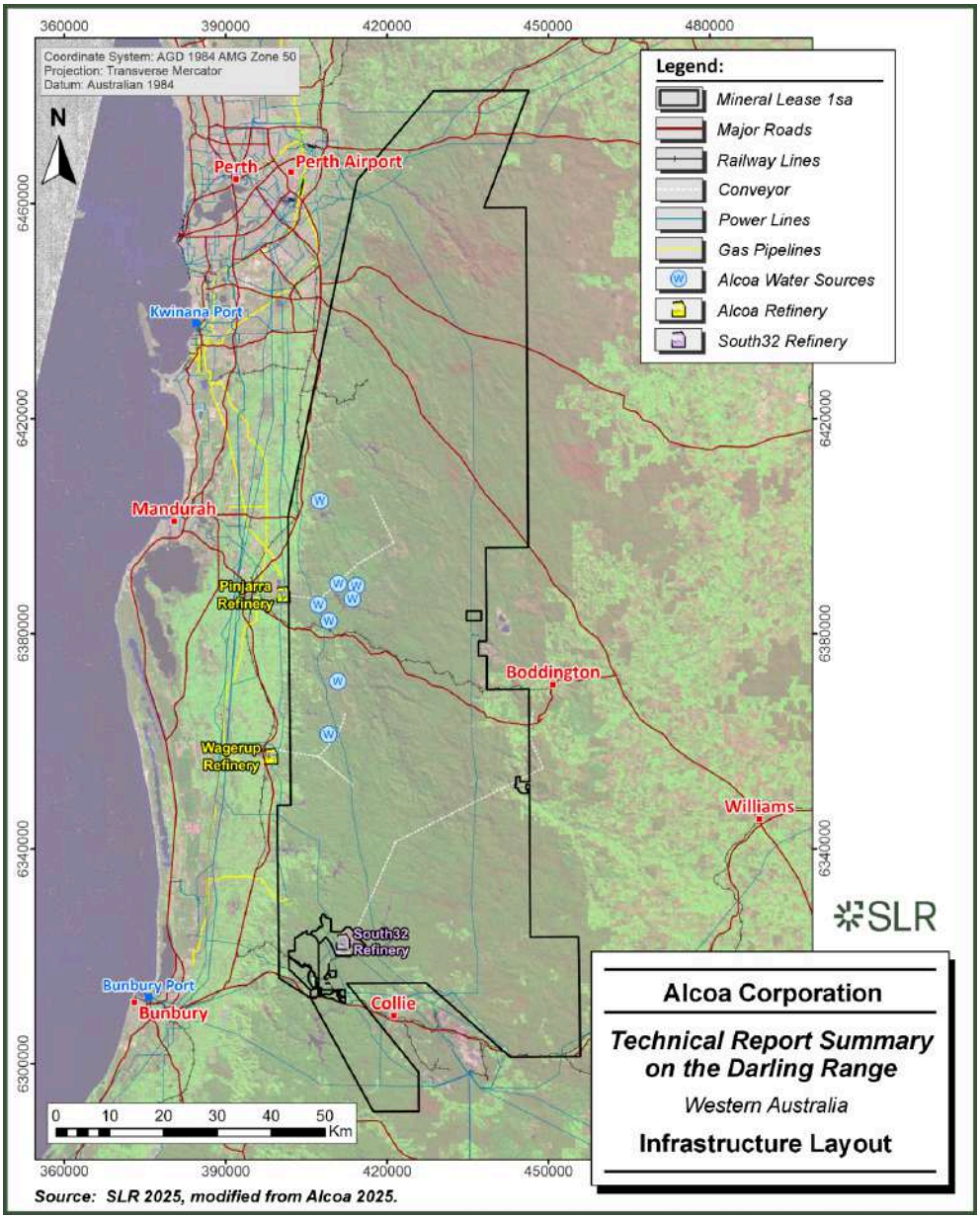
The mining hubs are relocated periodically as production moves away from the hub and thus transportation costs increase. Alcoa plans for the Larego site to be in place for approximately 20 years, though this is the fourth relocation since the mines opened in the 1970s/80s (approximately 13 years on average between relocations). The relocations are well-understood with planning and associated budgeting occurring well in advance of relocations; for example production restarted seven days after the most recent shutdown.

An extensive haul road network and overland conveyors are able to transport crushed bauxite to the refineries (namely Wagerup and Pinjarra). As announced in September 2025, the Kwinana refinery permanently closed, following an end to production in the second quarter of 2024. As safe and responsible closure is completed Alcoa will begin to prepare the site for new economic development opportunities, working with the Western Australian State Government.

Bauxite is transferred from each mine to Wagerup and Pinjarra primarily via long distance conveyor belt. The Alumina produced by the refineries is then transferred by rail and shipped to external and internal smelter customers through the Kwinana and Bunbury ports.

The infrastructure layout for the Darling Range operations is shown below (Figure 15-1).

**Figure 15-1: Infrastructure Layout**




Source: Alcoa 2026

## 15.1 Access Roads

The Darling Range is readily accessible via road from Perth and surrounding areas. The mines are near the towns of Pinjarra and Waroona. Both towns are easily accessible via the national South Western Highway, a sealed single carriageway road, which starts on the southern side of Perth and continues for almost 400 km to the southwest corner of Western Australia.

The Huntly mining area is accessible from the South Western Highway via Del Park Road, a sealed single carriageway road which connects the town of North Dandalup in the north with Dwellingup in the south. From Del Park Road, a further sealed road which follows the route of the bauxite conveyor to the Pinjarra refinery provides access to the Huntly site.

The Willowdale mining area is similarly accessible from the South Western Highway via Willowdale Road, a sealed single carriageway road to the south of Waroona.

Major haul roads have been established to each mining area. Roads are unsealed and require continuous ongoing maintenance which was observed during the site visit. Secondary haul roads, also unsealed, cross-cut each individual mining plateau.

## 15.2 Power

The Darling Range's Pinjarra refinery receives power from the South West Interconnected System (SWIS). The refinery also has internal generation capacity of 100 MW from 4 steam driven turbine alternators, with steam produced by gas fired boilers and a gas turbine Heat Recovery Steam Generator (HRSG). The refinery supplies power to the Huntly Mine by three different power supply lines (a single 33 kV and two 13.8 kV).

Willowdale Mine has a single 22 kV power supply fed from the Wagerup refinery. The Wagerup refinery is a net exporter of power to the SWIS, with internal generation capacity of 108 MW from three steam driven turbine alternators and one gas turbine. The steam is produced by gas fired boilers.

The power consumption of the Huntly operation is approximately 5,500 MWh to 6,500 MWh per month. The Willowdale power consumption is approximately 2,000 MWh per month.

## 15.3 Water

Water is used on the mines for dust suppression, dieback washdown, vehicle washdown, workshops, conveyor belt wash, construction and domestic purposes. The water supplies for mining consist of licensed surface water sources supplemented with treated wastewater from vehicle washdowns, stormwater runoff and maintenance workshops.

The WA mines are licensed by the Department of Water and Environmental Regulation (DWER) to draw surface water from five locations to meet their water supply requirements. The Huntly mine draws water from Banksiadale Dam and Boronia Waterhole. Huntly mine also holds a license to draw water from Pig Swamp and Marrinup, however these resources are retained as a backup water supply and have not been utilized in recent years. Huntly mine is also permitted to draw water from South Dandalup Dam under an agreement with the Water Corporation. A pumpback facility from South Dandalup Dam to Banksiadale Dam is used to raise levels in Banksiadale Dam during periods of low rainfall runoff. Willowdale Mine draws water from Samson Dam.

Table 15-1 summarizes the license allocation for water usage. In 2025, water abstraction comprised approximately:

- 0% of the annual entitlement from Boronia Dam
- 6.5% of the Banksiadale Dam surface water license volume
- 96.8% of the Samson Dam surface water license volume.



An additional 790,600 kL was also abstracted from South Dandalup Dam under the agreement with Water Corporation.

**Table 15-1: Water Abstraction License Volumes**

| Site | Water Source | Surface Water License | Annual Water Entitlement |
|---|---|---|---|
| Huntly | South Dandalup Dam | N/A | N/A |
| Huntly | Banksiadale Dam | SWL63409 | 500,000 |
| Huntly | Pig Swamp Waterhole | SWL153635 | 30,000 |
| Huntly | Boronia Waterhole on Marrinup Brook | SWL83356 | 70,000 |
| Marrinup Nursery | Lot 908 on Marrinup Brook | SWL68893 | 45,000 |
| Willowdale | Samson Dam | SWL61024 | 450,000 |

## 15.4 Accommodation Camp

There are no Alcoa accommodation facilities within the Darling Range. As described above, the Huntly and Willowdale mining areas are within proximity to established population centers including Pinjarra approximately 30 km to the southwest of Huntly and Waroona approximately 20 km northwest of Willowdale.

On site facilities includes offices, ablutions, crib-rooms, and workshops, all of which were observed to be in excellent condition.

## 15.5 Mine Waste Management

### 15.5.1 Tailings Disposal

No tailings are generated within the boundaries of the mining operations, and the majority of overburden (waste) is used to rehabilitate the previously mined out areas. Residue from processing is generated downstream of the mine and is not considered in this TRS, although they are considered as a cost and as part of the financial evaluation. tailings generated within the boundaries of the mining operations are not considered in this TRS, although they are considered as a cost and as part of the financial evaluation.

### 15.5.2 Waste Rock Disposal

Alcoa’s Darling Range mining operations at Huntly and Willowdale do not produce mine waste or “mullock” in the same manner as conventional mining operations and waste dumps are not constructed.

Topsoil and overburden is carefully segregated for later rehabilitation of adjacent, completed mining operations. Overburden is used to backfill these shallow, completed pits and the topsoil spread on top and contoured. Maximum slopes (angle and length) are defined in the Completion Criteria. If topsoil has been harvested and stored for up to three months prior to use as a rehabilitation input it is considered ‘direct-return’ and seeding may not be undertaken. If it is older than 3 months, it is considered ‘fallow’ and requires seeding. Nursery-raised seedlings are also used in rehabilitated areas.

To date, some 20,000 ha of mined areas have been backfilled and reforested, which represents around 75% of the area mined since 1966, including areas reserved for long-term infrastructure. Rehabilitation standards are described in Alcoa’s 2016 statutory Bauxite Mine Rehabilitation Completion Criteria (RCCs). These completion criteria have been progressively revised since inception in the 1990s. As Alcoa’s rehabilitation practices evolve over time — informed by improvements in research, technologies and shifting community



expectations — the RCC is periodically reviewed to reflect improved and modern practices. Due to this process, different RCCs are applicable to different periods of rehabilitation establishment. Alcoa is currently working on further revision to the RCCs as part of the latest MMP assessment which is expected to come into effect from 2026.

# 16.0 Market Studies

## 16.1 Overview

Alcoa Corporation is a vertically integrated aluminum company comprising bauxite mining, alumina refining, aluminum production (smelting and casting), and energy generation.

Through direct and indirect ownership, Alcoa Corporation has 25 locations in eight countries around the world, situated primarily in Australia, Brazil, Canada, Iceland, Norway, Spain, and the United States. Governmental policies, laws and regulations, and other economic factors, including inflation and fluctuations in foreign currency exchange rates and interest rates, affect the results of operations in these countries.

There are three commodities in the vertically integrated system: bauxite, alumina, and aluminum, with each having their own market and related price and impacted by their own market fundamentals. Bauxite, which contains various aluminum hydroxide minerals, is the principal raw material used to produce alumina. Bauxite is refined using the Bayer process to produce alumina, a compound of aluminum and oxygen, which in turn is the raw material used by smelters to produce aluminum metal.

Annually, the majority of bauxite produced by Alcoa operated mines is delivered to Alcoa refineries. The remainder is sold to the third-party market.

Aluminum is a commodity that is traded freely on the London Metal Exchange (LME) and priced daily. Pricing for primary aluminum products is typically composed of three components:

- The published LME aluminum price for commodity grade P1020 aluminum;
- The published regional premium applicable to the delivery locale; and
- A negotiated product premium that accounts for factors such as shape and alloy.

Further, alumina is subject to market pricing through the Alumina Price Index (API), which is calculated by the Company based on the weighted average of a prior month’s daily spot prices published by the following three indices: CRU Metallurgical Grade Alumina Price; Platts Metals Daily Alumina PAX Price; and Metal Bulletin Non-Ferrous Metals Alumina Index. As a result, the price of both aluminum and alumina is subject to significant volatility and, therefore, influences the operating results of Alcoa Corporation.

Unlike alumina and aluminum, bauxite is not a standard commodity traded on an index. Bauxite’s grades and characteristics vary significantly by deposit location and the value of bauxite deposits for each downstream refinery could be different, based upon:

- refinery technology;
- the location of each refinery in relation to the ore deposit; and
- the cost of related raw materials to each refinery.

