



19<sup>th</sup> February 2019

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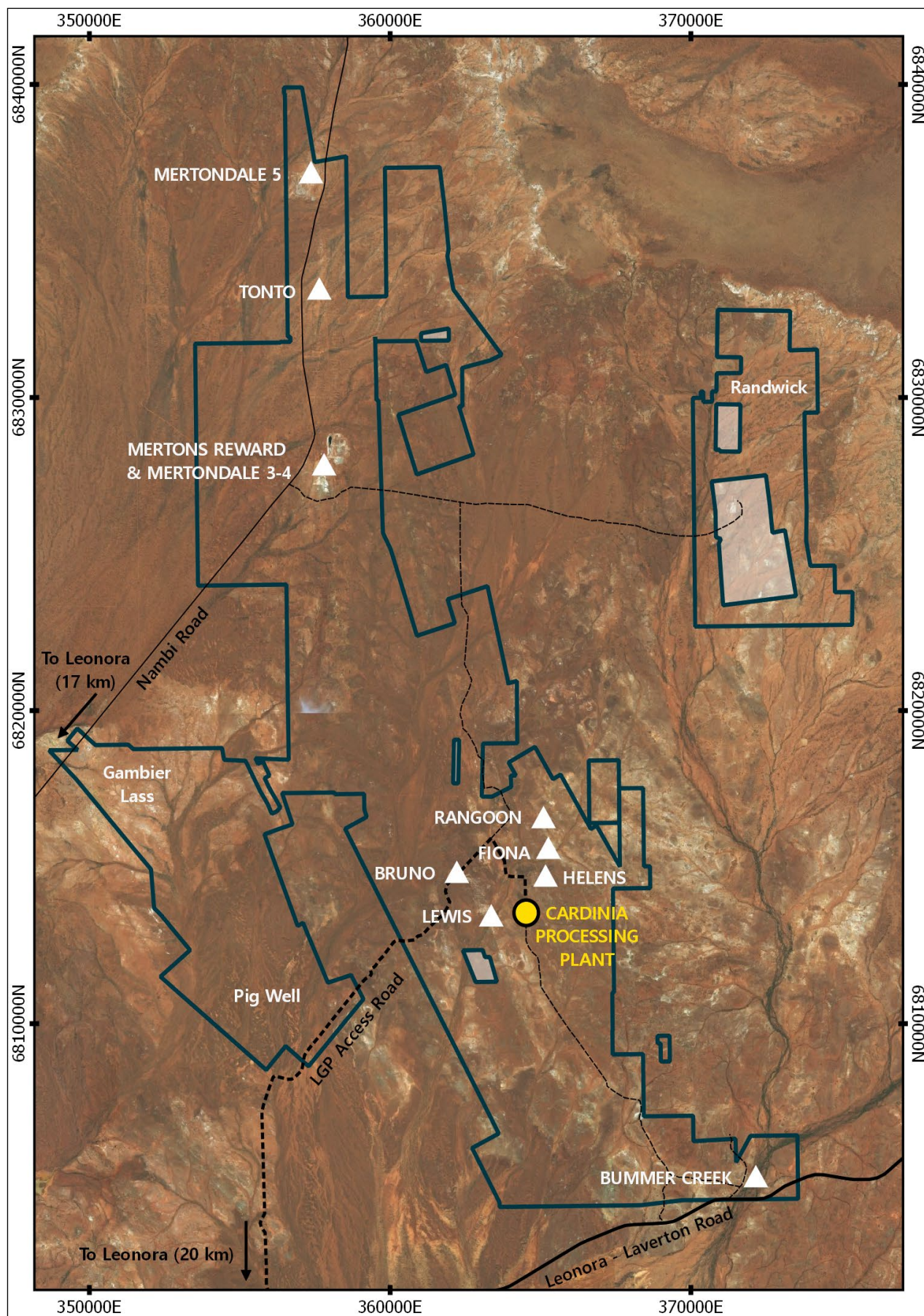
## CGP Development Update

### Work Programs progressing well on multiple fronts.

Kin Mining NL (ASX: KIN) is pleased to provide results from recent testwork programs in relation to water supply and infrastructure for the Cardinia Gold Project (CGP), along with recent metallurgical testwork results on the Lewis and Helens Prospects.

- **Water bore drilling and test pumping confirms adequate supply.**
  - Bummer Creek Bores tested to combined 35 to 40 L/sec
  - Cardinia Creek Bores tested to combined 25 to 30 L/sec
  - Supports steady state water usage requirement of 50 L/sec and peak demand of 70 L/sec
- **Sterilisation drilling complete**
  - Lewis Waste Dump and Tailings Storage Facility drilling complete
  - Helens Waste Dump drilling complete
  - Assaying in progress
- **Metallurgical testwork in Fresh rock shows good recovery**
  - Gravity recovery of 17 - 20% Au on Master composites
  - Coarse Grind appears optimal which has positive implications for future operating costs compared to previous estimates
    - Lewis – 92.8% total recovery at 150um grind
    - Helens – 85.4% total recovery at 106um grind
  - Low cyanide and lime consumption
  - Variability testing continuing to optimise grind size
- **Testwork program on schedule for completion in June quarter**





**Figure 1: Plan view of the Cardinia Gold Project**

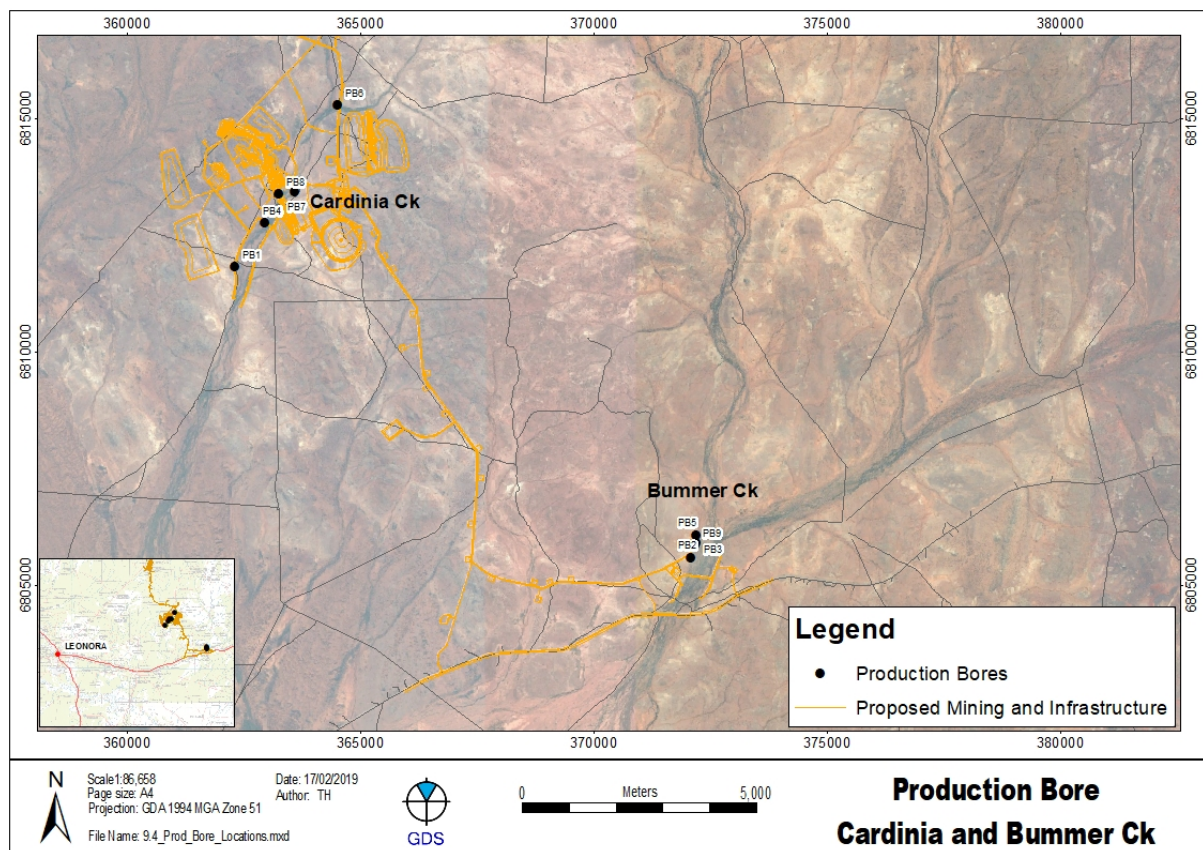


## Water Supply

Water demand at the CGP is expected to peak at 70 L/sec for a 1.5Mtpa plant during summer with minimal Tailings Storage Facility (TSF) water returns during the plant commissioning phase. This demand estimate includes allocations for dust suppression during mining and materials haulage activities.

Water demand is expected to fall to 50 L/sec once TSF return water reaches steady state, and fall further to approximately 42 L/sec during winter for plant demand and dust suppression.

The recent water production bore drilling program has been designed to achieve a peak supply of 70 L/sec and a sustainable supply of 50 L/sec to ensure sufficient water at all times for the project.



**Figure 2.** Production Bore location maps for Bummer Creek and Cardinia Creek.

At Bummer Creek, two additional bores have been established. A large diameter (30cm) bore PB9, was established close by PB3 where earlier pump tests in October 2018 had shown minimal drawdown during 10 L/sec pump testing (the maximum rate of the pump in a 15cm diameter test bore).

PB9 was pump tested and sustainable production rates of 15 L/sec, and maximum production of 20 L/sec, were established.

A production bore (15cm) was also established at PB5. Airlift tests yielded 5.5 L/sec and pump testing, which is yet to be completed, is expected to provide a sustainable supply of approximately 10 L/sec based on other test results from bores in the area.

The four production bores PB2, PB3, PB5 and PB9 established at Bummer Creek are estimated to be able to supply 35 to 40 L/sec of sustainable supply to the CGP plant.

