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Heron Resources Limited

ASX/TSX Release

29 June 2016

Heron Resources delivers robust Feasibility Study for Woodlawn Project

Study supports project viability with compelling commercial case for immediate development

Expedited program launched to secure project funding and bring project online to meet global zinc supply shortfall

Heron Resources Limited ("Heron", "Company", ASX:HRR and TSX:HER) is pleased to announce the results of its Feasibility Study (FS) for its 100% owned and fully permitted high-grade Woodlawn Zinc-Copper Project in New South Wales, Australia. The A$11 million study supports the viability of the Starter Case to deliver quality zinc, copper and lead concentrates to market over a significant Reserves-based mine life. This study underpins the Board's decision to advance an accelerated program to secure project finance and bring the Woodlawn Project into production in 2018.

Underground Mineral Reserves - 2.8Mt

Polymetallic: 1.8Mt @ 16% ZnEq (8.1% Zn, 1.2% Cu, 2.9% Pb, 0.56g/t Au, 57g/t Ag)
Copper: 1.0 Mt @ 9% ZnEq (0.6% Zn, 2.4% Cu, 0.1% Pb, 0.23g/t Au, 14g/t Ag)
TOTAL: 2.8Mt @ 14% ZnEq (5.5% Zn, 1.6% Cu, 1.9% Pb, 0.45g/t Au, 42g/t Ag)

+

Reclaimed Tailings Mineral Reserves - 9.5Mt

9.5Mt @ 6% ZnEq (2.2% Zn, 0.5% Cu, 1.3% Pb, 0.31g/t Au, 31g/t Ag)

Steady State Production	Mine Life
Zinc 40,000 tpa Copper 10,000 tpa Lead 12,000 tpa	9.3 Years

Post Tax NPV *	Post Tax IRR	Payback	Net Cashflow Post Tax
A$207M	32%	2.3 Years	A$402M

Peak Cash Requirement	C1 **	C3 **
A$163M	-US$0.06/lb	US$0.34/lb

** Results reported using Mineral Reserves as estimated for the FS at an 8% post-tax real discount rate (approximately. 10% post-tax nominal), with AUD/USD FX 0.71, and with flat real commodity prices of US$1.01/lb Zn, US$3.00/lb Cu, US$0.91/lb Pb, US$17.80/oz Ag and US$1,200/oz Au. Other assumptions are detailed later in this release. ** C1 and C3, refer to page 17 for definitions. All currency amounts are in Australian dollars unless otherwise noted.*

Key Outcomes:

- **Attractive project characteristics**
  - Initial 9.3 year mine life based upon the combined underground and tailings Mineral Reserves ("Starter Case")
  - Mineral Reserves-only life-of-mine (LOM) Production Target of 284kt Zn, 67kt Cu, 87kt Pb, 7.5Moz Ag and 28koz Au
  - Campaign processing rate of up to 1.0Mtpa from underground mining, and up to 1.5Mtpa from reclaiming tailings, processed through a standard single-sulphide flotation facility
  - Steady-state (2020-2023) annual Production Target of 40kt Zn, 10kt Cu, 12kt Pb, 900koz Ag and 4koz Au contained within zinc, copper, and lead concentrates
  - Utilising existing local and regional infrastructure to achieve significant reductions in development costs
  - Close proximity to large service and employment centres (Sydney, Wollongong, Canberra, Goulburn)
  - Strong local community and regulator support
  - Project is on granted Special Mining Lease SML20 – fully 'permitted' and 'mine ready'
  - Inferred Mineral Resources defined in both the underground and tailings projects demonstrate excellent potential to extend mine life to more than 11.5 years
- **Mineral Resources & Mineral Reserves**
  - Starter Case based on 51% Proven Reserves and 49% Probable Reserves
  - Underground mine plan focused on the shallower areas of the deposit reflecting the success of the recent Preliminary Economic Assessment (PEA) & FS drilling programs. There is a high level of confidence based on historic data for extensions to this mineralisation both at-depth and along strike
  - Conservative approach taken to the underground Mineral Reserve calculation, excluding all moderate- to higher-risk remnant mining areas. These remnant areas hold future potential which will be reconsidered post mine access with re-assessment from underground
  - Two separate production sources (underground and tailings) provide operational flexibility and reduces risk
  - 20 years of historical operational data removes 'greenfield' unknowns
- **Robust economics**
  - C1 costs of -US$0.06/lb zinc and C3 of US$0.34/lb expected to place the Project firmly in the lower half of the cost curve (refer to page 17 for definitions)
  - Attractive capital cost metrics based on annual metal Production Targets and Reserves-based mine life
  - Life extension case (PEA equivalent mine plan) shows excellent consistency with previously published PEA
  - Significant leverage to the price outlook for zinc, which comprises approximately 48% of total payable metal value
- **Expedited development and financing pathway to meet market opportunity**
  - Evaluating options for immediate sourcing of long lead-time items and other alternative second hand equipment procurement options to enhance development timing and reduce costs
  - Rapid development schedule of 15 months from commencement of construction until completion of wet commissioning
  - First production targeted early 2018 to meet projected favourable zinc market conditions
- **Excellent exploration upside**
  - Drill program to commence imminently to test high-priority near mine targets
  - Highly successful exploration drilling programs over the last 18 months
  - Significant exploration potential on SML20 remains including near-surface targets that have the scope to materially increase the Mineral Resources
  - Deeper underground extensions to be targeted with underground drilling post-commissioning
  - Significant medium grade base metal stringer mineralisation identified (metallurgical evaluation commenced)
  - Regional 'Massive Sulphide District' discovery potential within Heron's 682 square kilometres of regional tenure

The complete NI 43-101 Technical Report in support of the FS study will be published on Heron's web site and SEDAR www.sedar.com (**TSX:HER**) within 45 days of this news release. While summarised here, this Technical Report will contain expanded information with respect to key assumptions, parameters and risks associated with the results of the FS.

Heron Resources Managing Director and CEO, Mr. Wayne Taylor, said:

"The study presents a very compelling case for the development of the Woodlawn Project and confirms Heron's position as one of the most advanced Australian near term zinc producers. The resource and embedded low operating and competitive development costs due to existing site infrastructure all combine to make Woodlawn a clear choice amongst its peers.

From the outset it has been our aim to deliver a Reserve base that allows us to bring the project online quickly to take advantage of the significant opportunity that exists due to favourable zinc market fundamentals. The resulting economics place us in an ideal position to secure funding and target first production in 2018 with significant project upside still to be quantified.

I would like to recognise the tireless efforts of our employees and consultants who have helped deliver this study on time and under budget. It has been an enormous task which has been met with hard work and enthusiasm and is a credit to the individuals involved."

Please refer to page 23 for important Cautionary and Forward Looking Statements that are to be read in conjunction with this release.

Project Overview

The Woodlawn deposit is a high-grade, Volcanogenic Massive-Sulphide (VMS) deposit situated in New South Wales, Australia, approximately 50km northeast of Canberra, and 250km southwest of Sydney (Figure 1).

The Woodlawn deposit was discovered in 1970 with open-pit operations commencing in 1978 and underground operations in 1987. The operation was closed in March 1998 primarily due to corporate issues within then owners, Denehurst Ltd. Between 1978 and 1998 the operation reported production of 13.8Mt @ 9.1% Zn, 1.6% Cu, 3.6% Pb, 0.5g/t Au and 74g/t Ag. In 1999, Tri Origin Exploration Ltd (subsequently becoming TriAusMin Ltd) acquired the mineral rights to the site from the Denehurst Administrator.

Heron acquired its interest in the Woodlawn Project through the merger with TriAusMin Ltd which was completed in August 2014. Since this time the Company has advanced the project through the completion of a Preliminary Economic Assessment (PEA) in April 2015 covering the combined development of the underground and reclaimed tailings projects. The PEA summary results provided the commercial basis for advancing the project through this FS.

The Woodlawn Project consists of two production sources, comprising underground and tailings ore, which will be processed through a single sulphide flotation plant. The Woodlawn Project benefits from an existing granted mining lease (SML20) and major statutory project approvals. The mineral rights and production are 100%-owned by Heron. The Woodlawn site layout including location of the proposed plant is illustrated in Figure 2.

The Woodlawn mining lease, SML 20, and surrounding larger (179 sq km) exploration license, EL 7257, contain the previously producing Currawang Mine located 9km to the north-west of Woodlawn, and the Cowley Hills Mine located 2km to the north. A further 503 square kilometres are held by Heron under exploration licenses within the district covering the highly prospective Woodlawn felsic volcanics, the host of the VMS mineralisation.

Figure 1: Woodlawn location map

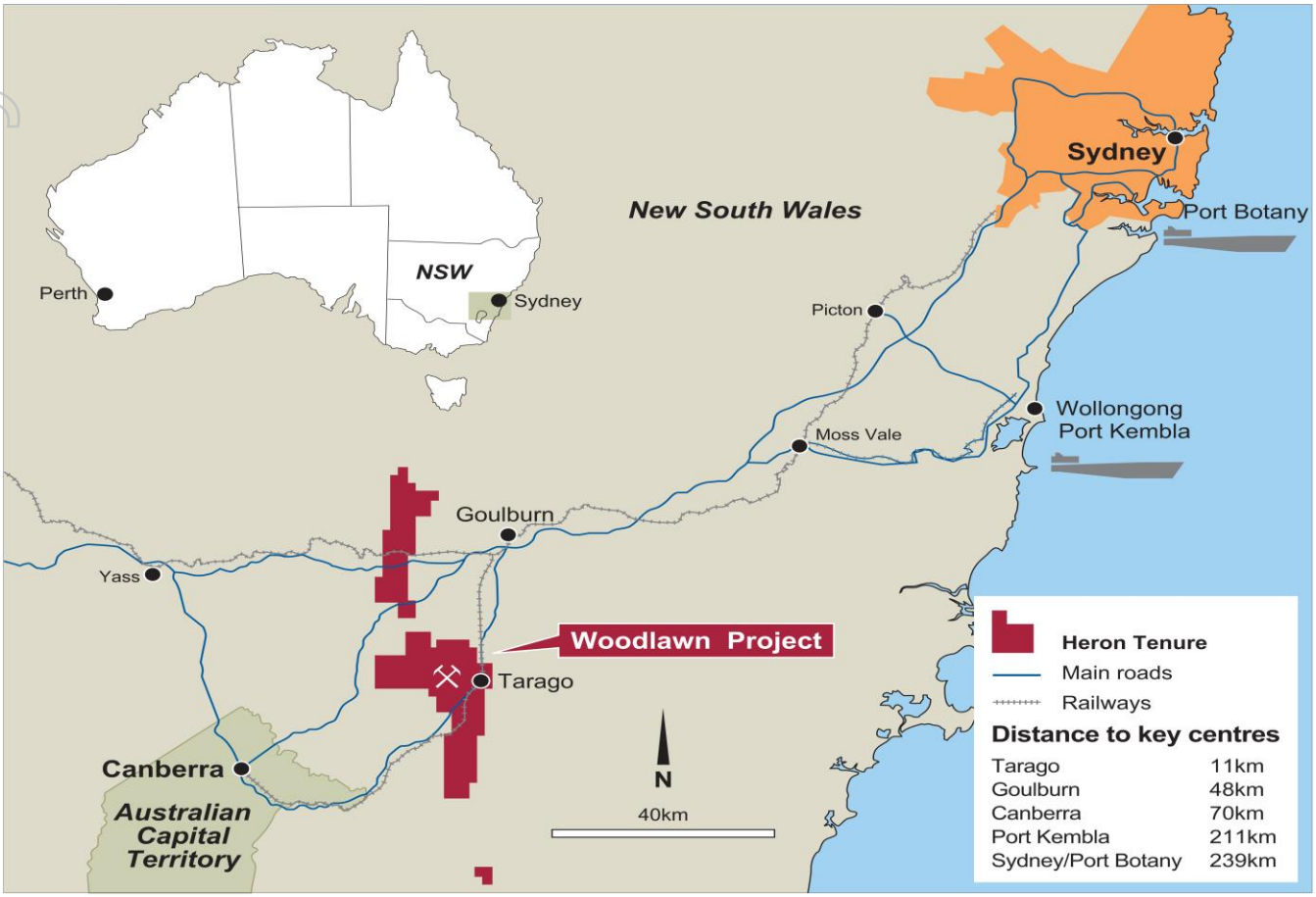


Figure 2: Woodlawn Site Layout

Mineral Resources

UNDERGROUND MINERAL RESOURCE

An updated underground Mineral Resource (Table 1) has been estimated in accordance with the JORC Code (2012) and the NI 43-101 guidelines which incorporates the results of the PEA and FS drilling programs and an extensive review of historic data. Two phases of Heron drilling comprised a total of 104 diamond core holes (DDH) for 26,690m and 11 reverse circulation (RC) holes for 1,200m. Detailed and high-quality underground geological mapping and 165,425m of historic surface and underground drilling data was also used in the estimate. Figure 3 provides an oblique view through the Mineral Resource block model with the block grades colour coded. The Mineral Resource estimation methodology is detailed in the JORC Code (2012) Table 1 in Appendix 2 at the end of this release.

The PEA drilling program focused initially on the Kate Lens discovery before drilling key positions within the near-surface portions of other lenses. The deepest hole (WNDD0006) was drilled to a depth of 940m and intersected multiple massive sulphides in the I and D Lens positions.

It became apparent during the course of the program that there was scope to expand the resource base within the upper 500m of the system, deferring the need to drill the deeper targets. While considerable resource potential exists in the deeper parts of the system, the FS focus has been on these shallower high-grade lens positions. The result of this is that the underground Mineral Resource used in the FS extends the depth of the mine to only 80m below previous workings, which reached approximately 650m below the land surface.

Heron has taken a deliberately cautious approach to areas considered remnant and accordingly higher risk, which have been removed from the mining inventory. Heron believes there is potential to re-incorporate some of these zones into the mine plan, and will conduct a detailed assessment once operations have commenced and underground access has been established.

The Mineral Resource has been reported undiluted to a lower cut-off grade of 7% ZnEq, a value that approximates the estimated lower cut-off grade for the mining and processing methods considered by the FS study.

Figure 3: Woodlawn underground Mineral Resource. Oblique sectional view looking north-east – block model coloured by ZnEq grades

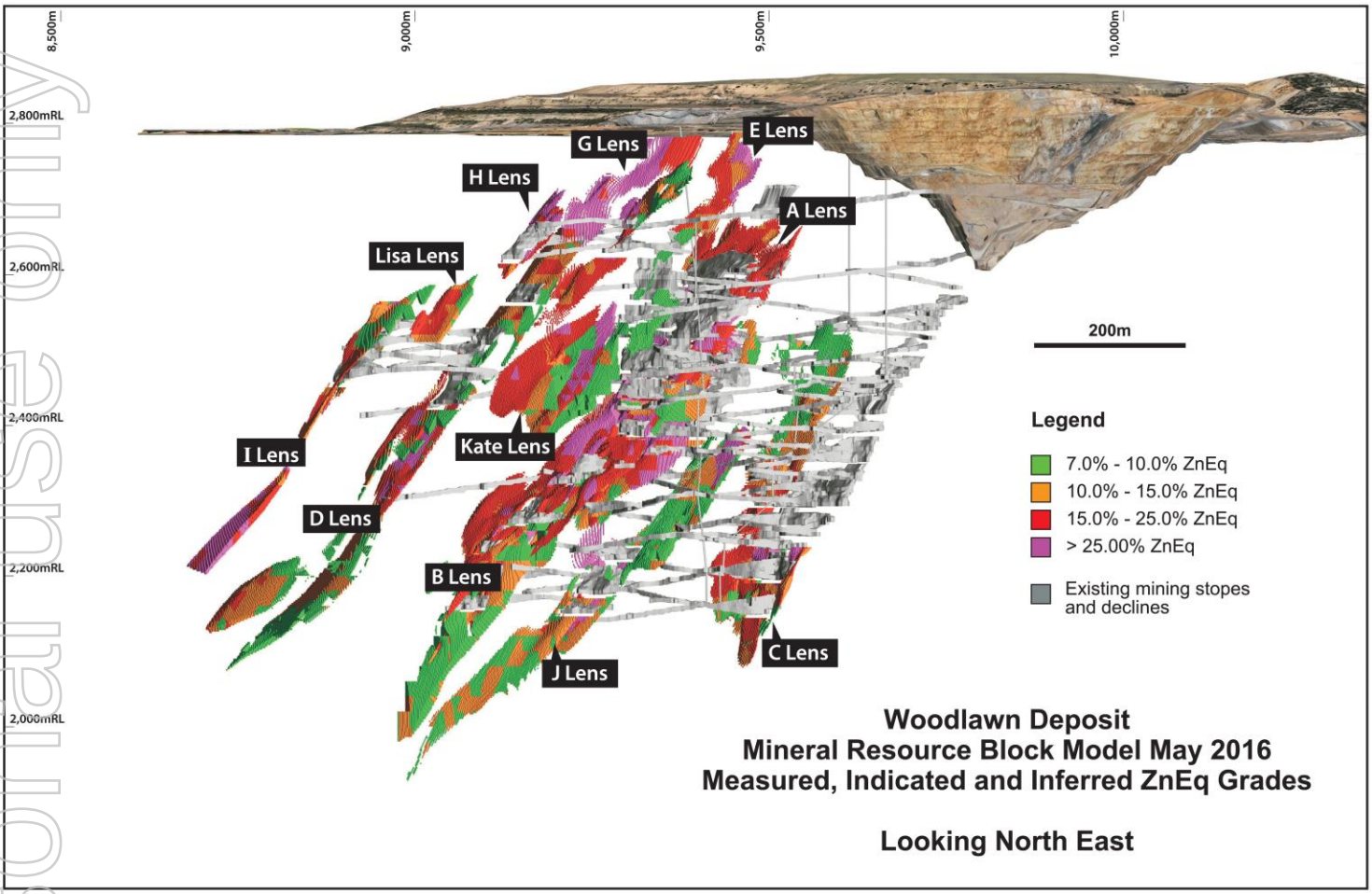


Table 1: Woodlawn Underground Mineral Resource Estimate 2016

Reported at a 7% ZnEq lower cut-off grade

Type	Resource Category	Quantity (Mt)	ZnEq(%)	Zn(%)	Cu(%)	Pb(%)	Au(g/t)	Ag(g/t)
Polymetallic	Measured	0.4	23	13	1.3	4.4	0.21	72
Polymetallic	Indicated	2.2	21	10	1.5	3.9	0.78	80
Polymetallic	Inferred	2.0	17	7.3	1.5	2.9	0.75	56
Copper	Indicated	1.5	10	0.8	2.8	0.2	0.23	15
Copper	Inferred	0.5	10	0.8	2.8	0.2	0.09	14
All Total	**Mea+Ind**	**4.1**	**18**	**7.2**	**2.0**	**2.6**	**0.52**	**55**
All Total	**Inferred**	**2.5**	**15**	**5.9**	**1.8**	**2.3**	**0.61**	**47**

Notes: 1) Please refer to the end of this release for Qualified Persons statements; 2) ZnEq(%) refers to a calculated Zn equivalent grade the formula for which is stated in Appendix 2; 3) Polymetallic Type refers to polymetallic massive sulphide mineralisation with high-grade Zn and Pb; Copper Type refers to Cu dominated massive and stringer sulphide mineralisation; 4) Some rounding related discrepancies may occur in the totals; 5) the Mineral Resource is reported in accordance with the the JORC Code (2012) and NI 43-101 43-101 guidelines; 6) further details of the Mineral Resources estimation are provided in the JORC Code (2012) Table 1 within Appendix 2 at the end of this report.