As such, there is no widely accepted index for bauxite. Most bauxite traded on the third-party market is priced using a value-in-use methodology. The key assumption for the value-in-use methodology is that both the (1) offered bauxite and the (2) comparative bauxite being used in the target refinery will generate the same refining cost. As such, using the known price for the comparative bauxite used in the target refinery, the offered bauxite price will then be derived by considering the bauxite characteristics and quality differences between the offered and comparative bauxite.

### 16.1.1 Market Fundamentals

Bauxite is the principal ore of alumina ($Al_2O_3$), which is used to produce aluminum. Bauxite mining and alumina refining are the upstream operations of primary aluminum production. China is the largest third-party seaborne bauxite market and accounts for more than 90% of all bauxite traded. Bauxite is sourced primarily from Guinea and Australia on the third-party market. There was a significant increase in bauxite supply from Guinea during 2025 despite some disruptions due to mining licenses being revoked. In the long run, China is expected to continue to be the largest consumer of third-party bauxite with Guinea expected to be the majority supplier.

Bauxite characteristics and variations in quality heavily impact the selection of refining technology and refinery operating cost. A market bauxite with high impurities could limit the customer volume an existing refinery could use, resulting in a discount applied to the value-in-use price basis.

Besides quality and geography, market fundamentals, including macroeconomic trends – the prices of raw materials, like caustic soda and energy, the prices of alumina and aluminum, and the cost of freight – will also play a role in bauxite prices.

## 16.2 Market: Darling Range

### 16.2.1 Operation

The Darling Range mines are part of an integrated operation of two mines, two refineries and two ports. Subsequent to 2021, production from the Darling Range mines (Huntly and Willowdale) was used exclusively for consumption by the integrated refineries.

Bauxite is transferred from each mine to the two refineries primarily via long distance conveyor belt. The Alumina produced by the two refineries is then shipped to external and internal smelter customers through two ports, at Kwinana and Bunbury.

### 16.2.2 Pricing

In 2016, Darling Range entered into a 5-year third-party sales contract with a major alumina producer in China. Following the expiration of the third-party sales contract at the end of 2021, all bauxite production from Huntly and Willowdale was consumed internally by Alcoa refineries.

The pricing mechanism of the third-party sales contract was based on a value-in-use methodology (as described in Section 16.1) that was anchored to the customer’s other bauxite sources at the time of execution, with a market adjustment factor linked to the alumina price.

Alcoa determines economic cut-off grade by deducting operational costs (mining, refining, etc.) from a base alumina price of $400/t. This approach is described in more detail in Section 12.7.

The bauxite price utilized in the mine cash flow is determined using an internal transfer price methodology that considers both the mine's operating cost structure and the value to Alcoa's integrated refining operations. The starting price of $25.45/t (FY26) escalates at 3% annually, resulting in a weighted average of $28.74/t over the nine-year mine plan period.

## 16.3 Contracts

All Darling Range production is shipped via conveyor to one of the Alcoa’s Pinjarra and Wagerup refineries.



Material operational contracts that are in place include:

- **Harvesting and Clearing contracts:** Alcoa has long term contracts with third party suppliers to harvest and clear the forecast prior to development for mining. Pricing is based on fixed rate schedules, payable either per hectare or on equipment hire and labor hire rates.
- **Rehabilitation contracts:** Alcoa has long-term contractual agreements with third-party suppliers to rehabilitate certain mined areas, ready for closure. Pricing is based on fixed rate schedules, payable either per hectare or on equipment and labor hire rates.
- **Fuel contract:** Alcoa has a mid-term contractual agreement with a third-party to supply diesel fuel for mining operations. Pricing is based on market pricing for diesel, payable on volume consumed.

These types of contracts are typical of other similar mining operations.

# 17.0 Environmental Studies, Permitting, and Plans, Negotiations, or Agreements with Local Individuals or Groups

## 17.1 Environmental Studies

### 17.1.1 Existing Operations

Alcoa has established practices and processes for enabling conformance to environmental requirements. Sensitive areas are identified and managed ahead of disturbance. Environmental factors are considered prior to drilling; hence, mining blocks carrying intolerable environmental risks do not feature in the Mineral Reserves (for example, areas around granite outcrops and water courses have a buffer applied and are considered no-go areas from a mining perspective). Mining in some areas became more constrained in 2023 as a result of internal and external factors including third party referrals of the 2022-2026 and 2023-2027 MMPS to the EPA. Alcoa operated within these constraints in 2024 and 2025; the constraints are associated with:

- Alcoa's ongoing consultation with key stakeholders including the EPA, ITAG and BSEC (previously MMPLG).
- Approval conditions of the 2023-2027 MMP which have been extended to cover the 2024-2028 MMP as a result of the October 2024 roll-over approval.
- Conditions associated with the *Environmental Protection (Darling Range Bauxite Mining Proposals) Exemption Order 2023*.
- Alcoa's progress on the EP and EPBC Act assessment (beyond the scope of the MMP) to increase refinery production by 5% through the transition of mining from Huntly to the Myara North and Holyoake areas, as described in Section 3.6.

The Final 2023-2027 MMP was developed by Alcoa and approved by the Minister for State Development in December 2023. In October 2024 the approval of the 2023-27 MMP (and conditions) was rolled over to the 2024-2028 MMP. The current approved 2024-2028 MMP excludes consideration of mine development activities associated with the Myara North and Holyoake Mining Regions currently under consideration by the EPA and DCCEEW (Section 17.1.2.

Alcoa undertakes surveys to inform the mine plan development, characterization of ore quality and volumes, assess geotechnical conditions, identify constraints and protect or manage important environmental, cultural heritage and social values. Surveys include:

- Vegetation mapping to delineate vegetation community types, ensure clearing does not have cumulative impacts on underrepresented species assemblages and identify critical habitat for known threatened species.
- Establishment of forest reference vegetation monitoring plots to enable representative comparison with post-mining rehabilitation. Mean species richness of forest reference sites is utilized to measure the effectiveness of rehabilitation.
- Black cockatoo surveys to locate trees that will be protected from disturbance, to minimize impact on these species. All nest trees and significant trees (as defined under technical guidance from the DCCEEW) are conserved with a buffer wherever they occur in the landscape. Habitat trees are conserved on haul road alignments, where the alignment can be adjusted to avoid these trees.



- Assessment of Phytophthora dieback to inform activities which may cause soil disturbance, to manage dieback soils and prevent contamination of dieback free areas. This data is also utilized in soil movement and rehabilitation planning.
- Baseline hydrologic and hydrogeologic data acquisition to inform detailed design of mine pit and infrastructure.

As reported in the 2023 and 2024 TRS, the current restrictions on mining while the EPA completes Assessment 2385 and Alcoa continues to operate under the Exemption Order 2023 include but are not limited to:

- Reduce mining activities inside higher risk areas within drinking water catchments.
- Alcoa will not undertake any new mining pit clearing in any areas with an average pit slope greater than 16% within any Reservoir Protection Zone (RPZ, 2 km from reservoir top water level).
- Increase rehabilitation and reduce open areas where possible, with priority in higher risk areas.
- Maximum annual clearing footprint of 800 ha.
- An extensive compliance program is required to be undertaken, including the appointment of an independent compliance monitor.

These changes have resulted in a presumed temporary decrease in operability and associated decrease in Reserve estimation. Future operating conditions may be different once EPA Assessment 2385 is complete and conditions on the subsequent Ministerial Statement are known. As documented in the Environmental Scoping Document (a key component of the EPA assessment), Alcoa and the EPA were aiming to complete the Response to Submissions process in June 2025, enabling the EPA to finalize its Assessment Report in August 2025; this has not been achieved. Alcoa is working closely with the EPA to produce a high-quality Response to Submissions document, with a first tranche of responses submitted to the EPA on 16 January 2026. This included all Government agency submissions, Local Government Areas, Environmental NGOs and thematic responses to all public submissions. A second and final tranche of all remaining submissions aims to be submitted to the EPA by end of March 2026.

Overall, SLR is of the opinion that the current plans and well understood processes that are in train with the EPA (specifically EPA Assessment 2385) are considered adequate to address matters related to environmental, social, and permitting risks. However, the timing of the EPA assessments and subsequent Ministerial approval is not wholly within Alcoa's control.

As reported in previous years, the threat of bushfires is the only significant naturally occurring risk identified to the Reserve estimation for existing operations.

Bushfire mitigation and firefighting activities within state forest are managed by the Department of Biodiversity Conservation and Attractions (DBCA). Alcoa maintains fire access tracks as required by the working arrangement with DBCA and complies with requirements of the Bushfires Act including seeking exemptions for certain activities during Total Fire Bans. Asset protection zones are not mandated although Alcoa does maintain them around infrastructure as per internal standards to mitigate risk. Alcoa owned private property is maintained to local government requirements as per the requirements of the Bushfire Act.

Bushfires have occurred in the past, but to date have not had a material impact on production.



### 17.1.2 Future Mining Operations

Alcoa is modernizing its environmental approvals framework for its Huntly Bauxite Mine and Pinjarra Alumina Refinery, by self-referring future mining plans for assessment under Part IV of the Western Australian *Environmental Protection Act 1986* (EP) and the Australian *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The future mining plans that have currently been referred to both State and Federal departments propose to transition the Huntly Mine into the proposed Myara North and Holyoake mine regions within Alcoa's Mining Lease ML1SA.

The Western Australian Environmental Protection Authority (State) has determined that the Pinjarra Alumina Refinery Revised Proposal (Assessment No. 2253), which includes the Huntly Bauxite Mine, will be assessed via a Public Environmental Review (PER). As is the case for the EPA's Assessment 2385, Assessment 2253 is also taking longer than initially anticipated.

Alcoa has two separate Proposed Actions currently being assessed under the EPBC Act (Federal):

- 2022/09204: *Huntly Bauxite Mine Transition – Myara North and Holyoake*; and
- 2024/10009: *Huntly Bauxite Mine Transition – O'Neil*.

The 2024 TRS reported on another EPBC assessment being 2022/09213: *Pinjarra Alumina Refinery – development of water storage ponds and associated borrow pits*. That proposal was withdrawn by Alcoa.

Alcoa has since requested the withdrawal of the O'Neil assessment 2024/10009, as the O'Neil mine region will be assessed as part of the strategic assessment announced in February 2026.

The referred actions at Myara North, Holyoake and O'Neil have been determined as Controlled Actions under the EPBC Act, and as such, require formal assessment.

In 2023 and again in 2024, Alcoa proposed changes to the proposal at Myara North and Holyoake while it was under assessment, some of the key changes are as follows:

- Changes to the development envelope within which future activities will be contained.
- Addition of mining at O'Neil.
- Reduction in proposed disturbance at Myara North and Holyoake.
- Increase in the annual bauxite residue disposal limit to 11.6 Mtpa (from 10.8 Mtpa).
- Reduction in disturbance at the Pinjarra Refinery.
- Extending to the LOM by a further seven years to 2045, in the event the Kwinana Refinery does not restart.

The EPA noted:

- Reduced disturbance will likely lessen impacts on flora, fauna, and environmental quality.
- Lower disturbance at Pinjarra Refinery should reduce impacts on Aboriginal cultural heritage.
- Mining in reservoir protection zones is considered removed from the proposal for this assessment, Alcoa has deferred mining in RPZs to the future.
- The amended proposal remains substantially similar to the original.
- Adding the O'Neil mining area may cause minor new impacts, but overall impacts are expected to decrease with the reduced footprint.



- No new significant environmental factors or additional EPA functions are required.
- The amendment follows a review to avoid areas of high environmental value.

The EPA has enabled the altered proposal to be assessed as part of assessment 2253 already in progress. DCCEEW made complementary decision and the assessment under the EPBC Act also continues.

The resulting Environmental Impact Assessments (EIAs) under State and Federal legislation will inform stakeholders on long-term mine plans and environmental management requirements and facilitate the setting of approval conditions.

As reported in the TRS for 2022, 2023, and 2024, numerous baseline studies have been completed to support approvals for future extensions to the mining footprint to the Myara North and Holyoake regions, this is also the case for O'Neil. Baseline studies are guided by the requirements of the EPA and guidelines under the EPBC Act which are well understood. Studies have been undertaken to define the environmental values and constraints associated with:

- Flora and vegetation
- Short-range endemic vertebrates
- Aquatic and subterranean fauna
- Phytophthora dieback
- Terrestrial vertebrate fauna including Black Cockatoos
- Surface water
- Groundwater quality and dewatering drawdown
- Air quality
- Noise
- Landscape and visual impacts
- Historical and aboriginal heritage
- Greenhouse gas emissions.

Access to environmental consultants, in particular terrestrial ecologists, has been difficult in recent times due to demands from many proponents all trying to secure resources from a limited pool. Alcoa maintains an internal prioritization tool to commission consultants to ensure the most production-important areas are allocated to available consultants first.

Construction for Myara North, Holyoake and O'Neil will commence pursuant to the requirements of the State and Federal approvals, which will be issued upon completion of the EPA and EPBC assessment processes indicatively forecast for the end of 2026, as opposed to the first quarter of 2026 as reported in the TRS for 2024. The plan to commence construction, to facilitate the transition to Holyoake Central, from approximately 2028 and commence operation from approximately 2030, was reported in the MMP dated 10 November 2023. The timeframe to approval of O'Neil, Myara North, and Holyoake under the EP and EPBC Act can be estimated, but not predicted with certainty; further delays are possible.