Bummer Creek water quality remains excellent with salinities in pump testing and airlift testing varying between 1230ppm and 2240ppm Total Dissolved Salt (TDS). Low salinity water is expected to reduce plant lime consumption, reduce descale requirements, and reduce corrosion prevention costs in the Cardinia plant and infrastructure.

At Cardinia Creek a further three production bores were established: PB6, PB7 and PB8.

Step rate tests were conducted and sustainable production rates of >5 L/sec, 4 L/sec and 1 L/sec respectively were established. PB6 showed limited drawdown in the Step Rate test and will be further tested at higher pumping rates.

The Cardinia Creek borefield now contains 5 established bores with a combined estimated sustainable yield of approximately 25 L/sec. Maximum yield is likely to be higher (around 30 L/sec) for the initial dewatering period when aquifer drawdown within the pits is in progress.

Test bore salinity at Cardinia Creek varies between 9,600 and 30,000ppm TDS dependent upon location.

During mining, initially at Helens and Lewis, in-pit dewatering is also likely to supply some dust suppression water once the pit depths exceed the standing water table in the area, generally established at between 20m to 30m below natural surface.

Water production bore testing results are summarised in Table 1.

### Cardinia Ck

Name	Airlift Yield (lps)	Maximum Test Yield (lps)	Estimated Operational Yield (lps)	Salinity (mg/L)	Comments
PB1	6	10	10	9,600	
PB4	4	9	6	>10,000	
PB6	3	5	>5	13,300	Planned for second test > 5lps
PB7	3	4	4	20,000	
PB8	1.5	1	na	30,000	Not a viable Production Bore

### Bummer Ck

Name	Airlift Yield (lps)	Maximum Test Yield (lps)	Estimated Operational Yield (lps)	Salinity (mg/L)	Comments
PB2	35	10	10	1,360	
PB3	30	10	10	1,230	
PB5	5.5	tbd	5.5	2,240	Planned for testing > 5 lps
PB9	14	20	10	1,360	

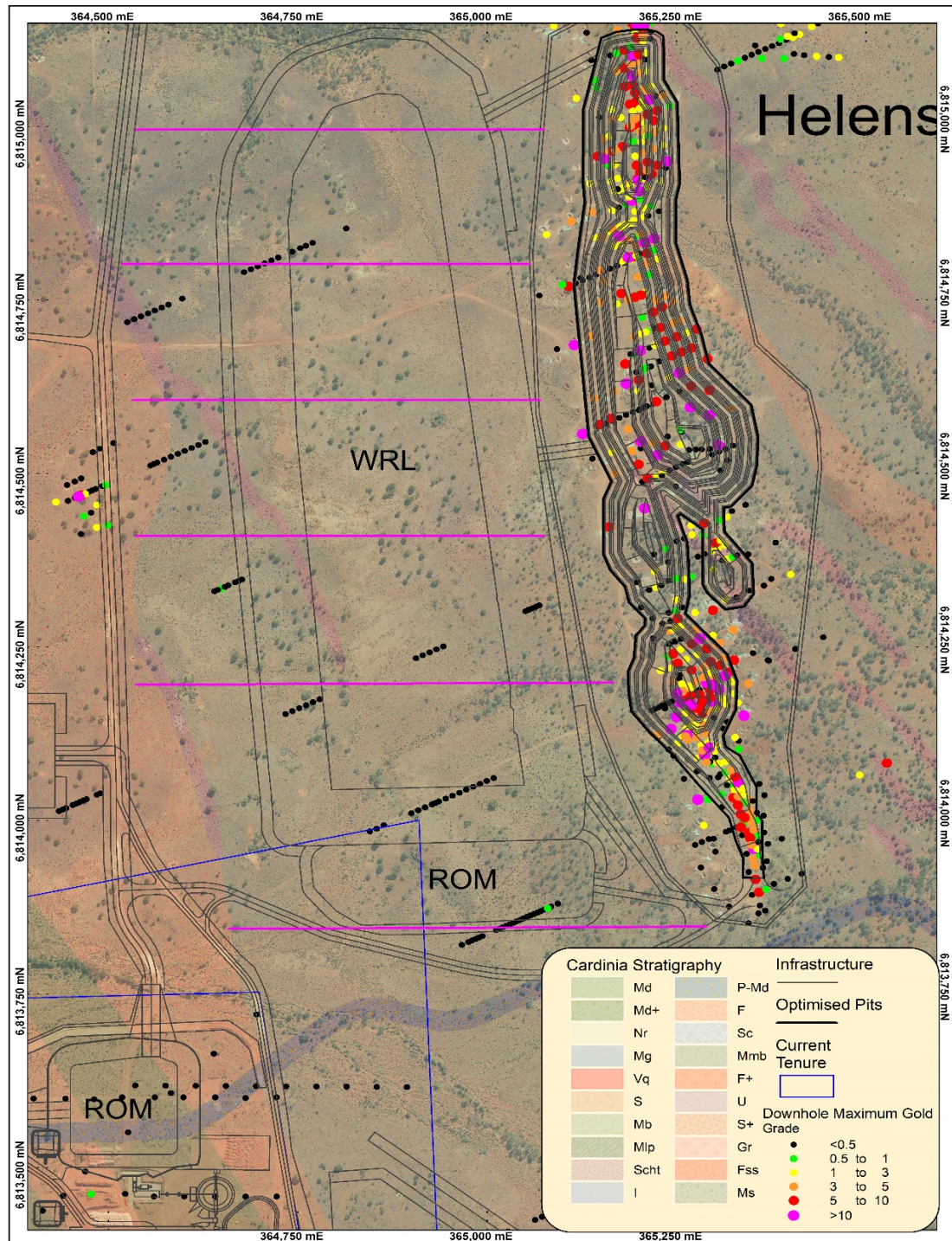
**Table 1.** Production Bore Summary Cardinia Creek borefield and Bummer Creek borefield



## Sterilisation Drilling

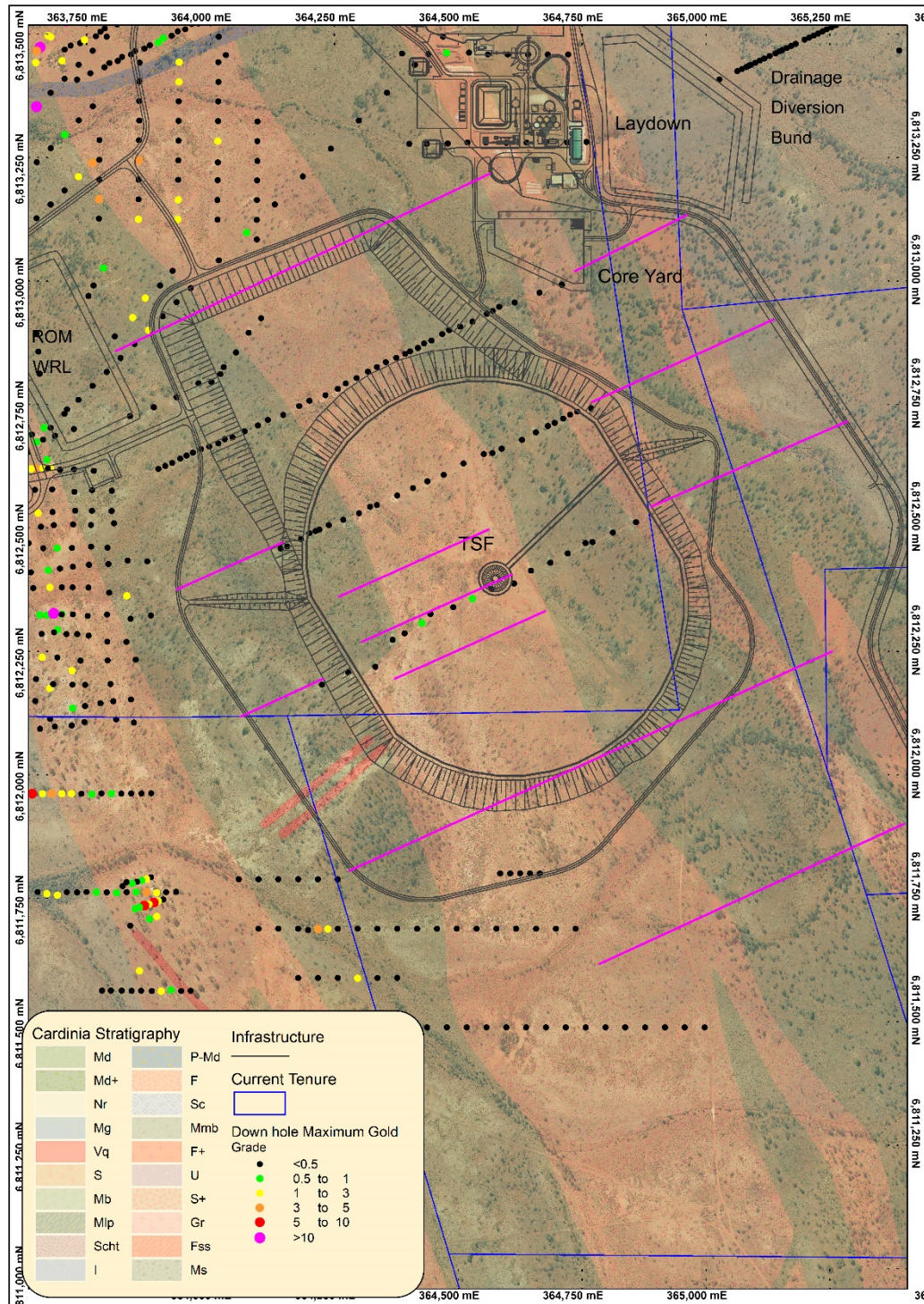
Two programs of Aircore (AC) drilling have been completed aimed at confirming the absence of economic gold mineralisation below the proposed sites for the Helens Waste Dump and Lewis Dump/TSF sites adjacent to the pits. At Lewis an Intergrated Waste Landform (IWL) design has been adopted for the Waste Dump and TSF.

