



# Australian Hualong Pty Ltd

1 Fowler Street Zeehan Tasmania 7469 Australia; Ph: 03 6471 6613; ACN 131 800 934

13 November 2019

The Chairperson  
Board of Environmental Protection Authority  
Department of Primary Industries, Parks, Water and Environment  
GPO Box 44

**Hobart, TAS 7001**

Via email "Mulligan, Helen (EPA)" <Helen.Mulligan@epa.tas.gov.au>

Dear Sir/Madam:

**Re: Tenth Legion Iron Ore Mine;**

**DRAFT 3 Notice Of Intent - Level 2 Extractive Industries**

## **1 Proponent**

This submission is made by Australian Hualong Limited (AHL).

Contact details are;

Dr Joe Xie Australian Hualong Pty Ltd.

Tel/Fax: 02 8197 6518

ABN 96131800934 ACN 131 800 934.

Operations:

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Ph: 03 6471 6613

Registered Address: 41 Kambala Road, Bellevue Hill, NSW 2023

Mr. Zhian Zhang, sole owner of Australian Hualong, has extensive experience in iron ore, tin and base metal mining, processing and smelting, mostly through his operations in Yunnan, China. More details about Mr. Zhang's operation under Zhida Industry in China are provided in the document attached, if required. Zhida in China is also owned and controlled by Mr. Zhang.

## **2 Project name and location**

The project name is the Tenth Legion Iron Ore Mine. The Project is located approximately 10km west of the township of Zeehan on the west coast of Tasmania (**Figure 1**).



FIGURE 1 PROJECT LOCATION – Zeehan Western Tasmania

AHL also owns the nearby Comstock plant site, which is being rehabilitated.

AHL is applying for a mining lease over the propose project area, as shown in **Figure 2**. This includes the Tenth Legion mine site and the Comstock Plant site,

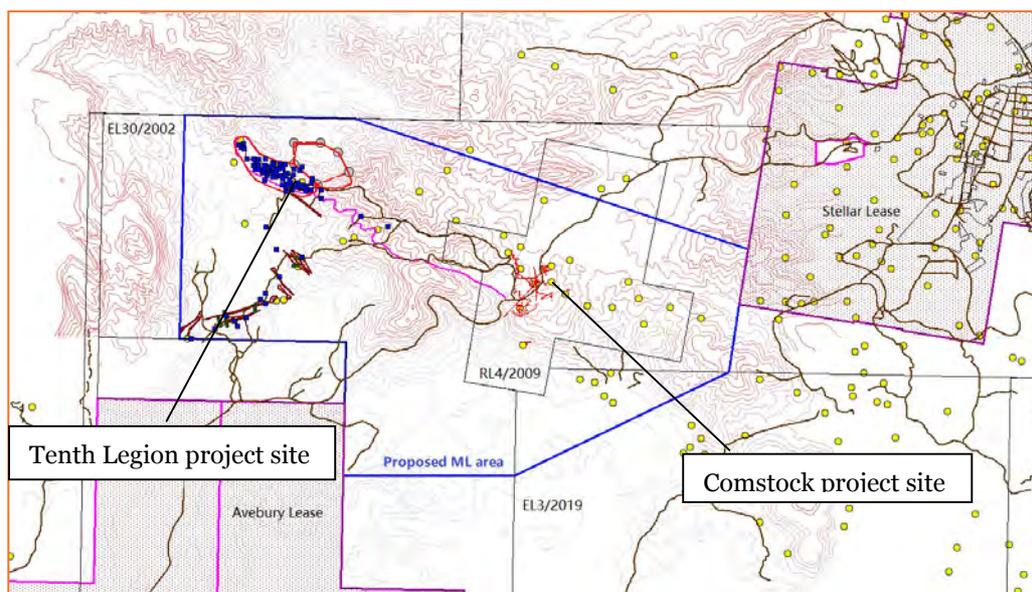


FIGURE 2 PROPOSED ML LOCATION – Zeehan Western Tasmania

### 3 Proponent Background

Australian Huaolong is a private Australian Company who have several Exploration and Retention Licences near Zeehan. These cover a number of historic mining areas and include the Comstock and Oceana mining areas.

Australian Hualong Pty. Ltd holds Retention Licences and an Exploration Licence on three projects near Zeehan. These are Oceana RL3/2009, Comstock (RL4/2209), Sweeneys (RL2/2016), Tenth Legion (EL 30/2002) and Stonehenge (EL3/2019). The areas under those licences are being actively explored for potential open pits for Iron Ore, Silver, Lead, Zinc and Tin.