Supporting both the existing and future mining operations, additional environmental studies were further progressed in 2023 and 2024 to identify regional environmental risks associated with low levels of PFAS in surface water catchments around the current and future Huntly and Willowdale operations. As is the case at most (if not all) mining operations in Western Australia, Per- and Poly-Fluoroalkyl Substances (PFAS) containing aqueous film-forming foams (AFFF) were used at Huntly and Willowdale Mines in vehicle fire suppression systems



from approximately 2014 to 2021. Discharge of AFFF has occurred within the Operational Areas due to both testing and maintenance of fire suppression systems (at workshops) and activation (within Operational Areas) in response to vehicle fires or equipment malfunction. Alcoa reported areas around workshops at the Orion, Arundel, McCoy and Myara Operational Areas to the Department of Water and Environmental Regulation (DWER) under the obligations of the Contaminated Sites Act (2003) as possibly contaminated. These areas have subsequently been classified as *possibly contaminated – investigation required*. Stage 1 and 2 investigations have been endorsed by the DWER-appointed Contaminated Sites Auditor, a Stage 3 Detailed Site Investigation was progressed in 2025 and was further informed following the release of the PFAS National Environmental Management Plan (PFAS NEMP) jointly developed by the Commonwealth, State, Territory, and New Zealand Governments through the Heads of EPA Australia and New Zealand (HEPA). The updated documentation was submitted to the Independent Auditor in 2025; Alcoa expects the documentation to be submitted back to DWER in the first half of 2026. It is not unusual for these processes to take multiple years to complete alongside ongoing operations.

Huntly's permanent PFAS solution has commenced under a capital project, and it is in the early design and options analysis stage. The solution will comprise of permanent PFAS-affected water treatment plants, solids handling and/or treatment, and associated infrastructure.

Commissioning of a PFAS Treatment Unit (PTU) commenced in November 2024 at Arundel (within Willowdale). Commissioning was deemed complete on 31 January 2025 and a commissioning report was submitted to the Department Water and Environmental Regulation on 27 February 2025.

## 17.2 Waste and Tailings Disposal, Site Monitoring, and Water Management

### 17.2.1 Waste and Tailings Disposal

No tailings are generated within the boundaries of the mining operations, and the majority of overburden (waste) is used to rehabilitate the previously mined out areas. Residue from processing is generated downstream of the mine and is not considered in this TRS, although they are considered as a cost and as part of the financial evaluation.

Alcoa's Darling Range mining operations do not produce mine waste or "mullock" in the same manner as conventional mining operations, the majority of overburden (waste) is used to rehabilitate the previously mined out areas. Overburden is carefully segregated for later contouring and rehabilitation of adjacent, completed mining operations. Caprock and other non-viable rock is used to backfill these shallow, completed pits and the viable topsoil is spread on top, contoured, and revegetated.

As such, there is no requirement for the monitoring of any tailings or mine waste dumps associated within the mining operations at Huntly and Willowdale.

### 17.2.2 Site Monitoring

Alcoa's mine sites are monitored in accordance with conditions of Government authorizations and its operational licenses at Huntly (L6210/1991/10, last updated 09/02/21) and Willowdale (L6465/1989/10, last updated 28/10/24). The October 2024 update at Willowdale was to enable the following mostly administrative amendments to the License:

- Remove the approved oil/water separator (OWS) at Arundel workshop (no longer required);
- Added requirement to construct a 5,000 L underground concrete waste holding pit;



- Allow the construction of specific proposed pipelines underground in culverts where vehicle access is required;
- Amended liner permeability construction requirements from 2.27 x $10^{-17}$ m/s to 1 x $10^{-9}$ m/s for the Anpress Pre-treatment sumps;
- McKnoes Brook water level monitoring to now measure “relevant parameters” instead of water levels only and for the monitoring location to be situated downstream of the discharge point instead of upstream;
- Added a requirement for the daily inspections of the PTU are logged and recorded;
- Removed freeboard requirements for sumps OS1 and OS2 - added requirement for OS1 and OS2 to be maintained and operated so that overtopping of sump embankments does not occur and that overflow is contained within OS3;
- Removal of the requirement for National Accredited Testing Associated (NATA) accredited analysis of Perfluoro-1-octanesulfonamidoacetic acid (FOSAA) at laboratories – such laboratories only exist in Tasmania and Newcastle;
- Allow monitoring samples not to be taken in the absence of wastewater or water; and
- Amendment to include a new license condition to allow minor changes to the infrastructure where it does not materially change or affect the infrastructure or the change does not increase risks to public health, public amenity or the environment;
- Other related administrative changes were made to the license.

Monitoring and reporting is also required under the latest MMP and the *Environmental Protection (Darling Range Bauxite Mining Proposals) Exemption Order 2023*.

Environmental management and monitoring commitments exist for the following environmental aspects which have been assessed as being significant and therefore require operational controls as a minimum. The significant environmental aspects for which monitoring and/or management undertaken are:

- Discharge of environmental hazardous material outside of containment infrastructure; discharge response and dangerous goods storage. All underground storage tanks were previously removed from Alcoa’s operations and are prohibited.
- Waste management and minimization.
- The management of mining within the lower rainfall zone to minimize risks of salinization of land and water resources.
- Surface water catchment protection for the nearby PDWSAs, including the exclusion of clearing, exploration, mining or other operations:

  within 1 km of the top water level of any water reservoir; or

  within the Serpentine Pipehead Dam Catchment;

  in any area with an average slope greater than 16% within the Reservoir Protection Zone of any water reservoir.
- Air emissions including:

  Smoke pollution associated with wood waste (although wood waste burning has now largely been phased out, with a small amount of burning in 2022 and no burning in 2023 and 2024)

  An ambient dust monitoring program to identify and quantify fugitive dust emissions from operating areas

  Ozone depleting substances



Hazardous materials management including asbestos, synthetic mineral fiber, and polychlorinated biphenyls.

- Disturbance to land including:

Recordkeeping and Geographical Information System (GIS) mapping of the location and timing of all soil removal, landscaping, soil return, ripping and seeding

Stabilization of cleared land post-mining and prior to rehabilitation

Rehabilitation area monitoring to ensure the number of established plants meet the completion criteria targets associated with species richness, weed outbreaks and erosion

Dieback management, mapping and field identification

Forest and land clearing

Flora and fauna, specific sensitivity and restrictions related to Black Cockatoos, including the exclusion of clearing, exploration, mining or other operations within 10 m of any Black Cockatoo nesting trees or Black Cockatoo significant trees. Note this condition does not apply to the activities outlined in[1].

Aboriginal and Historic (European) heritage

Environmental value of national parks, nature reserves and native forests

Visual amenity

Noise.

Outcomes of and compliance with the management and monitoring programs are tracked within Alcoa's Environmental Management System and reported in monthly and annual reports to regulators including the BSEC (previously MMPLG) and DWER (at least annually, according to MMPLG requirements and Part V Licence requirements), the Minister for State Development (in accordance with the Exemption Order 2023).

Review of Alcoa's 2024 Part V Licence Annual Environmental Report for Huntly (L6210/1991/10), signed 27 March 2025 revealed:

- Full compliance with licence conditions.

Review of Alcoa's 2024 Part V Licence Annual Environmental Report for Willowdale (L6465/1989/10), signed 27 March 2025 revealed a number of non-compliances, many of which have since been addressed by the Licence Amendment described in Section 17.2.2:

- Throughout 2024, the construction of the PFAS Treatment Unit (PTU), pipelines, and associated infrastructure resulted in multiple variations to what was initially proposed. Alcoa considered those variations to be minor in nature and consistent with the intent of the licence condition. The variations were noted within the Compliance Commissioning Reports submitted to DWER on 14 February 2025 (pipelines) and 26 February 2025 (PTU). It is reasonable to conclude there were no significant impact to the environment, alterations to design and construction methods are not uncommon.

[1] These three restrictions do not apply to:

- stabilisation or rehabilitation activities; or
- environmental monitoring activities; or
- use and maintenance of existing infrastructure; or
- modification of existing road infrastructure with the written consent of the State Development Minister; or
- construction of drainage control infrastructure; or
- mining within 1 kilometre of the top water level of any water reservoir in Myara Central and Myara South carried out before 30 June 2024



- In the licence amendment granted on 28 October 2024, the Arundel Workshop's 5,000L underground concrete waste holding pit was added to the approved infrastructure list. The pit was fully commissioned on 23 April 2024, before its inclusion in the licence. Remaining infrastructure for the stormwater collection pond is not expected to be built for some time. DWER was notified on 14 February 2025 and agreed that submitting a partial compliance report for the waste holding pit would be acceptable. This non-compliance was wholly administrative
- On 26 August 2024, APTD2 was found with less than 1000mm freeboard, followed by APTD1 on 5 September. Compliance was restored on 13 November for APTD2 and 24 November for APTD1, and maintained thereafter for the remainder of 2024. OS3 fell below 50% freeboard on 10 June and again on 26 July due to heavy rain and water transfers from a haul road sump. OS1 and OS2 did not meet 30% freeboard between 30 May and 23 September. The licence amendment removing this requirement for OS1 and OS2 took effect on 28 October 2024. No significant environmental impact resulted from these exceedances.
- FOSAA testing was unavailable in 2024 due to lab limitations; MeFOSAA and EtFOSAA were used instead. The licence was amended in October 2024 to allow non-NATA methods, and labs began FOSAA testing in December 2024. No environmental impact is known to have occurred in the absence of analysis.
- Water sampling couldn't be completed at some points (March–May) due to lack of water, discharge, or damaged bores. The licence in effect from February to October 2024 didn't allow for these exceptions. An amendment permitting missed sampling for such reasons was approved in October 2024. No environmental impact is known to have occurred in the absence of analysis.
- Review of Alcoa's Annual Environmental Review to JTSI (dated July 2025) revealed:

  The ratio of rehabilitated land against mining disturbed land was approximately 4.33:1 (based on Mining Rehabilitation Fund reporting for 2024).

  Three dieback breaches occurred in 2024 across Willowdale and Huntly combined, in comparison to four in 2023 and seven in 2022. The final area impacted is not yet available, but is reported to be likely to be less than 1 hectare.

  Eight drainage events due to mining-related activities were reported under the MMP/ Exemption Order 2023 requirements at Willowdale and Huntly combined in 2024; there were two in 2022 and two in 2023. The eight events had mining related turbidity exceedances to stream zones but no observable impacts to the catchment - downstream turbidity monitoring sites did not record turbidity events during or following the recorded events. The three events at Huntly were due to water shedding off the side of steep haul road embankments at the same turbidity monitor location. Similarly at Willowdale, the five events were associated with a single turbidity monitor location adjacent to a steep haul road embankment.

  Total number and total volume of chemical and hydrocarbon spills (>20 L) onto unsealed ground in 2024 was reasonably consistent with 2023 results; none of these triggered the obligation to report the discharge of waste under Section 72 of the Environmental Protection Act 1986.

Alcoa provided the monthly reports for January to December 2024, and January to June 2025 required under Clause 10 of the Exemption Order 2023, and verbally confirmed during meetings to inform this TRS, that no non-compliances had occurred; this is of interest given the importance of compliance with the Exemption Order to Alcoa's ongoing ability to operate while EPA assessment 2235 is in progress.



### 17.2.3 Water Management

Alcoa implements a comprehensive water management and monitoring program in accordance with the requirements of its surface water and operational licenses, and also acts with a view of continuous improvement, particularly in relation to water which is a key operational and environmental consideration for the Darling Range.

Key components of Alcoa's water management and monitoring program include:

- Treatment of stormwater that may contain traces of hydrocarbons via a wastewater treatment system to concentrations that meet DWER license requirements prior to release.
- Turbidity monitoring along tributaries to key catchments to prevent contaminated or turbid runoff into the drinking water supply.
- Wastewater treatment and monitoring to meet DWER license requirements prior to release including treated water quality monitoring prior to release and continuous discharge volumes.
- Surface water drainage management to prevent uncontrolled surface water runoff from operations to the surrounding forest and/or surface water bodies.
- Implementation of the *Interim PFAS Water Management Strategy*. The interim Strategy will remain in place until the Contaminated Sites process outlined in Section 17.1.2 is complete.
- Drainage protection management through the implementation of a Drainage Control Management Plan.
- Sewage management though a biological aeration treatment unit (BioMAX).
- Monitoring of cumulative water abstraction volumes at licensed and unlicensed surface water abstraction points in accordance with the *Surface Water License Operating Strategies* for Huntly and Samson Dam.
- Potable water monitoring for identification of possible biological or chemical contamination.
- Ecological water requirements (EWRs) have not been defined for the site, however Alcoa undertakes monitoring of the downstream environments to ensure no unacceptable impact. This is completed via photographic monitoring for Banksiadale Dam, Pig Swamp Waterhole, Boronia Dam and Marrinup Nursery. Note the EPA has not explicitly required Alcoa to develop EWRs as part of the formal impact assessment process for Myara North and Holyoake to date.
- Water use efficiency programs are implemented pertaining to wastewater recycling, efficient watering of haul roads, pumping and reusing water from roadside sumps, and effective mining planning to reduce dust suppression requirements.
- Alcoa, in association with the former Water and Rivers Commission, has researched the hydrology and salinity in the Jarrah forest since the 1970s, as part of the Joint Intermediate Rainfall Zone Research Program (JIRZRP). The JIRZRP has included monitoring of surface water, groundwater and salinity as well as analysis and modelling of the Intermediate Rainfall Zone (IRZ). This work continues to evaluate potential impacts of clearing and rehabilitation on groundwater salinization.
- Alcoa will continue to expand its monitoring program, as necessary, if groundwater quality or quantity has been identified as potentially at risk due to operational or mining activities, or potential exists for mining to impact offsite/private groundwater supply quantity or quality.



