HILL END GOLD LIMITED

ACN 072 692 365

INITIAL KAOLIN RESOURCE 12 February 2018

ASX Code: HEG, HEGOC

Outstanding Maiden Resource Positions Yendon to be One of the Largest High Purity Alumina Projects in the World

Results show Yendon in Victoria has a world-scale inventory, an exceptionally high-grade and very low impurities

Hill End Gold Ltd (ASX: HEG) is pleased to announce an outstanding maiden kaolin resource estimate for its Yendon high-purity alumina project in Victoria, marked by an extensive inventory, exceptionally high grades and low impurities.

The result shows Yendon is ideally positioned to become one of the biggest high purity alumina projects in the world, enabling Hill End to capitalise on the rapid demand growth forecast for this product on the back of the lithium battery and LED light industries.

Hill End aims to produce high purity alumina via a well established process in which it will upgrade the kaolinized host rock at Yendon to a kaolin concentrate containing world leading levels of alumina. This concentrate is then processed to produce high purity alumina (Al_2O_3) exceeding 99.99% purity as sought by customers in these rapidly growing markets.

The maiden resource estimate at Yendon is 3.68 million tonnes [1] of in-situ kaolinized material (measured and indicated). When this is beneficiated by wet

1. The Mineral Resource estimates were prepared from the datasets provided by HEG in late 2017 – early 2018, and represent the drilling and analytical testwork completed up until the end of 2017. The resource estimates are classified in accordance with the 2012 edition of The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code 2012).

screening to recover the -63 micron fraction, 1.59 million tonnes of kaolin concentrate containing 34.68% Al_2O_3 is produced.

Table 1: Yendon Kaolin Mineral Resource estimates - January 2018[1]

Class	Tonnage (Mt)		<63 µm Concentrate Grades (%)								
	In situ	Concentrate	Mass Rec	Al_2O_3	CaO	Fe	K_2O	MgO	Na_2O	SiO_2	TiO_2
Measured	1.73	0.75	43.13	35.08	0.08	0.79	0.19	0.09	0.16	47.84	1.13
Indicated	1.95	0.84	43.14	34.33	0.07	0.85	0.25	0.10	0.17	48.94	1.12
Total	**3.68**	**1.59**	**43.14**	**34.68**	**0.08**	**0.82**	**0.22**	**0.10**	**0.17**	**48.42**	**1.12**

Note: The estimates are based on a block cut-off concentrate grade of >= 30% Al_2O_3.

Assays used to calculate the resource estimate reveal that the Yendon mineralisation is of extremely high quality, containing almost 35% alumina, and very low levels of impurities such as iron, titanium and potassium (see table 1), making it easier and potentially less costly to process to high purity alumina.

These results are in addition to the metallurgical test results announced by Hill End Gold last month (see ASX release dated 10 January 2018), which confirmed the successful processing of typical Yendon kaolin using a conventional process to produce HPA with 99.995% purity, comfortably exceeding market specifications.

The Yendon resource is very uniform. A very high cut off grade of 30% Al_2O_3 in concentrate was applied which resulted in minimal diminution of the resource.

Hill End Managing Director Martin McFarlane said, “It was already clear that Yendon had the potential to be a world class high purity alumina project.”

“This initial kaolin resource estimate is sufficiently large to potentially supply 20 per cent of the world’s current HPA demand for more than 80 years,” Mr McFarlane said.

“There is also immense scope to grow the resource further, should we choose to do so, as the Yendon deposit remains open to both the north and south.”

Drilling was halted, while still intersecting substantial intervals of kaolinized material, once sufficient had been identified for the project. Since the drilling program finished, a new exploration licence has been granted adding potential for expansion of the resources by securing the area immediately to the south of the existing Yendon deposit. Known extensions to the north are already held under licence. In addition, historic exploration work has identified other kaolin deposits on Hill End’s tenements near Yendon as well as near Pittong to the west of Yendon.

Mine pit design using the Yendon kaolin resource estimate is now underway as well as more detailed metallurgical test work to identify the optimum process flow sheet, equipment size, capital and operating costs. This work together with other studies will be used to form the Pre-feasibility Study of the Yendon project which is expected to be completed in the second quarter of 2018.

Martin McFarlane
Managing Director

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Forward-looking Statements

This announcement contains forward-looking statements which are identified by words such as 'anticipates', 'forecasts', 'may', 'will', 'could', 'believes', 'estimates', 'targets', 'expects', 'plan' or 'intends' and other similar words that involve risks and uncertainties. Indications of, and guidelines or outlook on, future earnings, distributions or financial position or performance and targets, estimates and assumptions in respect of production, prices, operating costs, results, capital expenditures, reserves and resources are also forward-looking statements. These statements are based on an assessment of present economic and operating conditions, and on a number of assumptions and estimates regarding future events and actions that, while considered reasonable as at the date of this announcement and are expected to take place, are inherently subject to significant technical, business, economic, competitive, political and social uncertainties and contingencies. Such forward-looking statements are not guarantees of future performance and involve known and unknown risks, uncertainties, assumptions and other important factors, many of which are beyond the control of the Company, the directors and management. We cannot and do not give any assurance that the results, performance or achievements expressed or implied by the forward-looking statements contained in this announcement will actually occur and readers are cautioned not to place undue reliance on these forward-looking statements. These forward-looking statements are subject to various risk factors that could cause actual events or results to differ materially from the events or results estimated, expressed or anticipated in these statements.

Details of Kaolin Resource Estimate

1 Introduction

SRK Consulting (Australasia) Pty Ltd (SRK) has prepared a resource model and Mineral Resource estimates for Hill End Gold's (HEG) Yendon kaolin deposit, which is located approximately 20 km south east of Ballarat, Victoria. HEG plans to use the kaolin as feedstock for the production of high purity alumina (HPA), and plans to use the resource model and estimates as inputs into a pre-feasibility study (PFS) that is currently being conducted by HEG. This statement represents the maiden Mineral Resource for the deposit in HEG's project area.