Figure 3 and Figure 4 illustrate the completed AC drilling lines over the Helens Dump and Lewis IWL areas. Assay results are awaited.



**Figure 3.** Helens Waste Dump and Pit design with Aircore sterilisation drilling (pink lines). Historical RAB and other drilling is also shown by assay gold grade.





**Figure 4.** Lewis IWL, and CGP TSF, area with Aircore sterilisation drilling (pink lines). Historical RAB and other drilling is also shown by assay gold grade.

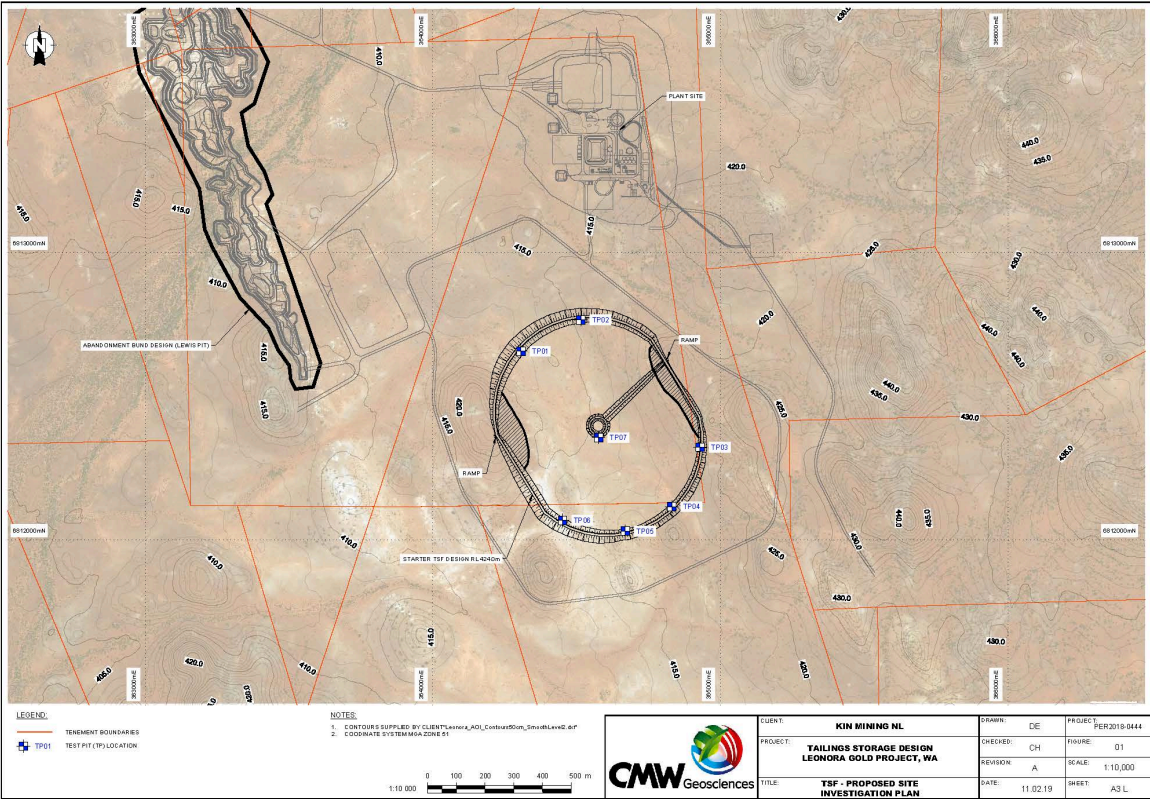
At Lewis, the Company has progressed the design of an IWL which incorporates the TSF for the project. CMW Geosciences, a leading Australian TSF and Waste Dump design group with a significant track record of IWL design and construction in the Eastern Goldfields, are undertaking the IWL testwork and design program.

Waste material removed from the Lewis Pit will be used to construct the starter TSF and as mining progresses used to complete the subsequent TSF wall lifts. IWL constructions utilise standard engineered construction techniques and are favoured where an excess of suitable



waste material is available for dam wall construction, as is the case at CGP.

IWL construction is favoured as it provides a more stable and environmentally suitable landform during operations, rehabilitation and project closure, and minimises material movement (and therefore cost) over the Life of Mine. Figure 5 illustrates the footprint of the proposed IWL relative to the Cardinia Plant site and the Lewis Open Pit Mine.



**Figure 5.** Lewis IWL design showing location relative to Cardinia Plant site and Lewis Open Pit.

## Metallurgical Testwork

Metallurgical testwork programs for Lewis, Helens and Mertondale Fresh ores commenced in late 2018 using diamond drill cores that were available from the 2018 drilling programs. The testwork program is being undertaken by Metallurgical Consultants (IMO).

Previous metallurgical testwork programs focused on Oxide and Transitional material with only limited testwork conducted on Fresh material. Previous testwork results for Fresh material used in the 2017 LGP DFS are summarised in Table 2 below.

Previously testwork was conducted uniformly at 75um grind with a single Lewis South test at 53um implying fine grinding was necessary to liberate the gold for leaching. Testwork was conducted on RC samples which in some cases had been in the field for some time leading to oxidation of the sulphides in fresh rock. No variability testing was undertaken.

The 2017 DFS testwork results at Lewis South, Mertons Reward and to a lesser degree Mertondale 3 and Helens Regional indicated a partial refractory nature to the Fresh material at those prospects. This partial refractory behavior was not investigated or explained.

	P <sub>80</sub> Grind	Gravity Recovery		Overall Recovery		Calc' Head Grade	Assay Head Grade	Assay Tails Grade	NaCN Consumption		Lime Consumption	
Duration				24	48				24	48	24	48
Units	µm	%	g/t	%		g/t			kg/t			
Merton's Reward Fresh	75	8.5	0.18	82.7	82.4	2.16	3.05	0.38	0.50	0.48	2.99	3.34
Merton's Reward Deep	75	25.5	0.65	76.3	77.7	2.54	2.50	0.57	0.47	0.52	2.88	3.18
Mertondale 3 Fresh	75	10.0	0.36	89.8	89.9	3.57	3.26	0.36	0.38	0.40	2.91	3.27
Tonto Fresh CIL	75	7.6	0.08		32.2	1.01	0.87	0.68	0.55	0.84	2.42	2.42
Helens Regional Fresh	75	28.6	0.61	90.5	91.1	2.14	2.08	0.19	0.21	0.35	2.20	2.20
Lewis South Fresh	53	37.7	1.23	78.7	79.1	3.27	3.87	0.68	0.20	0.21	2.31	2.31
Michelangelo Fresh	75	37.6	0.63	89.5	88.8	1.68	3.98	0.19	0.09	0.11	1.59	1.59
Leonardo Fresh	75	68.0	3.07	93.3	93.1	4.51	4.41	0.31	0.26	0.34	2.39	2.39

**Table 2.** 2017 LGP DFS metallurgical testwork results for Fresh material.



Initial results from the Metallurgical Testwork program started in late 2018 for Master Composite samples from Lewis and Helens are tabulated below. Master Composites were prepared from weighted average variability samples from the variety of lodes and separate mineralisation types present at each deposit. Variability samples and Master Composites were taken only from drill core.

	P <sub>80</sub> Grind	Gravity Recovery		Overall Recovery		Calc' Head Grade	Assay Head Grade	Assay Tails Grade	NaCN Consumption		Lime Consumption	
Duration				24	48				24	48	24	48
Units	µm	%	g/t	%		g/t			kg/t			
Helens Master	150	17.3	0.63	82.3	83.2	3.66	3.45	0.62	0.32	0.31	1.84	1.84
Helens Master	106	17.6	0.63	85.4	86.2	3.60	3.45	0.50	0.35	0.27	2.10	2.10
Helens Master	75	17.6	0.63	85.4	86.1	3.59	3.45	0.50	0.29	0.21	2.25	2.25
Lewis Master	150	20.2	0.41	92.8	92.6	2.02	1.48	0.15	0.29	0.34	2.13	2.13
Lewis Master	106	19.7	0.41	89.9	91.2	2.06	1.48	0.18	0.38	0.31	2.10	2.10
Lewis Master	75	19.7	0.41	95.0	94.0	2.06	1.48	0.12	0.29	0.37	2.19	2.19

**Table 3.** 2019 Master Composite metallurgical testwork results for Helens and Lewis Fresh material.

The 2019 results indicate that at both Helens and Lewis overall recovery (either at 24 hour or 48 hour leach times) and Tails Grade is relatively insensitive to P80 Grind Size up to 150µm. There appears, at least in the Master Composites at Helens and Lewis, to be significant scope for running the proposed plant at a significantly coarser grind than the 75µm grind chosen in the 2017 DFS plant design. A significantly coarser grind requirement implies either lower power demand or increased throughput, or a combination of the two, to provide optimal results.

Gravity recoveries are lower, being (17.3% to 20.2%) than the 2017 DFS testwork which is believed to be a function of the 2019 to date testwork conducted on core rather than RC samples. See Figure 6 for Gravity concentrate photographs.

Cyanide and lime consumptions are uniformly low and in line with previous testwork. The low lime consumption is a reflection of the very good quality water now available.

Further grinding establishment testwork will be undertaken on both Master Composites at 212µm to determine if overall recovery remains insensitive at an even coarser grind size. Once the optimal grind size is established the variability testwork will be undertaken to determine the metallurgical performance of particular areas or lodes within the Lewis and Helens deposits. Once completed, optimal grind size selection will determine the modifications to the flow sheet to be selected for the Process Plant design.

Mertondale Master Composites derived from drill core are currently being prepared in line with the testing protocol established at Lewis and Helens.

The CGP metallurgical testwork program remains on schedule to be completed in the June quarter.



**Figure 6:** Gravity concentrate photographs for Lewis Fresh ores. Sulphide (mostly pyrite) concentrate (LHS) and coarse gold concentrate (RHS). Gold recovery to gravity concentrate for Lewis Master Composite sample averages 0.41g/t Au (20%).