Current management practices are described in the *Water Resources Management Plan* (WRMP) for Willowdale and Huntly (7 February 2025), which will be updated with the outcome of EPA Assessment 2385. Different and/ or additional management measures may be required following the completion of EPA Assessment 2253 for Myara North, Holyoake and O'Neil. The WRMP forms part of the water management framework for Alcoa's WA Mines, and Alcoa continues to collaborate with the Independent Technical Advisory Group (ITAG) to develop the Catchment Risk Assessment (CRA) methodology and the Drainage Design Manual (DDM). The WRMP addresses the following key risks:

- Contamination risks: Loss of hazardous substances like pathogens or hydrocarbons threatens water quality, especially in RPZs.
- Erosion and turbidity: Clearing land and steep slopes increase erosion and turbidity, potentially affecting drinking water sources.
- Increased salinity: Removing deep-rooted vegetation raises groundwater levels, potentially increasing salinity in streams and reservoirs.

Alcoa has developed a detailed water quality dataset from which it can monitor impacts. Historical and current surface water monitoring programs have been designed and implemented to evaluate ambient surface water conditions, improve knowledge around how climate may influence surface water flow and water quality, understand potential impacts associated with Alcoa's mining infrastructure at operational areas and other general mining footprint associated activities. Between 23 November 2019 and 3 October 2024 680 samples have been laboratory-analysed from 242 locations at Willowdale. For Huntly, 2,326 samples from 458 locations were analysed between 22 December 2004 and 1 October 2024. These data sets are considered to be "historical" in comparison to data required to be collected since WRMP-required sampling commenced in September 2024:

- At Willowdale WRMP sampling only showed exceedance of pH and this was across both Background/ Ambient locations and Receiving Environment/ General Mining locations, and so was concluded to not be mining influenced.
- At Huntly WRMP sampling showed exceedances for:

  pH (consistent across Source Surface Water Body, Background/ Ambient Location and Receiving Environment – General Mining);

  dissolved iron and dissolved manganese only in Receiving Environment – General Mining locations.

Future rounds of surface water sampling (more data from potentially impacted areas) will provide useful in demonstrating the presence/ absence of mining-related impacts.

Groundwater monitoring bores have been (and continue to be) installed across the Huntly and Willowdale mine sites for different internal Alcoa projects and for various purposes including:

- Determine background/ ambient groundwater quality conditions;
- Evaluate contamination within the vicinity of operational areas, water treatment facilities and/or water storage dams;
- Assess groundwater quality downgradient of mining areas;
- Assess groundwater/ surface water interactions;
- Confirm groundwater levels in the vicinity of active and proposed mine pits to evaluate potential waterlogging risks and to ensure mine pit levels are not within 2 m of the base of mining pits;
- Salinity monitoring; and



- Support specific research projects and closing knowledge gaps.

Groundwater sampling locations have been categorized as:

- Background/ Ambient Location: bores located upgradient or away from mining activities or in areas where no mining has occurred or is planned.
- Discharge Zone Monitoring: bores located within general mining areas (i.e., outside operational areas).
- Existing Operational Areas: bores located within operational areas (i.e., adjacent to infrastructure such as conveyors, buildings and fuelling areas).
- Water Level Monitoring: bores which are only monitored for water level / elevation.

Historical groundwater data is based on 197 laboratory-analyzed samples collected between 5 July 2022 and 13 July 2023 at Willowdale (all of which are from mining-affected areas – no Background/ Ambient locations. 714 samples from 674 locations at Huntly between 1 January 2015 and 12 July 2023 have been collected across Background, Discharge and Existing Operational locations. By the end of 2024 Alcoa had installed 678 groundwater monitoring bores. Note the time required to gain regulator approval for bore installation is significant, and not entirely within Alcoa's control.

Under an approved MMP, a Forest Clearing Advice (FCA) is required to be endorsed prior to the clearing of native vegetation. FCAs include Drainage Control Management Plans (DCMPs) for clearing pits and haul roads within public drinking water catchments. DCMPs, the development of pit extraction plans and the prevention of groundwater intersections are interrelated – pit design and the DCMP need to account for site-specific groundwater levels and their seasonal variations, amongst other things. The designed pit floor should ensure a separation distance of two meters between the pit floor and groundwater for the life of the pit. Conversations with operational staff in October 2025 suggest it is usual practice to apply an additional buffer.

A Groundwater Risk Assessment Framework (GWRAF) was developed by Water Corporation. Alcoa refers to the framework to inform how much pre-mining groundwater monitoring is required for each pit. Pits assessed to be Low do not require pre-mining groundwater monitoring under the GWRAF, pits assessed to be Moderate require at least one year of pre-mining groundwater monitoring, and Pits assessed to be High require at least two to three years of pre-mining monitoring. Due to changes to the mine plan and available drilling resources, groundwater bores with two to three years of data may not be available within or directly adjacent to a proposed pit. To mitigate the absence of data and enable mining to continue, Alcoa engaged WSP to develop estimated maximum groundwater levels based on recent groundwater monitoring data; it is updated annually following the winter peak.

Pit extraction plans detail the individual mining areas and their preparation includes reviewing the following information:

- Groundwater levels within proximity with a review of seasonal fluctuations to ensure the 2 m separation.
- Groundwater monitoring bore locations to ensure the two meter separation is achieved.

Once extraction plans are finalized, pit maps are developed for implementation. To ensure pits are developed in-line with the pit extraction plan, Alcoa completes as-built reviews on the actual pits. Unless recent lidar information is available, a current survey pick-up is completed by drones.

If updated modelling or monitoring data shows the two meter separation is at risk during mining, Alcoa investigates further controls that might include:



- Pit depth control - to maintain 2 m groundwater separation; or
- Dewatering spears; or
- Trenches and sumps; or
- Surface water management.

Alcoa is drilling additional bores which will further support the GWRAF and update the modelled groundwater surface.

Potential impacts to groundwater at the future mining areas of O'Neil, Myara North and Holyoake will be considered by the EPA as part of the Part IV approvals process for these mining areas (Assessment 2253). It is anticipated that groundwater monitoring will be required as part of the operational license for these deposits.

## 17.3 Project Permitting

The environmental approvals and reviews / reporting form part of the BSEC/MMPLG approvals process outlined in Section 3.6. Compliance with the MMP is demonstrated through an annual Compliance Assessment Report submitted to the Department of Jobs, Tourism, Science and Innovation.

From 14 December 2023, Alcoa is also required to comply with the requirements of the Section 6 exemption (the Exemption Order 2023). A Section 6 exemption under the Environmental Protection Act 1986 (EP) allows continued operations whilst the Environmental Protection Authority undertakes an assessment of the mining activities which were not previously referred. Compliance against the Section 6 exemption is monitored on a weekly basis by an independent compliance monitor and reported monthly to the Department of Water and Environmental Regulation.

Operational matters at the Willowdale and Huntly mines are licensed by the Department of Water and Environmental Regulation via instruments L6465/1989/10 and L6210/1991/10, respectively. These licenses condition the processing of ore and reporting is required annually to DWER describing the total volume of bauxite crushed and any non-compliance. The latest available reporting as of the date of this TRS is for the calendar year 2024, as summarized in Section 17.2.2.

Alcoa's EMS for Huntly and Willowdale has been certified as compliant against ISO14001 since February 2001. It was most recently re-certified in May 2025 and has an expiry date of 7 May 2028.

The only known requirement to post performance or reclamation bonds is a $100M AUD bank guarantee to help fund the Western Australian Government's response in the unlikely event of an impact to Perth's drinking water dams which is not rectified within the relevant time periods, announced as part of the Alcoa Transitional Approvals Framework (ATAF) on 14 December 2023. In September 2024 and October 2024, AofA delivered bank guarantees totalling $67M (A$100M) demonstrating confidence that operations will not impair drinking water supplies. The requirement to provide financial assurance will expire upon the completion of the WA EPA's assessment of the Company's mine plans.

## 17.4 Social or Community Requirements

Alcoa has established systems and processes to support maintenance of its social license to operate, and conducts an extensive program of community relations activities to ensure that the public is aware and informed regarding its operations.

Alcoa strives to align its social performance and community engagement to global leading practice and was admitted to ICMM in 2019. In addition, Alcoa's Western Australian operations are certified under the Aluminum Stewardship Initiative, valid until 16 January



2026, Alcoa has confirmed that the recertification process is progressing well with onsite audit complete and final reporting and formal certification to Version 3 to follow in early 2026.

### 17.4.1 Community Consultation

Related to the requirements of the BSEC/MMPLG, Alcoa's actions include an annual 5-year consultation process aligned with the 5 Year Mine Plan. The consultation process involves engaging with affected landowners.

Alcoa's consultation extends to state and local government and Gnaala Karla Booja Aboriginal Corporation representing the Traditional Owners of the area.

Where appropriate, the mine plan accommodates community requirements, in particular, concerns related to noise, dust, etc., and allows for buffer zones and modified working hours.

Community consultation (both in-bound (e.g. noise complaints) and out-bound (e.g. Alcoa-initiated engagement with stakeholder groups)) is recorded in the Community Consultation System (CCS). CCS allocates and tracks follow-up actions.

Alcoa's move towards formal, publicly scrutinized environmental impact assessment and approval under the State and Federal acts (Section 3.6) for the extraction of future resources will provide greater transparency around Alcoa's future operations that should go some way to addressing the challenges it faces with some parts of the wider community. Both EPA processes that are in progress, and both EPBC Act processes include opportunities for community comments, and those opportunities have been used by members of the community and organizations to provide Alcoa with feedback. In some instances, Alcoa has altered its proposed activities in response to community feedback.

In 2024, Alcoa broadened the range of stakeholders invited to provide feedback on the Five-Year Mine Plans, to take in many different interest and stakeholders groups, including:

- community consultation networks;
- forest recreation groups and clubs;
- environmental sustainability groups and organizations;
- chambers of commerce & industry;
- local businesses;
- tourist businesses & organizations;
- local & regional Aboriginal Corporations; and
- local community groups of interest.

Alcoa has continued to engage with Traditional Owners through the Gnaala Karla Booja Aboriginal Corporation on cultural heritage and environmental matters across its operational footprint. In May 2025, Alcoa submitted the Cultural Heritage Management Plan to the relevant Government regulator. Consultation is continuing with Gnaala Karl Booja Aboriginal Corporation on a Cultural Heritage Management Framework that it is intended to replace the May 2025 Cultural Heritage Management Plan in due course.

Alcoa seeks to add value to the communities where it operates and beyond. Through a drive for sustainable development and desire to support reputable non-profit and community-based organizations, community investment supports partnerships and initiatives that look to deliver long-term community benefits.

Alcoa supported the establishment of the Gnaala Karla Boodja Aboriginal Corporation Ranger program in 2024, which is designed to embed Noongar People in land management across Gnaala Karla Boodja land. Alcoa provided initial financial support (through the

Southwest Sustainability Alliance) to establish the program and in late 2024 identified opportunities for the Gnaala Karla Boodja Rangers to be engaged across operations at Willowdale and/ or Huntly in fee-for-service land management activities.

Each year Alcoa and its global charity, the Alcoa Foundation, invests in a wide variety of programs at the local, state, and national level. In 2024 Alcoa invested $5.85M in community partnerships across the Australian regions where it operates its business. For example, in 2024, more than 1,160 at-risk primary school children in Western Australia were screened, supporting both improved ear health and learning outcomes through the Alcoa Foundation's support of the Earbus Foundation in Australia.

In addition to community partnerships, employees are encouraged to participate each year in Alcoa Volunteers (volunteering as teams during work time) and employee giving programs. The Alcoa Community Together In Our Neighborhood (ACTION) program encourages employees to make a positive difference by volunteering in their communities with at least eight work-mates, Alcoa then matches these volunteering efforts with a $3,000 grant for nominated organizations; in 2024 Alcoa provided local charities with 60 ACTION grants.