2 Resource Statement

The Mineral Resource estimates were prepared from the datasets provided by HEG in late 2017 – early 2018, and represent the drilling and analytical testwork completed up until the end of 2017. The resource estimates are classified in accordance with the 2012 edition of The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code 2012). A Mineral Resource Statement for Yendon is presented in Table 2-1.

Table 2-1: Yendon Kaolin Mineral Resource estimates - January 2018

Class	Tonnage (Mt)		<63 µm Concentrate Grades (%)								
	In situ	Concentrate*	Mass Rec	Al_2O_3	CaO	Fe	K_2O	MgO	Na_2O	SiO_2	TiO_2
Measured	1.73	0.75	43.13	35.08	0.08	0.79	0.19	0.09	0.16	47.84	1.13
Indicated	1.95	0.84	43.14	34.33	0.07	0.85	0.25	0.10	0.17	48.94	1.12
Total	**3.68**	**1.59**	**43.14**	**34.68**	**0.08**	**0.82**	**0.22**	**0.10**	**0.17**	**48.42**	**1.12**

Note: The estimates are based on a block cut-off concentrate grade of >= 30% Al_2O_3. The *Concentrate* is defined as the portion of the *in situ* tonnage with a particle size of <63 µm that is expected to be recovered as the feedstock for the HPA process. The estimates were derived from model file *RESM010218.dm.*

The Mineral Resources are contained within Exploration Licence EL5461. A plan showing the project location and the licenced areas is presented in Figure 2-1.

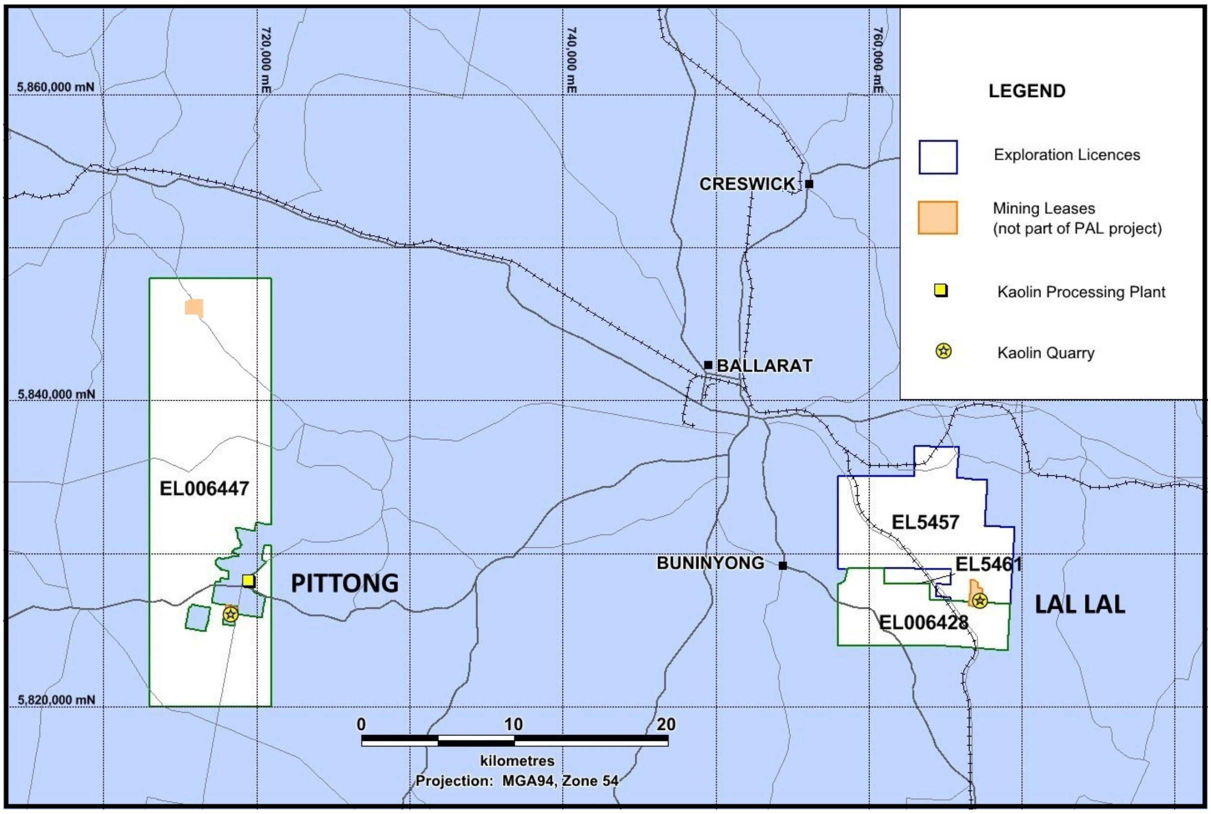

Figure 2-1: Location plan of Yendon HPA Project area

Source: HEG

A summary of the data collection and resource estimation activities is presented below. The JORC Code 2012 Edition – Table 1 is included as an attachment to this memorandum.

3 Data Collection Overview

The Mineral Resource estimates were prepared using data acquired from a drilling program completed by HEG in late 2017. Most of the drilling was conducted using air core (AC) equipment, which was supplemented by some diamond core (DDH) drilling. A summary of the drill quantities is presented in Table 3-1.

Table 3-1: Resource Estimation Drill Data Summary

Hole Type	Holes	Metres (m)	Assayed Holes	Assayed Intervals#
Aircore	121	1,607	84	926
Diamond	15	228	-	-
Total	**136**	**1,835**	**84**	**926**

#: Including 45 duplicates

A plan showing the drill hole collar locations is presented in Figure 3-1.