**-ENDS-**

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**COMPETENT PERSONS STATEMENT**

*The information contained in this report relating to Resource Estimation results relates to information compiled by Mr Jamie Logan. Mr Logan is a member of the Australian Institute of Geoscientists and is a full time employee of the company. Mr Logan has sufficient experience of relevance to the styles of mineralisation and the types of deposit under consideration, and to the activities undertaken to qualify as a Competent Person as defined in the 2012 edition of the JORC "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves".*

*The information contained in this report relating to exploration results relates to information compiled or reviewed by Glenn Grayson. Mr Grayson is a member of the Australasian Institute of Mining and Metallurgy and is a full time employee of the company. Mr Grayson has sufficient experience of relevance to the styles of mineralisation and the types of deposit under consideration, and to the activities undertaken to qualify as a Competent Person as defined in the 2012 edition of the JORC "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves".*

*Both Mr Logan and Mr. Grayson consents to the inclusion in this report of the matters based on information in the form and context in which it appears.*



# JORC Code, 2012 Edition – Table 1 report template

## Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<p><i>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.</i></p> <p><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></p> <p><i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></p> <p><i>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 30g 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</i></p>	<p><b>Diamond</b></p> <p>Historic (pre-2014) diamond core (DD) sampling utilised half core or quarter core sample intervals; typically varying from 0.3m to 1.4m in length. 1m sample intervals were favoured and sample boundaries principally coincided with geological contacts.</p> <p>Recent (2014-2018) diamond core (DD) samples, either HQ3 or NQ2 in size diameter, were either cut in half longitudinally or further cut into quarters, using a powered diamond core drop saw centered over a cradle holding core in place. Core sample intervals varied from 0.2 to 1.25m in length but were predominantly aligned to 1m intervals or with sample boundaries which respected geological contacts.</p> <p>2019 diamond core samples, either HQ3 or NQ2 in size diameter, were either cut in half longitudinally or a third longitudinally, using an automated Corewise core saw Core was placed in boats, holding core in place. Core sample intervals varied from 0.3 to 1.3m in length but were predominantly aligned to 1m intervals or with sample boundaries which respected geological contacts.</p> <p><b>RC</b></p> <p>Historic reverse circulation (RC) drill samples were collected over 1m downhole intervals beneath a cyclone and typically riffle split to obtain a sub-sample (typically 3-4kg). 1m sub-samples were typically collected in pre-numbered calico bags and 1m sample rejects were commonly stored at the drill site. 3m or 4m composited interval samples were often collected by using a scoop (dry samples) or spear (wet samples). If composite samples returned anomalous results once assayed, the single metre sub-samples of the anomalous composite intervals were retrieved and submitted for individual gold analysis.</p> <p>Recent reverse circulation (RC) drill samples were collected by passing through a cyclone, a sample collection box, and riffle or cone splitter. All RC sub-samples were collected over one metre downhole intervals and averaged 3-4kg.</p> <p>2019 RC drilling samples were collected in 1m downhole intervals by passing through a cyclone, a collection box and then dropping through a cone splitter. All RC sub-samples were collected over one metre downhole intervals and averaged 3-4kg.</p> <p><b>AC/RAB</b></p> <p>Historic air core (AC) and rotary air blast (RAB) were typically collected at 1 metre intervals and placed on the ground with 3-4kg sub-samples collected using a scoop or spear. Three metre or four metre composited interval samples were often collected by using a scoop (dry samples) or spear (wet samples). If composite samples returned anomalous results once assayed, the single metre sub-samples of the anomalous composite intervals were retrieved and submitted for individual gold analysis.</p>

Criteria	• JORC Code explanation	Commentary
	<p><i>commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</i></p>	<p><b>Assay Methodology</b></p> <p>Historic sample analysis typically included a number of commercial laboratories with preparation as per the following method, oven drying (90-110°C), crushing (&lt;2mm to &lt;6mm), pulverizing (&lt;75µm to &lt;105µm), and riffle split to obtain a 30, 40, or 50gram catchweight for gold analysis. Fire Assay fusion, with AAS finish was the common method of analysis however, on occasion, initial assaying may have been carried out via Aqua Regia digest and AAS/ICP finish. Anomalous samples were subsequently re-assayed by Fire Assay fusion and AAS/ICP finish.</p> <p>Recent sample analysis typically included oven drying (105-110°C), crushing (&lt;6mm &amp; &lt;2mm), pulverising (P90% &lt;75µm) and sample splitting to a representative 50gram catchweight sample for gold only analysis using Fire Assay fusion with AAS finish.</p> <p>All recent drilling, sample collection and sample handling procedures were conducted and/or supervised by KIN geology personnel to high level industry standards. QA/QC procedures were implemented during each drilling program to industry standards.</p>
<p><b>Drilling techniques</b></p>	<p><i>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).</i></p>	<p>Drilling carried out since 1986 and up to the most recent drill programs completed by KIN Mining was obtained from a combination of reverse circulation (RC), diamond core (DD), air core (AC), and rotary air blast (RAB) drilling.</p> <p>Data prior to 1986 is limited due to lack of exploration.</p> <p><b>Diamond</b></p> <p>Historic DD was carried out using industry standard 'Q' wireline techniques, with the core retrieved from the inner tubes and placed in core trays. Core sizes include NQ/NQ3 (Ø 45-48mm) and HQ/HQ3 (Ø 61-64mm). At the end of each core run, the driller placed core blocks in the tray, marked with hole number and depth. Core recovery was usually measured for each core run and recorded onto the geologist's drill logs.</p> <p>2017 – 2018 DD was carried out by contractor Orbit Drilling Pty Ltd ("Orbit Drilling") with a Mitsubishi truck-mounted Hydco 1200H 8x4 drill rig, using industry standard 'Q' wireline techniques. 2019 DD was carried out by Topdrill Pty Ltd. With a Sandvick DE840 mounted on a Mercedes Benz 4144 Actros 8x8 Carrier. The rig is fitted with Sandvik DA555 hands free diamond drilling rod handler and Austex hands free hydraulic breakout.</p> <p>Drill core is retrieved from the inner tubes and placed in plastic core trays and each core run depth recorded onto core marker blocks and placed at the end of each run in the tray. Core sizes include NQ2 (Ø 47mm) and HQ3 (Ø 64mm).</p> <p>Recent DD core recovery and orientation was obtained for each core run where possible, using electronic core orientation tools (e.g. Reflex EZ-ACT) and the 'bottom of core' marked accordingly.</p> <p>2017 -18 drilling was measured at regular downhole intervals, typically at 10-15m from surface and then every 30m to bottom of hole, using electronic multi-shot downhole survey tools (i.e. Reflex EZ-TRAC or Camteq Proshot). Independent programs of downhole deviation surveying were also carried out to validate previous surveys. These programs utilised either electronic continuous logging survey tool (AusLog A698 deviation tool) or gyroscopic survey equipment.</p> <p>2019 DD was surveyed at regular downhole intervals using electronic gyroscopic survey equipment.</p>



Criteria	• JORC Code explanation	Commentary
		<p><b>RC</b></p> <p>Historic RC drilling used conventional reverse circulation drilling techniques, utilising a cross-over sub, or face-sampling hammers with bit shrouds. Drill bit sizes typically ranged between 110-140mm.</p> <p>2017-18 RC drilling was carried out by Orbit Drilling's truck-mounted Hydco 350RC 8x8 Actross drill rigs with 350psi/1250cfm air compressor, with auxiliary and booster air compressors (when required). Drilling utilised mostly downhole face-sampling hammer bits (Ø 140mm), with occasional use of blade bits for highly oxidized and soft formations. The majority of drilling retrieved dry samples, with the occasional use of the auxiliary and booster air compressors beneath the water table, to maintain dry sample return as much as possible. RC drillhole deviations were surveyed downhole, typically carried out inside a non-magnetic stainless steel (s/s) rod located above the hammer, using electronic multi-shot downhole tool (e.g. Reflex EZ-TRAC). In some instances, drillholes were surveyed later in open hole. Independent programs of downhole deviation surveying were also carried out to validate previous surveys. These programs utilised either electronic continuous logging survey tool (AusLog A698 deviation tool) or gyroscopic survey equipment.</p> <p>2019 RC drilling was carried out by Swick Mining Services truck-mounted Swick version Schramm 685 RC Drill Rig (Rod Handler &amp; Rotary Cone Splitter) with support air truck and dust suppression equipment. Drilling utilised downhole face-sampling hammer bits (Ø 140mm). The majority of drilling retrieved dry samples, with the occasional use of the auxiliary and booster air compressors beneath the water table, to maintain dry sample return as much as possible.</p> <p><b>AC/RAB</b></p> <p>Historic AC drilling was conducted by Navigator utilising suitable rigs with appropriate compressors (e.g. 250psi/600cfm). AC holes were drilled using 'blade' or 'wing' bits, until the bit was unable to penetrate ('blade refusal'), often near the fresh rock interface. Hammer bits were used only when it was deemed necessary to penetrate further into the fresh rock profile or through notable "hard boundaries" in the regolith profile. No downhole surveying is noted to have been undertaken on AC drillholes.</p> <p>Historic RAB drilling was carried out using small air compressors (e.g. 250psi/600cfm) and drill rods fitted with a percussion hammer or blade bit, with the sample return collected at the drillhole collar using a stuffing box and cyclone collection techniques. Drillhole sizes generally range between 75-110mm. No downhole surveying is noted to have been undertaken on RAB drillholes.</p>
<b>Drill sample recovery</b>	<p><i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></p> <p><i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></p> <p><i>Whether a relationship exists between sample recovery and grade and</i></p>	<p><b>Diamond</b></p> <p>Historic core recovery was recorded in drill logs for most of the diamond drilling programs since 1985. A review of historical reports indicates that core recovery was generally good (&gt;80%) with lesser recoveries recorded in zones of broken ground and/or areas of mineralisation. Overall recoveries are considered acceptable for resource estimation.</p> <p>Recent core recovery data was recorded for each run by measuring total length of core retrieved against the downhole interval actually drilled and stored in the database. KIN representatives continuously monitor core recovery and core presentation quality as drilling is conducted and issues or discrepancies are rectified promptly to maintain industry best standards. Core recoveries averaged &gt;95%, even when difficult ground conditions were being encountered.</p>