### 17.4.2 Social Performance Management System

Alcoa's Social Performance Management System (SPMS), SP360, is in place across its global operations. The SPMS supports locations to undertake effective engagement with communities, manage their social risks, and maintain Alcoa's Social License to Operate.

SP360 includes the following management standards which guide social performance management:

- Social Performance Management Standard
- Human Rights Standard
- Indigenous and Land Connected Peoples Standard
- Cultural Heritage Management Standard.

Each location maintains a Social Performance Plan which details the activities Alcoa undertakes to support their understanding and management of social impacts and risks, including:

- Socio-economic baselines
- Social impact assessment and management plans
- Social risk assessments
- Stakeholder and community engagement planning
- Social commitments and obligation management
- Complaints and grievances handling.

## 17.5 Mine Closure Requirements

Alcoa's Closure Planning and Execution staff for Darling Range are located across multiple teams. The Global Planning Team are primarily responsible for developing the Long-Term Mine Closure Plans (LTMCPs) and life of asset planning for Alcoa's WA Mining Operations (Huntly and Willowdale). Short to Medium closure planning and execution is developed across organizational divisions and includes multidisciplinary inputs from Operations, Mid- and Short-term Planning, Finance, Centre for Excellence, Environment and Asset Management (both Fixed and Mobile Plant).

As described in Section 15.5.2, overburden is used to backfill adjacent, completed mining operations and the topsoil spread on top and contoured.

Current rehabilitation practices and closure planning have evolved positively since the 1990s. The agreed closure requirements for Darling Range centers around the return of Jarrah Forest across the site. End land uses are required to comply with the State's Forest Management Plan and include water catchment protection, timber production and biodiversity conservation. Completion Criteria were revised in 2015 by the MMPLG for rehabilitation works commencing in and after 2016. These criteria do not apply to areas which commenced rehabilitation prior to 2015 and represent a 'step forward' in rehabilitation practices at Darling Range.

The 2023-2027 MMP (and roll-overs), and EIA process being applied to Myara North and Holyoake represent another step forward in rehabilitation planning. Appropriate mine planning and closure implementation mitigates environmental risks to ecological, hydrological, social and physical receptors.

The 2023-2027 MMP (and roll-overs) aims to establish, and return to the State, a self-sustaining Jarrah Forest ecosystem, that meets the agreed forest values that will support similar management practices as that employed in the surrounding Northern Jarrah Forest. Alcoa is currently working on further revision to the Rehabilitation Completion Criteria as part of the 2024-2028 MMP approval which will come into effect from 2026.

Mine closure costs are considered as part of Asset Retirement Obligations (ARO) described in Section 18.0.

## 17.6 Local Procurement and Hiring

Alcoa's Local Community Supplier Policy defines "local" as it relates to Huntly and Willowdale as the localities of Keysbrook, North Dandalup, Dwellingup, Myara, Jarrahdale, Banksiadale, Inglehope,Etmilyn, Meelon, Harvey Waroona, Nanga, Cookernup and Yarloop. Within Alcoa's guidelines of safe, ethical, and competitive business practices, Alcoa's Local Community Supplier Policy states it will, among other things:

- Invite capable local business to bid on locally supplied or manufactured goods or services;
- Give preference to local business in a competitive situation;
- Work with local business interest groups to identify and utilize local suppliers; and
- Where possible, structure bids to enable local supplier participation.

Whilst the Policy does not specifically address local hiring, most of the mine's workforce are based within the close vicinity.

Alcoa also endeavors to add value to Traditional Owners and the local economy through the use of businesses owned by Traditional Owners, businesses that employ and work with Traditional Owners and locally owned businesses. Alcoa will help Traditional Owner businesses and local businesses to do business with Alcoa and encourage the employment of Traditional Owner and local labor. As noted in Section 17.4.1, Alcoa supported the establishment of the Gnaala Karla Boodja Aboriginal Corporation Ranger program in 2024. Alcoa have made a policy commitment to:

- Invite capable local Traditional Owner, Aboriginal and Torres Strait Islander and Local businesses to bid on every locally supplied or manufactured good or service.
- Give preference to Traditional Owner, Aboriginal and Torres Strait Islander and Local businesses in a competitive situation.
- Tender evaluations shall apply a minimum weighting of 10 per cent for Traditional Owner, Aboriginal and Torres Strait Islander and Local businesses.



- Work with Traditional Owner, Aboriginal and Torres Strait Islander and Local business interest groups to identify, utilize and build local supplier capability.
- Offer reduced Payment Terms to support the growth and sustainability of Traditional Owner, Aboriginal and Torres Strait Islander and Local business.

# 18.0 Capital and Operating Costs

Alcoa forecasts its capital and operating cost estimates based on annual budgets and historical actuals over the long life of the current operation. All values are presented in United States Dollars ($) unless otherwise stated.

## 18.1 Capital Costs

The operation is well-established, and the LOM plan outlines capital expenditure aligned with scheduled production rates throughout the mine's life. This includes future capital expenditures for major mine relocations to meet anticipated refinery production while sustaining ongoing operations.

Projected mine capital expenditure over the next nine years is estimated at $1,310 million. This amount includes not only the capital required to sustain operations within the nine-year valuation period, but also significant investment intended to enable mine life extension well beyond this timeframe.

Of the total projected capital, approximately $936 million represents the FEL-3 level estimates for the major mine moves. This includes $302 million for the Myara North Mine Move and $533 million for the Holyoake Mine Relocation. A further $101 million has been identified as contingency across both mine-move estimates.

A breakdown of the major expenditure areas and total expenditure over the Mine Plan is shown in Table 18-1.

**Table 18-1: Nine Year LOM Sustaining Capital Costs by Area**

| Project | Cost<br>$ Million | Percentage of Total |
|---|---|---|
| Mine Moves | 936 | 71% |
| Conveyor Belt Replacements | 67 | 5% |
| Haul Road Improvements | 178 | 14% |
| Other Sustaining capital | 129 | 10% |
| **Total** | **1,310** | **100%** |

Other capital costs are for replacement of conveyors, haul road improvements and other sustaining capital needed to continue the operations.

Alcoa’s sustaining capital estimates for Darling Range are derived from annual budgets and historical actuals over the long life of the current operation. According to the American Association of Cost Engineers (AACE) International, these estimates would generally be classified as Class 1 or Class 2 with an expected accuracy range of -3% to -10% to +3% to +15%.

## 18.2 Operating Costs

The main production mining operations are primarily Owner-operated using Alcoa equipment and employees, with contractors engaged for specific supporting activities.

Operating costs are derived from historical site cost data and, in the SLR QP’s opinion, achieve an accuracy range of -10% to +15%, which is appropriate for this level of planning.

No material factors have been identified that would significantly impact operating costs over the LOM.

Year-to-year variations are expected due to routine maintenance outages and production schedule fluctuations.

Table 18-2 presents both the forecast costs for 2026 and average operating costs over the nine-year LOM. As announced in September 2025, the Kwinana refinery permanently closed, following an end to production in the second quarter of 2024.

The mine plans and operational cost projections have been revised accordingly.

**Table 18-2: LOM Mine Operating Costs by Category***

| Cost Centre | 2026 ($/wmt) | Average LOM ($/wmt) | Percentage of Operating Cost |
|---|---|---|---|
| Direct Labor | $3.83 | $5.16 | 35% |
| Services | $2.26 | $2.30 | 16% |
| Other | $1.54 | $1.64 | 11% |
| Corporate Chargebacks for support services | $2.11 | $1.33 | 9% |
| Energy | $0.19 | $0.11 | 1% |
| Fuel | $0.46 | $1.22 | 8% |
| Operating Supplies and Spare Parts | $0.81 | $0.98 | 7% |
| Maintenance (fixed plant and mobile fleet) | $0.90 | $1.98 | 13% |
| **Mine Operating Cash Cost ($/wmt)** | **$12.10** | **$14.72** | **100%** |
| | | | |
| **Off-site Costs** | | | |
| G & A, selling and other expenses | $1.21 | $0.89 | |
| R & D Corporate Chargebacks | $0.12 | $0.14 | |
| Other COGS | $0.23 | $0.21 | |
| **Total Cash Operating Costs** | **$13.66** | **$15.96** | |

* Due to rounding, numbers presented may not add up precisely to the totals provided

Services costs include contractor costs for certain mining activities such as in noise sensitive areas and for haul road construction services, in select areas of pit development, and during landscaping activities for rehabilitation after mining.

As of December 2025, the Huntly and Willowdale operations together employ 1,181 employees consisting of 37 technical, 124 management and 849 operations employees. Additionally, 171 employees are centrally employed on the combined operations.

Table 18-3 summarizes the current workforce for the operations.

**Table 18-3: Workforce Summary**

| Category | Technical | Management | Operations | Total |
|---|---|---|---|---|
| Huntly | 25 | 83 | 580 | **688** |
| Willowdale | 12 | 41 | 269 | **322** |
| Central | 46 | 21 | 104 | **171** |
| **Total** | **83** | **145** | **953** | **1,181** |



As regards mine closure, compensation for vegetation clearing is paid in advance and rehabilitation is an ongoing process that is incorporated into the mining cost (as part of Asset Retirement Obligations (ARO)).



# 19.0 Economic Analysis

## 19.1 Economic Criteria

Alcoa prepares a rolling long-term mine plan for operational and business planning purposes.

The assumptions used in the analysis are current as of 31 December 2025.

A technical-economic model was prepared on an after-tax discounted cash flow (DCF) basis, the results of which are presented in this subsection. The cashflow is presented on a 100% attributable basis.

Alcoa has applied a 10.25% discount rate for DCF analysis. The SLR QP is of the opinion that a 10.25% discount rate is reasonable and appropriate for after-tax cash flow analysis of large-scale bauxite mining operations in Western Australia with a demonstrable operating track record, considering both project-specific factors and sovereign risk.

Key criteria used in the analysis are discussed elsewhere throughout this TRS. General assumptions used are summarized in Table 19-1. All values are presented in $ unless otherwise stated.

**Table 19-1: Technical-Economic Assumptions**

| Description | Value |
|---|---|
| Start Date | January 1, 2026 |
| Mine Life based on Mineral Reserves | 9 years |
| Average LOM Price Assumption | $28.74/t |
| Total Operating Costs | $4,127.4 million |
| Capital over nine years | $1,309.6 million |
| Income tax | $412.0 million |
| Discount Rate | 10.25% |
| Discounting Basis | End of Period |
| Corporate Income Tax Rate | 30% |
| Model Basis | Nominal |

Table 19-2 provides a summary of the estimated mine production over the nine-year model life.

**Table 19-2: LOM Production Summary**

| Description | Units | Value |
|---|---|---|
| Total ROM Ore | Mt | 258.5 |
| Waste Mined | Mt | 83.2 |
| Total Material Moved | Mt | 341.7 |
| Annual Average Ore Mining Rate | Mtpa | 28.7 |

## 19.2 Cash Flow Analysis

The economic analysis presented herein complies with S-K 1300 requirements and is based on a reserve-based analysis using only Proven and Probable Mineral Reserves for the current nine-year mine planning window.



### 19.2.1 Economic Analysis

The economic analysis considers only the Proven and Probable Mineral Reserves, supporting a nine-year mine life (FY26 - FY34) with production averaging 28.7 Mtpa (wet tonnes).

Production volumes are determined by refinery requirements rather than mining constraints, with annual throughput varying from 27.9 Mtpa (FY27) to 29.2 Mtpa (FY30). The SLR QP confirms that sufficient Proven and Probable Reserves exist to support this production profile.

Using the defined 9-year detailed mine plan period, at a 10.25% discount rate and average bauxite price of $28.74/t, the operation generates an after-tax NPV of $75.7M. This figure reflects substantial capital requirements ($1,310M) during the period.

Pricing is determined using an internal transfer price methodology that considers both the mine's operating cost structure and the value to Alcoa's integrated refining operations. The starting price of $25.45/t (2026) escalates by 3% annually, resulting in an average of $28.74/t over the nine-year period.

This valuation is presented on a 100% attributable basis using nominal cash flows which allow for annual price inflation of 3% and cost escalation ranging primarily between 2% and 3%.

The SLR QP notes several factors supporting potential operation beyond 2034, including demonstrated success in annual Resource to Reserve conversion through infill drilling, extensive operational history, scale of existing deposits, and consistent historical Reserve replacement rate.

### 19.2.2 Analysis Summary



Table 19-3 summarizes the key project economic results and estimated cash flows provided for the period FY26 to FY34. The economic analysis, conducted using the technical inputs and cost estimates presented in this Technical Report Summary, confirms positive cash flows that supports the statement of Mineral Reserves.