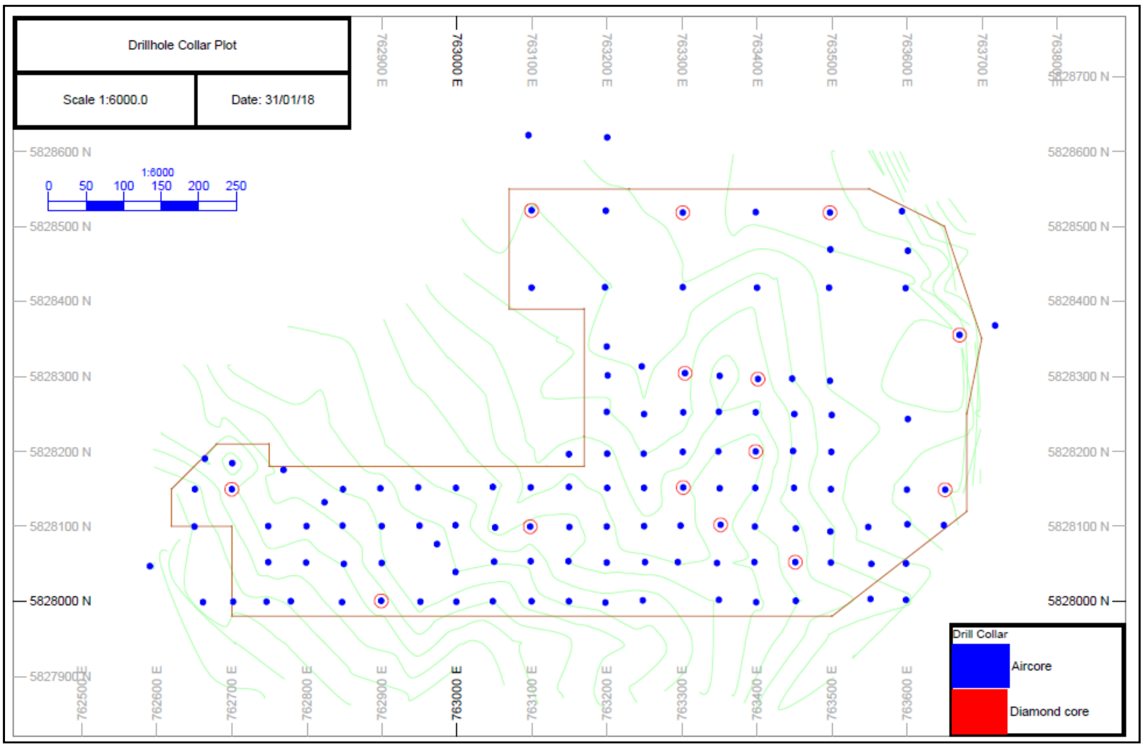

Figure 3-1: Drill hole collar plot and resource boundary

3.1 Drilling

The air core drilling was performed on section lines that were oriented parallel to the MGA 94 grid. A nominal drill spacing of 50 m x 50 m was used in the priority target area, and this was increased to 100 m x 100 m in the peripheral area to the north. All drill holes were planned, and assumed to be vertical.

The drilling was performed using a track-mounted Mantis 200 drill rig fitted with an 86-mm diameter air core bit. Drilling continued until HEG's project geologist considered that the base of the fully leached kaolin-rich material had been encountered, or where sample recovery was judged to be unacceptable. Recovery issues generally occurred when significant quantities of ground water were encountered. This usually occurred where water accumulated in the partially weathered adamellite immediately beneath the kaolin-rich layer.

The samples were taken over 1 m intervals, with the entire sample collected into a bag placed beneath the cyclone underflow. All samples were split using a single-deck riffle splitter, with half of the initial sample retained for reference and, in the case of intervals that represented overburden or material judged to be waste for other reasons, the remainder was returned to the hole. Of the remaining samples, those that were considered to be kaolinitic and exhibited acceptable recovery, were re-split, with one split submitted for laboratory testwork and the other split retained as a duplicate.

The diamond core drilling was performed using a Hydrapower Scout Mark V drilling rig fitted with HQ3 coring facility and a 3 m triple tube core barrel. All of the core holes twinned existing air core holes. To date, 72 core samples, with a nominal length of 150 mm, have been used for density determination and none have been submitted for geochemical testing.

3.2 Sample Preparation and Testing

Preliminary metallurgical testwork commissioned by HEG indicates that the kaolin is very fine grained; the planned process flowsheet includes a washing stage to remove the quartz-rich coarse fraction, with only the fine fraction used as feedstock for the HPA process plant. Based on preliminary metallurgical test results, a screen size of 63 µm was determined to be the most effective size split. In order to enable the inclusion of estimates of the HPA feedstock grades within the resource model, the resource delineation drill samples were wet-screened, and only the < 63 µm size fraction was assayed.

Sample preparation and geochemical analyses were conducted by LabWest Mineral Analysis Pty Ltd at their NATA accredited Malaga laboratory. Upon receipt, each air core sample was weighed, oven dried, and reweighed. A 500-g split from each sample was wet-screened using a nested set of sieves with a final sieve size of 63 µm. The fine fraction was allowed to settle with the majority of the water decanted prior to oven drying and weighing the residue, and calculation of the mass recovery.

An aliquot from each of the fine fraction samples was submitted for fused-bead XRF analysis, with the following constituents included in the analytical suite:

Al_2O_3, CaO, Fe, K_2O, MgO, MnO, Na_2O, P_2O_5, S, SiO_2, and TiO_2.

All constituents were reported in oxide form, with the exception of iron and sulphur, which were expressed in elemental form. Loss on ignition (LOI) was determined using thermogravimetric analysis (1000°C)

Density tests were conducted on selected core samples using water immersion techniques. The samples, which were typically 150 mm in length, were oven dried, weighed, and sealed prior to water immersion.