Criteria	• JORC Code explanation	Commentary
	<p><i>whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i></p>	<p><b>RC/AC/RAB</b></p> <p>Historic sample recovery information for RC, AC, and RAB drilling is limited.</p> <p>Recent RC drilling samples are preserved as best as possible during the drilling process. At the end of each 1 metre downhole interval, the driller stops advancing, retracts from the bottom of hole, and waits for the sample to clear from the bottom of the hole through to the sample collector box fitted beneath the cyclone. The sample is then released from the sample collector box and passed through either a 3-tiered riffle splitter or cone splitter fitted beneath the sample box.</p> <p>Drilling prior to 2018 utilised riffle split collection whereas sample collection via a cone splitter was conducted for drilling undertaken since March 2018; cyclone cleaning processes remained the same.</p> <p>Sample reject is collected in plastic bags, and a 3-4kg sub-sample is collected in pre-marked calico bags for analysis. Once the samples have been collected, the cyclone, sample collector box and riffle splitter are flushed with compressed air, and the splitter cleaned by the off-sider using a compressed air hose at both the end of each 6 metre drill rod and then extensively cleaned at the completion of each hole. This process is maintained throughout the entire drilling program to maximise drill sample recovery and to maintain a high level of representivity of the material being drilled.</p> <p>RC drill sample recoveries are not recorded in the database however a review by Carras Mining Pty Ltd (CM) in 2017, of RC drill samples stored in the field, and ongoing observations of RC drill rigs in operation by KIN representatives, suggests that RC sample recoveries were mostly consistent and typically very good (&gt;90%).</p> <p>Collected samples are deemed reliable and representative of drilled material and no material discrepancy, that would impede a mineral resource estimate, exists between collected RC primary and sub-samples.</p>
<b>Logging</b>	<p><i>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.</i></p> <p><i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</i></p> <p><i>The total length and percentage of the relevant intersections logged.</i></p>	<p>Logging data coded in the database, prior to 2014, illustrates at least four different lithological code systems, a legacy of numerous past operators (MEGM, Pacmin, SOG, and Navigator). Correlation between codes is difficult to establish however, based on historical reports, drill hole logging procedures appear consistent with normal industry practices of the time.</p> <p>KIN has attempted to validate historical logging data and to standardize the logging code system by incorporating the SOG and Navigator logging codes into one. This is an ongoing process and is not yet completed.</p> <p><b>Diamond</b></p> <p>Diamond core logging is typically logged in more detail compared to RC, AC, and RAB drilling.</p> <p>Historical diamond core logging procedures are not well documented however core logging was recorded into drill logs for most of the diamond drilling programs since 1985. A review of historical reports indicates that logging noted core recovery, fractures per metre and RQD, lithology, alteration, texture, mineralisation, weathering, and other features. Core was then marked up for cutting and sampling.</p> <p>Navigator's procedure for logging of diamond core included firstly marking of the bottom of the core (for successful core orientations), then recording of core recovery, fractures per metre and RQD, lithology, alteration, texture, mineralisation, weathering, and other features. Core was then marked up for cutting and sampling. Navigator DD logging is predominantly to geological contacts.</p> <p>Navigator logging information was entered directly into hand held digital data loggers and transferred directly to the</p>



Criteria	• JORC Code explanation	Commentary
		<p>database, after validation, to minimize data entry errors.</p> <p>Drill core photographs, for drilling prior to 2014, are available only for diamond drillholes completed by Navigator.</p> <p>KIN DD logging is carried out at the KIN yard in Leonora once geology personnel retrieve core trays from the drill rig site. These are relocated to the KIN yard in Leonora each day. Drill core is photographed at the Leonora yard, prior to any cutting and/or sampling, and then stored in this location.</p> <p>Recorded data includes lithology, alteration, structure, texture, mineralisation, sulphide content, weathering and other features. Drillhole collar coordinates, azimuth, dip, depth and sampling intervals are also recorded. KIN DD logging is to geological contacts.</p> <p>Qualitative logging includes classification and description of lithology, weathering, oxidation, colour, texture and grain size. Quantitative logging includes identification and percentages of mineralogy, sulphides, mineralisation, veining, and in addition, logging of diamond drilling includes geotechnical data, RQD and core recoveries.</p> <p>KIN logging is inclusive of the entire length of each drillhole from surface to 'end of hole'. Diamond core logging is typically logged in more detail compared to RC drilling.</p> <p>Photographs are available for every diamond drillhole completed by KIN and a selection of various RC drillholes.</p> <p>All information collected is entered directly into laptop computers or tablets, validated in the field, and then transferred to the database.</p> <p>The level of logging detail is considered appropriate for exploration and to support appropriate mineral resource estimation, mining studies, and metallurgical studies.</p> <p>Diamond drillholes completed for geotechnical purposes were independently logged for structural data by geotechnical consultants.</p> <p><b>RC/AC/RAB</b></p> <p>Historical RC, AC, and RAB logging was entered on a metre by metre basis. Logging consisted of lithology, alteration, texture, mineralisation, weathering, and other features</p> <p>Navigator RC and AC logging was entered on a metre by metre basis. Logging consisted of lithology, alteration, texture, mineralisation, weathering, and other features.</p> <p>Navigator logging information was entered directly into hand held digital data loggers and transferred directly to the database, after validation, to minimize data entry errors.</p> <p>For the majority of historical drilling (pre-2004) the entire length of each drillhole have been logged from surface to 'end of hole'.</p> <p>KIN RC logging of was carried out in the field and logging has predominantly been undertaken on a metre by metre basis. KIN logging is inclusive of the entire length of each RC drillhole from surface to 'end of hole'.</p> <p>Recorded data includes lithology, alteration, structure, texture, mineralisation, sulphide content, weathering and other features. Drillhole collar coordinates, azimuth, dip, depth and sampling intervals are also recorded.</p> <p>Qualitative logging includes classification and description of lithology, weathering, oxidation, colour, texture and grain size. Quantitative logging includes identification and percentages of mineralogy, sulphides,</p>

Criteria	• JORC Code explanation	Commentary
		<p>mineralisation, and veining.</p> <p>Photographs are available for a selection of recent KIN RC drillholes.</p> <p>All information collected is entered directly into laptop computers or tablets, validated in the field, and then transferred to the database.</p> <p>The level of logging detail is considered appropriate for exploration and to support appropriate mineral resource estimation, mining studies, and metallurgical studies.</p>
<p><b>Sub-sampling techniques and sample preparation</b></p>	<p><i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></p> <p><i>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</i></p> <p><i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></p> <p><i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></p> <p><i>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.</i></p> <p><i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></p>	<p>Historical reports for drill programs prior to 2004, are and have not always been complete in the description of sub-sampling techniques, sample preparation, and quality control protocols. Errors may be present in the following commentary as a direct result of this however this is deemed relatively immaterial to the final mineral estimation.</p> <p><b>Diamond</b></p> <p>Historic diamond drill core (NQ/NQ3 or HQ/HQ3) samples collected for analysis were longitudinally cut in half, and occasionally in quarters for the larger (HQ/HQ3) diameter holes, using a powered diamond core drop saw centered over a cradle holding the core in place. Half core or quarter core sample intervals typically varied from 0.3m to 1.4m in length. 1m sample intervals were favoured and are the most common method of sampling, however sample boundaries do principally coincide with geological contacts. The remaining core was retained in core trays.</p> <p>Where historical reports do not describe the sampling protocol for sampling of drill core, it is assumed that drill core was sampled as described above.</p> <p>2017-18 diamond drill core samples collected for analysis were longitudinally cut in half, with some samples cut into quarters, using a powered diamond core drop saw blade centered over a cradle holding the core in place. Core sample intervals varied from 0.2 to 1.25m in length but were predominantly aligned to 1m intervals or with sample boundaries which respected geological contacts. The remaining core was retained in their respective core trays and stored in KIN's yard for future reference. All KIN diamond drill core is securely stored at the KIN Leonora Yard.</p> <p>2019 diamond drill core samples collected for analysis were longitudinally cut in half, with some samples cut into thirds, using an automated Corewise powered diamond core saw with the blade centered over a boat holding the core in place. Core sample intervals varied from 0.2 to 1.25m in length but were predominantly aligned to 1m intervals or with sample boundaries which respected geological contacts. The remaining core was retained in their respective core trays and stored in KIN's yard for future reference. All KIN diamond drill core is securely stored at the Cardinia coreyard.</p> <p>All sub-sampling techniques and sample preparation procedures conducted and/or supervised by KIN geology personnel are to standard industry practice. Sub-sampling and sample preparation techniques used are considered to maximise representivity of drilled material. QA/QC procedures implemented during each drilling program are to industry standard practice.</p> <p>Samples sizes are considered appropriate for this style of gold mineralisation and as an industry accepted method for evaluation of gold deposits in the Eastern Goldfields of Western Australia.</p> <p><b>RC/AC/RAB</b></p>