## Table 19-3: LOM Indicative Economic Results

| | | FY26 | FY27 | FY28 | FY29 | FY30 | FY31 | FY32 | FY33 | FY34 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Macro Assumptions** | | | | | | | | | | |
| Region | | Australia | Australia | Australia | Australia | Australia | Australia | Australia | Australia | Australia |
| Days/Year | | 365 | 365 | 366 | 365 | 365 | 365 | 366 | 365 | 365 |
| InterCo Price | | $ 25.45 | $ 26.21 | $ 27.00 | $ 27.81 | $ 28.64 | $ 29.50 | $ 30.39 | $ 31.30 | $ 32.24 |
| 3P Price | | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Tax Rate | | 30.00% | 30.00% | 30.00% | 30.00% | 30.00% | 30.00% | 30.00% | 30.00% | 30.00% |
| **Production** | | | | | | | | | | |
| InterCo Production (Wet Kt) | | 28,373,053 | 27,912,746 | 29,069,440 | 29,147,038 | 29,203,790 | 28,759,913 | 28,744,530 | 28,617,303 | 28,720,632 |
| 3P Production (Wet Kt) | | - | - | - | - | - | - | - | - | - |
| Total Production (Wet Kt) | | 28,373,053 | 27,912,746 | 29,069,440 | 29,147,038 | 29,203,790 | 28,759,913 | 28,744,530 | 28,617,303 | 28,720,632 |
| **Shipments** | | | | | | | | | | |
| InterCo Shipments (Wet Kt) | | 28,373,053 | 27,912,746 | 29,069,440 | 29,147,038 | 29,203,790 | 28,759,913 | 28,744,530 | 28,617,303 | 28,720,632 |
| 3P Shipments (Wet Kt) | | - | - | - | - | - | - | - | - | - |
| Total Shipments (Wet Kt) | | 28,373,053 | 27,912,746 | 29,069,440 | 29,147,038 | 29,203,790 | 28,759,913 | 28,744,530 | 28,617,303 | 28,720,632 |
| **Income Statement** | | | | | | | | | | |
| Sales | | $ 722,094,198 | $ 731,690,768 | $ 784,872,107 | $ 810,576,264 | $ 836,519,168 | $ 848,518,824 | $ 873,506,909 | $ 895,729,880 | $ 925,933,017 |
| Cost of goods sold | | 349,944,684 | 413,560,056 | 471,815,767 | 466,410,732 | 481,778,427 | 462,929,982 | 421,350,671 | 399,604,421 | 394,800,195 |
| Selling, general administrative, and other expenses | | 34,453,305 | 24,131,389 | 24,867,268 | 24,879,324 | 24,690,156 | 24,501,068 | 24,325,036 | 24,166,150 | 24,024,296 |
| Research and development expenses | | 3,523,757 | 3,902,258 | 4,026,059 | 4,029,577 | 3,998,978 | 3,968,310 | 3,939,726 | 3,913,915 | 3,890,869 |
| Provision for depreciation, depletion, and amortization | | 117,753,807 | 180,142,094 | 208,034,505 | 270,043,750 | 274,855,772 | 259,485,337 | 222,671,684 | 208,839,366 | 186,952,539 |
| Restructuring and other charges | | - | - | - | - | - | - | - | - | - |
| Other expenses (income), net | | - | - | - | - | - | - | - | - | - |
| Total costs and expenses | | 505,675,553 | 621,735,797 | 708,743,599 | 765,363,383 | 785,323,333 | 750,884,697 | 672,287,116 | 636,523,853 | 609,667,899 |
| **Income (loss) before income taxes** | | **216,418,645** | **109,954,971** | **76,128,508** | **45,212,881** | **51,195,836** | **97,634,127** | **201,219,793** | **259,206,028** | **316,265,119** |
| Provision for income taxes | | 64,925,593 | 32,986,491 | 22,838,552 | 13,563,864 | 15,358,751 | 29,290,238 | 60,365,938 | 77,761,808 | 94,879,536 |
| **Net income** | | **151,493,051** | **76,968,479** | **53,289,956** | **31,649,017** | **35,837,085** | **68,343,889** | **140,853,855** | **181,444,219** | **221,385,583** |
| Less: Net income attributable to noncontrolling interest | | - | - | - | - | - | - | - | - | - |
| Net Income (Loss) Attributable to Alcoa Corporation | | 151,493,051 | 76,968,479 | 53,289,956 | 31,649,017 | 35,837,085 | 68,343,889 | 140,853,855 | 181,444,219 | 221,385,583 |
| **EBITDA** | | **334,172,452** | **290,097,065** | **284,163,013** | **315,256,631** | **326,051,608** | **357,119,464** | **423,891,477** | **468,045,394** | **503,217,657** |
| **EBIT** | | **216,418,645** | **109,954,971** | **76,128,508** | **45,212,881** | **51,195,836** | **97,634,127** | **201,219,793** | **259,206,028** | **316,265,119** |
| **Cash Flow Statement** | | | | | | | | | | |
| CF Income before NCI | | $ 151,493,051 | $ 76,968,479 | $ 53,289,956 | $ 31,649,017 | $ 35,837,085 | $ 68,343,889 | $ 140,853,855 | $ 181,444,219 | $ 221,385,583 |
| CF Depreciation, depletion, and amortization | | 117,753,807 | 180,142,094 | 208,034,505 | 270,043,750 | 274,855,772 | 259,485,337 | 222,671,684 | 208,839,366 | 186,952,539 |
| CF Working capital change | | (2,748,796) | 81,259,855 | 7,708,154 | (12,047,134) | (7,565,128) | 1,066,747 | 16,381,692 | 3,653,826 | (1,989,135) |
| CF Equity earnings net of dividends | | - | - | - | - | - | - | - | - | - |
| CF Pension contributions net of accrual | | - | - | - | - | - | - | - | - | - |
| CF Tax payments net of accrual | | - | - | - | - | - | - | - | - | - |
| CF Other (Cash from Operations) | | (181,036,740) | (169,095,893) | (148,711,188) | (148,790,741) | (148,240,747) | (140,024,211) | (137,710,260) | (136,559,541) | (136,843,276) |
| **Cash from Operations** | | **85,461,322** | **169,274,536** | **120,321,426** | **140,854,892** | **154,886,982** | **188,871,762** | **242,196,970** | **257,377,871** | **269,505,711** |
| CF Distributions to NCIs | | - | - | - | - | - | - | - | - | - |
| CF Contributions from NCIs | | - | - | - | - | - | - | - | - | - |
| CF Change in debt | | - | - | - | - | - | - | - | - | - |
| CF Stock issuances / repurchases | | - | - | - | - | - | - | - | - | - |
| CF Other (Cash from Financing) | | - | - | - | - | - | - | - | - | - |
| **Cash from Financing** | | - | - | - | - | - | - | - | - | - |
| CF Capital expenditures | | (159,713,208) | (271,417,054) | (161,359,839) | (99,925,798) | (116,377,289) | (198,600,000) | (216,900,000) | (57,600,000) | (27,700,000) |
| CF Acquisitions/divestitures | | - | - | - | - | - | - | - | - | - |
| CF Investments | | - | - | - | - | - | - | - | - | - |
| CF Other (Cash from Investing) | | - | - | - | - | - | - | - | - | - |
| **Cash from Investing** | | **(159,713,208)** | **(271,417,054)** | **(161,359,839)** | **(99,925,798)** | **(116,377,289)** | **(198,600,000)** | **(216,900,000)** | **(57,600,000)** | **(27,700,000)** |
| **Free Cash Flow** | | **$ (74,251,886)** | **$ (102,142,519)** | **$ (41,038,413)** | **$ 40,929,094** | **$ 38,509,693** | **$ (9,728,238)** | **$ 25,296,970** | **$ 199,777,871** | **$ 241,805,711** |
| | | | | | | | | | | |
| **Model NPV** | **$ 75,735,619** | **$ (74,251,886)** | **$ (92,646,275)** | **$ (33,762,404)** | **$ 30,541,920** | **$ 26,064,876** | **$ (5,972,294)** | **$ 14,086,300** | **$ 100,901,400** | **$ 110,773,982** |

## 19.3 Sensitivity Analysis

Project risks can be identified in both economic and non-economic terms. Key economic risks were examined by running cash flow sensitivities.

The operation is most sensitive to bauxite pricing, followed by operating costs, with capital expenditure having a more moderate impact.

**Figure 19-1: Sensitivity Analysis (NPV)**

NPV $M

OPEX

| | 80% | 90% | 100% | 110% | 120% |
|---|---|---|---|---|---|
| 8.50% | $502.27 | $303.32 | $104.38 | -$ 94.57 | -$ 293.52 |
| 9.50% | $472.91 | $280.22 | $87.53 | -$ 105.16 | -$ 297.85 |
| 10.25% | $452.16 | $263.96 | **$75.74** | -$ 112.48 | -$ 300.71 |
| 11.50% | $419.91 | $238.73 | $57.56 | -$ 123.62 | -$ 304.79 |
| 12.50% | $395.99 | $220.11 | $44.23 | -$ 131.64 | -$ 307.52 |

NPV $M

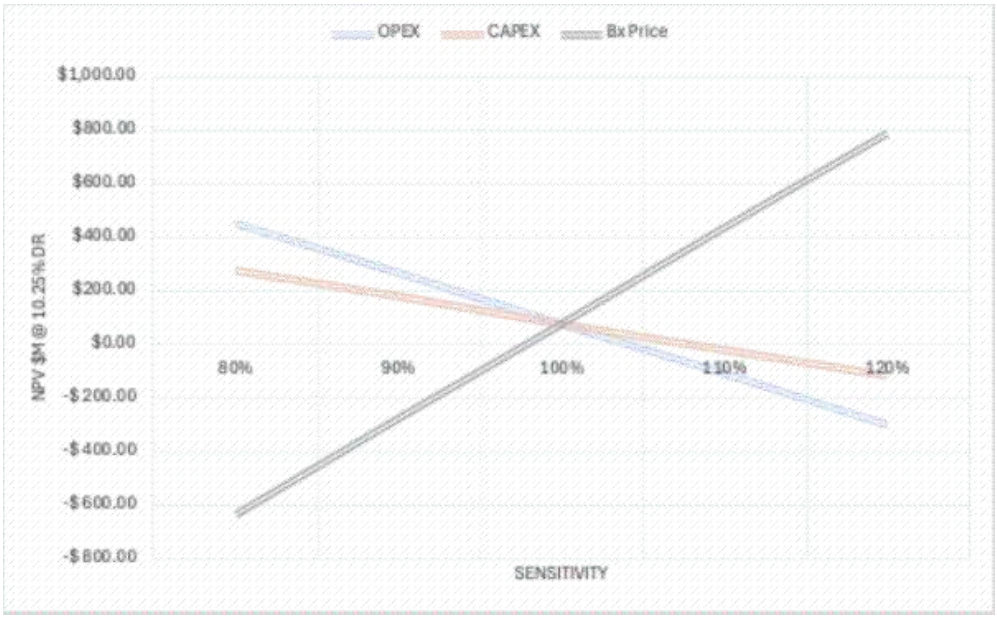
CAPEX

| | 80% | 90% | 100% | 110% | 120% |
|---|---|---|---|---|---|
| 8.50% | $308.80 | $206.49 | $104.38 | $2.26 | -$ 99.85 |
| 9.50% | $286.55 | $187.04 | $87.53 | -$ 11.98 | -$ 111.50 |
| 10.25% | $271.03 | $173.38 | **$75.74** | -$ 21.91 | -$ 119.56 |
| 11.50% | $246.94 | $152.25 | $57.56 | -$ 37.13 | -$ 131.82 |
| 12.50% | $229.14 | $136.69 | $44.23 | -$ 46.22 | -$ 140.66 |

NPV $M

Bx Price

| | 80% | 90% | 100% | 110% | 120% |
|---|---|---|---|---|---|
| 8.50% | -$ 650.12 | -$ 272.67 | $104.38 | $481.62 | $858.87 |
| 9.50% | -$ 642.21 | -$ 277.34 | $87.53 | $452.40 | $817.26 |
| 10.25% | -$ 636.36 | -$ 280.31 | **$75.74** | $431.79 | $787.84 |
| 11.50% | -$ 626.80 | -$ 284.62 | $57.56 | $399.73 | $741.91 |
| 12.50% | -$ 619.30 | -$ 287.53 | $44.23 | $376.00 | $707.77 |



# 20.0 Adjacent Properties

The Darling Range has no material adjacent properties.

# 21.0 Other Relevant Data and Information

No additional information or explanation is necessary to make this Technical Report Summary understandable and not misleading.