## 4 Project Description

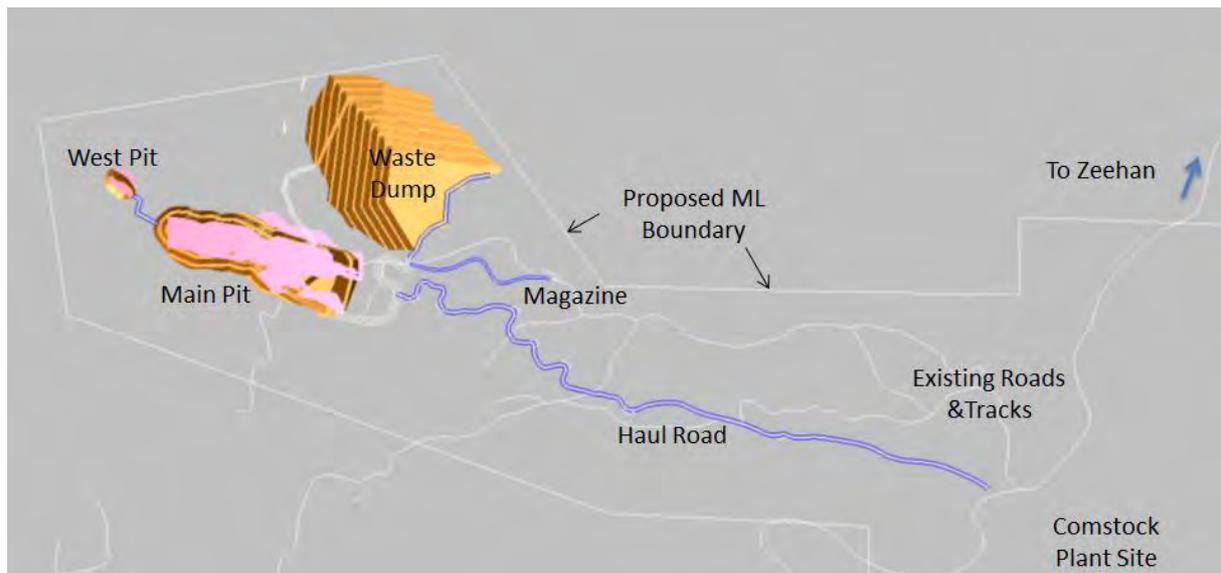
### 4.1 General Arrangement

The Tenth Legion Magnetite Deposit is located approximately 2.5 km NW of the Comstock mine and processing plant, near Zeehan. It is a skarn iron ore deposit which is amenable to a small surface mine.

The project will involve several open pits to recover a direct shipping ore (DSO) resource, oxide and fresh iron ore.

The existing Comstock plant site is planned to be utilized as the magnetite ore beneficiation and processing plant site for the Project, together with the existing tailings dam which would be rebuilt or another tailings dam constructed nearby. **Figure 3** show a general site plan with Figure 4 a detailed plan of the Comstock area. Ore (and topsoils/clays and overburden) will be carted from the Open Pits (2) via the new Haul Road to the Comstock site.