3.3 Quality Assurance Procedures

HEG collected field duplicates of all drill intervals considered to be of a grade potentially suitable to generate feedstock for the HPA Project. From 832 intervals (1 m intervals), 45 (approximately 1:20) were randomly selected as duplicates for both mass recovery determinations and assay. These were included with the primary sample submissions and prepared and assayed using the same procedures. The naming scheme identifies these as duplicates to the laboratory. The laboratory included certified kaolin standards, internal reference materials, and laboratory repeats within the laboratory batches.

3.4 Surveying

All spatial data used for resource estimation are reported using the MGA 94 Zone 54 grid system based on Australian Height Datum. The drill hole collar locations were surveyed after drilling by a local contractor using RTK-DGPS equipment. All holes were shallow and assumed to be vertical, and downhole surveying was not performed. A number of spot height readings were also taken over the project area in order to produce a 1 m interval topographic map of the resource and surrounding area

3.5 Geological Model

The Yendon deposit is located in the Ballarat-Bendigo Zone of the Western division of the Lachlan Fold Belt. Within the project area, kaolin has formed from the weathering of Devonian adamellites that have intruded the extensive sequences of Ordovician turbidites that dominate this part of the fold belt. The profile changes with depth from fully kaolinised- to partially kaolinised- to unweathered- adamellite. The changes are typically gradational and usually marked by changes in colour, texture, and geochemistry. In most parts of the project area, the kaolin is covered by approximately 2 - 3 m of overburden, which typically comprises a mix of transported clays and silts, contaminated kaolinised adamellite with some minor occurrences of residual clays derived from the pre-existing Pleistocene basalts that covered residual kaolinised profiles. Recent erosion and leaching have re-exposed the kaolinised material over wide areas.

The contact between the overburden and kaolin is typically sharp and well defined and, although samples were collected from the overburden, they were not submitted for laboratory testing. In general, sample recovery deteriorated when the partially weathered adamellite was encountered, due to the accumulation and pooling of groundwater below the more impermeable kaolin-rich layer. Drilling typically continued until significant recovery difficulties occurred, with only contiguous 1 m sample intervals, deemed to have good recoveries, being submitted for assaying. These practices have ensured that most of the assay data were obtained from metallurgically acceptable kaolinised adamellite intervals.

For estimation control, the profile has been sub-divided into the following horizons:

- Overburden
- Kaolinised adamellite
- Decomposed adamellite
- Saprock.

The interpreted base of the kaolinised adamellite generally coincides with the base of assay data, except in places where the geochemistry indicates incomplete alteration of the feldspars.

The defined base of the decomposed adamellite generally coincided with the base of the drilling, with the underlying material generically referred to as 'saprock,' and included for volume modelling purposes only. Fresh adamellite was not encountered, and the bases of decomposed adamellite and saprock were defined for estimation control, and do not represent lithological contacts as such.

Each horizon was interpreted over the extents of the deposit, and represented by upper and lower wireframe surfaces. The wireframes were used to assign domain codes to the drill hole samples. A typical cross section plot showing the drill holes, colour-coded by lithology, and displaying Al_2O_3 and K_2O grade, is presented in Figure 3-2.

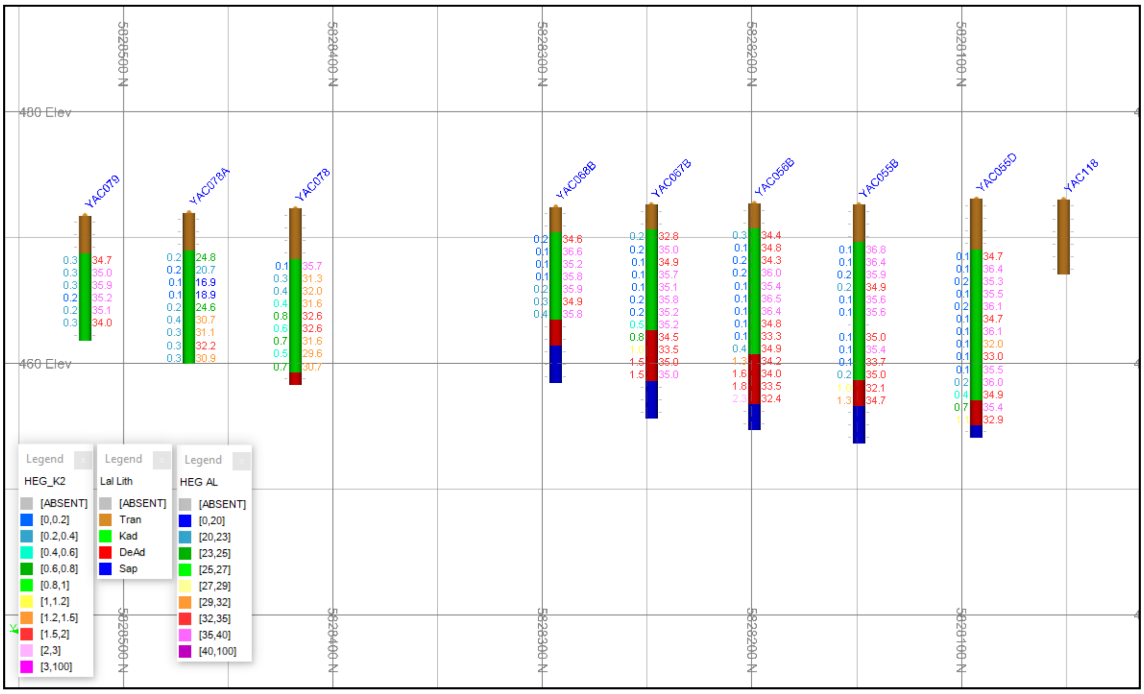

Figure 3-2: Typical cross section (763,500E)

3.6 *Estimation Dataset*

All samples were collected on 1 m intervals and compositing was therefore not required. The geochemical dataset only contains assay data for the < 63 µm fraction of each sample. These grades cannot be directly estimated into the model because they were derived from samples with different *support,* i.e. different mass recoveries. To address this issue, SRK factored the concentrates grades by mass recovery. These calculated values can be understood to represent the *in situ* grades of the material that is expected to report to concentrate. Statistical and geostatistical analyses and estimation were conducted using these calculated values.