RECLAIMED TAILINGS MINERAL RESOURCE

The reclaimed tailings Mineral Resource estimate, Table 2 below, is restated here as part of this FS. It has been previously disclosed to the market via the ASX/TSX release titled "Heron confirms 10Mt (M+I) of High Grade Tailings at 6.2% ZnEq within Revised JORC 2012 Mineral Resource Estimate", dated 20 October 2015. It is summarised here as a combined total for the three tailings dams, namely Tailings Dam North (TDN), Tailings Dam South (TDS) and Tailings Dam West (TDW), shown in Figure 4. The tailings consist of fine grained sulphides and some silicate minerals derived from the processing of the Woodlawn open-pit and underground mineralisation from the late 1970's through to 1998.

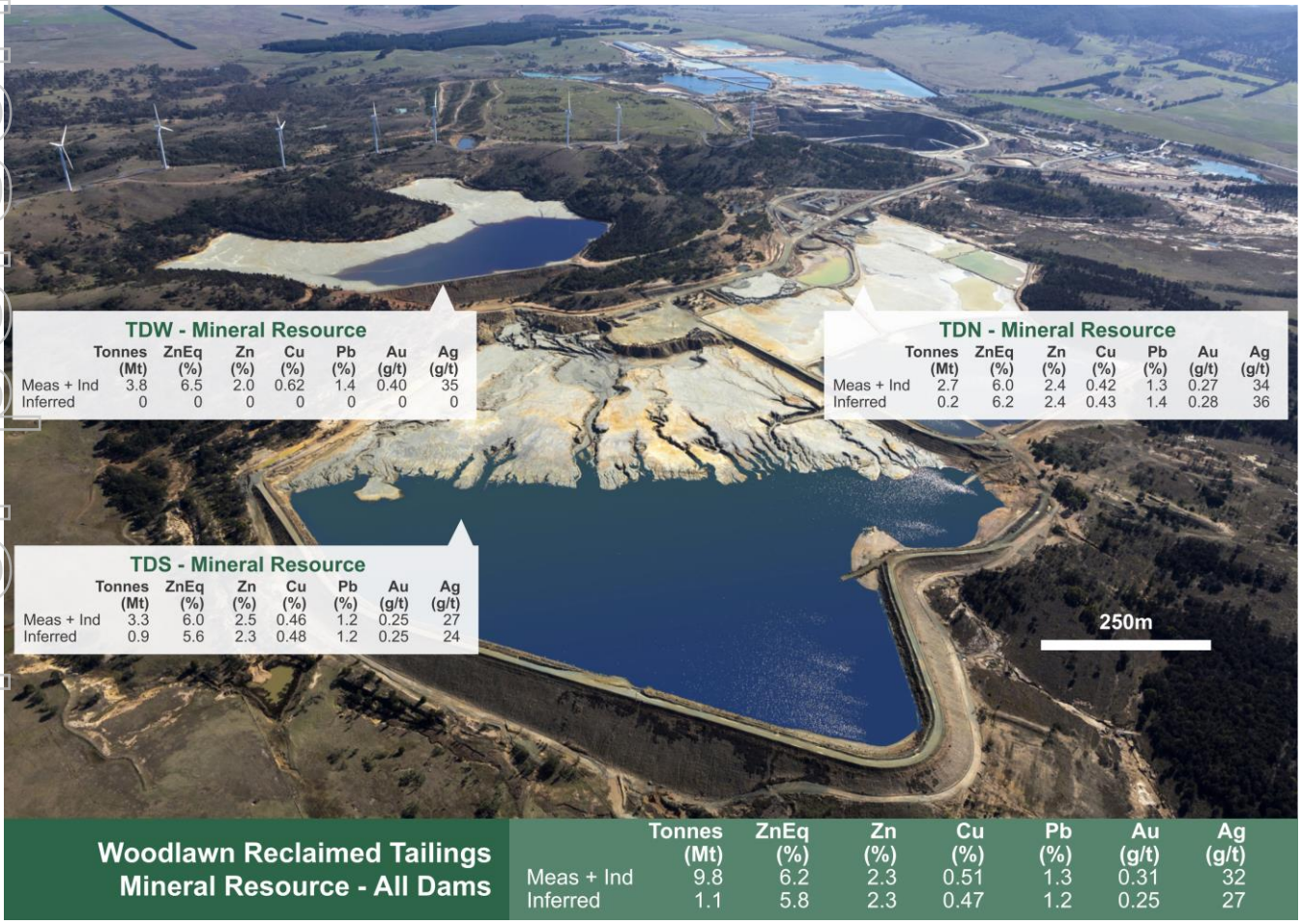
Table 2: Woodlawn Reclaimed Tailings Mineral Resource Estimate 2015

Reported with no cut-off grade applied

Type	Resource Category	Quantity (Mt)	ZnEq(%)	Zn(%)	Cu(%)	Pb(%)	Au(g/t)	Ag(g/t)
All Dams	Measured	6.6	6.1	2.3	0.49	1.3	0.30	32
All Dams	Indicated	3.2	6.3	2.2	0.56	1.4	0.33	33
All Dams	**Meas + Ind**	**9.8**	**6.2**	**2.3**	**0.51**	**1.3**	**0.31**	**32**
All Dams	**Inferred**	**1.1**	**5.8**	**2.3**	**0.47**	**1.2**	**0.25**	**27**

Notes: 1) The Mineral Resource estimate, originally published on Heron's website and SEDAR under the NI43-101 guidelines, is entitled Woodlawn Retreatment Project Mineral Resources Technical Report (NI43-101) with an effective date of 30th November 2015 and authored by Mr Robin Rankin (MAusIMM CP Geology) of independent consulting firm GeoRes Geological Resources. Heron confirms that it is not aware of any new information or data that materially affects the information included in this report and that the form and context in which the Mr Rankin's findings are presented have not been materially modified 2) ZnEq (%) refers to a calculated Zn equivalent grade the formula for which is stated in Appendix 2; 3) some rounding related discrepancies may occur in the totals.

Figure 4: WRP Mineral Resources (looking NW)



Ore Reserves

UNDERGROUND MINERAL RESERVES

Based on the underground Mineral Resources block model, independent consultant SRK Consulting (Australasia) Pty Ltd (SRK) have developed a detailed mine plan to access and mine the resource blocks that meet the required resource classification (Measured or Indicated) and other parameters for inclusion in Reserves (Table 3). The Mineral Reserves calculation is based upon the Resource block model and incorporates stope designs, cut-off grades, geotechnical parameters, mine recovery and dilution (planned & unplanned). Particular attention was paid to the existing mine workings and areas were excluded if there were potential recovery concerns due to past operations. The Mineral Reserve is the basis of the Starter Case for the financial modelling.

Table 3: Woodlawn Underground Mineral Reserve Estimate 2016

Type	Reserve Category	Quantity (Mt)	ZnEq(%)	Zn(%)	Cu(%)	Pb(%)	Au(g/t)	Ag(g/t)
Polymetallic	Proven	0						
Polymetallic	Probable	1.8	16	8.1	1.2	2.9	0.56	57
Copper	Proven	0						
Copper	Probable	0.96	8.8	0.61	2.4	0.13	0.23	14
Total	**Probable**	**2.8**	**14**	**5.5**	**1.6**	**1.9**	**0.45**	**42**

Notes: 1) Please refer to the end of this release for Qualified Persons statements; 2) Reported at cut-off grades determined by economic and metallurgical factors; 3) This estimate has been prepared in accordance with the JORC Code (2012) and the NI43-101 guidelines. Further details for the estimate can be found in Appendix 1 and the JORC Code (2012) Table 1 at the end of this report; 4) Some discrepancies in totals may occur due to rounding of numbers; 5) ZnEq(%) refers to a calculated Zn equivalent grade the formula for which is stated in Appendix 2.

RECLAIMED TAILINGS MINERAL RESERVES

Mineral Reserves have been calculated for all three tailings storage dams; TDS, TDW and TDN. The conversion of Measured and Indicated Mineral Resources to Mineral Reserves (Table 4) has involved the inclusion of the following mining parameters:

- The loss of 400mm of retreatment tailings from the sides and base of all dams (recovery factor); and
- The addition of 200mm of zero grade material across the base of the dams as a dilution factor during recovery of the reclaimed tailings.

Table 4: Woodlawn Tailings Mineral Reserve Estimate 2016

Reported with no cut-off grade applied

Reserve Category	Quantity (Mt)	ZnEq(%)	Zn(%)	Cu(%)	Pb(%)	Au(g/t)	Ag(g/t)
Proven	6.4	6.0	2.2	0.5	1.3	0.29	31
Probable	3.2	6.0	2.1	0.5	1.3	0.33	32
Total (Proven + Probable)	**9.5**	**6.0**	**2.2**	**0.5**	**1.3**	**0.31**	**31**

Notes: 1) Combined tailings estimate for the North, South and West Tailings Dams; 2) This estimate has been prepared in accordance with the JORC Code (2012) and the NI43-101 guidelines. Please refer to the end of this release for Qualified Persons statements; 3) ZnEq% refers to a calculated Zn equivalent grade the formula for which is stated in Appendix 2. 4) Reported at cut-off grades determined by economic and metallurgical factors; Further details for the estimate are provided in the JORC Code (2012) Table 1, within Appendix 2 at the end of this report; 5) Some discrepancies in totals may occur due to rounding of numbers.

Mining

UNDERGROUND

The deposit will be accessed via a box-cut located to the west of the existing open pit, this allows for the early development of shallow underground material. Stoping areas will be accessed predominantly through a new decline and new access drives; however, in some areas the existing workings are planned to be rehabilitated and utilised.

The mine access drives range in size from 3.0m x 3.0m to 5.5m x 5.5m, with gradients of up to 1-in-7 depending upon the intended use. Overall mine layout is consistent with standard practice within Australian underground mines reliant on decline access and vertical excavations for ventilation returns and second means of egress (escape way).

The mine plan for the underground developed by SRK utilises mining method selection work previously undertaken during the PEA and further developed as part of the FS. A summary of the applied mining methods is presented in Table 5 and their use in the mine plan illustrated in Figure 5. The mining method selection takes into consideration the location of the existing open pit above the deposit which is being used as a bioreactor by Veolia Environmental Services Ltd (Veolia). The mine design plans for stopes to be filled with cemented paste fill.

Independent consultant Beck Engineering (Beck) continued its work from the PEA with rock mechanics input in the proposed underground operation.

Table 5: Mining Methods

Mining Method	**Area / Location for implementation**
Underhand Transverse Open Stoping	• Stope width greater than 15m. • Sub level spacing is 20m as recommended by Beck Engineering. • These stopes are typically 10 - 20m along strike. • Double lift (40m tall) transverse stopes have been designed in the thicker parts of Kate Lens
Underhand Longitudinal Open Stoping	• Stope width less than 15m. • Sub level spacing is 20m as recommended by Beck Engineering. • These stopes are typically 10 - 20m along strike.
Drift and Fill Uppers	• Remnant areas of the A Lens, B Lens, D Lens, G Lens, H Lens and J Lens. • The stopes are typically 10 - 20m along strike and between 3 and 20m wide.

The mining criteria in Table 5 have been applied to the stope designs for each of the mining methods. Modifying factors have also been applied to the stope designs to account for both recovery loss and dilution (planned and unplanned).

Ore and waste will be transferred to loading bays with LHD loaders and then loaded onto trucks (40t capacity) to be hauled to the surface via the decline. The ore will be conveyed overland to the processing plant run-of-mine (ROM) pad located 1.2km to the east via a 2.1km haul road south of the open pit.

Rock Mechanics - Beck's extensive analysis and modelling work has been incorporated into mine access design and physical stoping parameters along with the design of standard ground support patterns. A number of changes to historic work practices have been included into the proposed operations to improve the future management of the ground conditions including:

- Full-time geotechnical engineering staff on site to provide timely and day-to-day support to mine operations;
- Whole-of-mine structural and stress modelling to improve the predictive capacity for mine planning;
- Adoption of extraction techniques to minimise the creation of isolated sill pillars; and
- Implementation of cemented paste fill as a competent support medium that will enable significantly higher resource recovery whilst providing local and regional ground support to the mine excavations.

Paste Backfill – Independent consultant Outotec has completed further test work on the paste fill following the PEA. This work included characterisation, cyclone de-sliming, dewatering (thickening / filtration), rheology and strength testing, using tailings samples from the recent metallurgical testing. Good results were achieved through the use of de-slimed tailings in process water and a paste plant and mine reticulation system has been included into the mine design.

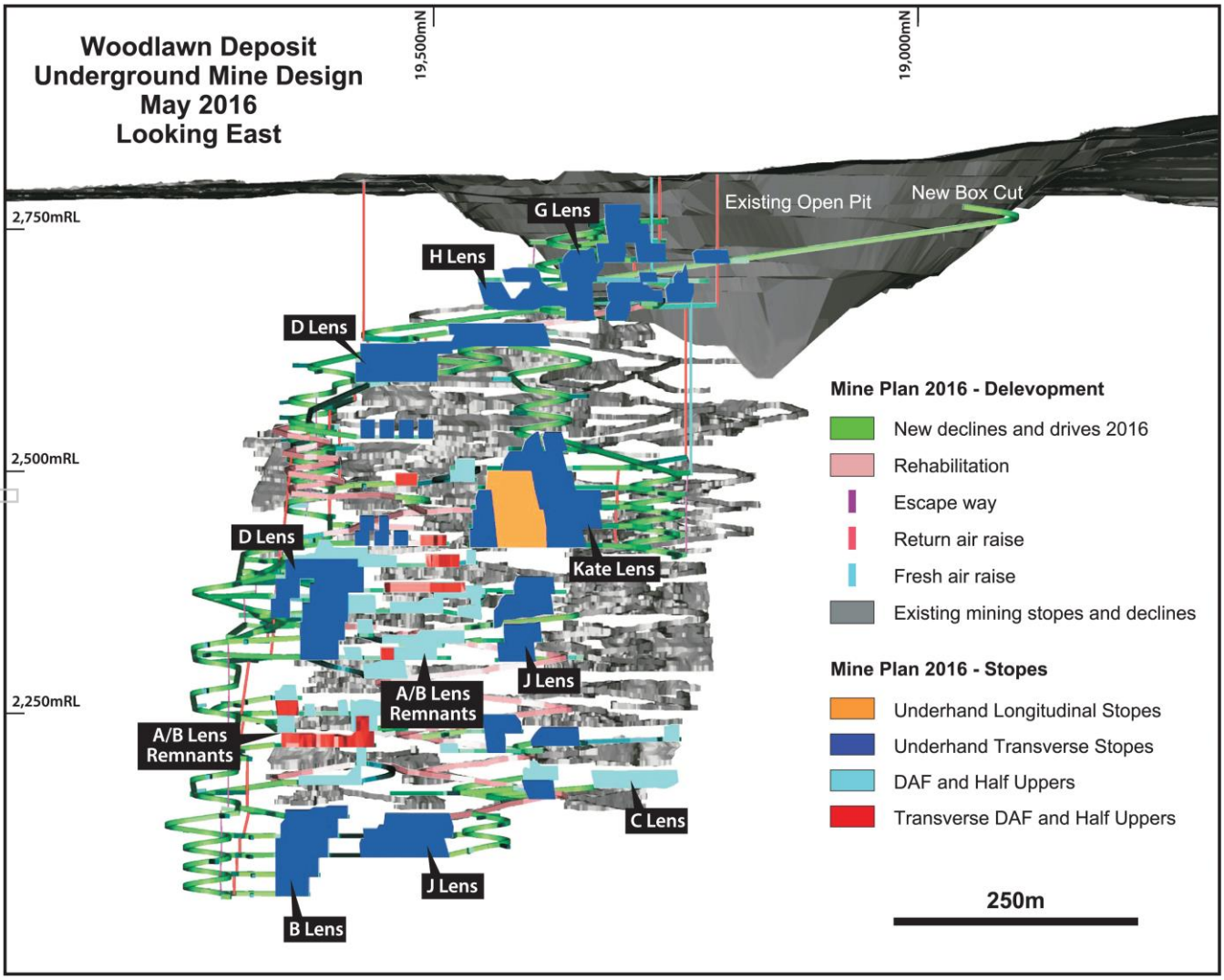
Mine Ventilation - The primary mine ventilation system for the underground operation has been designed for a maximum rate of 270m³/sec and serviced by two return air rises with surface-mounted axial fans. This capacity is sufficient to support the scheduled activities and equipment levels. Secondary ventilation will be provided through a series of smaller, high pressure twin stage fans pulling air from the primary circuit.

Mine Power & Dewatering - A total of five electrical substations have been allowed for over the life of the underground. Power will be reticulated underground at 11kV to stepdown transformers to 1kV for an estimated peak demand of 3.2MW. Mine dewatering will be achieved through two rising mains with a designed capacity of 26L/sec and an estimated average demand of 4.5L/sec.

Mining Equipment - The mining equipment will be supplied by the mining contractor and will be typical for an underground mine of this scale. It is anticipated a fleet of up to 3x 40t capacity trucks, 3x LHDs, 2x development drills, 1x production drill and 2x ground support rigs along with service / support equipment will comprise permanent mobile equipment base.

Mining Contractor - The FS contemplates the use of mining contractors for both development and production activities working under the direction of Heron's technical and management staff. The mining contractor is scoped to supply operational labour, mobile equipment and consumables. Heron will supply limited consumables, electrical power (HV reticulation to 1kV take-off), primary ventilation equipment, paste fill generation and primary reticulation and primary mains pumping. Specialty contractors will also be sourced for activities such as diamond drilling and raise-boring.

Figure 5: Underground mine design



RECLAIMED TAILINGS

Previous detailed mining studies undertaken on the tailings reclaim process concluded that there is no shortage of potential working faces around the dams and production rates of up to 2.0Mtpa are considered readily achievable. Economic considerations led to a determination that a mining rate of 1.5Mtpa provided the best return for the project and this is the rate adopted for the FS.