Criteria	• JORC Code explanation	Commentary
		<p>Historic sampling was predominantly conducted by collecting 1m samples from beneath a cyclone and either retaining these primary samples or passing through a riffle splitter to obtain a 3-4kg sub-sample for analysis. First pass sampling often involved collecting composite samples by using a scoop (dry samples) or spear/tube (wet samples) to obtain 3m or 4m composited intervals, with the single metre split samples being retained at the drill site as spoil or in sample bags. If composite sample assays returned anomalous results, the single metre samples for this composite were retrieved and submitted for analysis. RC/AC/RAB sampling procedures are believed to be consistent with the normal industry practices at the time.</p> <p>Samples obtained from conventional RC drilling techniques with cross-over subs often suffered from down hole contamination, especially beneath the water table. Samples obtained from RC drilling techniques using the face sampling hammer suffered less from down hole contamination and were more likely to be kept dry beneath the water table, particularly if auxiliary and booster air compressors were used. These samples are considered to be representative.</p> <p>The vast majority of Reverse Circulation (RC) drill samples were collected at 1m downhole intervals from beneath a cyclone and then riffle split to obtain a sub-sample (typically 3-4kg). After splitting, 1m sub-samples were typically collected in pre-numbered calico bags, and the 1m sample rejects were commonly stored at the drill site in marked plastic bags, for future reference. First pass sampling often involved collecting composite samples by using a scoop (dry samples) or spear/tube (wet samples) to obtain 3m or 4m composited intervals, with the single metre split sub-samples being retained at the drill site. If the composite sample assays returned anomalous results, single metre sub-samples for the anomalous composite intervals were retrieved and submitted for analysis.</p> <p>Navigator obtained sub-samples from wet samples using the spear or tube method.</p> <p>There are no sample rejects available from RC drilling prior to 2014 as most drill sites have been rehabilitated and the sample bags either removed or destroyed.</p> <p>Navigator included standards, fields duplicate splits (since 2009), and blanks within each drill sample batch, at a ratio of 1 for every 20 samples, with the number of standards being inserted at a ratio of 1 for every 50 samples.</p> <p>Recent RC sub-samples were collected over 1 metre downhole intervals and retained in pre-marked calico bags, after passing through a cyclone and either a riffle splitter, prior to March 2018, or cone splitter, after March 2018. The majority of RC sub-samples consistently averaged 3-4kg. Sample reject from the riffle splitter were retained and stored in plastic bags, and located near each drillhole site. When drilling beneath the water table, the majority of sample returns were kept dry by the use of the auxiliary and booster air compressors. Very few wet samples were collected through the splitter, and the small number of wet or damp samples is not considered material for resource estimation work.</p> <p>KIN RC drill programs utilise field duplicates, at regular intervals at a ratio of 1:25, and assay results indicate that there is reasonable analytical repeatability; considering the presence of nuggety gold.</p> <p>All sub-sampling techniques and sample preparation procedures conducted and/or supervised by KIN geology personnel are to standard industry practice. Sub-sampling and sample preparation techniques used are considered to maximise representivity of drilled material. QA/QC procedures implemented during each drilling</p>



Criteria	• JORC Code explanation	Commentary
		<p>program are to industry standard practice.</p> <p>Samples sizes are considered appropriate for this style of gold mineralisation and as an industry accepted method for evaluation of gold deposits in the Eastern Goldfields of Western Australia.</p>
<b>Quality of assay data and laboratory tests</b>	<p><i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></p> <p><i>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.</i></p> <p><i>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.</i></p>	<p>Numerous assay laboratories and various sample preparation and assay techniques have been used since 1981. Historical reporting and descriptions of laboratory sample preparation, assaying procedures, and quality control protocols for the samples from the various drilling programs are variable in their descriptions and completeness.</p> <p>Assay data obtained prior to 2001 is incomplete and the nature of results could not be accurately quantified due to the combinations of various laboratories and analytical methodologies utilised.</p> <p>Since 1993, the majority of samples submitted to the various laboratories were typically prepared for analysis firstly by oven drying, crushing and pulverizing to a nominal 85% passing 75µm.</p> <p>In the initial exploration stages, Aqua Regia digest with AAS/ICP finish, was generally used as a first pass detection method, with follow up analysis by Fire Assay fusion and AAS/ICP finish. This was a common practice at the time. Mineralised intervals were subsequently Fire Assayed (using 30, 40 or 50 gram catchweights) with AAS/ICP finish.</p> <p>Approximately 15-20% of the sampled AC holes may have been subject to Aqua Regia digest methods only, however AC samples were predominantly within the oxide profile, where aqua regia results would not be significantly different to results from fire assay methods.</p> <p>Limited information is available regarding check assays for drilling programs prior to 2004.</p> <p>During 2004-2014, Navigator utilised six different commercial laboratories during their drilling programs, however Kalgoorlie Assay Laboratories conducted the majority of assaying for diamond, RC, and AC samples using Fire Assay fusion on 40 gram catchweights with AAS/ICP finish.</p> <p>Since 2009 Navigator regularly included field duplicates and Certified Reference Material (CRM), standards and blanks, with their sample batch submissions to laboratories at average ratio of 1 in 20 samples. Sample assay repeatability and blank and CRM standard assay results were typically within acceptable limits.</p> <p>KIN sample analysis from 2014 to 2018 was conducted by SGS Australia Pty Ltd's ("SGS") Kalgoorlie and Perth laboratories. Sample preparation included oven drying (105°C), crushing (&lt;6mm), pulverising (P90% passing 75µm) and riffle split to obtain a 50 gram catchweight. Analysis for gold only was carried out by Fire Assay fusion technique with AAS finish (SGS Lab Code FAA505).</p> <ul style="list-style-type: none"> <li>• KIN regularly insert blanks and CRM standards in each sample batch at a ratio of 1:50. This allows for at least one blank and one CRM standard to be included in each of the laboratory's fire assay batch of 50 samples. Field duplicates are typically collected at a ratio of 1:50 samples and test sample assay repeatability. Blanks and CRM standards assay result performance is predominantly within acceptable limits for this style of gold mineralisation.</li> <li>• KIN requests laboratory pulp grind and crush checks at a ratio of 1:50 or less since May 2018 in order to better qualify sample preparation and evaluate laboratory performance. Samples have generally illustrated appropriate crush and grind size percentages since the addition of this component to the sample analysis</li> </ul>

Criteria	• JORC Code explanation	Commentary
		<p>procedure.</p> <ul style="list-style-type: none"> <li>SGS include laboratory blanks and CRM standards as part of their internal QA/QC for sample preparation and analysis, as well as regular assay repeats. Sample pulp assay repeatability, and internal blank and CRM standards assay results are typically within acceptable limits.</li> </ul> <p>From late 2018 samples have been analysed by Intertek Genalysis, with sample preparation either at their Kalgoorlie prep laboratory or the Perth Laboratory located in Maddington. Sample preparation included oven drying (105°C), crushing (&lt;6mm), pulverising (P90% passing 75µm) and split to obtain a 50 gram catchweight. Analysis for gold only was carried out by Fire Assay fusion technique with AAS finish.</p> <ul style="list-style-type: none"> <li>KIN regularly insert blanks and CRM standards in each sample batch at a ratio of 1:25. Kin accepts that this ratio of QAQC is industry standard. Field duplicates are typically collected at a ratio of 1:25 samples and test sample assay repeatability. Blanks and CRM standards assay result performance is predominantly within acceptable limits for this style of gold mineralisation.</li> <li>KIN requests laboratory pulp grind and crush checks at a ratio of 1:50 or less since May 2018 in order to better qualify sample preparation and evaluate laboratory performance. Samples have generally illustrated appropriate crush and grind size percentages since the addition of this component to the sample analysis procedure.</li> <li>Genalysis include laboratory blanks and CRM standards as part of their internal QA/QC for sample preparation and analysis, as well as regular assay repeats. Sample pulp assay repeatability, and internal blank and CRM standards assay results are typically within acceptable limits.</li> </ul> <p>The nature and quality of the assaying and laboratory procedures used are considered to be satisfactory and appropriate for use in mineral resource estimations.</p> <p>Fire Assay fusion is considered to be a total extraction technique. The majority of assay data used for the mineral resource estimations were obtained by the Fire Assay technique with AAS or ICP finish. AAS and ICP methods of detection are both considered to be suitable and appropriate methods of detection for this style of mineralisation</p> <p>Aqua Regia is considered a partial extraction technique, where gold encapsulated in refractory sulphides or some silicate minerals may not be fully dissolved, resulting in partial reporting of gold content.</p> <p>No other analysis techniques have been used to determine gold assays.</p> <p>Ongoing QAQC monitoring program identified one particular CRM returning spurious results. Further analysis demonstrated that the standard was compromised and was subsequently removed and destroyed. A replacement CRM of similar grade was substituted into the QAQC program.</p> <p>KIN continues to both develop and reinforce best practice QAQC methods for all drilling operations and the treatment and analysis of samples. Regular laboratory site visits and audits have been introduced since April 2018 and will be conducted on a quarterly basis. This measure will ensure that all aspects of KIN QAQC practices are adhered to and align with industry best practice.</p>
<b>Verification of sampling</b>	<i>The verification of significant intersections by either independent</i>	Verification of sampling, assay techniques, and results prior to 2004 is limited due to the legacy of the involvement of various companies, personnel, drilling equipment, sampling protocols and analytical techniques at different