Statistical analyses indicated the domain samples showed relatively well-defined populations for the constituents of interest. Grade cutting was not considered necessary. Variographic studies were conducted on spatially transformed data (see below), with well-structured variograms obtained for most of the major oxides and for mass recovery. Nugget values were typically around 0.3 and although total ranges were in the order of 250 m, 80% of the sill was usually reached within 100 m. As expected for this style of mineralisation, the variograms exhibited minimal lateral anisotropy, but significant vertical anisotropy.

3.7 Grade Modelling

The resource estimates were prepared using conventional block modelling techniques. A single 3D model framework was created covering the entire deposit. Drill spacing and kriging neighbourhood analysis (KNA) were used to assist with the selection of a parent cell of 15 m x 15 m x 1 m (XYZ). Sub-celling was not applied. The model cells were flagged using the domain wireframes. A digital elevation model prepared from the topography data was used to remove cells located above the current surface.

Prior to grade estimation, the model cells were transformed relative to local datum planes, such that cells within similar parts of the weathered profile were assigned similar elevations. Identical transforms were applied to the drill hole data such that the original geometric relationship between the samples and model cells was retained.

Local estimates were prepared for all of the constituents listed above. Ordinary Kriging was used for grade interpolation and all domain contacts were treated as hard boundary constraints. Estimates were made into the discretised parent cells. A three-pass search strategy was implemented using discoid-shaped search ellipsoids, with orientations and dimensions primarily based on the variography studies. Octant searching and keyfield restrictions were invoked for additional estimation control. Default grades, which were equivalent to the average grades of the estimation datasets, were assigned to any cells that did not receive estimated grades. Extrapolation was limited to approximately half of the drill spacing. After estimation, the model cells were back-transformed to their original locations.

The concentrate grades were back-calculated from the *in situ* grades of the material expected to report to concentrate. The model contains both the in situ and the concentrate grades, with only the latter used for resource reporting. Model validation included:

- Visual comparisons of the sample and model cell grades
- Local and global statistical comparisons of the sample and model cell grades
- Major oxide total comparisons
- An assessment of the estimation performance data.

No significant issues were identified, with the model cell estimates appearing to be consistent with the input data.

3.8 Resource Classification

The resource classifications have been applied based on a consideration of the confidence in the geological interpretation, the quality and quantity of the input data, the confidence in the estimation technique, and the likely economic viability of the material. Sample quality and spacing are considered to be the controlling factors on classification. The variographic studies indicate useful continuity ranges of up to 100 m, and only samples that were deemed to have acceptable recovery were submitted for assay.

A classification of Measured Resource was applied to estimates for kaolinised adamellite located within sub-regions, with a uniform drill coverage of 50 m. A classification of Indicated Resource was applied to estimates for kaolinised adamellite located within sub-regions with a uniform drill coverage of between 50 m and 100 m.

The main constituent of interest is Al_2O_3. Based on the preliminary metallurgical testwork conducted on material sourced from the Yendon deposit, HEG's metallurgical consultants have devised a conceptual flowsheet for the production of HPA. There are several elements that can have a detrimental effect on processing, or on the HPA purity (such as Fe, K, and Na). However, none of these are considered to be present at concentrations that would require exclusion from the feedstock or significant control during processing, and, for this reason, none have been applied as a resource reporting constraint. Mass recovery has not been used as a reporting constraint because it appears to be relatively uniform for the kaolinised adamellite material, and washing does not represent a significant component of the total processing cost.

A 30% Al_2O_3 grade has been selected as a resource cut-off grade. This value represents the lower bound of the high-grade material within the deposit. The selection of the 30% Al_2O_3 grade enables HEG to maximise the quality of the kaolinised material selected for subsequent processing whilst maintaining the high mass recovery/ yield of the target -63 µm mass fraction.

4 Competent Person's Statement

The information in this statement that relates to the Mineral Resource estimates is based on work done by Rod Brown of SRK Consulting (Australasia) Pty Ltd.

Rod Brown is a member of The Australasian Institute of Mining and Metallurgy and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration, and to the activity he is undertaking, to qualify as a Competent Person in terms of The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code 2012 edition).

The information in this statement that relates to the geology, drilling, and sampling is based on work done by Mike Ware.

Mike Ware is a fellow of The Australasian Institute of Mining and Metallurgy and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration, and to the activity he is undertaking, to qualify as a Competent Person in terms of The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code 2012 edition).

APPENDIX 1 - JORC Code 2012 Edition

Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.*	The datasets used for Mineral Resource estimation were derived from a drilling program conducted by Hill End Gold Limited (HEG) in 2017. The program included both air core (AC) and diamond core (DDH) drilling. The database that HEG has compiled for the project area contains 136 drill holes, comprising 121 AC holes equating to 1,607 m of AC drilling, and 15 DDH holes equating to 228 m of drilling. Only the AC samples were submitted for assaying. The core samples were used for density testing and retained for planned metallurgical testwork. Samples from 84 AC holes, totalling 831 intervals, were submitted for assaying. The remaining samples were not assayed because they were either logged as overburden, sample recovery was deemed to be too poor to give reliable results, or the interval was considered not to be of metallurgical quality. All of the AC samples were collected on 1 m intervals. The entire sample was collected from the rig's cyclone underflow and a riffle splitter was used to collect a ½ sample for reference and 2* ¼ splits (approximately 2 kg) one for assaying and one as a field duplicate. The samples were sent to LabWest (Malaga laboratory) for sample preparation and assaying. Sample preparation included drying, weighing, splitting, and then wet-screening. The < 63 µm fraction was dried and weighed, and submitted for assaying. An aliquot from each of the fine fraction samples was submitted for fused bead XRF analysis, with the following constituents included in the analytical suite: Al_2O_3, CaO, Fe, K_2O, MgO, MnO, Na_2O, P_2O_5, S, SiO_2, and TiO_2 All constituents were reported in oxide form, with the exception of iron and sulphur, which were expressed in elemental form. Loss on ignition (LOI) was determined using thermogravimetric analysis (1000 °C)
Drilling techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type,*	The sample data used for resource estimation were derived from samples collected using a Mantis 200 AC rig fitted with an 86-mm air core bit. The diamond core holes were drilled using HQ3 triple tube coring equipment.