# 22.0 Interpretation and Conclusions

## 22.1 Geology and Mineral Resources

- Bauxite Mineral Resource estimates for the Property were prepared by Alcoa and were reviewed and adopted by SLR.
- The total estimated Measured and Indicated Mineral Resource exclusive of Mineral Reserves as at 31 December 2025, has been estimated at 186.8 Mt at a grade of 30.0% AL and 1.8% SI. Of this, the Measured portion is estimated to be 133.6 Mt (or 72% of the total Measured and Indicated Resources) at 30.1% AL and 1.9% SI, and the Indicated portion is estimated to be 53.2 Mt (or 28% of the total Measured and Indicated Resources) at 29.7% AL and 1.6% SI, and the Inferred Resource is estimated to be 51.9 Mt at 31.9% AL and 1.1% SI.
- Bauxite deposits on the Property generally occur as erratically distributed alumina-rich lenses within eroded laterites mantling granites and are thought to have formed from the lateritization of the peneplained surface of the Western Gneiss Terrane rocks. The laterite profile typically consists of an Overburden unit, underlain by Hardcap, Friable Zone, and Basal Clay, respectively. Of these, the Hardcap and Friable Zone contain the bauxite mineralization targeted by the current mining operation.
- Exploration and resource definition drilling is completed by Alcoa using vacuum drill rigs, by contractor Wallis Drilling Pty Ltd using their patented reverse circulation (RC) air core (AC) rigs, and by contractor JSW Drilling Pty Ltd using a similar method. Samples are taken on 0.5 m intervals through the bauxitic horizon and into the underlying clay material. Sample mass per sample interval is nominally 1.5 kg sample to obtain a representative sample which is logged and sub-sampled via a riffle splitter to obtain a retained split of 150 g to 200 g which is sent to the laboratory for analysis.
- The SLR QP considers the drilling and sampling protocol employed appropriate to obtain representative samples to support the accurate interpretation and definition of the zone of economic bauxite to support accurate Mineral Resource estimation.
- Sample preparation and analysis were performed by Bella Analytical Systems Pty Ltd (Bella), an independently owned and operated laboratory, located at Alcoa's Kwinana Mining Laboratory (KWI). Fourier Transform Infrared Spectrometry (FTIR) is the primary geochemical analytical technique used by Alcoa. This analytical method has been successfully applied at the Darling Range operations for more than a decade and is routinely validated by industry standard X-Ray Fluorescence (XRF) and wet chemical analytical procedures.
- The SLR QP considers the sample preparation, security, and FTIR analytical procedures to be adequate to obtain representative samples and accurate assays for the estimation of Mineral Resources and Mineral Reserves. The quality assurance program in place demonstrates acceptable accuracy and precision.
- Dry bulk density testwork has been completed historically using a variety of sampling (grab samples, diamond drillcore, test pits) and testing methods. Statistical analysis of results has been completed based on logged geology and whether samples were within the Caprock zone, Friable zone, or Clay zone. For the Caprock zone a total of 421 samples (grab samples to diamond core) were used in the statistical analysis. Dry bulk density results for the caprock zone were typically in the range of 1.8 g/cm$^3$ to 2.5 g/cm$^3$ with a mean dry bulk density value of 2.05 g/cm$^3$ calculated. Caprock samples with a higher $Fe_2O_3$ (FE) content have increased density values. The assignment of block dry density values within the Caprock zone uses an algorithm

based on the estimated block FE value. A review of the mean bulk density results shows no notable differences in the average caprock dry density of samples across programs/years or from different regions. A total of 24 samples have been collected in the friable ore zone for bulk density testwork. The bulk density mean-average of the Friable zone is 1.90 g/cm$^3$.

- The SLR QP considers that bulk density testwork to date is adequate to support the application of domain average density values to obtain a global tonnage estimate. A review of reconciliation metrics to date shows estimated Mineral Resource tonnages fall within a 5% to 10% tolerance of actual mined tonnages on a monthly basis. Ongoing bulk density testwork is considered warranted to support the application of current bulk density domain values to areas of future planned production.
- Data management and quality assurance processes have been implemented to ensure that the quality of assay data meets minimum acceptable thresholds and errors do not occur in the data transfer process from the laboratory to the Alcoa acQuire database.
- The SLR QP has reviewed the Darling Range data verification protocols and independently performed data validity checks on the assay database and has reviewed quality control data to ensure assays were accurate, precise, and reflected what was contained within certified reference certificates from the laboratory.
- The SLR QP is of the opinion that the sample database is reliable and adequate for the purposes of Mineral Resource and Mineral Reserve estimation.
- Geological modelling is based on logging and assay data from drillholes to define the economic bauxite zone. Mineral Resources were estimated using two dimensional (2D) polygonal estimation (ResTag), gridded seam models (GSM), or three dimensional block models (3DBM). As part of Alcoa's continuous improvements, estimates are gradually being migrated to the 3DBM approach.
- The SLR QP considers the geological interpretation and grade estimation processes to be appropriate. Further refinement and definition of the geochemical variation present vertically in the weathered bauxitic profile will occur once 3D block model estimates are developed within areas which are currently estimated using the ResTag approach. A total of 51.9 Mt or 22% of the reported Mineral Resource exclusive of Mineral Reserves as at 31 December 2025 comes from estimates completed using the ResTag approach, while 51.9 Mt or 8% of the reported Mineral Resource inclusive of Mineral Reserve uses the ResTag approach. The SLR QP considers that no material change in the reported Mineral Resource will occur in these areas with the implementation of a 3DBM approach.
- The Mineral Resource classification approach reflects the quality of the supporting data, drill hole spacing, and the estimation methodology used.
- In SLR QP's opinion, the Mineral Resource classification approach appropriately reflects the expected confidence in the estimated Mineral Resource, in accordance with the S-K 1300 definitions.
- RPEE for the Mineral Resources have been demonstrated by economic mining of the defined bauxite zone over the life of the operation. Cut-off criteria applied in developing the reported Mineral Resource have been chosen taking into account economic criteria which include mining, haulage and processing costs, and required minimum quality specifications for the refinery to deliver a product which meets minimum acceptable saleable product standards.

- Mineral Resources estimated using polygonal methods (ResTag and GSM) are reported above a cut-off value of ≥27.5% AL, ≤3.5% SI, and ≤4 kg/t OX, that is implicit in the delineation of the bauxite layer in the geological modelling stage.
- Mineral Resources estimated using a 3DBM approach are economically evaluated based on a 'Value in Use' (VIU) calculation which considers individual and cumulative block grades to identify zones of bauxite that meet the minimum grade and quality specification required by the refinery (taking into account mining considerations and blending opportunities). The VIU calculation used in the definition and reporting of Mineral Resources uses a life of mine (LOM) price of $500/t for alumina and $300/t for caustic soda, respectively.
- The SLR QP considers that Alcoa have appropriately substantiated that the reported Mineral Resource meets RPEE.
- In the SLR QP's opinion the reported Mineral Resource has been developed and classified to an appropriate and adequate standard. Further refinement and development in certain areas is considered possible. A listing of recommendations are summarized in Section 1.1.2.1 or 23.1 of this report.

## 22.2 Mining and Mineral Reserves

- Proven Mineral Reserves for the Property are estimated to total 33.4 Mt, with weighted average grades of 29.3% AL and 1.8% SI. Probable Mineral Reserves are estimated to total 359.5 Mt, at weighted average grades of 31.4% AL and 1.5% SI. Together, this results in total Proven and Probable Mineral Reserves of 392.9 Mt, with weighted average grades of 31.2% AL and 1.5% SI. The effective date of the estimate is 31 December 2025.
- The SLR QP has used the 31 December 2025 Mineral Resource estimate as the basis for its Mineral Reserve estimate, applying Modifying Factors only to those Resources classified as Measured Mineral Resources and Indicated Mineral Resources.
- The bauxite operations are mature, long-standing mining projects with an extensive production history. The major historical development capital has long since been depreciated, and current capital requirements predominantly relate to sustaining activities and planned crusher relocations. These sustaining capital levels, along with observed operating costs, are considered appropriate for use in economic analysis. The review of the FEL-2 capital studies for the Myara North and Holyoake crusher moves provides further technical support. Consequently, the SLR QP considers that the standard of technical and economic evaluation is consistent with that expected of a Feasibility Study (FS), based on the long record of profitable operation and the robustness of the Modifying Factors. The SLR QP has reviewed the operating procedures, planning assumptions, and parameters applied across the operations.
- The SLR QP considers that the accuracy and confidence in the Mineral Reserve estimate to be appropriate for the classification applied, which is supported by both the conservative operational processes and the long operational history.
- The SLR QP is not aware of any risk factors associated with, or changes to, any aspects of the Modifying Factors such as mining, metallurgical, infrastructure, permitting, or other relevant factors that could materially affect the current Mineral Reserve estimate. The Darling Range operations have however undergone some changes as related to the permitting requirements which are discussed in this report; namely the approvals process, river corridor constraints, restoration obligations, and any required adjustments to accommodate the closure of the Kwinana refinery.



## 22.3 Mineral Processing

- The operating data between 2010 and 2025 indicates that the product from the Darling Range operations consisted of an average AL grade of 32% with SI below the target for refinery feed.
- The SLR QP is of the opinion that the Darling Range operation demonstrated that ore can be effectively crushed and supplied to a refinery for further upgrading to produce alumina. The historical operational data confirmed that the ore consistently met refinery specifications without any deleterious elements.
  - Based on this, and additional information provided by Alcoa regarding the mine plan, it is reasonable to assume that the bauxite mined from Darling Range will meet the refinery specifications for the next nine years.

## 22.4 Infrastructure

- The Darling Range mining operations have established and operational infrastructure, with mining hubs that host administrative offices, as well as crushing facilities and maintenance facilities.
  - Hubs are relocated periodically as production moves away from the hub and transportation costs increase. These relocations are well-understood with planning and associated budgeting occurring well in advance of relocations; production restarted seven days after the most recent shutdown.
- An extensive haul road network and overland conveyors transport crushed bauxite to the refineries.
  - Bauxite is transferred from each mine to the refineries primarily via long distance conveyor belt.
  - Alumina produced by the Pinjarra and Wagerup refineries is then shipped to external and internal smelter customers through the Kwinana and Bunbury ports.
  - As intended, the Kwinana refinery ceased production in the second quarter of 2024 as part of the phased curtailment, and the refinery has now permanently closed.
- The Huntly and Willowdale mines are located near the towns of Pinjarra and Waroona respectively. These are easily accessible via the national South Western Highway, a sealed single carriageway road, spanning almost 400 km from the southern side of Perth to the southwest corner of Western Australia.
- Sealed access roads to the main hubs have been established, connecting Huntly and Willowdale to the road network.
- Major haul roads have been established to each mining area, while secondary haul roads cross-cut each individual mining plateau. Roads are unsealed and require continuous maintenance.
- The Darling Range's Pinjarra refinery receives power from the South West Interconnected System (SWIS) but also has internal generation capacity of 100 MW from four steam driven turbine alternators, with steam produced by gas fired boilers and a gas turbine Heat Recovery Steam Generator (HRSG).
  - The refinery supplies power to the Huntly Mine by a 33,000 volt power supply line and two 13,800 volt lines.



- The Wagerup refinery is a net exporter of power to the SWIS, with internal generation capacity of 108 MW from three steam driven turbine alternators and one gas turbine; steam being generated by gas fired boilers.
  - The refinery supplies power to the Willowdale Mine by a single 22,000 volt power supply.
- Water is used on the mines for dust suppression, dieback washdown, vehicle washdown, workshops, conveyor belt wash, construction, and domestic purposes.
  - The water supplies for mining consist of licensed surface water sources supplemented with treated wastewater from vehicle washdowns, stormwater runoff and maintenance workshops.
  - The annual volume of freshwater abstracted under the Department of Water and Environmental Regulation (DWER) surface water licenses and Water Corporation supply agreements was as follows in 2025:
    - 0% of the annual entitlement from Boronia Dam
    - 6.5% of the Banksiadale Dam surface water license volume
    - 96.8% of the Samson Dam surface water license volume.

    An additional 790,600 kL was also abstracted from South Dandalup Dam under the agreement with Water Corporation.
- Onsite facilities include offices, ablutions, crib-rooms, and workshops, however there are no Alcoa accommodation facilities, as the Huntly and Willowdale mining areas are close to established population centers.
- No tailings are generated within the boundaries of the mining operations, and the majority of overburden (waste) is used to rehabilitate the previously mined out areas. Residue from processing is generated downstream of the mines and is not considered in this TRS, although they are considered as a cost and as part of the financial evaluation.
- Overburden is segregated for later contouring and rehabilitation of adjacent, completed mining operations. Caprock and other non-viable rock is used to backfill these shallow, completed pits and the viable topsoil is spread on top, contoured, and revegetated.

## 22.5 Environment

- Alcoa has established processes to facilitate conformance with environmental requirements, identifying sensitive areas ahead of time enables them to be managed ahead of disturbance.
- Alcoa is modernizing its environmental approvals framework for its Huntly Bauxite Mine and Pinjarra Alumina Refinery, by referring future mining plans for assessment under Part IV of the Western Australian *Environmental Protection Act 1986* (EP) and the Australian *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) in 2020.
- Mining in some areas became more constrained in 2023 as a result of internal and external factors. This continued into 2024 and 2025 and has resulted in a presumed temporary decrease in operability and associated decrease in Reserve estimation.
- The 2023-2027 MMP describes Alcoa’s proposed mining operations for the Huntly and Willowdale mines within ML1SA from 1 January 2023 to 31 December 2027. The 2023-2027 MMP was referred to the Environmental Protection Authority (EPA) in 2023 by a third party.