Criteria	• JORC Code explanation	Commentary
<p><i>and assaying</i></p>	<p><i>or alternative company personnel.</i></p> <p><i>The use of twinned holes.</i></p> <p><i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></p> <p><i>Discuss any adjustment to assay data.</i></p>	<p>laboratories.</p> <p>In 2009, Runge Ltd ("Runge") completed a mineral resource estimate report for the Cardinia Project area, including the Helens and Rangoon deposits. Runge's database verification included basic visual validation in Surpac and field verification of drillhole positions in February 2009. Runge did not report any significant issues with the database.</p> <p>Since 2014, significant drill intersections have been verified by KIN company geologists during the course of the drilling programs.</p> <p>During 2017, Carras Mining Pty Ltd ("CM") carried out an independent data verification. 10,499 assay records for KIN 2014-2017 drilling programs were verified by comparing laboratory assay reports against the database. 6 errors were found, which are not considered material and which represented only 0.015% of all database records verified for KIN 2014-2017 drilling programs</p> <p>No adjustments, averaging or calibrations are made to any of the assay data recorded in the database. QA/QC protocol is considered industry standard with standard reference material submitted on a routine basis.</p> <p>Recent (2014-2018) RC and diamond drilling by KIN included twinning of some historical holes within the Helens and Rangoon resource areas. There is no significant material difference between historical drilling information and KIN drilling information.</p> <p>Areas without twinned holes illustrate a drill density that is considered sufficient to enable comparison with surrounding historic information. No material difference of a negative nature exists between historical drilling information and KIN drilling information.</p> <p>KIN diamond holes drilled for metallurgical and geotechnical test work illustrate assay results with adequate correlation to both nearby historical and recent drilling results.</p> <p>No adjustment or calibration has been made to assay data.</p>
<p><i>Location of data points</i></p>	<p><i>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.</i></p> <p><i>Specification of the grid system used.</i></p> <p><i>Quality and adequacy of topographic control.</i></p>	<p>Several local grids were established and used by previous project owners. During the 1990s, SOG transformed the surface survey data firstly to AMG and subsequently to MGA (GDA94 zone51).</p> <p>Drilling was carried out using these various local grids. Since 2004, All Navigators drill hole collars were surveyed on completion of drilling in the Australian MGA94, Zone51 grid using RTK-DGPS equipment by licensed surveyors, with more than 80% of the pickups carried out by independent contractors.</p> <p>Almost all the diamond and at least 70% of Navigator RC holes were downhole surveyed. Pre-Navigator, single shot survey cameras were used, with typical survey intervals of 30-40 metres.</p> <p>Recent KIN drill hole collars are located and recorded in the field by a contract surveyor using RTK-DGPS (with a horizontal and vertical accuracy of <math>\pm 50\text{mm}</math>). Location data was collected in the GDA94 Zone51 grid coordinate system.</p> <p>Downhole surveying was predominantly carried out by the drilling contractor; Orbit Drilling Pty Ltd. KIN recognised that some of the downhole survey data appeared to be spurious, and commissioned an independent downhole surveying program by a survey contractor (BHGS, Perth) to check several drillholes at Helens and Rangoon. The check survey found occasional spurious results with the initial surveys. This can be explained by the fact that when the drilling company's survey tool is run inside the drill rods, the tool's sensors need to</p>



Criteria	• JORC Code explanation	Commentary
		<p>be located exactly in the middle of the bottom stainless steel (s/s) RC rod to obtain accurate readings. Check readings by KIN personnel at different locations within the s/s rod found that variation in azimuth can be measured up to 2°, within 1 metre from the centre of the rod, and up to 10° further away from the centre. The positioning of the tool by the drilling contractor is assumed to be within 1 metre of the centre of the s/s rod for the majority of the drilling program. Therefore, given the nature of the mineralisation and the shift in apparent position of up to 5 metres (for 2° variation) along 'strike' for open pit depths (&lt;140 metres), the occasional errors are not considered material for this resource estimation work.</p> <p>Downhole surveying in 2019 has been conducted by the drilling contractors (Topdrill Pty Ltd and Swick Mining Services Pty Ltd) utilizing electronic gyroscopic survey tools. These are considered very accurate with no further surveying required to check drill hole deviation.</p> <p>In addition, if the downhole survey tool is located within 15 metres of the surface, there is risk of influence from the drill rig affecting the azimuth readings. This was observed for the survey readings, which include total magnetic intensity (TMI) measurements, where TMI is spurious for readings taken at downhole depths less than 20 metres. These spurious readings are included in the database, but are not used.</p> <p>A small selection of drillhole collars, which do not have DGPS collar surveys, were picked up with a handheld GPS and individually appraised in regards to their location prior to modelling; the position of these collars is deemed appropriate for the resource estimation work.</p> <p>Considering the history of grid transformations and surviving documentation, there might be some residual risk of error in the MGA co-ordinates for old drillholes, however this is not considered to be material for the resource estimation.</p> <p>Azimuth data was historically recorded relative to magnetic north. Much of the historical drilling data was recorded relative to magnetic north. Variation in magnetic declination for the Cardinia Project area is calculated at +0.823° East (1985) to +1.301° East (2017), with a maximum variation of +1.575° in 2005. The difference between true north and magnetic north, and the annual variation in magnetic declination since 1985 is not significant, therefore magnetic north measurements have been used, where true north data is unavailable, for all survey data used in resource estimation processes.</p> <p>The accuracy of drill hole collars and downhole data are located with sufficient accuracy for use in resource estimation work.</p>
<b>Data spacing and distribution</b>	<p><i>Data spacing for reporting of Exploration Results.</i></p> <p><i>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.</i></p>	<p>Drill hole spacing patterns vary considerably throughout the Cardinia Project area and are deposit specific, depending on the nature and style of mineralisation being tested.</p> <p>Drill hole spacing within the resource area is sufficient to establish an acceptable degree of geological and grade continuity and is appropriate for both the mineral resource estimation and the resource classifications applied.</p> <p>Sample compositing of 1m was conducted for the resource estimation. The vast majority (95%) of primary assay intervals are 1 metres interval for RC drill samples with diamond drilling illustrating a greater degree of sample interval length variation. AC and RAB assay data were not included in the resource estimation and was only utilised for geological interpretation.</p>

Criteria	• JORC Code explanation	Commentary
	<i>Whether sample compositing has been applied.</i>	
<b>Orientation of data in relation to geological structure</b>	<p><i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></p> <p><i>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.</i></p>	<p>The sheared Cardinia greenstone sequence displays a NNW to NW trend. Drilling and sampling programs were carried out to obtain unbiased locations of drill sample data, generally orthogonal to the strike of mineralisation.</p> <p>Mineralisation is structurally controlled in sub-vertical shear zones within the Cardinia area, with supergene components of varying lateral extensiveness present in the oxide profile.</p> <p>The vast majority of historical drilling, pre-Navigator (pre-2004), and KIN drilling is orientated at -60°/245° (WSW) and -60°/065° (ENE).</p> <p>The chance of sample bias introduced by sample orientation is considered minimal. No orientation sampling bias has been identified in data thus far.</p>
<b>Sample security</b>	<i>The measures taken to ensure sample security.</i>	<p>No sample security details are available for pre-Navigator (pre-2004) drill or field samples.</p> <p>Navigator drill samples (2004-2014) were collected in pre-numbered calico bags at the drill rig site. Samples were then collected by company personnel from the field and transported to the secure Navigator yard in Leonora. Samples were then batch processed (drillhole and sample numbers logged into the database) and then packed into 'bulkabag sacks'. The bulkabags were tied off and stored securely in the Navigator yard until being transported to the selected laboratory. There was no perceived opportunity for the samples to be compromised from collection of samples at the drill site to delivery to the laboratory.</p> <p>2017 -18 KIN RC drill samples were collected in pre-numbered calico bags at the drill rig site. The samples were then batch processed (drillhole and sample numbers encoded onto a hardcopy sample register) in the field, and then transported and stacked into 'bulkabag sacks' at the secure KIN yard location in Leonora. Bulkabags were tied off and stored securely in the yard until being transported to the laboratory.</p> <p>2019 RC drill samples were collected in pre-numbered calico bags at the drill rig site. The samples were then batch processed (drillhole and sample numbers encoded onto a hardcopy sample register) in the field, and then transported and stacked into 'bulkabag sacks' at the Cardinia office.</p> <p>2017-18 KIN DD samples were obtained by KIN personnel in pre-numbered calico bags at the KIN yard location in Leonora. Samples were then stacked into 'bulkabag sacks' at the yard location and stored securely until being transported to the laboratory.</p> <p>2019 DD samples were obtained by KIN personnel in pre-numbered calico bags at the core yard located at the Cardinia office. Samples were then stacked into 'bulkabag sacks' at the yard location and stored securely until being transported to the laboratory.</p> <p>Transport contractors are utilised to transport samples to the laboratory. No perceived opportunity for samples to be compromised from collection of samples at the drill site, to delivery to the laboratory, where they were stored in their secure compound, and made ready for processing is deemed likely to have occurred.</p>

Criteria	• JORC Code explanation	Commentary
		<p>On receipt of the samples, the laboratory independently checked the sample submission form to verify samples received and readied the samples for sample preparation. SGS and Genalysis sample security protocols are of industry standard and deemed acceptable for resource estimation work.</p>
<p><b>Audits or reviews</b></p>	<p><i>The results of any audits or reviews of sampling techniques and data.</i></p>	<p>Historic drilling and sampling methods and QA/QC are regarded as not being as thoroughly documented compared to current standards. Inhouse reviews of various available historical company reports of drilling and sampling techniques indicates that these were most likely conducted to industry best practice and standards of the day.</p> <p>Independent geological consultants Runge Ltd completed a review of the Cardinia Project database, drilling and sampling protocols, and so forth in 2009. The Runge report highlighted issues with bulk density and QA/QC analysis within the supplied database. Identified issues were subsequently addressed by Navigator and KIN.</p> <p>Carras Mining Pty Ltd (CM), an independent geological consultant, reviewed and carried out an audit on the field operations and database in 2017. Drilling and sampling methodologies observed during the site visits were to industry standard. No issues were identified for the supplied databases which could be considered material to a mineral resource estimation</p> <p>CM logged the oxidation profiles ('base of complete oxidation' or "BOCO", and 'top of fresh rock' or "TOFR") for each of the deposit areas, based on visual inspection of selected RC drill chips from KIN's recent drilling programs, and a combination of historical and KIN drillhole logging. Final adjustments were made with input from KIN geologists. The oxidation profiles were used to assign bulk densities and metallurgical recoveries to the 2017 resource models.</p> <p>Past bulk density test work has been inconsistent with incorrect methods employed, to derive specific gravity or in-situ bulk density, rather than dry bulk density. Navigator (2009) and recent KIN (2017) bulk density test work was carried out using the water immersion method on oven dried, coated samples to derive dry bulk densities for different rock types and oxidation profiles. This information has been incorporated into the database for resource estimation work. CM conducted site visits during 2017 to the laboratory to validate the methodology.</p> <p>Additional density measurements were undertaken by KIN throughout 2018 utilising an onsite water immersion specific gravity station. Core specimens delineated as overlying the fresh rock boundary were wrapped in plastic film prior to being immersed while fresh rock specimens were emplaced without plastic film. Results to date have quite accurately represented previous laboratory results from dry bulk density testing and, whilst these results were not included for the purpose of mineral resource estimation, they do provide clear indicators for the weathering profile boundaries for geological interpretation.</p> <p>RC and diamond drilling conducted by KIN from 2014 to 2018 include some twinning of historical drillholes within the Cardinia Project area. In addition, KIN infill drilling density is considered sufficiently close enough to enable comparison with surrounding historic information, and there is no material difference of a negative nature between historical drilling information and the KIN drilling information. KIN diamond holes drilled for metallurgical and geotechnical test work illustrate assay results with adequate correlation to both nearby historical and recent drilling results.</p> <p>Drilling, sampling methodologies, and assay techniques used in these drilling programs are considered to be appropriate and to mineral exploration industry standards of the day.</p>