Mining of the reclaimed tailings ore will be undertaken using automated monitor-based hydraulic mining, which uses high pressure water cannon to agitate the ore into a slurry. In consultation with hydraulic mining consultants, the mining approach has been revised from a top-down to a bottom-up mining method, which is considered to be safer, having lower environmental impacts, being easier to control and more cost effective.

Under the bottom-up method, the tailings ore will be mined using a channel and windrow system in a herringbone pattern to the full thickness of the tailings ore in a single pass advancing away from the collection sumps at the dam low points, with a mining face width of 20-25m. Working heights are nominally 10m, though these may be in excess of 12-14m locally.

A single production monitor (water cannon) is employed to achieve the required shift output. The tailings mining schedule is based on a value analysis and incorporates the mining of tailings in the sequence of TDS, TDW and TDN. Mining TDS first liberates a large storage capacity for future returned tailings not utilised for paste fill.

Mining Equipment - The key production equipment for hydraulic monitoring comprises:

- 1x pump for water to be drawn from the process water pond and delivered to a pond adjacent to the tailings dam;
- 1x high pressure diesel driven pumping unit providing water from the pond at up to 30 bar and at a rate of 80-100 litres/second to the cannon;
- 1x mobile remote-controlled water cannon directing the water jet to the mining face;
- 1x drag-flow pump/s positioned at the sump point (maximum particle size 60mm);
- 1x 2mm vibrating screen for trash rejection; and
- 1x booster pump to deliver the resulting slurry to the thickening tank at the plant site for processing in the plant.

Operational Personnel - Two personnel per shift will be required, comprising an operator and a field technician. As the plant will campaign treat either underground or reclaimed tailings ore, but not both simultaneously, the retreatment mining personnel will perform additional duties within the plant site when reclaimed tailings mining is not being undertaken. Maintenance personnel will be drawn from the plant as required. During installation and commissioning of the system, consultants will be employed as supervisors and operators whilst local staff undergo training.

Processing

METALLURGICAL TEST WORK

Metallurgical test work for the Woodlawn Project commenced in 2006 and the major programs included:

- 2008 WRP[1] BFS comprising four phases and used to establish the basic flowsheet;
- 2012 WRP FEED[2] Study: focused on validation and optimisation of the 2008 WRP BFS outcomes using TDS material;
- 2015 PEA: included testing of samples from underground and blend tests of tailing and underground samples to assess the concept of co-treatment;
- 2015/2016 FS: confirmation and optimisation of reclaimed tailing and underground material.

This FS metallurgical test work program built on the successful PEA test work undertaken on the underground mineralisation in 2014 and 2015, and was undertaken by Australian Mineral Metallurgical Laboratories Pty Ltd (AMML) in its Gosford, NSW testing facility with input from independent consultant GR Engineering Services Ltd (GRES) and was focused on the underground massive sulphides scheduled as plant feed from Woodlawn.

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[1] *Woodlawn Retreatment Project (WRP)*
[2] *Front End Engineering Design (FEED)*

The overall results from this work have demonstrated better than historical operational performance and reflect the advancements made in the field of sulphide flotation, and in particular fine grinding technology. The test work demonstrated the ability to produce three readily saleable concentrates.

PROCESS DESIGN

GRES have updated the previous PEA to deliver a plant that has been designed to treat ore on a campaign basis with up to 1.0Mtpa for underground ore or 1.5Mtpa for reclaimed tailings ore. The design allows initial operations to treat 100% reclaimed tailings ore, whilst at the same time the development of the initial mine decline will be undertaken to provide access for mining of the higher margin underground ore. The contribution from underground peaks at an annualised 800kt during the middle years of the current Reserves-based mine life.

For underground ore, a two-stage crushing circuit has been incorporated into the plant design, together with a primary ball mill. For reclaimed tailings ore, a fine grind mill is planned that reduces the particle size down to 30µm, a size which previous and current test work confirms maximises recovery performance from the flotation circuit. For the underground ore, the initial float (copper concentrate) is undertaken at a 75µm grind size, with a regrind of copper tails to 30µm being employed to maximise the subsequent recoveries from the lead and zinc flotation stages. Figure 6 below shows a schematic flowsheet of the plant.

The flotation circuit comprises a gangue pre-float, copper, lead and zinc differential flotation sequence. The overall plant design is broadly consistent with the design of the original 1978-1998 plant that was previously used to successfully treat Woodlawn ore. Cleaner concentrate recovered from the pre-float flotation cleaner cell will be discarded to final tails to remove the silicate gangue ahead of the differential base metal flotation circuit. A differential flotation circuit for copper, lead and zinc will be utilised with concentrate regrind stages in the copper, lead and zinc circuits to produce cleaner concentrates. The copper circuit will also utilise a rougher and scavenger tailings regrind circuit prior to the lead flotation stage.

Concentrates from the copper, lead and zinc flotation circuits will be thickened and subsequently filtered for road transport.

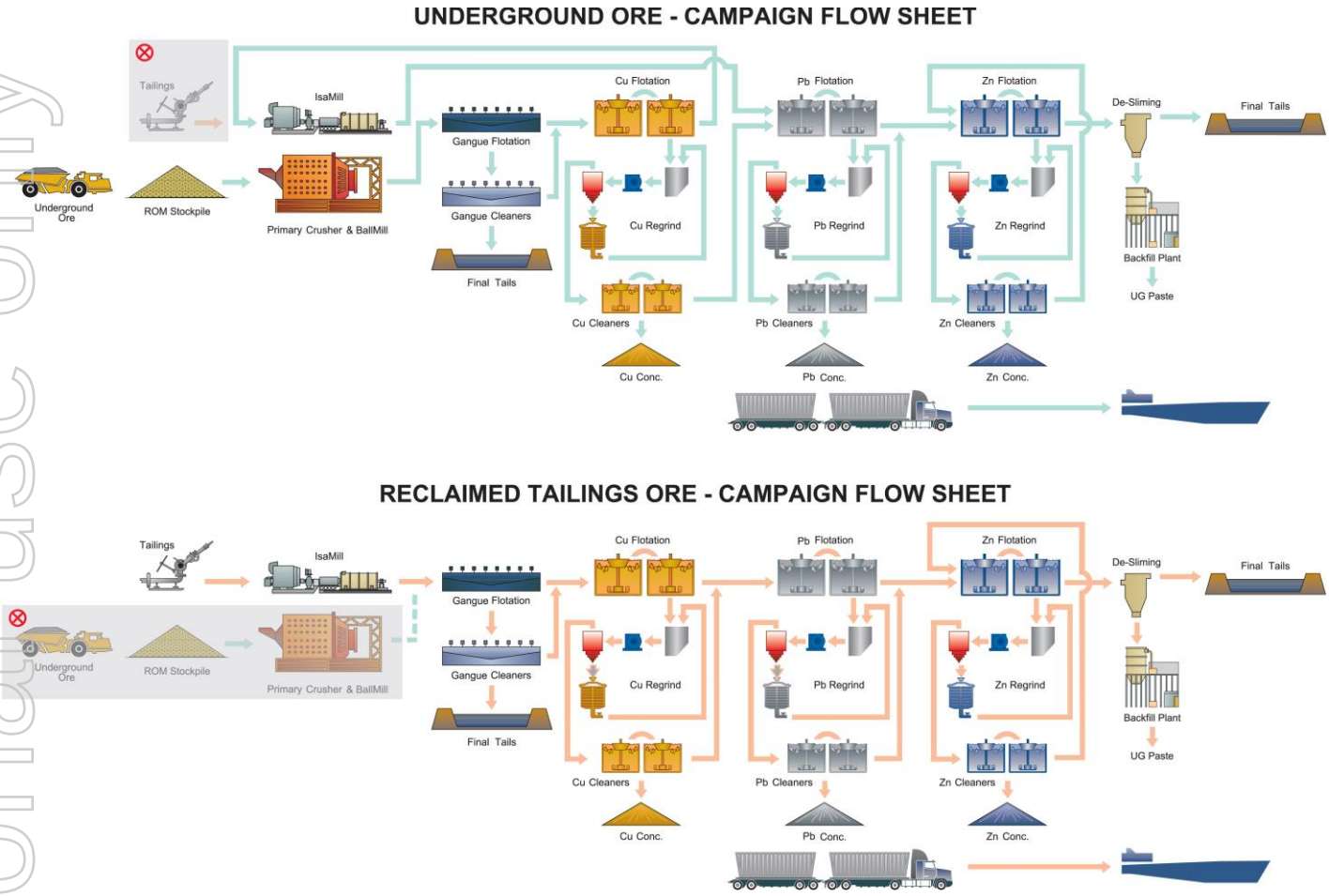
Final flotation tailings will be de-slimed and used in the paste fill plant which will generate a cemented paste that will be reticulated underground and used to backfill mined stopes from both new and historic mining. The slime tailings component (approximately 50% of tailings produced) will be deposited initially into a new tailings storage facility TSF4, and later into the existing TDS.

Process Design Criteria based on metallurgical test work is summarised in the table below:

Table 6: Process Design Criteria

Ore Type	**Concentrate Grade (%)**			**Metallurgical Recovery (%)**		
	Zinc	**Copper**	**Lead**	**Zinc**	**Copper**	**Lead**
Underground	55	27	45	88	60	70
Tailings	55	20	36	76	39	42

Figure 6: Campaign flow sheet – Underground & Reclaimed Tailings Processing



Infrastructure & Personnel

POWER

The Woodlawn mine site is supplied via Essential Energy's 66kV Woodlawn Zone Substation. This Zone Substation is currently being upgraded from a single 5MVA transformer substation to a single 10/16MVA transformer, with potential to be upgraded further to include a second 10/16MVA transformer, giving an ultimate emergency firm capacity of 16MVA.

There are savings in opting for a 66kV supply which form the basis for costing estimates. For the 66kV option, current annual estimates for the supply cost are $8.4 million per annum excluding a capital charge. Power will be reticulated around the site at 11kV with stepdown to 1000V for the underground operations and 415V/240V for surface installations.

WATER

The Woodlawn site operates under 'non-discharge' conditions. Infrastructure exists for site water management purposes and includes major storage capacity in TDS and two evaporation dams (ED1 and ED2). These dams adequately supported previous operations and water modelling has indicated that it will service Heron's intended requirements.

Heron has access to a water access license granted under the Water Management Act 2000 to use the Willeroo Borefield, with a maximum volume entitlement of 600 megalitres (ML)/year. Water sourced from this borefield would be used for make-up purposes. Detailed water balance modelling shows that there is adequate water available for operational requirements.

ACCESS

Access to the site is gained from the sealed Collector Road located approximately 350m north of the proposed plant site. This road to the east is heavy haulage rated (25/26m B-Double) and provides access to a road network linking all major regional centres including Sydney, Canberra, Wollongong and Goulburn.

In addition, access to the Sydney to Canberra rail line is located approximately 6km east of the site at Veolia's Crisp Creek intermodal. This rail line has direct connections to the major N/S and E/W Australian rail infrastructure.

The closest major, deep water import / export berth is located at Port Kembla, 211km from the site by road.

The closest international airport is Canberra Airport located 64km by road to the south of the site.

PERSONNEL

The majority of operational labour will be sourced from surrounding population centres with in excess of 430,000 people residing within a 55 km radius of the Woodlawn site. The site is well placed to offer the operational workforce the opportunity to reside in rural, village, regional township or city settings and is expected to be a significant drawcard in attracting skilled personnel.

The proposed site organisational structure will be typical of an Australian underground mining operation. The management, administrative, technical functions, processing, surface plant maintenance and hydraulic mining functions will be directly employed by the operation. Contractors will be utilised for underground mining, concentrate haulage and other specialty roles and functions.

Total site personnel numbers are expected to reach approximately 250 during construction and 157 at full production, comprising 30 Management/ Supervisory/Technical staff, 40 Operational staff and 87 Mining Contractors.

Marketing

OFFSITE CONCENTRATE LOGISTICS

The operation will have the option of either dedicated truck haulage of concentrates to either Port Kembla or Port Botany or rail haulage to either of the two port options. On the basis of the cost estimates received, road haulage has been adopted as the base case with zinc and copper concentrates being delivered to Port Kembla for bulk shipment and containerised lead concentrates to Port Botany.

The haulage route commences at the site turnoff with a B-double rated sealed road to Tarago and then to Goulburn where the Hume Highway is joined, following which either:

- Picton Road to the Port Kembla Terminal (total 211 km), or
- M5 Motorway to the Port Botany Terminal (total 239 km).

PORT & EXPORT

Port Kembla and Port Botany are the likely concentrate export points. Port Kembla can handle bulk concentrates (zinc and copper) at two berths with the Gateway facilities offering bulk storage and loading arrangements and Patricks providing 'Rotainer' arrangements at an alternative berth. Zinc concentrates will be shipped in 10kt lots and copper concentrates in 5kt lots. Lead sulphide concentrates will be containerised onsite for shipment out of Port Botany with containers being delivered on a campaign basis to Port Botany for shipment in 2.5kt lots.

CONCENTRATES

The concentrates produced at Woodlawn are expected to have the following typical major element levels:

Zinc Concentrates	45% - 57% Zn, 80g/t – 130g/t Ag
Copper Concentrates	20% - 27% Cu, 120g/t – 490g/t Ag, 1g/t – 3g/t Au
Lead Concentrates	35% - 45% Pb, 5% - 9% Cu, 500g/t – 800g/t Ag, 2g/t – 10g/t Au

An Expression of Interest for the off-take of Woodlawn concentrates was undertaken in April 2016 to gauge the marketability and interest in the products. The interest was very strong from both commodity traders and smelters. The terms offered were not only all referenced to standard industry terms but also reflective of the tight physical market with little new material becoming available in the near term. Aside from a minor payment for lead levels in the copper concentrate, the concentrates are likely to be otherwise free from penalties.

Project Development and Production Schedule

The Woodlawn Project development schedule has been developed by GRES with a duration of 15 months from commencement of construction until completion of wet commissioning. The major milestones in the construction plan include:

- Construction contract award and commencement of detailed design. Long lead item procurement - Month 1
- Construction contractor mobilises to site - Month 4
- Commencement of site works (earthworks) - Month 5
- Plant construction completion - Month 18
- Complete dry and water commissioning i.e. practical completion - Month 19
- Complete ore commissioning - Month 20

The Underground mining schedule was driven by the following constraints:

- Stope production to commence as soon as possible
- Development to be mined on a “just-in-time” basis
- Stope production is prioritised by depth, stopes closer to the surface are given a higher priority over stopes at depth
- Return airways and escape way rises for each level to be completed ahead of commencement of stoping on each respective level
- The mine schedule is production unconstrained

The tailings mining schedule is driven by the following constraints:

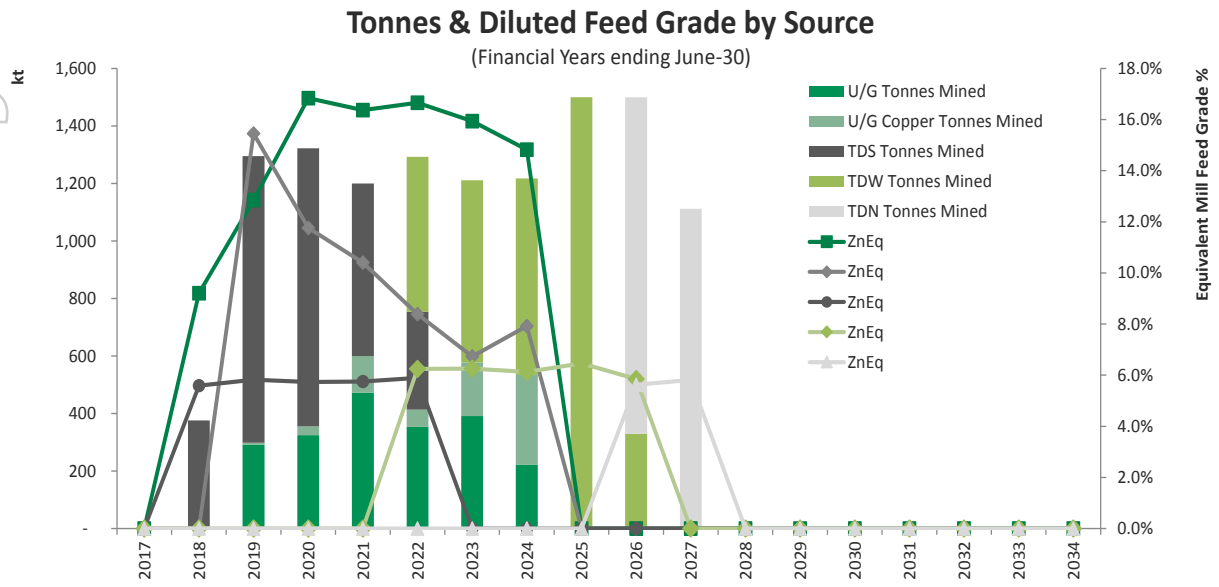
- The three storage facilities are mined in a TDS, TDW, TDN series sequence (priority driven by value)
- Mining blocks are sequenced to ensure there is gravity flow to a central sump for transfer to the processing plant thickener. A secondary sequencing control will be to maintain a herringbone pattern to the mined panels
- In the case of TDW this dam will be mined in two lifts with lift 1 being restricted to a height of 13-14m

The ore processing schedule is driven by:

- The campaign (or separate) treatment of underground ore and reclaimed tailings ore
- The processing rate when treating underground ore is limited to 1.0Mtpa
- The processing rate when treating reclaimed tailings ore is limited to 1.5Mtpa
- Underground ore will be stockpiled on the ROM pad until a minimum quantity of 42kt is reached at which time the treatment of this ore will commence
- When insufficient underground ore is available (during stockpile build) the reclaimed tailings ore alone will be treated

The Woodlawn Mine ore processing schedule for the 9.3 year Reserves-only Starter Case is illustrated in Figure 7.

Figure 7: Ore Feed and Grade to Mill by Year for Starter Case



Financial Analysis

CAPEX

Capital costs have been estimated to a +/-15% accuracy. Initial capital costs of A$144M are estimated, with total capital costs to Peak Cash Draw estimated at A$162M including contingency. Refer to page 22 in Appendix 1 for full details.

Area	A$M
Underground	4.0
Process Plant	100.9
Infrastructure	2.7
Construction, Engineering, Other	24.6
TSF4	6.0
Owners	6.0
TOTAL	**144.2**

OPEX

Operating costs have been estimated by GRES for the plant component and by SRK for the mining component, with additional costs estimated by Heron. A detailed cost breakdown is provided in Appendix 1. Major components include:

Area	A$/t Ore Feed to Mill (post ramp-up)
Mining	58.90 underground average 1.68 reclaimed tailings (post ramp-up) **15.02 average**
Processing	21.34 for underground ore (post ramp-up) 17.33 for reclaimed tailings ore (post ramp-up) **18.90 average**
Fixed and Closure	2.87
Off-Site (Logistics, TC/RCs, Royalties)	30.97
TOTAL	**67.76**

OFF-SITE & OFFTAKE

The commercial terms provided by third parties for off-take remain confidential. Heron has applied an average of a selected number of the proposals received which all reference standard industry terms. Refer to page 28 for further information.