- On 14 December 2023 the State Government announced the *Alcoa Transitional Approvals Framework* which enables Alcoa to continue mining as defined in the 2023-2027 MMP while the formal EPA Environmental Impact Assessment (EIA) is in progress. The State Government reserves the right to, with reasonable notice, withdraw or amend the exemption at any point. The 2023 Exemption Order is central to the Framework.
- In October 2024 the Premier rolled over the 2023-2027 approval to cover 2024-2028 with the same conditions.
- The Company is aiming to have the 2025-2029 MMP in place in the first half of 2026.
- On 18 February 2026, the Federal Minister for the Environment and Water announced Alcoa would enter into enforceable undertakings related to clearing that occurred between 2019 and 2025, and that the government had entered a strategic assessment agreement with Alcoa for its Huntly and Willowdale mining operations. At the same time, Alcoa was granted a national-interest exemption allowing for limited land clearing and mining operations to continue for a period of 18 months, while the strategic assessment is completed.
- The Company is committed to continuing to work collaboratively with stakeholders to achieve Ministerial decisions on future mining plans at Holyoake and Myara North by the end of 2026. The TRS for 2024 indicated approvals were expected in the first quarter of 2026, this is now estimated to be the end of 2026. The timeframe for approvals under the EP Act and EPBC Act can be estimated, but not predicted with certainty; further delays are possible.
- Construction for Myara North, Holyoake, and O'Neil will commence pursuant to the requirements of the State and Federal approvals, which will be issued upon completion of the EPA and EPBC assessment processes.
- Alcoa has made progress in drafting and implementing a number of new management plans and processes required to meet current compliance requirements.
- Alcoa's mine sites are monitored in accordance with the conditions of Government authorizations and its operational licenses at Huntly (L6210/1991/10) and Willowdale (L6465/1989/10) and the MMP. Compliance and reporting is also required under the Environmental Protection (Darling Range Bauxite Mining Proposals) Exemption Order 2023. Outcomes of and compliance with the management and monitoring programs are tracked within Alcoa's Environmental Management System and reported in monthly and annual reports to regulators including the BSEC (previously MMPLG) and DWER (at least annually, according to MMPLG requirements and Part V License requirements), the Minister for State Development (in accordance with the Exemption Order):
  - Alcoa provided the monthly reports for January to December 2024, and January to June 2025 required under Clause 10 of the 2023 Exemption Order, no non-compliances had occurred. Reporting continues on a monthly basis; more recent reporting will be reviewed in the next TRS;
  - Review of Alcoa's most recent Annual Environmental report to the Jobs, Tourism, Science, and Innovation (JTSI) (dated July 2025) and both Part V Licence Annual Environmental Reports largely reported compliance with environmental commitments and success of operational controls to manage environmental objectives.
- Alcoa implements a comprehensive water management and monitoring program in accordance with the requirements of its abstraction and operational licenses.



- Alcoa's groundwater monitoring program is extensive and continues to evolve.
- Alcoa has established systems and processes to support maintenance of its social license to operate and conducts an extensive program of community relations activities to ensure that the public is aware and informed regarding its operations.
- Alcoa has formally consulted and engaged survey work from the relevant Traditional Owners across its operational footprint; Alcoa supported the establishment of the Gnaala Karla Boodja Aboriginal Corporation Ranger program in 2024, which is designed to embed Noongar People in land management across Gnaala Karla Boodja land.
- Alcoa's Social Performance Management System (SPMS), SP360, is in place across its global operations. The SPMS supports locations to undertake effective engagement with communities, manage their social risks and maintain Alcoa's Social License to Operate.
- Alcoa's Closure Planning and Execution staff for Darling Range are located across multiple teams. The Global Planning Team is primarily responsible for developing the Long-Term Mine Closure Plans (LTMCPs) and life of asset planning for Alcoa's WA (Western Australian) Mining Operations (Huntly and Willowdale).
- The agreed closure requirements for Darling Range centers around the return of Jarrah Forest across the site. The approved 2024-2028 MMP aims to establish, and return to the State, a self-sustaining Jarrah Forest ecosystem, that meets the agreed forest values that will support similar management practices as that employed in the surrounding Northern Jarrah Forest.



# 23.0 Recommendations

## 23.1 Geology and Mineral Resources

- The SLR QP recommends that ISO 9001 and ISO 17025 certification is pursued for the laboratories, to substantiate to technical personnel outside of Alcoa that the quality assurance programs in place meet ISO 17025 quality management system certification.
- SLR recommend that ongoing checks of FTIR assay results by traditional XRF and wet chemistry methods by an independent 3rd party laboratory occur to ensure that FTIR assay results are accurate in all regions of new mining and within different material types and areas of differing mineralogy. SLR consider that the XRF and wet chemistry check assaying program should occur on all reference (REF) samples (1% of dataset) in favour of the current FTIR check assaying program which potentially has the same limitations on accuracy and precision as the Bella Laboratory FTIR process. The check assay program should include analysis of 'Internal Reference Material' (IRM) from high Fe caprock material and low grade clayey bauxite and results should be reviewed on a regular basis to ensure any identified issues are rectified promptly.
- Ongoing development of 'Internal Reference Material' (IRM's) to ensure quality assurance program has high quality reference standards which cover the expected grade range of all key elements (AL, AT, SI, ST, FE, OX, SU) for the economic bauxite zone. SLR consider two high FE caprock standards, two low AL, high SI clayey bauxite standards and an additional average grade Al, SI bauxite sample should be developed and added to the current quality assurance program. Additionally, it is advised to continue monitoring failures and recurrent trending biases associated with IRM KH20 and if the need arise replace this standard with an alternative or a newly developed IRM.
- Re-implement the taking of field duplicates at rig throughout the drillhole to ensure representative samples are being attained at drill rig within the Caprock, Friable and Clay zones and to ensure information is obtained to substantiate that current sampling and splitting processes are robust and are not subject to bias.
- Address biases identified in the Holyoake re-assay program by limiting the use of historic data where possible and continuing the re-assay program for assays collected before 2005.
- Consider validation of current estimation results using risk-based (conditional simulation) techniques to quantify uncertainty and support Mineral Resource classification.
- Review applied cut-off criteria and currently assigned economic and mining parameters, considering more flexible costs and bauxite prices to ensure all material that meets RPEE is contained within the reported Mineral Resource.
- Investigate whether the 5% positive bias in the tonnage between the As Mined and sampling tower weightometers is persistent in the 3D block models (3DBM). SLR consider bulk density testwork within each of the identified bauxite domains for new regions of mining is required and a phase of bulk density testwork on large diameter sonic drillcore is recommended. This bulk density testwork subject to safety considerations could be supported by a phase of in pit sampling within 0.5 m X by 0.5 m Y by 0.5 m RL sample pits within operating pits within Caprock, Friable bauxite and Clayey bauxite weathering profiles.



- Continue implementation and development of the reconciliation system to be able to obtain accurate grade, tonnage, moisture content and survey data on which accurate dry tonnage reconciliation against the block model can be completed. SLR understand the challenges faced in reconciling from multiple pits and stockpiles and consider that an ongoing program of in pit bulk density and moisture content sampling is required to substantiate currently applied density and moisture content values.
- Reconciliation results in recent years (2024, 2025) of SI grades of mined material against estimated SI grades from the block model have shown a notable bias. Mined SI grades have been typically >15% higher than those predicted. This bias coincides with the removal of a 0.5 m mining buffer zone above the base of interpreted bauxite / top of clay horizon to maximise economic bauxite recovery. SLR note the base of economic bauxite / top of clay surface is not a distinct boundary and is a function of weathering processes and can be somewhat gradational and variable on a local scale. SLR recommend that in these areas a semi-soft boundary estimation approach should be used in addition to the hard boundary estimation approach currently applied and comparisons be made from a reconciliation perspective to justify the best estimation approach to use moving forward.

## 23.2 Mining and Mineral Reserves

- Currently, a historical dilution and mining recovery factor is applied to the final Mineral Reserves to reconcile the tonnes and grade. The SLR QP recommends applying dilution and ore loss at the re-blocked model level before performing the optimization and reporting these values independently.
- A reconciliation system is being implemented to allow the comparison of mined tonnes to the predicted tonnes of the geological model. This system will assist in defining dilution and losses related to modifying factors. Alcoa had been actively developing this reconciliation system during 2024 with partial implementation during 2025.
- A mine planning schedule (the Long Term Mine Plan, or LTMP) has been developed providing a strategic schedule over nine years which incorporates a tactical schedule over the first three years. However, currently Mineral Reserves would provide an additional three years of mine scheduling which would benefit cashflow modelling. Completing a strategic mine schedule for the total Mineral Reserve would allow impacts from sequencing of later Capital costs to be modelled appropriately. The view of the SLR QP is that the unscheduled Mineral Reserve ore tonnes should be added to the LTMP.
- The SLR QP notes that a defined Process Acceptance Criteria has yet to be provided with specifications on upper and lower limits for all key process constraints. This should be provided for review.
- Capital costs for the Myara North and Holyoake mine moves were in the process of being advanced to FEL 3. Although the cost estimates could be reviewed, a complete FEL 3-level study defining the execution basis of estimate and its linkage to a master schedule was not available and should be prepared to support final capital confidence.
- In addition, for the purposes of the value-in-use assessment, further review is required of the key cost drivers underpinning the analysis, including residue storage facilities and other refinery-related operating and sustaining capital costs provided, to confirm their completeness, assumptions, and consistency with the execution basis and long-term operating plans.

## 23.3 Mineral Processing

- The historical operational data for the Darling Range demonstrates that ore consistently met refinery specifications.
- Ideally, independent verification of sample analysis is conducted, by a certified laboratory, on a structured program, to ensure the QA/QC aspects of the internal analysis. Within this process a proportion of samples from each batch could be sent to the independent laboratory for analysis and the results can be compared with the internal analysis.
- The SLR QP is appreciative that the mine is operational, meaning a trade-off versus logistics / practicality would need to be carried out.

## 23.4 Infrastructure

- The Darling Range mining operations have well established infrastructure, with mining hubs that are periodically moved to reduce transportation distances between mining operations and the hubs. The SLR QP makes no recommendations regarding infrastructure.

## 23.5 Environment

- Alcoa has established systems to facilitate adherence to environmental commitments and has made progress with modernizing environmental approvals and permits for Huntly, Willowdale and the future mining areas at O'Neil, Holyoake and Myara North. The SLR QP recommends that the following action is taken:
- Continued close engagement with EPA, DCCEEW, Bauxite Strategic Executive Committee (BSEC) and the community to best enable a prompt resolution to approval and permitting process to minimize impacts to the Reserve estimate into the future.
- Appropriate resourcing will be required to enable the successful execution of existing State and Federal approvals alongside the emerging strategic assessment by Alcoa and DCCEEW.
- Continued compliance with all approval and permit requirements. Compliance with the conditions associated with the *Alcoa Transitional Approvals Framework* and Exemption Order and recently announced Federal National-Interest Exemption is critical to ensure these instruments are maintained.
- Progress was made to close out the Contaminated Sites Act process in 2025 however the release of version 3.0 of the per- and polyfluoroalkyl substances (PFAS) National Environmental Management Plan necessitated changes that are anticipated to be submitted back to DWER in 2026. An update on progress should be reported in the future.
- Following from Alcoa's commitment in support of the Gnaala Karla Booja (GKB) Ranger Program in 2024, a review of how the Ranger Program has benefited the community, and the environment, should be conducted and summarized in the future.



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# 25.0 Reliance on Information Provided by the Registrant

This report has been prepared by SLR for Alcoa. The information, conclusions, opinions, and estimates contained herein are based on:

- Information available to SLR at the time of preparation of this report,
- Assumptions, conditions, and qualifications as set forth in this report, and
- Data, reports, and other information supplied by Alcoa and other third party sources.

For the purpose of this report (namely Section 1.3.3), SLR has relied on ownership information provided by Alcoa in a legal opinion by Paul Volich, Managing Counsel – Australia, dated 28 January 2026, entitled Technical Report Summary on the Darling Range, Western Australia S-K 1300 Report for Alcoa Corporation – that ML1SA in good standing. SLR has not researched property title or mineral rights for the Darling Range as we consider it reasonable to rely on Alcoa's legal counsel who is responsible for maintaining this information.

SLR has relied on Alcoa for guidance on applicable taxes, royalties, and other government levies or interests, applicable to revenue or income from Darling Range in the Executive Summary and Sections 18.0 and 19.0. As Darling Range has been in operation for over ten years, Alcoa has considerable experience in this area.

The SLR QPs have taken all appropriate steps, in their professional opinion, to ensure that the above information from Alcoa is sound.

Except for the purposes legislated under applicable securities laws, any use of this report by any third party is at that party's sole risk.



# 26.0 Date and Signature Page

This report titled “Technical Report Summary on the Darling Range, Western Australia, S-K 1300 Report” with an effective date of December 31, 2025 was prepared and signed by:

**SLR Consulting Ltd**

**John R. Walker FGS, FIMMM, QMR**
Technical Director, Mining Advisory Europe

Dated in UK

Signature Date: 26 February 2026