1. The Mineral Resource estimates were prepared from the datasets provided by HEG in late 2017 – early 2018, and represent the drilling and analytical testwork completed up until the end of 2017. The resource estimates are classified in accordance with the 2012 edition of The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code 2012).

Criteria	JORC Code explanation	Commentary
	whether core is oriented and if so, by what method, etc.).	
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/ coarse material.*	A qualitative assessment of AC recovery was made by the HEG project geologist during drilling. The drill hole was terminated if poor sample recovery was observed. After the completion of each hole, the samples were geologically logged and recovery was again assessed. If there were signs that preferential material loss may have occurred, the affected sample (as well as the subsequent samples in the hole) were not assayed. The majority of the assayed samples are described as being dry, slightly moist, or moist, with less than 1.5% described as wet. There does not appear to be any significant correlation between the logged moisture coding and grade.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.* • *The total length and percentage of the relevant intersections logged.*	All drill holes used for resource estimation were geologically logged to a level of detail deemed sufficient to enable the delineation of geological domains appropriate to support Mineral Resource estimation and classification. The air core samples were geologically logged and photographed. Handheld XRF analyses were used to assist with logging. These results were not used for resource estimations. All intervals were geologically logged and the logging data are deemed to be qualitative.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	The entire sample from each 1 m interval was collected from the cyclone underflow and then passed through a single-deck riffle splitter to give a ½ split. Samples that were judged to be of potential metallurgical quality were passed through the splitter a second time to give two ¼ splits. The splits were sent for laboratory preparation and assaying, with a second split retained for reference (45 submitted as field duplicates). All remaining material was returned to the hole. Upon receipt by the laboratory, the samples were sorted and oven-dried and weighed. A 500 g split was then wet-screened, with the < 63 µm size fraction oven-dried, weighed, and submitted for geochemical testing. Field duplicates were collected at a frequency of 1 duplicate for every 20 primary samples. The duplicates were collected during the first field splitting stage, and they were prepared and analysed using the same procedures as those used for the primary samples. The duplicates indicate very good analytical precision for both mass recovery and grade, and no evidence of significant grade bias.

Criteria	JORC Code explanation	Commentary
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	Geochemical analyses were performed on the <63 µm fraction using fused bead XRF, with the analytical suite including the following constituents: Al_2O_3, CaO, Fe, K_2O, MgO, MnO, Na_2O, P_2O_5, S, SiO_2, and TiO_2. LOI was determined using thermogravimetric analysis and reported at 1000 °C. Mass recovery was based on dry sample weights. In addition to the QA/ QC procedures described above, the laboratory also inserted internal QA/ QC samples to monitor the quality of the analysis. These included Standards, Internal reference materials, and repeats. The QA/ QC data did not indicate significant issues with the laboratory testwork.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	Both HEG and SRK personnel compared the assay data to the geological logs and sample photographs. Given that this is a bulk commodity and the grade distributions are relatively uniform, the resource estimates are not considered to be sensitive to the results for individual sample intervals A total of 15 of the air core holes were twinned by diamond core holes. The logging data shows good correlation between the paired holes, however geochemical testing has not yet been conducted on the core samples. HEG provided the survey and drill hole logging data to SRK in spreadsheet format. The assay data were provided by LabWest as CSV files, as well as laboratory certificates as locked PDFs. SRK imported the files into Studio RM for merging and validation, which included numerical range checks on survey and interval data, and visual checks. All assay data were accepted into the database as supplied by the laboratory, with no adjustments applied.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	All survey data are reported according to MGA94 Zone 54, with elevations based on AHD. The survey data were collected on 14 December 2017. The drill hole collars and a number of spot locations were surveyed by a local surveying contractor using RTK-DGPS equipment (Leica GS16) to a stated accuracy of 0.1 m in both the horizontal and vertical directions. All holes are assumed to be vertical and, with an average hole depth of only 13 m, downhole surveying was not considered necessary.

Criteria	JORC Code explanation	Commentary
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	The drilling was performed on section lines orthogonal to the MGA94 grid. A nominal drill spacing of 50 m x 50 m was used in the priority target area, with a nominal spacing of 100 m x 100 m in the peripheral areas. At these drill spacings, the continuity of the kaolin zones can be clearly traced between drill holes. The variography indicates practical grade continuity ranges of up to 100 m. All of the data used for resource estimation was derived from samples collected on 1 m intervals. This sample length was considered appropriate for resource estimation and compositing was not performed.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	All drill holes are assumed vertical, which means that most of the sampling is orthogonal to the sub-horizontal kaolin zones. No orientation-based sampling biases have been identified, nor are expected for this style of mineralisation.
Sample security	• *The measures taken to ensure sample security.*	Hill End Gold and its agents in the field retained responsibility for, and control of, the air core drilling samples up to the point of delivery to an interstate freight company in Ballarat for delivery to the Perth laboratory of LabWest for processing and analysis. After completion of the filed procedures described above, the samples were placed in labelled calico bags, which in turn were placed into labelled polyweave bags. The bags were collected at the end of each shift, and stored in a shed in locked paddock within the drilling area. At the completion of the drilling program, the samples were relocated to HEG's storage facility where the samples for assaying were checked, weighed, repacked, loaded onto pallets, shrink-wrapped and delivered to a freight company for road and rail transport to the laboratory. On arrival, the laboratory checked the samples against the submission forms. Assay results were provided electronically in CSV format, and laboratory certificates were provided in locked PDF format.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	The field program was managed and supervised by HEG. SRK conducted a site visit to inspect the field procedures and has reviewed the data. SRK is not aware of any independent reviews or audits of the data collection procedures

Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	The reported resources are all contained within Exploration Licence EL5461. HEG advised that under an agreement dated 11 September 2017, EL5461 is currently subject to transfer from the original licensee, Mr. Peter J. Sterling, to Pure Alumina Pty Ltd (ACN: 618 881 137). Pure Alumina Pty Ltd is a 100% owned subsidiary of Hill End Gold Ltd, an ASX-listed resource development and investment company. HEG also advised that all statutory requirements under the Victorian Mineral Resources Sustainable Development Act (MRSDA, 1990), to finalize and register the transfer have been delivered to the Department of Economic Development, Jobs Transport and Resources (DEDJTR) who administer the MRSDA.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	The datasets provided to SRK were sourced from drilling programs conducted by HEG in 2017. SRK understands that a number of exploration programs and small-scale mining operations for kaolin have been conducted within the region, but SRK is not in possession (or aware of the existence) of datasets that may be directly relevant to the Yendon Mineral Resource estimates described in the report.
Geology	• *Deposit type, geological setting and style of mineralisation.*	Yendon is considered to be a weathering deposit. The alteration of feldspars to kaolin and the selective removal of more soluble minerals during the intense weathering of adamellite and syenite has resulted in the formation of a mantle of kaolin-rich material. The kaolin has formed from the weathering of Devonian adamellites that have intruded Ordovician turbidite sequences. The weathering is thought to have occurred during the Cainozoic, and the kaolin was subsequently covered by a protective layer of basalt that has subsequently been eroded away exposing the kaolinised resources. Quaternary alluvial silts and clays form a thin cover over parts of the resource.
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* o *easting and northing of the drill hole collar*	No exploration results are reported for this study.

Criteria	JORC Code explanation	Commentary
	o *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* o *dip and azimuth of the hole* o *down hole length and interception depth* o *hole length.* • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	No exploration results are reported for this study.
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	No exploration results are reported for this study.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	No exploration results are reported for this study.
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high*	No exploration results are reported for this study.

Criteria	JORC Code explanation	Commentary
	grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	SRK is not aware of any meaningful and material exploration datasets that are additional to those used in the Mineral Resource estimates.
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	SRK is not aware of plans that HEG may have for further exploration work in the project area.

Section 3 Estimation and Reporting of Mineral Resources

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

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	The survey and logging datasets used to prepare the Mineral Resource estimates were provided by HEG in spreadsheet format. The assay data were provided by LabWest as CSV files, as well as locked PDFs. SRK imported the files into Studio RM for merging and validation, which included numerical range checks on survey and interval data, library code lists, and visual checks.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	A site visit was conducted by the Competent Person (Rod Brown - SRK) for the Mineral Resource sign-off on 4 August 2017. The visit included an examination of the local geology and drill samples, an inspection of the air core drilling and sampling handling activities, and discussions with site personnel on field procedures. The CP also visited the LabWest laboratory to inspect the wet-screening equipment and to discuss the laboratory testwork.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	The geological interpretation is considered consistent with datasets, as well as with the broadly accepted understanding within the mining community of the regional geology. Estimation domain definition was based on a combination of geological logging and geochemical data. The domain volumes have been limited to areas where reliable sample data were available Domain geometry was observed to be relatively consistent and predictable over the extents of the drill coverage, with relatively good continuity evident between drill holes. SRK does not consider that the existing data would support an equally plausible interpretation that delineated significantly different grade or tonnage.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	The mineralisation is contained within a weathered horizon that has been interpreted over an irregular area of approximately 40 Ha, and extends for up to 1,000 m in the east-west direction, and up to 600 m in the north-south direction. The following sub-horizons, each covering the extents of the drill coverage, have been defined: • Overburden zone: A covering of transported soils, clays, and silts. Overburden was identified in all holes, with an average depth of around 2-3 m and maximum depth of 8 m. • Kaolinised adamellite: This is defined by the near complete alteration of feldspars to kaolin, and was generally well-defined in the logging and geochemical data.

Criteria	JORC Code explanation	Commentary
		It was identified in approximately 65% of the holes, and has an average thickness of 8 m and a maximum thickness of approximately 22 m. • Decomposed Adamellite zone: This is a transitional zone between the kaolinite and unweathered adamellite, and is marked by the relatively incomplete alteration of feldspars. It is expected to contain significant quantities of kaolin, but because of sample recovery issues due to the presence of groundwater accumulating under the clay-rich kaolinised zone, it has not been included in the resource inventory. It was identified in 90% of the holes. The average penetration depth was 4 m and fresh adamellite was not encountered in any of the drilling.
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.*	The Mineral Resource estimates were prepared using conventional block modelling and geostatistical estimation techniques. A single model was prepared to represent the defined extents of the mineralisation. The resource modelling and estimation study was performed using Datamine Studio RM®, Supervisor®, and X10®. Kriging neighbourhood analyses (KNA) studies were used to assess a range of parent cell dimensions, and a size of 15 m x 15 m x 1 m (XYZ) was considered appropriate given the drill spacing, grade continuity characteristics, and the expected mining method. The parent cell dimensions were considered to be suitable to accurately represent the interpreted domain volumes, and sub-celling was not used. The volume model and estimation datasets were spatially transformed (flattened and dilated) prior to estimation. The original sample data were collected on 1 m intervals, and no compositing was conducted. Probability plots were used to assess for outlier values, and grade cutting was not considered necessary. The discretised parent cell grades were estimated using ordinary block kriging. The domain wireframes were used as hard boundary estimation constraints. Search orientations and weighting factors were derived from variographic studies conducted on the transformed data. A multiple-pass estimation strategy was invoked, with KNA used to assist with the selection of search distances and sample number constraints. Extrapolation was limited to approximately half the nominal drill spacing. The model estimates are intended to represent the grade of the material that will report to <63 μm and were derived from assays performed on the fine fraction of each sample. For estimation, the sample grades were factored by the mass recovery to account for the different sample support introduced by the variability in mass recovery.