Criteria	• JORC Code explanation	Commentary
		<p>KIN is in the process of completing validation of all historical logging data and to standardise the logging code system by incorporating the SOG and Navigator logging codes into one, and converting all historical logging into the standardized code system. This is an ongoing process and is not yet completed.</p> <p>Laboratory site visits and audits have been introduced since April 2018 and will be conducted on a quarterly basis. This measure will ensure that all aspects of KIN QAQC practices are adhered to and align with industry best practice.</p>

## Section 2 Reporting of Exploration Results

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

Criteria	• JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<p><i>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.</i></p> <p><i>The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.</i></p>	<p>The Cardinia Project's Helens and Rangoon areas includes granted mining tenements M37/316 and M37/317, centered some 35-40km NE of Leonora. The tenements are held in the name of Navigator Mining Pty Ltd, a wholly owned subsidiary of KIN. The Cardinia Project is managed, explored and maintained by KIN, and constitute a portion of KIN's Leonora Gold Project (LGP), which is located within the Shire of Leonora in the Mt Margaret Mineral Field of the North Eastern Goldfields.</p> <p>There are no known native title interests, historical sites, wilderness areas, national park or environmental impediments over the outlined current resource areas, and there are no current impediments to obtaining a license to operate in the area.</p>
<b>Exploration done by other parties</b>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	<p>Limited data is available prior to 1986 due to the level of exploration completed in the area, however marginal exploration was conducted during the late 1960's for nickel and throughout the 1970's targeting base metals.</p> <p>From 1980-1985, Townson Holdings Pty Ltd ("Townson") mined a small open pit over selected historical workings at the Rangoon prospect. Localised instances of drilling relating to this mining event are not recorded and are considered insubstantial and immaterial for resource modelling.</p> <p>Companies involved in the collection of the majority of the gold exploration data since 1986 and prior to 2014 include: Mt Eden Gold Mines (Aust) NL (also Tarmoola Aust Pty Ltd "MEGM") 1986-2003; Pacmin Mining Corporation Ltd ("Pacmin") 1998-2001; Sons of Gwalia Ltd ("SOG") 2001-2004, and Navigator Resources Ltd ("Navigator") 2004-2014.</p>

Criteria	• JORC Code explanation	Commentary
		<p>In 2009 Navigator commissioned Runge Limited (“Runge”) to complete a Mineral Resource estimate for the Helens and Rangoon deposits. Runge reported a JORC 2004 compliant Mineral Resource estimate, at a low cut-off grade of 0.7g/t Au, totaling 1.45Mt @ 1.3 g/t au (61,700 oz Au), comprising total Indicated Resources of 1.0Mt @ 1.4 g/t Au and total Inferred Resources of 0.446Mt @ 1.2 g/t Au.</p> <p>In 2017 KIN commissioned Carras Mining (“CM”) to complete a reviewed Mineral Resource estimate for the Helens and Rangoon deposits. CM reported a JORC 2012 compliant Mineral Resource estimate, at a low cut-off grade of 0.5g/t Au, of 1.27Mt @ 1.5g/t (61,000oz Au), comprising total Indicated Resources of 0.99Mt @ 1.53g/t Au and total Inferred Resources of 0.29Mt @ 1.39g/t Au for the Helens resource. CM reported a JORC 2012 compliant Mineral Resource estimate, at a low cut-off grade of 0.5g/t Au, of 0.60Mt @ 1.31g/t (25,000oz Au), comprising total Indicated Resources of 0.41Mt @ 1.37g/t Au and total Inferred Resources of 0.19Mt @ 1.18g/t Au for the Rangoon resource.</p> <p>KIN exploration drilling and continued mineral investigation is primarily focused in areas proximal to and hosting the Helens and Rangoon deposits, together with regions of immediate lateral strike extension, and historical drilling conducted by the as mentioned operators.</p>
Geology	Deposit type, geological setting and style of mineralisation.	<p>The Cardinia Project area is located 35km NE of Leonora in the central part of the Norseman-Wiluna Greenstone Belt, which extends for some 600km on a NNW trend across the Archean Yilgarn Craton of Western Australia.</p> <p>The regional geology comprises a suite of NNE-North trending greenstones positioned within the Mertondale Shear Zone (MSZ) a splay limb of the Kilkenny Lineament. The MSZ denotes the contact between Archaean felsic volcanoclastics and sediment sequences in the west and Archaean mafic volcanics in the east. Proterozoic dolerite dykes and Archaean felsic porphyries have intruded the sheared mafic/felsic volcanoclastic/sedimentary sequence.</p> <p>Locally within the Cardinia Project area, the stratigraphy consists of intermediate, mafic and felsic volcanic and intrusive lithologies and locally derived epiclastic sediments, which strike NNW with a sub-vertical attitude. Structural foliation of the areas stratigraphy predominantly dips steeply to the east but localised inflections are common and structural orientation can vary between moderately (50-75°) easterly to moderately westerly dipping.</p> <p>At Helens and Rangoon, the stratigraphy comprises a sequence of intermediate-mafic and felsic volcanic lithologies and locally derived epiclastic sediments, intruded in places by narrow felsic porphyry dykes. Carbonaceous shales often mark the mafic/felsic contact. These lithologies are located on the western limb of the regionally faulted south plunging Benalla Anticline.</p> <p>Primary mineralised zones at the Helens and Rangoon areas are north-south trending with a sub-vertical attitude. Mineralisation is hosted predominantly in mafic rock units, adjacent to the felsic volcanic/sediment contacts, where it is associated with increased shearing, intense alteration and disseminated sulphides.</p> <p>Minor supergene enrichment occurs locally within mineralised shears throughout the regolith profile.</p>

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		In some areas, gold mineralisation is highly variable in the regolith profile. In these areas, closer spaced drilling was carried out by KIN to improve confidence in the mineral resource.
<b>Drill hole Information</b>	<p><i>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:</i></p> <ul style="list-style-type: none"> <li>• easting and northing of the drill hole collar</li> <li>• elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>• dip and azimuth of the hole</li> <li>• down hole length and interception depth</li> <li>• hole length.</li> </ul> <p><i>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.</i></p>	Material drilling information used for the resource estimation has previously been publicly reported in numerous announcements to the ASX by Navigator (2004-2014) and KIN since 2014.
<b>Data aggregation methods</b>	<p><i>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.</i></p> <p><i>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.</i></p> <p><i>The assumptions used for any reporting of metal equivalent values should be clearly</i></p>	<p>When exploration results have been reported for the resource areas, the intercepts are reported as weighted average grades over intercept lengths defined by geology or lower cut-off grades, without high grade cuts applied. Where aggregate intercepts incorporated short lengths of high grade results, these results were included in the reports.</p> <p>Since 2014, KIN have reported RC drilling intersections with low cut off grades of <math>\geq 0.5</math> g/t Au and a maximum of 2m of internal dilution at a grade of <math>&lt;0.5</math>g/t Au.</p> <p>There is no reporting of metal equivalent values.</p>



Criteria	• JORC Code explanation	Commentary
	<i>stated.</i>	
<b>Relationship between mineralisation widths and intercept lengths</b>	<p><i>These relationships are particularly important in the reporting of Exploration Results.</i></p> <p><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></p> <p><i>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').</i></p>	<p>The orientation, true width, and geometry of mineralised zones have been primarily determined by interpretation of historical drilling and continued investigation and verification of KIN drilling.</p> <p>The majority of drill holes prior to 2018 are inclined at -60° toward 245° (WSW). 2018 drilling included holes orientated both at -60° toward 065° (ENE) and -60° toward 245° (WSW) to more accurately account for and target localised zones of structural inflection along the larger mineralised structural trends of the resource area.</p> <p>Mineralisation is typically steeply dipping and, as such, drill intercepts are reported as downhole widths not true widths.</p> <p>Accompanying dialogue to reported intersections normally describes the attitude of mineralisation.</p>
<b>Diagrams</b>	<i>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.</i>	Appropriate maps and sections are included in the main body of this report.
<b>Balanced reporting</b>	<i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</i>	<p>Public reporting of exploration results by KIN and past tenement holders and explorers for the resource areas are considered balanced.</p> <p>Representative widths typically included a combination of both low and high grade assay results.</p> <p>All meaningful and material information relating to this mineral resource estimate is or has been previously reported.</p>
<b>Other substantive exploration data</b>	<i>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.</i>	During 2018 a campaign of determining Bulk Densities was undertaken. Water displacement method was used on samples selected by the logging geologist. These measurements are input to the logging software interface and loaded to the Datashed database.
<b>Further work</b>	<i>The nature and scale of planned further work (e.g. tests for lateral extensions or depth</i>	The potential to increase the existing resources as reported is viewed as probable. Further work does however not guarantee an upgrade in resources will be achieved.

Criteria	• JORC Code explanation	Commentary
	<p><i>extensions or large-scale step-out drilling).</i></p> <p><i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></p>	<p>KIN intend to continue exploration and drilling activities at Cardinia in the resource areas, with intention to increase Cardinia Project's resources and convert Inferred portions to the Indicated category.</p>