FINANCIAL RESULTS

The Woodlawn Project economics have been assessed using the discounted cash flow method, based on a quarterly schedule of tonnes mined and processed from both the underground ore and the reclaimed tailings ore. Capital and operating costs are applied to mining, processing and overheads. The processed material has recovery factors applied, together with flotation splits to the three concentrates which make up the project production. Shipping and logistics, product payability, treatment and refining costs, state royalties and taxes are adjusted for to derive a Net Present Value (NPV) for the project.

The Project's post-tax NPV at an 8% post-tax real discount rate (approximately equivalent to a 10% post-tax nominal discount rate) is A$207M and the IRR is 32%. Payback of start-up capital is achieved approximately 2.3 years from commissioning.

	Starter Case[3]
Post-tax NPV[8]	A$207M
Post-tax IRR	32%
Plant & Infrastructure Capital	A$144M / US$105M
Funding to Peak Cash Draw	A$163M / US$119M
Payback Period	2.3 years from commissioning
Post-tax Cash Flow[2]	A$402M
C1 Cash Cost[1]	US$(0.06)/lb Zn
C3 Total Cost[1]	US$0.34/lb Zn
Plant Feed Rate	1.5Mtpa when feeding Reclaimed Tailings Ore 1.0Mtpa when feeding Underground Ore
Total Underground Ore Feed	2.79Mt
Total Reclaimed Tailings Ore Feed	9.24Mt
Total UG+RT Feed	12.03Mt
Starter Case Mine Life	9.3 years
PEA Equivalent Mine Life	11.5 years

1. C1 is defined as direct cash operating costs produced, net of by-product credits, divided by the amount of payable zinc produced. Direct cash operating costs include all mining and processing costs, mine site overheads and realisation costs (including transport costs, treatment and refining costs and smelter recovery deductions) through to refined metal, net of revenue credits from sale of by-products. C3 includes C1 costs, plus a depreciation charge and royalties. C1 and C3 are presented in this table based on Zn as primary product with all other saleable commodities treated as by-product credits
2. Net increase in cash after tax and after paying back capital, but pre-financing costs.
3. Results are based on Mineral Reserves only, at an 8% post tax real discount rate (approximately. 10% post-tax nominal), with AUD/USD FX 0.71, and with flat real commodity prices of US$1.01/lb Zn, US$3.00/lb Cu, US$0.91/lb Pb, US$17.80/oz Ag and US$1,200/oz Au. Other assumptions detailed in Appendix 1.
4. Capital and Peak Cash draw converted at AUD:USD exchange rate of 0.73

The project is highly leveraged to commodity prices. In particular, zinc makes up around 48% of expected total payable metal value for the project. Hence the project provides excellent exposure to what is anticipated to be a market where demand will exceed supply, with positive potential implications for the future price of zinc.

Whilst the Starter Case presents a strongly positive economic outcome for the project, there is potential for the project to deliver significantly greater tonnages from underground based on both expansion of the current Reserve through further conversion of existing Mineral Resources, and on the broader exploration potential of the Woodlawn mineralised system. The project is highly leveraged to such conversion. In particular, an expansion of the Starter Case Reserve to an equivalent PEA Plant Feed Estimate through further resource conversion would result in the Woodlawn Project returning a very similar commercial result to that reached in the PEA, providing a clear indication of the potential for improved returns with an increase in mine life.

With plant, underground access and development costs included for mining to a depth of 700m below surface under the Starter Case, the incremental net present value associated with new discoveries and/or conversion of additional resource tonnes into the future mine plan has the potential to be very positive.

SENSITIVITIES

The NPV is most sensitive to the commodity price / FX environment and to mine life extensions on the revenue side, and to grade (which in turn is driven by dilution considerations) and metallurgical recoveries on the cost side. Other significant factors influencing the project returns include the upfront and underground development capital, and the plant operating costs.

Approvals, Environment and Stakeholders

REGULATORY APPROVALS AND LICENSES

On 4 July 2013, project approval was provided to the Woodlawn Project under Section 75J of the Environmental Planning and Assessment Act 1979 by the Department of Planning and Environment. On 28 April 2016, a modification to this approval was granted by the Department of Planning and Environment covering the relocation of the underground portal from the eastern side of the open pit to the western side. The completion of the FS mine plan will require a final Planning Approval update covering the revised underground mine plan. This is expected to be completed in the second half of 2016.

The mining lease, SML20, is held in the name of Tarago Operations Pty Ltd, a fully owned subsidiary of Heron. On 19 February 2015 the Company received notification from the NSW Department of Trade and Investment, Division of Resources and Energy (DRE) that the Special (Crown & Private Land) Lease No 20 (Act 1969) or SML20 had been renewed for 15 years (to 16 November 2029). The Company is required to lodge a security bond of A$3.577 million prior to commencement of any on-ground activity.

On 11 November 2015 the DRE provided notification of approval for the Woodlawn Mine Operations Plan (MOP). The approval permits Heron to conduct activities in accordance with the MOP and is valid until 30 November 2021 at which time a new MOP will be submitted.

Environmental Protection License (EPL) – The application for an EPL is underway and will require a modification to the existing EPL's held by Veolia and Infigen. EPL boundaries have been agreed with oversight by the EPA, the licensing authority. The EPL is expected to be granted in the second half of 2016.

ENVIRONMENT

Heron maintains responsibility for the final rehabilitation of the site; however, Veolia will be responsible for the open pit, the former plant site, existing maintenance and administration areas. This leaves Heron with the tailings storage dams, waste rock dump, portal, plant site and any other newly disturbed areas. Progressive rehabilitation plans have been covered in the Environmental Assessment submitted as part of the project approval process. These plans have also been incorporated into the MOP which has been separately approved by the DRE.

VEOLIA AGREEMENTS

Since 2008 Heron has maintained a number of agreements with Veolia centred on the joint use and interactions covering the site. Veolia operates the Woodlawn Bioreactor, utilising the existing 1978-1987 open pit as a landfill site for a significant portion of Sydney's putrescible waste. The landfill operations have been in place since 2004, with Veolia maintaining the site infrastructure in a good serviceable condition. As noted above, under the agreements Veolia will maintain ultimate responsibility for the final rehabilitation of a significant portion of the existing disturbed area. Heron maintains responsibility for the tailings storage facilities, waste dump, evaporation ponds and any newly disturbed areas. This significantly reduces Heron rehabilitation obligations for the site and the previous mining disturbance.

Veolia have commenced construction of their Mechanical Biological Treatment (MBT) plant to the west of the site. It is intended that this plant will process a stream of waste to produce a mulch product that is licensed for mine site rehabilitation purposes. Contained within the agreements with Veolia is the free issuance of this mulch for use on Heron's rehabilitation areas.

LOCAL COMMUNITY

As part of its community relations initiatives, Heron has established a Community Consultation Committee with representation from the local community, Goulburn-Mulwaree Council, Veolia and Heron. The Committee meets on a quarterly basis with the aim of covering items of interest for the local community whilst providing a platform to inform these stakeholders of progress being made to bring Woodlawn into production. The meeting outcomes are recorded on the Heron website.

Opportunities to Enhance the FS Outcomes

MINE LIFE EXPANSION

The underground Mineral Reserves presented as part of the FS are considered to be a Starter Case with the aim of the FS being to justify the development of the project. Beyond the defined Mineral Reserves there are many open positions within the mine environment that are expected to provide mineralisation extensions that will result in further optimisation and additions to the current mine schedule to extend the life of the underground mine. These additions are likely to come both from upgrading Inferred Mineral Resources to Reserves and from drilling new lens positions. SRK have provided a mining schedule including Inferred material (equivalent to the PEA) which shows excellent consistency with the previously published PEA. As well as underground targets, shallow mineralised positions have been identified which may constitute future open pit plant feed. Figure 8 provides a ranked listing of immediate target areas.

Figure 8: Woodlawn Exploration Project Ranking

Notes: MEA = Measured Mineral Resources, IND = Indicated Mineral Resources, INF = Inferred Mineral Resources. Mineral Reserve estimates are derived from and inclusive of Measured and Indicated Mineral Resource estimates. Near mine and conceptual exploration targets are early stage and conceptual in nature and there is no certainty that future Mineral Resources or Mineral Reserves will be identified within them. The dimensions (strike length x thickness x down-dip extension) for Cowley Hills is based on the known stopes (thickness and strike) and projected down dip based on limited drilling. S = can be drilled from surface, S/U = can be drilled from surface but majority would be better driller from underground.

REGIONAL EXPANSION

With a known endowment of some 21Mt of massive sulphide mineralisation, Woodlawn is a world-renowned VMS district with considerable potential for significant future discoveries. As listed in Figure 9, there are a number of advanced exploration targets

within 15km from the Woodlawn plant site that provide for further discovery potential. Cowley Hills on SML20 and Currawang on EL 7257 are highly regarded for further discovery.

POWER COSTS – OPEX REDUCTION

Alternative sources of power supply are available within immediate proximity of the proposed operations including the Infigen Windfarm located to the south (23x2.1MW turbines) and Veolia's 6x1MW gas fired generators fuelled by the bioreactor methane generation. These power supply sources could provide energy to the operations without passing onto the NSW State electrical grid, thus removing the need to pay for some network charges. These have the potential to provide a lower cost supply of electrical power to site.

ALTERNATIVE EQUIPMENT SUPPLY – CAPEX REDUCTION

A number of options for major plant components are available through the used equipment market place. The quantum of equipment available is reflective of the poor sentiment that exists around project construction in the resources sector. These items range from full sections of the plant that have been commissioned and never put into production, to items that have seen full production service but are not at the end of their economic lives. An assessment of specific items is currently underway with an aim of reducing both upfront capital costs and potentially the lead time into first production.

About Heron Resources Limited:

Heron's primary focus is the development of its 100% owned, high-grade Woodlawn Zinc-Copper Project located 250km southwest of Sydney, New South Wales, Australia. In addition, the Company holds a significant high quality tenement holding in the Lachlan Fold Belt of New South Wales and in Western Australia.

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Cautionary Notes & Forward Looking Information:

Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. The estimate of Mineral Resources may be materially affected by environmental permitting, legal, marketing, or other relevant issues. The Mineral Resources disclosed in this release are estimated using the Canadian Institute of Mining Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves Definitions and Guidelines proposed by the CIM Standing Committee on Resource Definitions adopted by the CIM Council.

Certain statements contained in this Report constitute forward-looking information, future oriented financial information, or financial outlooks (collectively, "forward-looking information"). Forward-looking information is considered here to be within the meaning of Canadian securities laws and has the same meaning as forward looking statements under Australian securities laws.

Forward-looking information often relates to statements concerning Heron's future outlook and anticipated events or results and, in some cases, can be identified by terminology such as "may", "will", "could", "should", "expect", "plan", "anticipate", "believe", "intend", "estimate", "projects", "predict", "potential", "continue" or other similar expressions concerning matters that are not historical facts. Statements of historical fact are not considered forward looking information.

Such forward-looking information and statements are based on a number of material factors and assumptions, including, but not limited in any manner to, those disclosed in results; the ability to explore; communications with local stakeholders and community and governmental relations; status of negotiations of joint ventures; weather conditions; Mineral Reserves; Mineral Resources; the development approach; availability and receipt of required approvals, titles, licenses and permits; sufficient working capital to develop and operate the mines and implement development plans; access to adequate services and supplies; foreign currency exchange rates; interest rates; access to capital markets and associated cost of funds; availability of a qualified work force; ability to negotiate, finalise and execute relevant agreements; lack of social opposition to the mines or facilities; lack of legal challenges with respect to the Woodlawn property; the timing and amount of future production and ability to meet production, cost and capital expenditure targets; timing and ability to produce studies and analysis; capital and operating expenditures; execution of the amended credit facility; ability to draw under the credit facility and satisfy conditions precedent including execution of security and construction documents; economic conditions; availability of sufficient financing; the ultimate ability to mine, process and sell mineral products on economically favourable terms, any and all other timing, exploration, development, operational, financial, budgetary, economic, legal, social, regulatory and political factors that may influence future events or conditions, as well as those factors discussed in the section entitled Risk Factors in Heron's annual information form, which is available under Heron's issuer profile on SEDAR at www.sedar.com. While we consider these factors and assumptions to be reasonable based on information currently available to us, they may prove to be incorrect and undue reliance on forward-looking information and statements should not be made. Forward-looking information and statements are only predictions based on Heron's current expectations and projections about future events. Actual results may vary from such forward-looking information for a variety of reasons including, but not limited to, risks and uncertainties disclosed above and further in Heron's filings at www.sedar.com.

Forecast financial information provided in this announcement is based on the Production Target disclosed herein. The Company has concluded that it has a reasonable basis for providing the forward-looking statements included in this announcement. The detailed reasons for this conclusion are outlined throughout this announcement and in particular in Appendix 1 headed "Disclosure of Additional Assumptions". However, the Company cautions that there is no certainty that the forecast financial information derived from the Production Targets will be realised.

Other than as required by law, Heron assumes no obligation to update any forward-looking information to reflect, among other things, new information or future events.

Appendix 1: Disclosure of Additional Assumptions

Note: In the tables and graphics disclosed herein, years are financial years ending 30 June unless otherwise noted.

Compliance with ASX Listing Rule 5.8.1 for updated Underground Mineral Resources

- The updated underground Mineral Resource estimate for Woodlawn comprises 12 individual lenses containing 37 separate sub domains of polymetallic (Zn-Pb dominated) or copper-dominated VMS, massive sulphide mineralisation styles, which were individually wire framed, based primarily on geological criteria. Heron has remodelled the underground Mineral Resource, incorporating the recent and historical drilling results with newly digitised information compiled from detailed underground mapping of geology and structure, combined with careful consideration of the expected mining methods.
- Sample points were mostly derived from diamond drill core, half or quarter-core sampled over an average of 1m intervals, to geological contacts, using an orientated cut line. Samples were analysed by an independent commercial laboratory using industry standard analytical techniques including fire assay and AAS finish for Au and mixed acid digest and ICP finish for the multi-element suite (40 elements), including Zn, Cu, Pb, Ag and Fe.
- Mineral Resource grades were estimated into a conventional digital block model for Zn, Pb, Cu, Au, Ag and Fe using ordinary kriging, employing parameters derived from an independent geostatistical analysis of the sample data set. Statistical analysis indicated that high-grade sample cuts were not required for most elements estimated except for Ag, where a high-grade cut of 800ppm was applied to one sub-domain. A ZnEq grade was calculated for each block and a ZnEq lower cut-off grade of 7% was used in the reporting of the Mineral Resource. Density was assigned to each block using grade regression equations derived from density measurements of drill core samples.
- In general terms the Mineral Resource was classified as Inferred where geological continuity was confirmed and the drill hole spacing better than 80m x 80m centres, as Indicated where drilling was on 40m x 40m centres or better, and Measured where underground mapping was present and correlated with drilling at a spacing 20m x 20m centres or better.
- A variety of conventional underground mining methods, employing paste-fill where required, were considered for the extraction of the mineralised material including, underhand stoping, and drift and half-upper stoping. Metallurgical testwork has been undertaken on the mineralised material which has demonstrated that it can be processed through a fine grinding circuit and industry standard sequential flotation to produce Zn, Cu and Pb concentrates.

Please refer to Appendix 2 for further details.

Capital

A summary of the initial capital cost estimates (+/-15%) and inclusive of a 6% contingency is provided below:

Cost to Peak Cash Draw	**Total**
Pre-Commissioning	
Underground Development & Rehabilitation	0.8
Mining Services	3.2
Paste Plant	5.4
Treatment Plant and Services	95.5
Earthworks & Roads	2.7
Construction & Engineering	19.9
Tailings Storage (TSF4)	6.0
Commissioning, First Fills, Other	4.7
Owners Costs & Pre-operating Costs	6.0
Subtotal	*144.2*
Post-Commissioning	
Underground Development & Rehabilitation	8.5
TSF4 First Lift	2.4
Working Capital	7.6
Total	**162.7**

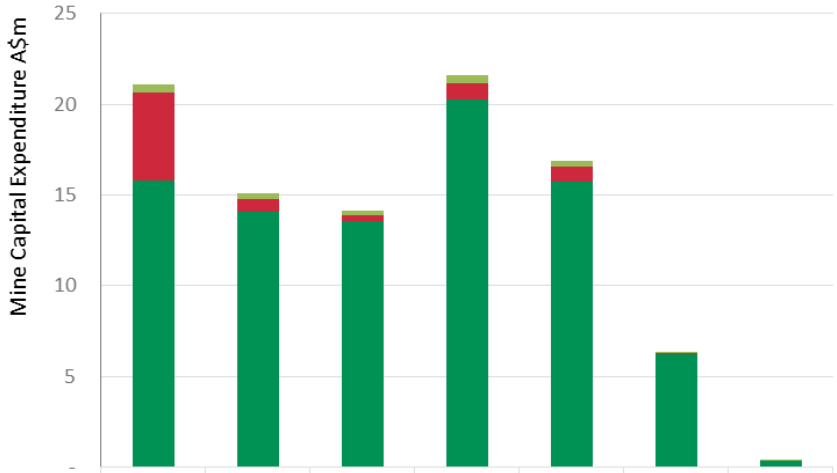
Peak Cash Draw is defined as initial capital working capital post commissioning until the mine achieves a break-even cash position, and excludes financing costs. Maintenance capital has been built into the operating cost estimates. No

allowance has been made for financing charges or interest, GST related cash flows, or fluctuations in the exchange rate (estimates were provided on the basis of an exchange rate of 0.73 AUD:USD).

The basis for the capital estimates includes:

- Engineering, Procurement and Construction model for non-mining infrastructure;
- Owner operator processing facilities and workforce;
- Owned fixed plant, mobile surface plant, and administration buildings;
- Contract mining, underground mining equipment and maintenance facilities;
- Contract concentrate road haulage, port storage and handling and ship loading; and
- The construction of the new tailings storage facility TSF4.

In addition to the capital described above, ongoing capital of A$95.5 million is required for the underground decline and lateral development, decline rehabilitation, ventilation raises, escape ways, pumps, substations, infrastructure and sustaining capital. The profile is driven by the production schedule and is shown below starting in the third quarter post commissioning:



	FY19	FY20	FY21	FY22	FY23	FY24	FY25
Sustaining Capital	0.41	0.30	0.28	0.42	0.33	0.11	0.01
Mine Services and Infrastructure	4.87	0.70	0.32	0.90	0.81	0.07	-
Development and Rehabilitation	15.78	14.08	13.53	20.25	15.76	6.20	0.36

A further A$3.6 million has been allowed for in FY19/20 for a final lift of TSF4 before re-use of TDS commences in FY22.