Criteria	JORC Code explanation	Commentary
	• *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	The model contains local estimates for Al_2O_3, CaO, Fe, K_2O, MgO, MnO, Na_2O, P_2O_5, S, SiO_2, TiO_2, LOI and Mass Recovery. Estimates for both the in situ grades of the material expected to report to concentrate, and of the concentrate grades, are included in the model, with the latter used for resource reporting. Model validation included: • Visual comparisons between the input sample and estimated model grades • Global and local statistical comparisons between the sample and model data • An assessment of estimation performance measures including kriging efficiency, slope of regression, and percentage of cells estimated in each search pass.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	The resource estimates are expressed on a dry tonnage basis, and in situ moisture content has not been estimated. A description of density data is presented below.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	The main constituent of interest is Al_2O_3. Based on the preliminary metallurgical testwork conducted on material sourced from the Yendon deposit, HEG's metallurgical consultants have devised a conceptual flowsheet for the production of HPA. There are several elements that can have a detrimental effect on processing or on the HPA purity (such as Fe, K, and Na). However, none of these are considered to be present at concentrations that would require exclusion from the feedstock or significant control during processing, and for this reason none have been applied as a resource reporting constraint. Mass recovery has not been used as a reporting constraint because it appears to be relatively uniform for the kaolinised adamellite material, and the wet-screening process is not expected to represent a significant component of the total processing cost. A 30% Al_2O_3 grade has been selected as a resource cut-off grade. This value approximately coincides with the lower bound of the high-grade material within the deposit. The selection of the 30% Al_2O_3 grade enables HEG to maximise the quality of the kaolinised material selected for subsequent processing whilst maintaining the high mass recovery / yield of the target -63um mass fraction. This result reinforces the view of HEG management that the Yendon deposit provides a large, homogenous, high grade Al_2O_3 resource to underpin the proposed HPA project.
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining*	Detailed mining studies have not yet been completed. It is expected that ore will be extracted using conventional selective open pit mining methods, which includes hydraulic excavator mining, and dump truck haulage. Mining dilution assumptions have not been factored into the resource estimates.

Criteria	JORC Code explanation	Commentary
	reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	Detailed metallurgical testwork has not yet been completed. However, based on preliminary testwork completed by Nagrom Mineral Processors, and ongoing testwork being conducted at ALS Metallurgy, there is a reasonable level of confidence in the amenability of Yendon material to processing using conventional calcination technology with subsequent elevated temperature hydrochloric acid leaching. BHM Process Consultants (BHM) advised that preliminary testwork completed for the production of a final product marketing sample, and conducted under typical process conditions, indicated expected Al_2O_3 recoveries of 95% from the physical concentration process and in excess of 80% from the hydrometallurgical refinery. BHM advised that the completion of preliminary marketing testwork supports the expectation that kaolin material from the Yendon deposit can be processed to a high purity 4N (>99.99% Al_2O_3) product and the ongoing detailed metallurgical test program is expected to result in improved Al_2O_3 recoveries and product quality.
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	It is anticipated that material included in the resource will be mined under the relevant environmental permitting, which will be defined as a part of scoping and feasibility studies. The characterisation of contamination potential is expected to be completed during a PFS or DFS and factored into waste rock storage design. The likelihood of acid generation is considered low, given the intense weathering of the profile and the geochemical characteristics of the host rocks.

Criteria	JORC Code explanation	Commentary
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc.), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	The dry bulk density dataset was derived from water immersion tests performed on 72 core sections (150 mm length) collected from 15 diamond core holes. The data were grouped according to material type, and the dataset averages calculated. Very little variation was observed, and the dataset average was applied to all resource model cells.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	The resource classifications have been applied based on a consideration of the confidence in the geological interpretation, the quality and quantity of the input data, the confidence in the estimation technique, and the likely economic viability of the material. Sample quality and spacing are considered to be the controlling factors on classification. The variographic studies indicate useful continuity ranges of up to 100 m, and only samples that were deemed to have acceptable recovery were submitted for assay. A classification of Measured Resource was applied to estimates for kaolinised adamellite located within sub-regions with a uniform drill coverage of 50 m. A classification of Indicated Resource was applied to estimates for kaolinised adamellite located within sub-regions with a uniform drill coverage of 50 - 100 m. Resource classifications have not been assigned to estimates for the other domains because of the limited amount of available data.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	No independent audits or reviews have been conducted on the latest resource estimates.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative*	The resource estimates have been prepared and classified in accordance with the guidelines that accompany the JORC Code (2012), and no attempts have been made to further quantify the uncertainty in the estimates. The field program did not include any procedures that enabled an accurate quantification of any preferential material loss that may have occurred during sample extraction. The impact of this on the resource estimates was mitigated against by limiting the interpreted resource volumes to areas with drill coverage where there was a

Criteria	JORC Code explanation	Commentary
	accuracy and confidence of the estimate. • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	high expectation of acceptable recovery, and only using assay data from samples where the logging data indicated good recovery. The topographic model has been prepared from the drill hole collar and relatively wide-spaced spot height survey data, and may not accurately reflect short-scale undulations in the natural surface. The topographic model is considered to be of acceptable accuracy for the resource estimates given the minimal topographic relief observed in the project area, the geometry of the mineralised zones, and the consistency between the drill hole and topographic surface elevations. More accurate survey data may be required to support detailed mine planning and infrastructure studies. The resource quantities should be considered as regional or global estimates only. The accompanying models are considered suitable to support mine planning studies, but are not considered suitable for production planning, or studies that place significant reliance upon the local estimates.