Mining Production Schedule

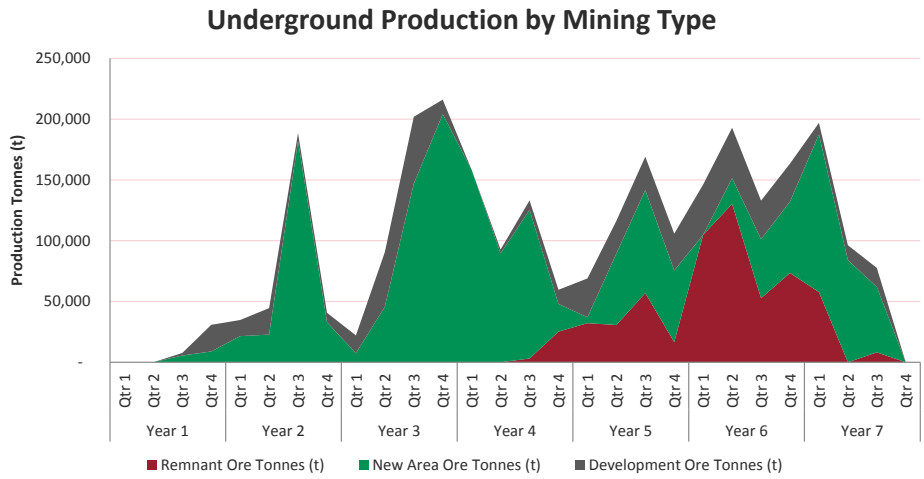
As disclosed in the body of the announcement, total plant feed based on Mineral Reserves only of 12.0Mt has been modelled to provide a 9.3 year Starter Case mine life at a rate of 1.0Mtpa for underground and 1.5Mtpa for reclaimed tailings. Timing is assumed to deliver a commissioned project in the first half of calendar year 2018. The overall tonnes / grade profile is illustrated below by financial year and by source:

Financial Year		Total	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
U/G Polymetallic Tonnes Mined	**kt**	**2,065**	**8**	**292**	**325**	**473**	**354**	**391**	**223**	-	-	-
ZnEq	**kt**	**15.72%**	**9.20%**	**12.85%**	**16.84%**	**16.37%**	**16.66%**	**15.94%**	**14.82%**	**0.00%**	**0.00%**	**0.00%**
Zn Grade	%	7.11%	4.72%	4.78%	7.35%	6.56%	8.11%	8.73%	6.67%	0.00%	0.00%	0.00%
Pb Grade	%	2.54%	2.63%	2.53%	3.00%	1.99%	3.27%	2.77%	1.44%	0.00%	0.00%	0.00%
Cu Grade	%	1.44%	0.23%	1.12%	1.25%	1.88%	1.26%	1.21%	1.97%	0.00%	0.00%	0.00%
Ag Grade	g/t	52.9	43.8	63.5	74.7	53.3	58.6	37.1	25.2	-	-	-
Au Grade	g/t	0.54	0.37	0.72	1.09	0.85	0.24	0.07	0.11	-	-	-
U/G Copper Tonnes Mined	**kt**	**723**	-	**7**	**31**	**127**	**60**	**187**	**312**	-	-	-
ZnEq	**kt**	**8.32%**	**0.00%**	**15.45%**	**11.77%**	**10.40%**	**8.39%**	**6.74%**	**7.92%**	**0.00%**	**0.00%**	**0.00%**
Zn Grade	%	0.98%	0.00%	2.45%	1.07%	1.51%	1.39%	0.73%	0.80%	0.00%	0.00%	0.00%
Pb Grade	%	0.26%	0.00%	2.14%	0.22%	0.45%	0.41%	0.15%	0.17%	0.00%	0.00%	0.00%
Cu Grade	%	2.11%	0.00%	2.11%	2.98%	2.35%	1.90%	1.80%	2.15%	0.00%	0.00%	0.00%
Ag Grade	g/t	13.1	-	123.1	20.0	21.2	17.4	8.3	8.7	-	-	-
Au Grade	g/t	0.20	-	1.14	0.71	0.66	0.27	0.01	0.03	-	-	-
South Dam Tonnes Mined	**kt**	**3,271**	**369**	**997**	**967**	**600**	**339**	-	-	-	-	-
ZnEq	**kt**	**5.76%**	**5.59%**	**5.82%**	**5.73%**	**5.75%**	**5.90%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**
Zn Grade	%	2.39%	2.37%	2.46%	2.27%	2.42%	2.47%	0.00%	0.00%	0.00%	0.00%	0.00%
Pb Grade	%	1.19%	1.09%	1.15%	1.23%	1.20%	1.27%	0.00%	0.00%	0.00%	0.00%	0.00%
Cu Grade	%	0.45%	0.43%	0.46%	0.48%	0.43%	0.43%	0.00%	0.00%	0.00%	0.00%	0.00%
Ag Grade	g/t	26.2	26.0	25.7	26.6	26.4	26.8	-	-	-	-	-
Au Grade	g/t	0.25	0.25	0.25	0.22	0.26	0.29	-	-	-	-	-
West Dam Tonnes Mined	**kt**	**3,686**	-	-	-	-	**540**	**633**	**683**	**1,500**	**330**	-
ZnEq	**kt**	**6.28%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**6.25%**	**6.26%**	**6.13%**	**6.46%**	**5.85%**	**0.00%**
Zn Grade	%	1.92%	0.00%	0.00%	0.00%	0.00%	1.84%	1.89%	1.83%	2.00%	1.95%	0.00%
Pb Grade	%	1.39%	0.00%	0.00%	0.00%	0.00%	1.25%	1.41%	1.39%	1.45%	1.29%	0.00%
Cu Grade	%	0.61%	0.00%	0.00%	0.00%	0.00%	0.74%	0.61%	0.61%	0.59%	0.47%	0.00%
Ag Grade	g/t	33.8	-	-	-	-	27.0	33.1	32.5	36.9	34.7	-
Au Grade	g/t	0.38	-	-	-	-	0.33	0.38	0.35	0.41	0.41	-
North Dam Tonnes Mined	**kt**	**2,282**	-	-	-	-	-	-	-	-	**1,170**	**1,112**
ZnEq	**kt**	**5.72%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**5.63%**	**5.82%**
Zn Grade	%	2.26%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.24%	2.27%
Pb Grade	%	1.25%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.21%	1.30%
Cu Grade	%	0.40%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.40%	0.40%
Ag Grade	g/t	32.6	-	-	-	-	-	-	-	-	30.8	34.4
Au Grade	g/t	0.27	-	-	-	-	-	-	-	-	0.26	0.27
Reclaimed Tailings Tonnes Mined	**kt**	**9,239**	**369**	**997**	**967**	**600**	**879**	**633**	**683**	**1,500**	**1,500**	**1,112**
ZnEq	**kt**	**5.96%**	**5.59%**	**5.82%**	**5.73%**	**5.75%**	**6.11%**	**6.26%**	**6.13%**	**6.46%**	**5.68%**	**5.82%**
Zn Grade	%	2.17%	2.37%	2.46%	2.27%	2.42%	2.08%	1.89%	1.83%	2.00%	2.18%	2.27%
Pb Grade	%	1.28%	1.09%	1.15%	1.23%	1.20%	1.26%	1.41%	1.39%	1.45%	1.23%	1.30%
Cu Grade	%	0.50%	0.43%	0.46%	0.48%	0.43%	0.62%	0.61%	0.61%	0.59%	0.42%	0.40%
Ag Grade	g/t	30.8	26.0	25.7	26.6	26.4	27.0	33.1	32.5	36.9	31.7	34.4
Au Grade	g/t	0.31	0.25	0.25	0.22	0.26	0.31	0.38	0.35	0.41	0.30	0.27
Total Tonnes Mined	**kt**	**12,028**	**376**	**1,296**	**1,322**	**1,200**	**1,293**	**1,211**	**1,218**	**1,500**	**1,500**	**1,112**
ZnEq	**kt**	**7.78%**	**5.47%**	**7.41%**	**8.57%**	**10.47%**	**9.07%**	**9.50%**	**8.26%**	**6.46%**	**5.68%**	**5.82%**
Zn Grade	%	2.95%	2.32%	2.97%	3.47%	3.99%	3.67%	3.95%	2.48%	2.00%	2.18%	2.27%
Pb Grade	%	1.44%	1.07%	1.47%	1.64%	1.45%	1.76%	1.67%	1.10%	1.45%	1.23%	1.30%
Cu Grade	%	0.76%	0.42%	0.61%	0.72%	1.20%	0.86%	0.99%	1.26%	0.59%	0.42%	0.40%
Ag Grade	g/t	33.5	25.5	34.5	38.2	36.7	35.1	30.8	25.2	36.9	31.7	34.4
Au Grade	g/t	0.34	0.25	0.36	0.44	0.54	0.30	0.23	0.22	0.41	0.30	0.27

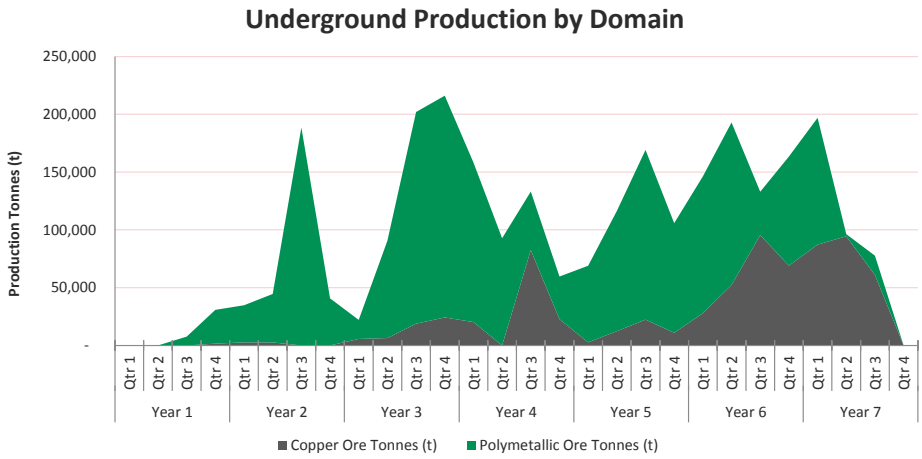
Zn equivalents (ZnEq) in the above table are based on the formula: Zn(%) + 0.81 x Pb(%) + 3.12 x Cu(%) + 0.86 x Au(g/t) + 0.03 x Ag(g/t). The factors in the equation, determined by SRK, take into account the plant feed grade together with relative mining recoveries, mining dilution, metallurgical recovery rates, payability and realisation costs, and are expressed as an equivalent zinc only grade (the effective grade that is delivered to the processing plant). The Polymetallic and Copper ore split is based on SRK stope descriptions rather than Resource blocks and hence differs from the Mineral Reserve breakdown. Metal recoveries are provided in the section on metallurgy on page 27 and it is Heron's view that all the metals within this formula are expected to be recovered and sold.

The production schedule for the Starter Case contains 51% Proven Reserves, 49% Probable Reserves.

79% of the ore tonnes from underground mining relate to areas which have not previously been mined. The breakdown between remnant and new areas (including development) is illustrated below:



The underground Resources falls into two main types, a "Polymetallic" type which refers to polymetallic massive sulphide mineralisation with high-grade Zn and Pb, and a "Copper" type which refers to Cu dominated massive and stringer sulphide mineralisation. These ore types are based on stope descriptions rather than blocks and hence differ from the Mineral Reserve breakdown. The mining schedule preferentially feeds the higher value Polymetallic material, with the Copper material generally being skewed to the back end of the production profile.



ROM pad stockpiling for the underground production is driven by the campaigning schedule, with underground campaigning being undertaken on minimum 14-day runs. The resulting average stockpile levels are generally between 40-90kt corresponding to 2-4 weeks of ore feed. This is consistent with the historic operations. Reclaimed tailings are fed directly into the mill after thickening.

Production

Based on the mining schedules above, the table below presents the detailed life-of-mine production schedule for the Woodlawn Project on an annual basis, showing concentrate production on a dry tonne basis and gross metal content by concentrate. Moisture in the shipped concentrates is expected to be around 10% for zinc and copper concentrates, and around 8% for lead concentrates.

Average annual Production Target figures are as follows for the Starter Case and for the 3 year period where the underground is producing at target production rates:

Annual Commodity Gross Production		**Steady State FY21-23 p.a.**	**Starter Case Average p.a.**
Zinc	kt	40.2	30.7
Lead	kt	11.5	9.4
Copper	kt	9.7	7.3
Silver	koz	894	811
Gold	koz	3.6	3.1

Production by Product		Total	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Zn Concentrate	dry kt	517.1	9.2	52.9	68.7	73.4	71.9	73.9	45.6	41.4	45.2	34.9
Zn	kt	284.4	5.1	29.1	37.8	40.4	39.6	40.7	25.1	22.8	24.9	19.2
Ag	koz	2,301.4	35.2	262.6	323.4	303.2	288.5	232.8	175.2	267.1	229.1	184.3
Pb Concentrate	dry kt	224.7	3.6	24.5	30.1	24.7	32.7	28.9	16.6	25.3	21.5	16.83
Pb	kt	86.8	1.3	9.5	11.8	10.2	12.8	11.7	6.7	9.1	7.7	6.1
Cu	kt	22.6	0.3	1.9	2.4	3.5	2.8	2.9	3.8	2.3	1.6	1.1
Ag	koz	4,405.7	69.3	497.4	610.8	567.5	545.3	441.2	336.0	525.3	450.6	362.5
Au	koz	22.7	0.3	2.9	4.4	5.3	2.1	1.2	1.2	2.4	1.7	1.1
Cu Concentrate	dry kt	197.1	2.3	15.9	20.8	33.9	24.2	27.0	35.6	16.9	12.0	8.46
Cu	kt	44.7	0.5	3.6	4.8	8.1	5.5	6.4	8.4	3.4	2.4	1.7
Ag	koz	794.4	10.8	94.5	117.8	114.1	104.7	83.7	60.1	81.9	70.3	56.5
Au	koz	5.7	0.1	0.7	1.1	1.3	0.5	0.3	0.3	0.6	0.5	0.3

Mining Costs

Underground

Underground mining costs have been developed by SRK from first principles and contractor budget quotes based on the mining method, vertical development, horizontal access, stoping and back fill costs, and vary according to the physical location and characteristics of the mined material within the underground. The capital cost profile is shown above, and includes mining costs in the FY18 year. The operating costs are provided below on a A$/t mill feed basis on a contract mining basis and include maintenance costs and average A$58.9 / tonne over the Starter Case mine plan:

Tailings

Tailings materials will be recovered from the three tailings dams in sequence, utilising the proven technique of high pressure water jet monitoring. The pulped material will then be pumped to the concentrator, thickened, and processed. The mining rate is tied to the mill feed ramp up rate, described below, and includes an allowance for mobilisation and contractor costs for the initial mining periods. The production schedule is provided above. The cost assumption for mining the tailings material is A$1.68/t on a campaign feed basis with a ramp-up by quarter per the following table:

Mining Cost	31-Mar-18	30-Jun-18	30-Sep-18	31-Dec-18	31-Mar-19	30-Jun-19
Total mining cost $/t	8.57	2.52	1.90	1.74	1.69	1.68

Processing & Overheads

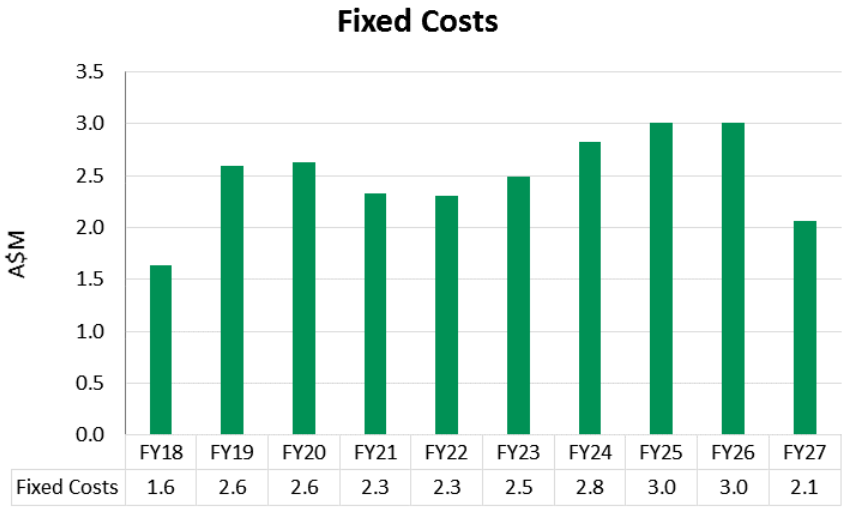
The operating cost estimate has been developed on the basis of a process plant feed tonnage of 1.0Mtpa when treating underground ore and 1.5Mtpa when treating reclaimed tailings. The operating cost estimate is A$21.34 per tonne of underground ore feed, and A$17.33 per tonne of retreatment tailings ore feed.

Processing Unit Cost	Underground A$/t	Retreatment Tailings A$/t
Crushing & Grinding	3.12	0.00
Tailings Reclamation & Grind	0.00	3.61
Flotation	9.61	7.94
Concentrate Handling	0.63	0.40
Plant services	0.75	0.57
Administration	7.23	4.82
Total	**21.34**	**17.33**

Initial period costs have been escalated directly in proportion to the mill ramp-up rate.

When comparing with the processing costs presented in the PEA, it should be noted that the costs of cemented paste backfill production have been removed from the processing costs and have been included in the mining costs.

Additional fixed costs of A$34.5 million have been estimated and include general administration costs, insurances, and owner's personnel costs (in addition to those included in the variable costs disclosed). Maintenance capital is included in the operating costs above. These are shown by year below. Pre-production owner's costs are included in the capital estimate.



An amount of A$9.6 million has been estimated for the net closure costs associated with the end of mining at the Woodlawn site for the Starter Case. No salvage value has been assumed for the plant.

Metallurgical

Design work for the FS has been based on commissioning of the operations on reclaimed tailings ore and moving to processing underground ore on a campaign basis as ROM stockpiled material becomes available (minimum level of approximately 42kt to trigger a campaign switch).

Based on the test work undertaken during the FS, as well as historic testwork undertaken for the PEA and earlier studies, the recovery outcomes to concentrates are expected to be as described in the table below:

	Underground Ore		Reclaimed Tailings Ore	
	Recovery	Concentrate Grade	Recovery	Concentrate Grade
Zinc Concentrate				
Zn	88%	55%	76%	55%
Pb (*)	6%		6%	
Cu (*)	3%		6%	
Ag	25%		15%	
Au	6%		5%	
Lead Concentrate				
Zn (*)	4%		7%	
Pb	70%	45%	42%	36%
Cu	24%		26%	
Ag	46%		30%	
Au	30%		12%	
Copper Concentrate				
Zn (*)	2%		1%	
Pb (*)	8%		5%	
Cu	60%	27%	39%	20%
Ag	10%		5%	
Au	7%		3%	

Items marked with a (*) are unlikely to be payable, and in the case of Pb in the Cu concentrate, may attract a small penalty if levels exceed specified amounts.

For the Starter Case, this results in the following average blended recoveries:

Average Recoveries	Zinc	Copper	Lead
Zn	80.2%	1.5%	5.5%
Pb	5.6%	5.6%	50.3%
Cu	4.5%	49.0%	24.8%
Ag	17.7%	6.1%	34.0%
Au	5.0%	4.3%	17.4%

A ramp up in recoveries has been assumed over the first five quarters of production based on 75%, 80%, 90%, 95%, and finally 100% of design recoveries being achieved in the quarters post commissioning. This ramp up is reflected in the averages above.

For the Starter Case, these recoveries provide average concentrate specifications as follows; however, it should be noted that based on the proportion of campaigning of underground ore compared to reclaimed tailings ore, the concentrate specifications will vary from period to period:

Average Conc. Specifications		Zinc	Copper	Lead
Zn	%	2.7%	55.0%	8.6%
Pb	%	4.9%	1.9%	38.6%
Cu	%	22.7%	0.8%	10.1%
Ag	g/t	125	138	610
Au	g/t	0.89	0.39	3.14

Marketing & Logistics

The inland transportation, port storage and handling charges, shipping quantity and cost, payability and TC/RC[3] terms vary by concentrate.

The cost of transportation to port, port handling and storage charges, and ocean freight has been estimated based on quotations received. Transportation, port storage and handling costs are equivalent to:

Domestic Realisation Costs A$/wmt[4]	Zinc	Copper	Lead
Transportation & port storage & handling	49	49	48

Overseas shipping costs (in US$/wmt) are equivalent to:

Shipping Costs US$/wmt	Average 2018	Average 2019	Long Term
5,000 tonne bulk to MAP/MCP[5]	42	45	47
10,000 tonne bulk to MAP/MCP	29	33	36
GP20' Container to MAP/MCP	27	29	29

Concentrate is assumed shipped in lots of 10kt for zinc, 5kt for copper and 2.5kt for lead. It is assumed that 90% of revenue will be received 30 days following concentrate shipment, and the remaining 10% after a further 90 days. Payment terms are assumed to be 30 days.

The payability and TC/RC terms vary by concentrate and commodity depending on the concentrate specifications and the levels of by-products in each concentrate The assumptions used by Heron are based on benchmarks and quotations received from potential off-takers based on the expected concentrate characteristics, and are in line with normal terms available in the market.

Material payability terms have been assumed as follows:

<u>Zinc Concentrate</u>

- Zinc payable: 85% minimum deduction 8 units
- Silver payable: Deduct 3oz pay 70% of balance

[3] *Treatment Charge/Refining Charge (TC/RC)*
[4] *Wet Metric Tonne (wmt), Dry Metric Tonne (dmt)*
[5] *Main Asian Port/Main China Port (MAP/MCP)*

Lead Concentrate

- Lead payable: 95% minimum deduction 3 units
- Silver payable: 95% minimum deduction 50g

Copper Concentrate

- Copper payable: 96.6% minimum deduction 1 unit
- Silver payable: 90% if more than 30g/t
- Gold payable: 90% if more than 1g/t

As anticipated in the PEA, there is some potential for a penalty charge to be applied to lead in the copper concentrate, with an allowance of US$7.3/dmt[4] of lead concentrate applied. Whilst other standard penalty terms will apply to a number of compounds within the concentrates, based on the expected concentrate specifications, no penalty is expected to apply to the zinc or lead concentrates.

Heron has assumed the following benchmarks for treatment charges:

- Zinc: US$204/dmt basis US$2,000/t, upper participation 8.5%, lower participation 3%;
- Lead: US$185/dmt, basis US$2,000/t, upper participation 6%, lower participation 4%; and
- Copper: US$90/dmt flat plus $0.09/payable lb.

Internal marketing personnel costs are included in the general and administration costs.

Infrastructure

The Woodlawn site is well supplied with existing infrastructure including:

- A sealed access road to the mine site;
- Shared administration building and offices;
- An existing site laboratory building;
- Raw water tank;
- Evaporation ponds;
- Site water pipe systems and pumps; and
- Electrical supply sub-station.

Raw water will be sourced from the underground, existing surface water storage, and from the existing licensed Willeroo Borefield and stored in the existing 10,000m³ raw water dam at the plant site. Potable water will be generated onsite from a raw water supply to a reverse osmosis plant.

A new tailings storage facility TSF4 will be constructed on the north side of the existing TDN site. The design of this dam is unchanged from the 2008 WRP BFS and PEA. The TSF4 dam will be utilised for initial tailings storage, with TDS being re-processed and then re-used as the operation progresses.

Economic

Unless otherwise stated, all cash flows are in Australian dollars, are undiscounted and are not subject to inflation/escalation factors, and all years are financial years (ending 30 June). All cash flows are unleveraged (pre-finance) and are post-tax unless otherwise specified.

An exchange rate of 0.73 A$:US$ has been employed for capital cost estimation, and a flat rate of 0.71 has been used for the project operational cash flows.

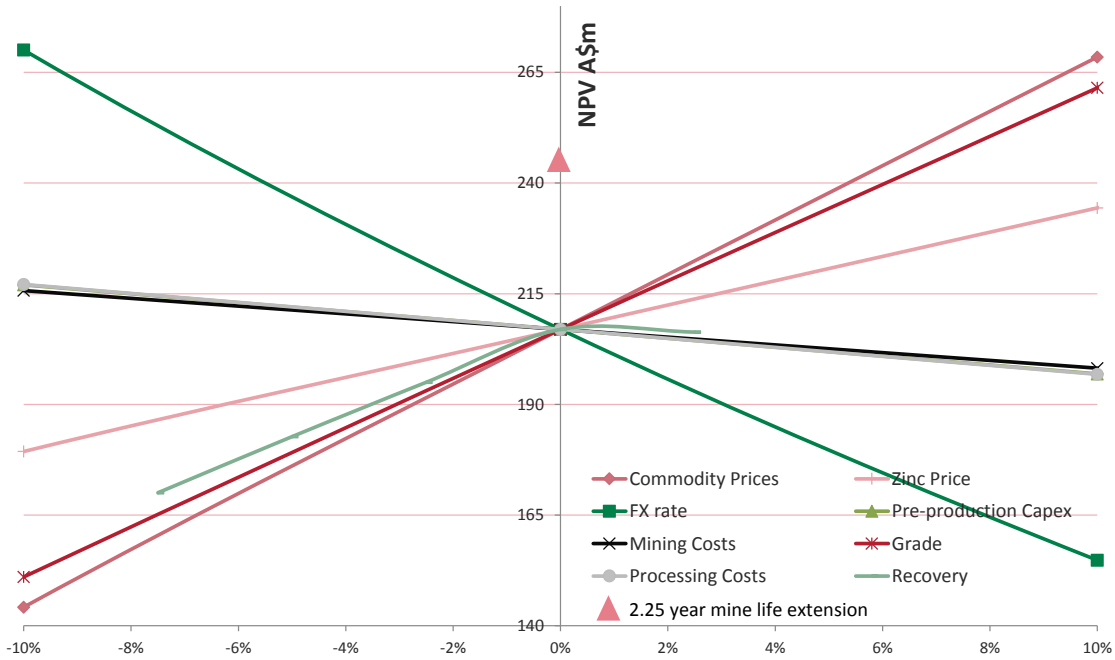
The following metals prices have been assumed by Heron in the modelling. These prices have been based on analysis of forecast commodity price data from a number of different sources during the modelled period during which the mine will operate, as well as considering recently released comparable Technical Reports. They are expressed below in 2016 dollar terms, and have been held constant for the duration of the model:

		Comparison Price Decks	
Commodity	**FS Base Price Deck, 2016 basis, flat**	**Spot Price as at 14 June 2016**	**PEA assumption, June 2015**
Zinc	US$2,230/t (US$1.01/lb)	US$2,070/t (US$0.94/lb)	US$2,400/t (US$1.09/lb)
Lead	US$2,000/t (US$0.91/lb)	US$1,730 /t (US$0.78/lb)	US$2,050/t (US$0.95/lb)
Copper	US$6,610/t (US$3.00/lb)	US$4,500/t (US$2.04/lb)	US$6,610/t (US$3.00/lb)
Silver	US$17.8/oz	US$17.3/oz	US$18.5/oz
Gold	US$1,200/oz	US$1,280/oz	US$1,200/oz

A real, post-tax discount rate has been applied to the project to calculate a net present value. The selected discount rate of 8% is approximately equivalent to a post-tax nominal discount rate of 10%.

Sensitivities

The sensitivity of the project NPV (A$M) to percentage changes in key inputs are summarised below for movements in a number of key drivers as labelled:



Legal

All Mineral Resources and Reserves which are the subject of the FS Production Target are owned 100% by Heron on granted SML20.

Environmental

During 2012 the Company carried out an extensive Environmental Assessment (EA), seeking Major Project approval under Part 3A(transitional) of the NSW Environmental Planning and Assessment Act 1979 (EP&A Act) to establish the Project. The EA included a public exhibition stage during which a total of 17 submissions were received, including 11 from public agencies, 2 from special interest groups and 4 from the general public.

On 4 July 2013 the Company received project approval under Section 75J of the EP&A Act from the NSW Minister for Planning and Infrastructure in relation to the Project. The approvals have been granted and allow mining operations at the Woodlawn site until 31 December 2034.

Social

The workforce for the Project is assumed to be sourced on a drive-in, drive-out basis from the communities around Woodlawn. With more than 430,000 people living within 55km of site and an attractive and liveable environment, it is anticipated that the Woodlawn Project will present an attractive employment opportunity both for locals and for qualified personnel relocating from elsewhere.

Governmental

The project is subject to Australian corporate tax, which has been applied at 30%. Tax calculations are impacted by depreciation deductions for capital items.

New South Wales levies mineral royalties for extractive operations within the state. The royalties are based on an "ad valorem" value of minerals, being 4% of the ex-mine value less allowable deductions. Allowable deductions are confined to the direct costs incurred in upgrading the mineral, after the first stockpile, and bringing it to market, and include crushing and milling, concentration, assaying and analysis, realisation costs, and a depreciation allowance. When applied to the project costs, the equivalent royalty expressed as a percentage of net smelter revenue averages approximately 3.2% over the life of the mine.

Estimated opening capitalised exploration expenditure of A$32.3M has been depreciated on a unit of production basis.

Heron's estimated opening tax losses of A$90M have been fully netted against the project tax calculations. In addition, a portion of A$53M in additional losses subject to the available fraction rule have been netted against the project tax calculations. These losses reflect accumulated losses for the group companies and are based on independent advice received.

Appendix 2: JORC Code (2012) – Table 1

Woodlawn Underground Mineral Resource Estimate (June 2016)

Section 1 Sampling Techniques and Data

(Criteria in this section applies to all succeeding sections)

Criteria	Commentary
Sampling techniques	• The sampling dataset that forms the basis of the Mineral Resource estimate consists mostly of drill samples that have been collected from the 1970's up to the present day and, for reporting purposes, is split into two groups, *Historical* being pre-1999 samples from Jododex, CRA and Denehurst exploration and mining operations, and *Recent* being post 1999 drilling samples from exploration by Heron Resources Ltd (Heron) and TriAusMin Ltd (TriAusMin). The Heron drilling was undertaken from September 2014 to November 2016 (Phase I and Phase II drilling programs) and the TriAusMin drilling was undertaken between January 2007 and May 2013. • The Phase I and II drilling programs (104 DDH for 27,048 metres and 11 RC holes for 1,201 metres) completes the drilling required to estimate the Mineral Resource for the Woodlawn feasibility study (FS). • Heron also drilled 18 geotechnical diamond drill holes (for 1,247 metres) to assist with engineering studies associated with the mine design and reserve calculations. • The majority of recent diamond core samples were taken from HQ3 sized core (with a smaller proportion of NQ2 and NQ3 sized core) and generally collected on a nominal interval length of 1m, with samples terminated at geological contacts. The core was halved along the core orientation line. In massive sulphide zones, quarter core was submitted for assaying, half core preserved for metallurgical testing, with the remaining quarter retained as reference material. In non-massive sulphide material half core was submitted for assaying. • The Recent percussion reverse circulation (RC) holes (11 holes drilled in 2014 with two of these used in the Mineral Resource estimate) were drilled using a 4.5 inch sized bit. Samples were collected on 1m intervals. In the waste zones, a sample spear was used to collect a split from each interval, which were subsequently combined to form 4m composites. In the mineralised zone, the 1m interval was retained and a split collected using a riffle splitter. • The Recent sampling methods were consistent with accepted industry practice and are considered to provide representative samples for the mineralisation encountered. • Historical RC drilling was not used in the Mineral Resource estimate. • Historical surface and underground diamond drilling has been used in the Mineral Resource. The majority of the samples were collected from half NQ core, although some underground samples were taken from whole BQ core. Core was sampled on 1m intervals, with the intervals usually split at lithological boundaries. Some of the early exploration core was sampled on imperial intervals, which were subsequently metricised in the Historical database. • Some Historical face chip samples have been used in the Mineral Resource calculation. This was limited to samples taken from cross cuts that spanned the complete section of the mineralised lens. Rock chip samples were taken as a continuous channel from the wall rocks on 1-2m intervals, with each sample weighing were approximately 2-3kg. Samples were taken to geological contacts. • Resampling of the massive sulphide intervals from the Historical drilling has been undertaken where the drill core was still of reasonable quality. A total of 116 repeat samples were taken and showed acceptable correlation with the reported Historical assay results. In addition, Historical production reconciliation suggests that there was an acceptable correlation between the grades derived from sampling and concentrate production over the life of the underground mine.

Criteria	Commentary
Drilling techniques	• The Recent diamond-core drilling was performed mostly using McCulloch DR800 rigs (or similar) for Phase I and Sandvik UDR650 for Phase II. Various techniques were employed to ensure the hole was kept within limits of the planned position, including directional drilling. The retrieved core was laid out in standard plastic cores trays. • The Recent RC drilling was performed using a Schramm T450WSI rig fitted with a 4.5 inch face sampling hammer. One metre samples were collected via a Jones 5:1 splitter fitted to the rig cyclone. • Historical diamond drilling was undertaken by both surface and underground rigs. The full drill company and rig details are poorly understood, however anecdotal evidence indicates it was conducted with standard drill equipment and procedures for that time. Historical core stored on site represents approximately fifty percent of the historical drilling. The majority of core is intact and in good condition, apart from some limited surface oxidation and degradation of the sulphide zone in the vicinity of joint planes. Metre marks, sample marks and hole numbers are visible for almost all holes stored on site. Select key holes have been stored off site at Geological survey of NSW Maitland core library.
Drill sample recovery	• The drill core was transported to an enclosed facility for logging and preparation. The average recovery exceeds 95%. The core was orientated, where possible and marked with 1 metre downhole intervals for logging and sampling. • The recoveries for the Recent RC drilling were visually estimated, with most being close to 100%. • Historical core stored on site shows a similar level of recovery to that from the recent diamond drilling. With the exception of some geotechnical holes, the Historical exploration and underground core does not appear to have been orientated.
Logging	• For recent drilling, both diamond core and RC holes were geologically logged. Geotechnical logging was conducted on selected core intervals. Samples for metallurgical testing were stored in a freezer to reduce oxidation prior to metallurgical testing. • Historical core was geologically logged. Some holes were geotechnically logged, and some were used for metallurgical test work.
Sub-sampling techniques and sample preparation	• For recent drilling, all core samples were crushed and then pulverised in a ring pulveriser (LM5) to a nominal 90% passing 75 micron. For each interval, a 250g pulp sub-sample was taken, with the remainder stored for reference. • For recent programs a quartz flush was put through the LM5 pulveriser prior to each new batch of samples. Multiple quartz flushes were also put through the pulveriser after each massive sulphide sample processed. A selection of the flush material was analysed and reported by the lab to gauge the potential level of contamination that may be carried through from one sample to the next. • The recent RC samples were pulverised in an LM5 ring pulveriser. The same quartz flush procedures as those described above were used. • For the majority of Historical sampling, preparation and analysis was carried out on site by Denehurst Analytical Services Pty Ltd, a NATA accredited laboratory. An independent review of the laboratory was carried out in 1986 by Robertson Research. At that time the following procedures were being used: 1) All samples were crushed to 1.5mm using a combination of jaw and roll crushers; 2) Crushed samples were quartered to obtain a 150gram cut for pulverising in a Rocklabs bowl and puck pulveriser; 3) A quartz flush was used between individual samples. • A number of Historical samples, including all early exploration surface diamond drilling, were prepared at other commercial laboratories using methods that are understood to be similar to those described above.
Quality of assay data and laboratory tests	• Recent sample preparation and assaying was conducted by ALS Laboratories, Orange, New South Wales with the final analysis of the pulps undertaken at ALS Laboratory, Brisbane, Queensland. • Recent Gold assays were determined by 30g fire assay fusion with AAS analysis to 1ppb LLD. • Recent other elements were assayed by mixed acid digestion followed by ICP analysis. The digest is considered to be a total digest. • Recent Laboratory quality control standards (blanks, standards and duplicates) were inserted at a rate of 5 per 35 samples for ICP analysis.

Criteria	Commentary
	• Most of the Historical sample preparation and assaying was carried out by Denehurst Analytical Pty Ltd (Denehurst Laboratory), which was a NATA accredited laboratory operating at the Woodlawn site. Zinc, lead and copper grades were determined by acid digest and AAS finish. An aliquot from each pulp was also analysed by XRF pressed powder for precious metals, iron, silicon, aluminium, magnesium and barium, along with repeats of zinc, lead and copper. Gold assays over 2g/t were retested by fire assay and AAS finish. QAQC procedures included Standards inserted at a frequency of 1:30, however the actual QAQC data have not been located. Anecdotal evidence indicates the Denehurst Laboratory was well regarded at the time of operation and was used for umpire assaying by other laboratories. • Some sample preparation and assaying for the Historical data, in particular the early exploration diamond drilling samples, were carried out by various other commercial laboratories. Exact details have not been located for these samples and the Historical database does not contain information describing which laboratories or assay methods were used for the various programmes.
Verification of sampling and assaying	• For recent data, an internal review of results was undertaken by company personnel. Independent verification has also been undertaken by the Company's geological consultants. • All recent field and laboratory data were entered into a database using a consultant database administrator (DBA), who is based in the Company's Perth office. Validation of both the field and laboratory data was undertaken prior to final acceptance and reporting of the data. • For recent drilling, quality control samples from both the Company and the Laboratory were assessed by the DBA and reported to the Company geologists for verification. Company procedures dictate that all assay data must pass this data verification and quality control process before being reported. • All data from Historical data bases were entered into the Heron Database by the DBA. Original source data and laboratory records have not been located and the assay data has not been verified. • At the time of Historical data collection, QAQC checks were not routinely carried out by the mine geology department, however the laboratory did do internal standard analysis at the rate of 1 in 30 samples. During operations, the mine claim grades (derived from the Reserve and Resource models) were routinely reconciled against the mill concentrate grades. As a semi-quantitative test, this suggests that the Historical drilling assay results are sufficiently accurate for the prediction of mining grades. • No adjustments have been made to assay data within the database.
Location of data points	• The deposit is not thought to contain magnetic minerals in concentrations that may adversely affect survey equipment. • For recent drilling, drill collars were initially located with a combination of handheld GPS and licenced surveyor using a DGPS system, to an accuracy of approximately 1m. The final drill collar locations are surveyed by a licenced surveyor. • For recent drilling, downhole surveys were conducted using an Eastman, Pathfinder or Ranger survey tool to record the magnetic azimuth and dip of the hole. These recordings were taken approximately every 30 metres downhole. Approximately 80% of the recent holes were also surveyed with gyroscopic equipment. • For recent drilling in the Phase I program a north seeking gyroscopic tool was used to provide collar azimuth data for approximately half the diamond holes. • For Historical drilling collar surveys were carried out on all surface and underground holes using conventional Total Station equipment. • Down-hole surveys of Historic holes were carried out using down-hole cameras of various types, and recording intervals of approximately 30m. • Historical drill holes intersected in underground workings were routinely picked up by the mine surveyor. These data indicated the downhole survey azimuth accuracy was usually in the order of +/- 2 degrees. • All Historical primary source data for collar surveys, and most down-hole surveys have been located and verified against the Historical drill hole database. • Down-hole magnetic survey data have been checked and adjusted for changes in magnetic declination.

Criteria	Commentary
Data spacing and distribution	• Drill data spacing varies from 15m x15m in some remnant parts of the historical mine to greater than 80m x 80m in some exploration areas. • Historical backs mapping data covering all development (generally on 5m flitches) have been used to help define geological contacts in areas of previous mining. Geological structures identified in the mapping data have been used to constrain the dimensions of drilled extensions to previously mined lenses. • Data are considered to be of sufficient spacing to establish geological and grade continuity for resource estimation, and the resource classification reflects the geological and grade continuity confidence of the modelled material. • Lenses with insufficient drilling data have been modelled for exploration targeting purposes, but have not been assigned resource classifications or included in the resource inventory. This includes portions of the new Lisa Lens, portions of B Deeps and parts of the G lens extensions. • The majority of the sample lengths are between 0.22m to 1.0m. Some Historical samples were taken over 3' intervals (converted to metric equivalents in the database). Some underground face samples are 2m in length. • All samples were composited to 1m length for resource modelling purposes. All composites were density weighted.
Orientation of data in relation to geological structure	• The recent drill hole orientations were designed to intersect the mineralised lenses at a close to perpendicular angle. The mineralised lenses dip at approximately 50-70 degrees to the west and the holes dip at approximately 60 degrees to the east. • The majority of Historical drilling has been orientated to intersect the lenses at a close to perpendicular angle. • Some underground drill holes have been collared in the footwall, and cross the lenses at a lower angle than 50 degrees. • No significant sampling bias due to the orientation of the drilling has been identified.
Sample security	• Sampling was conducted according to written procedures, and was performed by appropriately trained and supervised sampling personnel. • Core was photographed after mark up, but before sampling. • Half and quarter core samples were placed in numbered and tied calico sample bags. • Samples were weighed on site and density of all samples determined before being sent to the laboratory. • Samples were secured in plastic bags and are transported to the ALS laboratory in Orange, NSW via a courier service or with Company personnel. • The sample security of Historical drilling is not known, however most samples were assayed at the onsite laboratory. • All recent drilling, and approximately half of the Historical drilling is stored at the Woodlawn core farm.
Audits or reviews	• In September 2014 a review and assessment of the ALS laboratory procedures was carried out by company senior geology personnel resulted in some changes to the laboratory sample pulverising procedures resulting in additional quartz flushes being inserted after massive sulphide samples. Further ALS Laboratory visits were undertaken by Heron geologists to check procedures in 2015. • The majority of Historical assay work was carried out by the NATA certified Denehurst Analytical Laboratory. • The Historical laboratory procedures were reviewed as part of a broader independent assessment of resources and reserves carried out by Mr R E Cotton of Robertson Research in 1986.

Section 2 Reporting of Exploration Results

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

Criteria	Commentary
Mineral tenement and	• The Woodlawn Project is located 250km south-west of Sydney in the state of New South Wales. The area is near the top of the Great Australian Dividing range and has an elevation around 800m

Criteria	Commentary
land tenure status	above sea-level. The mineral and mining rights to the project are owned 100% by Heron Resources through the granted, Special Mining Lease 20 (SML20), also known as S(C&P)L 20. The lease has recently been renewed for 15 years and has an expiry date of the 16th November 2029. • The project area is on private land owned by Veolia who operate a waste disposal facility that utilises the historical open-pit void. An agreement is in place with Veolia for the Company to purchase certain sections of this private land to facilitate future mining and processing activities. • A cooperation agreement is also in place between Veolia and the Company that covers drilling, other exploration activities and mining/processing in the area.
Exploration done by other parties	• The Woodlawn deposit was discovered by the Jododex JV in 1970 and open-pit mining began in 1978 and continued through to 1987. The project was bought outright by Rio Tinto (CRA) in 1984 who completed the open-pit mining. Underground operations commenced in 1986 and the project was sold to Denehurst Ltd in 1987 who continued underground mining up until 1998. The mineral rights to the project were then acquired by TriAusMin Ltd in 1999, who conducted further studies on a tailings re-treatment and revived underground operation. Heron took 100% ownership of the project in August 2014 following the merger of the two companies.
Geology	• The Woodlawn deposit comprises volcanogenic massive sulphide (VMS) mineralisation consisting of stratabound lenses of pyrite, sphalerite, galena and chalcopyrite. The mineralisation is hosted in the Silurian-aged Woodlawn Felsic Volcanic package of the Goulburn sub-basin on the eastern side of the Lachlan Fold Belt. • Mineralisation is hosted within strata bound lens shaped lodes. The lenses can be further divided into three favourable horizons which host multiple lenses. The lenses have an average strike of between 330 and 350 degrees, and dip at between 50 and 75 degrees to the west. There is a prominent northwest oriented plunge to the mineralisation of most lenses. Some of the lenses are further subdivided by later faulting, associated with regional deformation. Mineralisation is polymetallic with copper, lead and zinc being the primary economic minerals along with secondary silver and gold.
Drill hole Information	• A total of 1,195 drill holes for 193,318 metres and associated assays and lithological data are currently held in the database for the Woodlawn underground deposit. • Due to the size of the database it is not practical to list every individual drill hole in Table 1. All Recent drilling results have been released to the market prior to the calculation of the Mineral Resource estimate.
Data aggregation methods	• The details related to intercepts and assay management for Mineral Resource estimation are to be found under the Mineral Resource estimation section of the Table 1 (section 3).
Relationship between mineralisation widths and intercept lengths	• No exploration results in addition to those already published are included in the Mineral Resource estimate.
Balanced reporting	• No exploration results in addition to those already published are included in the Mineral Resource estimate.
Other substantive exploration data	• No exploration results in addition to those already published are included in the Mineral Resource estimate.
Further work	• The Phase I and II drilling programs completes the drilling required to estimate the Mineral Resource for the Woodlawn FS. Further drilling is being considered to: 1) extend the known lens positions along strike and down plunge; 2) test for new lens positions where EM modelled plates are present (eg Kate Deeps); 3) test for entirely new lens positions along strike to the north and north-west where the system has not been closed off and; 4) extend known satellite ore systems at Cowley Hills and Currawang.

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	Commentary
Preamble and responsible people.	• The revised underground Mineral Resource estimate for the Woodlawn Project has been largely undertaken in-house by Heron personnel, in particular Heron's Senior Resource Geologist (Mr Steve Jones, who is a member of the AusIMM). • This work has been reviewed on a semi-continuous basis by SRK personnel: Mr Rod Brown, who has provided the final Independent Competent Person's sign-off to the estimate.
Database integrity	• For Recent data, all data were captured digitally, including, collar survey, down-hole survey, geological logging, geotechnical logging, sample selection and assay results. The geological and geotechnical logging and sampling data were validated on entry in the field. Clear written procedures outline how all data are entered and managed in the field, and field geologists update the procedures as changes are made to suit new data types (eg updating of geological legend). • Digital records were uploaded into the database by the DBA. All source files were stored within the database. The database has internal validation procedures for most data types to minimise the chance of transcription errors. Initial data validation was done automatically (the database will not accept data contrary to validation criteria). • Secondary validation was carried out as data was added to the database. Regular downloads from the database were validated in 3D mining packages by the geological team after each assay batch received. • All updates and changes to the database, including corrections from the geological team, were carried out by the DBA.
Site visits	• Mr Jones visited the site numerous times during the drilling and post drilling to check the successful implementation of site procedures, including drilling, logging, sampling, and density measurements. • Rod Brown (SRK) conducted a site visit in March 2015 to inspect the project site, examine the geology, inspect core samples, and to discuss aspects of the data acquisition and deposit geology with site personnel. The geological setting and controls on mineralisation observed in the exposures (pit walls) and core samples are considered to be consistent with the geological understanding that has been used for the preparation of the geological model. There were no drill rigs operating at the time of the site visit. However, an inspection of the core storage facilities indicated both the historical and recent core to be of an acceptable quality, and suitable for the preparation of resource estimates
Geological interpretation	• The geological interpretation was built upon on from an extensive body of work by both researchers, and previous operators at the mine. • The geological model of the mine was built up from detailed underground mapping, Historical underground and surface diamond drilling, and Recent RC and diamond drilling by TriAusMin and Heron. • The underground mapping was completed during underground mining operations, and consisted of 1:500 and 1:250 scale backs maps of every underground development drive, including all flat back stope lifts. The mapping line work was digitised by Heron geologists and is used to develop wireframes of major faults and mineralisation domain boundaries. • The majority of mineralisation domain boundaries correspond to the sharp contacts between the massive or stringer sulphide zones and the silicate host rock. As a result the mapped and logged geological contacts between sulphides and silicates provide a robust basis for the interpretation of volumes and the selection of samples for estimation of Mineral Resources. • It was recognised in the previous mining operations that individual lenses can have distinct mineralisation characteristics, and this has been reflected in the domains used in the resource estimate. In particular polymetallic mineralisation (sphalerite, pyrite, galena, chalcopyrite and other minor components) has been separated from Copper zone mineralisation (principally pyrite, chalcopyrite) by domain boundaries within the model. • The impact of alternative interpretations on the resource quantities is considered to be adequately reflected in the classifications assigned to the resource estimates: • Measured material is defined in areas where both sufficient drill hole and underground

Criteria	Commentary
	mapping data are available to confirm both the grades and controlling structures (and thus volumes) of the lenses. There is limited scope for an alternative interpretation that would result in significantly different volumes or grades. • Indicated material is defined in areas where there is either sufficient drilling, or sufficient underground mapping data available to confirm the volume of the lenses. In previously mined areas, the drill spacing is wider than expected for Measured (from reconciliation work carried out on the block model vs production records), or there has been no previous mining and the interpretation is based on drilling and interpretation projections from adjacent mapped areas. • In areas where grade and geological continuity can be demonstrated, but the geological data is limited to widely spaced drilling only, the resource classification has been set to inferred. • Where insufficient intercepts are available to confirm continuity of either grade or geology between holes, the model cells have been flagged as 'Not Classified', and excluded from the resource estimates. • There is some scope for reinterpretation of Inferred material geometry and considerable scope for alternate interpretation of Not Classified portions of the model. It is expected that further drilling will be required to improve the robustness of the interpretation of these materials. • A similar approach to resource modelling was used during the Historical underground operations, and it was considered that the reconciliation between mine and mill supported the classification that had been assigned during this period. • The geological model includes material that has been mined and the lens models closely match the models generated by the mining department during operation. • Infill drill holes, drilled post the PEA study (Phase II drilling) to enable upgrading the classification for some of the Inferred Resources to Indicated Resources, often intersected mineralisation, faults and dolerites close to the expected location indicated in the geology model. This indicates that the geology model is reasonably robust in the areas drilled for the feasibility study.
Dimensions	• The Resource Model has 37 separate domains, 27 of which are reported to contain either Measured and/or Indicated resources, and a further 10 containing only Inferred resources above the modelled cut-off grade of 7% Zn Equivalent Grade (ZnEq). Two lenses contain low grade mineralisation below the reporting cut-off grade. • The typical lens dimensions are 40 to 120m along strike, approximately 80 to over 500m down plunge and 2 to 30m across strike. • Mineralisation has been modelled to a depth of 820m below surface, however the deposit is considered to be open at depth. The current Mineral Resource estimate is constrained by the limited drill coverage below 700m.
Estimation and modelling techniques	Modelling: • All modelling of domains was completed using a combination of Micromine and Leapfrog modelling software to generate domain wireframes. Mapping data was digitised using Micromine. Flagged lens outlines from the mapping data and drill hole pierce points were imported into Leapfrog where the footwall and hanging wall of each lens were modelled using implicit modelling routines appropriate for the geometry of the surface being modelled. The completed wall wireframes were wire-framed together in Micromine using appropriate geological constraints, including faults, adjacent lens domains and Boolean mathematics to build the final enclosed domain boundaries. • A regular block model was built using the lens boundaries and a digital terrain model of the surface. Only the sulphide portion of lenses has been domained and modelled. Waste material was not subdivided into different geological units for this model. • A parent cell size of 10m x 20m x 20m in the X, Y and Z directions was chosen to reflect the principal mining method of sub-level retreat long hole mining with paste fill over 20m x 20m spans. This also reflects the drill hole intercept spacing of 20m x 20m for a significant portion of the deposit. In some inferred portions of the model, drill hole spacing approaches 80m x 80m spacing. • The parent cells were sub-celled to 1m x 2m x 2m to accurately estimate the volume of material inside each lens domain for mining assessment.

Criteria	Commentary

	Estimation of grades:
	• Each individual lens was interpolated separately from other lenses by the flagging of both drill hole assays and the block model. Lens boundaries were treated as *hard boundaries* for the purposes of modelling.
	• For resource modelling purposes two adjustments were made to assay data during modelling;
	  ○ Not all of historical samples had been routinely assayed for Au. The detection limit of 0.01g/t has been applied to all absent Au assays prior to compositing and interpolation.
	  ○ Fe assays were absent for a small number of holes in portions of the I, K and D lenses. Appropriate Fe values were assigned to the intervals based on nearby drill holes within the relevant domains during compositing.
	• Assays were selected and composited based on drill hole flagging that was independent of the domain wireframe boundaries. This technique was used to accommodate small differences in the accuracy of drill hole sample locations relative to the underground mapping data.
	• No cut grades were required for assays except for Ag assays in the G1 domain, where a high- grade cut of 800 g/t was applied to three samples in two adjacent holes.
	• Due to the limited number of samples in each domain, geostatistical modelling was carried out on all the domained assay data simultaneously, to produce global semi-variogram models for Au, Ag, Cu, Fe, Pb and Zn. These global geostatistical models were considered to be robust for all elements modelled. They show good continuity in general, with low nugget effects.
	• No estimates of deleterious elements were carried out.
	• Fe was estimated for all lenses to assist with the calculation of density for the mineralisation by way or a regression equation based on Fe, Zn and Pb grades.
	• Grades were interpolated using Ordinary Kriging in Micromine software, with Kriging parameters derived directly from the semi-variogram models. Search parameters were based on the variogram models with octant searches being used to set a maximum of 32 samples for the initial search, and 16 and 4 for subsequent searches. Search sizes were set to ensure all blocks were filled by the third search and were orientated to match the variography. Only blocks filled for all elements in the first search were considered for Indicated or Measured classification.
	• Although separate estimation parameters were used for each element modelled there is good correlation between lead and zinc, and moderate correlation between gold and silver. Copper was found to have a somewhat shorter variogram range than the other elements modelled. All element grades were broadly anisotropic and of similar orientation and plunge to the lenses.
	• The maximum range of extrapolation for inferred resources was 80m. Mineralisation estimates beyond this range were not classified or reported.
	• Zinc Equivalent Calculations
	  • ZnEq was calculated for each block from the estimated block grades. The ZnEq calculation used to report the resource model is the same as that used in the PEA to allow a direct comparison between the two figures. The ZnEq calculation takes into account, mining costs, milling costs, recoveries, payability (including transport and refining charges) and metal prices in generating a Zinc equivalent value for each block grade for Au, Ag, Cu, Pb and Zn.
	  ○ ZnEq = Zn%+Cu%*3.12+Pb%*0.81+*Au g/t*0.86+Ag g/t*0.03
	Metal prices used in the calculation are: Zn US$2,300/t, Pb US$ 2,050/t, Cu US$6,600/t, Au US$1,250/oz and Ag US$18/oz. Metal recoveries are provided in the section on metallurgy (Appendix 1) and it is Heron's view that all the metals within this formula are expected to be recovered and sold.
	• Validation of Estimates:
	  • The volumes of the block model were checked against the calculated interior volumes of the wireframe models and found to be reasonable for the level of confidence of the model.
	  • All domains were checked visually, individually by element for assay composite grades

Criteria	Commentary
	against estimated block grades. • 20m thick Swath plots in the vertical plane, north-south plane and east-west plane were produced for all lenses, comparing drill hole composite grades with block modelled grades. No significant departures in grades were noted for material classified as Measured or Indicated. Some differences in the mean and smoothing were detected for lens models that contained a significant portion of Inferred resources. This was deemed acceptable for the level of confidence assigned. • Reconciliation of historical mine claim production records (where recorded in sufficient detail) to the block model were acceptable, with all Measured and most Indicated portions of the model accurately predicting both grade and tonnes mined to ±10% or better.
Moisture	• All estimates were based on dry density. The rock mass is non-porous fresh rock and contains little residual moisture, except along major fault planes (less than 0.01% of the rock mass).
Cut-off parameters	• A ZnEq cut-off grade of 7% minimum was applied to report Mineral Resources. This cut-off grade was based on the likely foreseeable minimum grade required for underground mining at the Woodlawn mine site. The ZnEq equation is the same as that used in the PEA study. It is not necessarily related to the FS mining study economic assessments, which take into account more up to date prices and metallurgical performance. That being said, the 7% cut-off is not materially different to the results of the FS mining study cut-off grades.
Mining factors or assumptions	• Dilution factors have not been applied to the Mineral Resource estimate. • The deposit has previously been mined both as an open cut pit, and an underground mine. Open cut mining has not been considered for the Mineral Resource at this time. • It is assumed that underground mechanised mining will be used to mine the deposit in the future. • The Indicated and Measured portions of the resource model was assessed for underground mining as a part of the FS. Assessment was carried out by SRK mining engineers in conjunction with Beck geotechnical engineers. • The study included both capital and operating underground mining costs, based on a contract mining scenario with trackless mining equipment and employing primarily long-hole stoping and paste backfill. Other considerations included the presence of existing historical underground development openings, filled and unfilled historical stopes, as well as the ongoing use of the open cut by Veolia. • The mine design included new box-cut and decline access, ventilation design, escape-way design, ground support requirements, stockpiles and cross-cuts, as well as level development and stoping designs. • The size of stopes, mining methods and dilution parameters are based on historical mining performance and geotechnical assessment of recent drilling, applied to the mining methods chosen by the study. • The mining study is a thorough study of mining inventory to a FS level. • Material assessed to be inaccessible or unrecoverable by underground mining during the FS were excluded from the Mineral Resource estimate and not reported. This includes material in non-recoverable pillars, the edge of previously mined stopes and areas of known collapse in the mining records from the previous underground mine. • More detailed work on the proposed mining plan can be found in the body of the FS document.
Metallurgical factors or assumptions	• The deposit was previously mined and processed to produce saleable and profitable metal concentrates for copper, lead and zinc. • Recent metallurgical test work by Heron on underground mineralisation intercepts, including material representing mining dilution, as a part of the FS indicates that good recoveries of saleable concentrates can be achieved for copper, lead and zinc concentrates from both the underground mineralisation, and tailings stored on site from previous mining operations. • The test work was based on crushing and grinding underground mineralisation to 75µm, floating of a copper concentrate with separate talc pre-float, then regrinding the material to 30µm with separate talc pre-float, copper, lead, and zinc concentrate floats. • Test work included the classification of tailings to produce material suitable for use as a paste fill in

Criteria	Commentary
	underground voids. • Detailed work on the proposed metallurgical processing of the deposit, including estimated capital and operating costs, and plant preliminary designs, metal recoveries, concentrate grades and payabilities can be found in the body of the FS document.

Environmental factors or assumptions	• The site has been subject to previous mining activities, and has not been fully rehabilitated.
	• On July 4th, 2013 the Company received project approval under Section 75J of the EP&A Act from the NSW Minister of Planning and Infrastructure in relation to the project, covering both:
	  • The Woodlawn Retreatment Project (WRP) — involving the establishment of a hard-rock processing facility and the processing of existing tailings material stored within three existing tailings dams; and
	  • The Woodlawn Underground Project (WUP) — involving excavation of a new box-cut and underground mining development to extract metalliferous sulphide material, subject to successful exploration.
	• The approvals have been granted to allow mining operations at the Woodlawn site until 31st December 2034.
	• The approvals come with a number of reasonable, workable operating conditions relating to hours of operations, operating standards, community consultation, conditions on site operations and restrictions on volumes and transport routes approved.
	• Aside from the conditions the Company must also design a new tailings dam, implement water management systems (to ensure zero discharge of contaminated water off site), identify and implement a passive system for the treatment of potential acid forming seepage from the existing waste dump, refurbish, monitor and maintain the existing bore fields.
	• Further environmental details can be found in the body of the FS document.

Bulk density	• No verifiable historical density data has been located, although the taking of density measurements is mentioned in a number of historical resource reports. Earlier resource estimates used formulae similar to the one shown below to calculate densities. Historically, a default density of 3.9 t/m^3 was used for polymetallic ore and 2.9 t/m^3 for copper only mineralisation.
	• Bulk densities were determined for all Heron samples by the wet weight/dry weight method on site, by suitably trained personnel. As the mineralisation is hosted wholly in non-porous fresh rock, it is reasonable to expect that dry density and bulk density of material are similar.
	• Dry density for each block was determined via a historical regression equation based on the following formula for all polymetallic lenses.
	  Dry Density = 2.2118 +Fe%*0.0552 + Zn%*0,0226 + Pb%*0.0487
	• For Copper lenses the polymetallic equation was found to underestimate density, and a new regression equation specific to copper domains was developed
	  Dry Density = 2.5479 + Fe%*0.0267 + Fe%^{2} * 0.0005
	• The performance of the two regression equations against measured densities was validated by Heron and found to be sufficiently accurate for the purpose of the Mineral Resource estimate with the application of a lower limit to the regression.
	• All densities below 2.70 were assigned a density of 2.70; this being the average value of non-mineralised measured densities from the recent Heron drilling.
	• Waste was also assigned a density of 2.70, based on recent sampling and density work carried out by Heron.
	• More detail on the examination and adjustments of density can be found in the FS report.

Classification	• The resource classification was based on the findings from both geological and mining engineering assessments.
	• Geological Criteria;
	  • Measured Mineral Resource classifications were applied where the geological confidence in the definition of controlling geological structures was robust, the drill spacing was generally 20m x 20m or less, and Kriging parameters indicated a high level of confidence in the interpolation. In the majority of cases Measured resources were supported by both underground geological mapping and drill hole data and represent recoverable sill pillars and remnants from previous mining operations.
	  • Indicated Mineral Resource classifications were applied where the geological confidence in

Criteria	Commentary
	the definition of controlling geological structures was robust, the drill spacing was between 15m x 20m and 40m x 40m depending on individual lens characteristics, and Kriging parameters indicated a high level of confidence in the interpolation. In the majority of cases Indicated resources were supported by well correlated drill hole data in areas not previously mined, or a mixture of geological mapping and drilling in areas previously mined. • Inferred Mineral Resource classification was applied to areas where geological and grade continuity was proven by adjacent drill holes, and projection of geological data could be used to apply reasonable geological structural controls to the extents of mineralisation. Drill hole spacing was usually 80m x 80m or less for this domain, and included both lens extensions and lenses previously not modelled, and was usually based on drill hole intercepts with projected geological interpretations from mapped areas. • Areas of poor geological confidence, or limited sampling, whilst modelled, were not classified and have not been reported. • Engineering Criteria; • As a part of the PEA Heron completely remodelled the existing underground voids from the source survey data for the entire mine. This included making adjustments to the void model to reflect the shanty-back profiles of the cut-and-fill jumbo stoping used in much of the historical mine stoping. No resources were reported from within the modelled voids in the FS. • Areas adjacent to, and directly below existing historical stopes were excluded from classification as it was considered unlikely that this in-situ material could be recovered safely from the deposit. All stope skins were treated in this manner. • Areas in and around known zones of collapse in the previous mine were also not classified or reported. • Areas where mining recovery was considered uncertain, but may be possible, pending underground access and assessment, have been left classified as Mineral Resources, although some may not have been included in the FS Mineral Reserve. • Estimated resource blocks below the likely future minimum mining grade of 7% ZnEq were also removed from the resource inventory by the application of a low grade cut to reported blocks.
Audits or reviews	• Review of the Mineral Resource estimates have been carried out by Mr R. Brown of SRK Consulting. This included the following steps: • Regular discussions with Heron's Senior Resource Geologist during the building of the geological model. • Visual examination of the final geological model against existing drill hole and mapping data • Variography of the major elements: Zn, Cu, Pb, Ag, Au and Fe, as described in a previous paragraph • Review of the kriging parameters used by Heron • Review of the resulting block model (Visually and statistically) • Review of the quality of the estimation through an evaluation of kriging quality parameters (slope of regression and kriging efficiency) • Review of the classification criteria and results. • The overall conclusion of the review is that the model and resource estimates are sound, based on a thorough analysis of the geology and the data. If anything, the results are conservative, as a number of zones are eliminated from the resources based on fairly strict criteria of confidence in the geology, data density and mineability.
Discussion of relative accuracy confidence	• The Competent Person has a relatively high confidence in the Mineral Resource estimate • The principal reasons are: • Underground backs mapping data has been digitised and used to develop a geological frame work for the Mineral Resource estimate which is inclusive of all geological observations made during previous mining of the deposit. • Lenses have been modelled on an individual basis, with a clear separation of the principal mineralisation styles within each lens. Interpretation of lens volumes and location directly incorporates underground mapping data, where available, significantly increasing the confidence in the geological model and the Mineral Resource estimate. • The modelling of the variography is sound and interpolation of the deposit using ordinary

Criteria	Commentary
	kriging is a robust and proven method for modelling this style of deposit. The method is employed to model other similar deposits, including current producing mines. • Because the quality of the variograms is generally very good, showing good grade continuity (low nugget effect, ranges varying between 25 and 100 m), the quality of estimation as quantified by indicators such as the slope of regression and the kriging efficiency is good. As expected, blocks classified as Indicated show better quality indices in general than Inferred blocks. • The resource estimates have been prepared and classified in accordance with the guidelines that accompany the JORC Code, and no attempts have been made to further quantify the uncertainty in the estimates. • The void model has been completely remodelled for original source data, significantly increasing the confidence in the location of remaining unmined material. • The Mineral Resource quantities should be considered as global and regional estimates only. The accompanying models are considered suitable to support mining planning studies, but not considered suitable for production planning, or studies that place significant reliance on the accuracy of the local estimates. • The deposit remains open at depth and along strike. • No recent production data exists to verify the accuracy of the resource estimate as the deposit is currently not being mined. Historical production figures are of a similar grade to the diluted resource model on a global scale in areas which have been previously mined.

Section 4 Estimation and Reporting of Mineral Reserves

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

The Ore Reserve at Woodlawn, as at 31 May 2016, presented on page 9 within the body of this report and is reported in accordance with the Australian JORC Code (2012) for reporting Ore Reserves and the Canadian NI43-101 for the reporting of Mineral Reserves. The Woodlawn Ore Reserve Estimate uses the 2016 underground and tailings Mineral Resource estimates as detailed in this report and applies revenue analysis, mining dilution and ore loss, costs and metallurgical recovery assumptions.

The reclaimed tailings Ore Reserve estimate is based on 0% ZnEq cut-off and mining of the Measured and Indicated Mineral Resource and has been classified as both Proven and Probable Ore Reserve based on the geological and mining confidence.

The underground Ore Reserve was estimated from the underground mine design for the Woodlawn deposit based on the geotechnical parameters and a cut-off grade of approximately 7.0% ZnEq, however, as detailed below the cut-off grades were varied depending on a number of factors. The Ore Reserve includes Measured and Indicated Mineral Resource and has been classified a Probable Ore Reserve based on the geological and mining confidence.

Following is a summary of the supporting information for the Ore Reserve estimate in the form of the JORC (2012).

Criteria	Commentary
Mineral Resource estimate for conversion to Ore Reserves	• Heron prepared the Mineral Resource estimate for tailings retreatment Woodlawn deposit. The Mineral Resource is estimated, at a cut-off grade of 0.0% ZnEq. Details of this Mineral Resource and supporting information can be found in the report above. • Heron prepared the Mineral Resource estimate for underground Woodlawn deposit and reviewed by Mr Rod Brown, SRK. The Mineral Resource is estimated, at a cut-off grade of 7.0% ZnEq. Details of this Mineral Resource and supporting information can be found in the report above. • The Mineral Resources are reported inclusive of the Ore Reserves.
Site visits	• A site visit was completed by the competent person on 22 January 2015 and 22 October 2015 for familiarisation of the site and discussion with the site personnel.

Criteria	Commentary
Study Status	• The project is at a Feasibility Study stage and this is the first time that the Ore Reserves have been release under JORC Code (2012). The inputs into the Ore Reserve are based on the work completed in the Feasibility Study.
Cut-off Parameters	• The underground stope cut-off grades were developed from the over-arching FS assumptions (including commodity prices, exchange rates, recovery factors processing, freight, shipping and treatment costs sustaining capital, and royalties) and varied based on a number of factors including ore types and stope designs. • The tailing retreatment cut-off grade is 0% ZnEq.
Mining factors or assumptions	• The underground orebody has widths between 2 m to 30 m with an average of about 10 m and is steeply dipping, which suits uphole stoping. It has a competent hanging wall and footwall. Uphole open stoping is the primary method of extraction with some drift and half uppers and drift and fill. The sublevel spacing of 20 m floor to floor. Paste fill will be used to fill empty voids. • An exclusion zone of 50 m from the existing pit has been applied. • The underground mining dilution is applied based on the mining method and lens and range between 5% and 20%. • The mining recovery is applied based on the mining method and ranges between 85% and 90%. • A minimum mining width of 3 m has been applied to the underground Ore Reserves Estimate. • The tailings will be hydraulically mined using a bottom up approach with a channel feeding back to a sump. • The tailings retreatment dilution is calculated based on 200 mm of dilution which is a range between 2.2% and 3.2%. A global average of 3% dilution has been applied • The tailings retreatment recovery is applied based on 400 mm of ore loss which is a range between 4.4% and 6.6%. A global average of 95% mining recovery has been applied • No Inferred Mineral Resource has been used in the project economics for Woodlawn

Metallurgical factors or assumptions	• The process recovery is based on campaign processing of underground and tailings.
	• The zinc, lead, copper, gold and silver are recovered by conventional industry methods of:
	  ○ Comminution
	  ○ Flotation; and
	  ○ Thickening and Filtration.
	• The flowsheet is similar to the original Woodlawn concentrator which operated between 1978 and 1998.
	• No allowances have been made for deleterious elements.
	• No bulk sampling has occurred.

Environmental	• Major Project approval was received on 4 July 2013 from the NSW Minister for Planning and Infrastructure under Section 75J of the EP & A Act for both the tailings retreatment and underground project.
Infrastructure	• The operation will use the existing access road. • New site buildings including processing plant, offices and car park will need to be constructed. • Power will be supplied from the grid which has sufficient capacity. The current sub-station on site also has sufficient spare capacity to service the operation. • Water will be sourced from surface site and underground water plus the Willeroo borefield with potable water being generated from reverse osmosis plant

Criteria	Commentary
Costs	• There is significant capital expenditure required for the project for the construction of the processing plant and underground access and are based on budget quotes for the FS. • The operating costs used for the economic assessment are based on budget quotes provided for the FS. • All calculations have been undertaken in Australian dollars. • Royalties that are applied by the NSW government have been taken into account.
Revenue factors	• Commodity prices are based on consensus forecast from brokers going forward.
Market Assessment	• Heron have no current contracts in place for the project given the current Feasibility stage of the project. • The indicative product specifications for the three saleable concentrates produced are considered readily marketable based on work undertaken by BPDT & Co Pty Ltd (2015). There is potential for a penalty charge to be applied to the lead in the copper concentrate.
Economic	• The Woodlawn deposit is sensitive to the metallurgical recoveries, commodity prices, and exchange rate. • The commodity prices used are Zinc US$1.01/lb, Lead US$0.91/lb, Copper US$3.00/lb, Gold US$1,200 / oz, Silver US$17.80/ oz, exchange rate AUD:USD 0.71.
Social	• The Woodlawn deposit is located within the land owned by Veolia Environmental Services Pty Ltd (Veolia). There has been community consultation including government agencies, local government, the community and non-government stakeholders
Other	• The project is sited within the Special Mining Lease 20 which expires on 16 November 2029. • Heron have a number of legal agreements in place with Veolia regarding the interaction of the two operations. These include a co-operation agreement regarding rehabilitation of the site and use of joint facilities; Deed of Assignment which exercises the Veolia operation from the SML20 and a Call option which gives Heron the option to purchase the land covered by the proposed mining operation. • SRK has not identified any additional risks.
Classification	• The Ore Reserve was classified in accordance with the JORC Code (2012). Standard modifying factors and conversions were applied as described above. • The methods used are considered by the Competent Person to be appropriate for the style and nature of the deposit. • Measured Mineral Resource has been classified as Probable in the Ore Reserves Estimate because of the uncertainty relating to the existing mined area and the ground conditions associated with the remnant areas.
Audits or reviews	• No audits have been undertaken on the Woodlawn Ore Reserves. • The Woodlawn Ore Reserve estimates have been internally peer reviewed by SRK.

Criteria	Commentary
Discussion of relative accuracy/ confidence	• The competent person is of the opinion that the Mineral Reserves for the Woodlawn underground project, which have been estimated using core drill and development data, appropriately consider modifying factors and have been estimated using industry best practices Factors that can affect the Ore Reserves estimates are: • Ground conditions in the remnant areas may be worse than expected. This may reduce the recovery of the ore in these areas. • Stope dilution and recovery factors are based on assumptions that will be reviewed after mining experiences. • Stope stability is also an important factor with some stopes having considerable span and thickness. • As always, changes in commodity price and exchange rate assumptions will have an impact on the cut-off grade. • SRK is not aware of any environmental, permitting, legal, title, taxation, socio-economic, marketing, or political factors that could materially influence the Ore Reserves other than the modifying factors already described in this section of the report.

CONSENTS

The Woodlawn Project Mineral Reserve, mine design, production schedule and FS results have been produced or reviewed by SRK Consulting (Australasia) Pty Ltd (SRK) under the direction of Ms Anne-Marie Ebbels, Principal Consultant (Mining), an Independent Qualified Person as defined by Canadian National Instrument 43-101 and a Competent Person as defined in the 2012 edition of the JORC Code: Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Ms Ebbels consents to the inclusion in this report of the matters based on her information in the form and context that it appears.

The Woodlawn Project plant and metallurgy designs and costings have been produced or reviewed by GR Engineering Services Limited (GRES) under the direction of Mr Peter Allen, Manager – Process & Technical Services, who is a Member of the Australasian Institute of Mining and Metallurgy and accredited by the AusIMM as a Chartered Professional (CP) in the metallurgy discipline, and an Independent Qualified Person as defined by Canadian National Instrument 43-101. Mr Allen consents to the inclusion in this report of the matters based on his information in the form and context that it appears.

The information in this report that relates to Mineral Resources for the Woodlawn Underground Project has been reviewed, and verified by Mr Rodney Brown who is a full time employee of SRK Consulting (Australasia). Mr Brown, who is a member of the AIG, takes responsibility for the integrity of Data that have been used to prepare the resource estimates, and for the Geological Model. Mr Brown has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the resource estimation activity that he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the JORC Code: Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and a Qualified Person as this term is defined in Canadian National Instrument 43-101. Mr Brown consents to the inclusion in this report of the matters based on his information in the form and context that it appears.

The technical information in this news release relating to the exploration results and forward program at the Woodlawn Project is based on information compiled by Mr David von Perger, who is a Member of the Australian Institute of Mining and Metallurgy (Chartered Professional – Geology). Mr von Perger is a full time employee of Heron Resources Limited and has sufficient experience, which is relevant to the style of mineralization and type of deposit under consideration and to qualify as a Competent Person as defined in the 2012 edition of the JORC Code: Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and a Qualified Person as this term is defined in Canadian National Instrument 43-101. Mr von Perger has reviewed this press release and consents to the inclusion in this news release of the information in the form and context in which it appears.