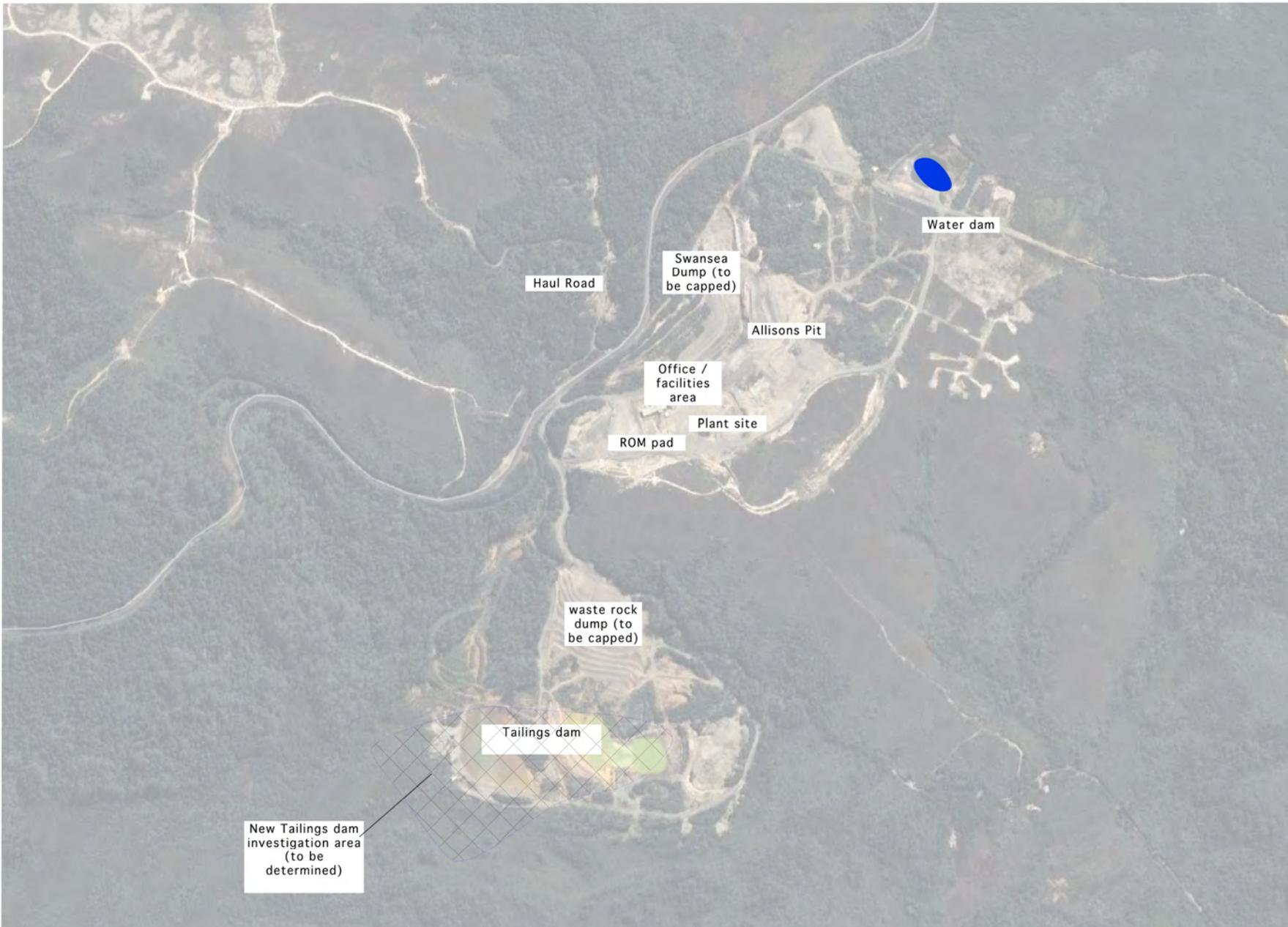
The Comstock site will be used for ore beneficiation as discussed in Section 4.6. **Figure 4** shows the proposed location of ROM Pad, processing plant and possible tailings dam. These are preliminary only and may change. A tailings dam location and design is to be investigated.



**FIGURE 3** PROPOSED PROJECT LAYOUT (ML boundary incorrect)

In addition, it is proposed to remediate the Comstock mine site, in accordance with EPN 7977-2 and the approved Water Management and Rehabilitation Plan (WMRP). This includes the capping of the Swansea Tramway Waste Rock Dump (STWRD) and the Dirty Water Pond (DWP) (see Figure 4).

The balance of the Comstock site is currently being explored for a potential lead – zinc –silver base metal mine with extensive drilling over part of Comstock site. A JORC 2012 resource has just been completed for Boss ore body, which is located to the south of current Allison Pit. A scoping study for the economics of Boss resource will follow.



NB These plans are indicative only and may vary depending on site conditions and detail design

<b>AHL</b>	
Tenth Legion Project - Comstock Mine Prelim Project Layout	
JOHN MIEDECKE AND PARTNERS PTY LTD	FIG. <b>4</b>

## 4.2 Geology and Resource

The Tenth Legion locality is dominated by the Devonian Heemskirk granite batholith, which outcrops to the immediate northwest of the prospect forming the prominent Heemskirk Range. The Heemskirk granite is associated with much of the tin-tungsten, lead-zinc, magnetite and nickel skarn mineralisation in the district.

The Tenth Legion deposit is a carbonate hosted magnetite skarn deposit formed within Precambrian sedimentary rocks of the Oonah Formation on the south-eastern edge of the Heemskirk Granite. The skarn strikes west-northwest and dips steeply to the north (**Figure 5**).

The skarn extends approximately east-west for 500 m in strike length and has been drilled to approximately 200 m depth. Mineralised lenses vary from 1 to 12 m in thickness. Hornfelsed quartzite forms the hangingwall and footwall to the host sequence. Mineralisation is hosted in what is interpreted to have been impure limestone beds associated with pale grey siltstones within the Oonah Formation. The host sequence is bounded by Oonah Formation quartzite, siltstone and black shales to the north and south.

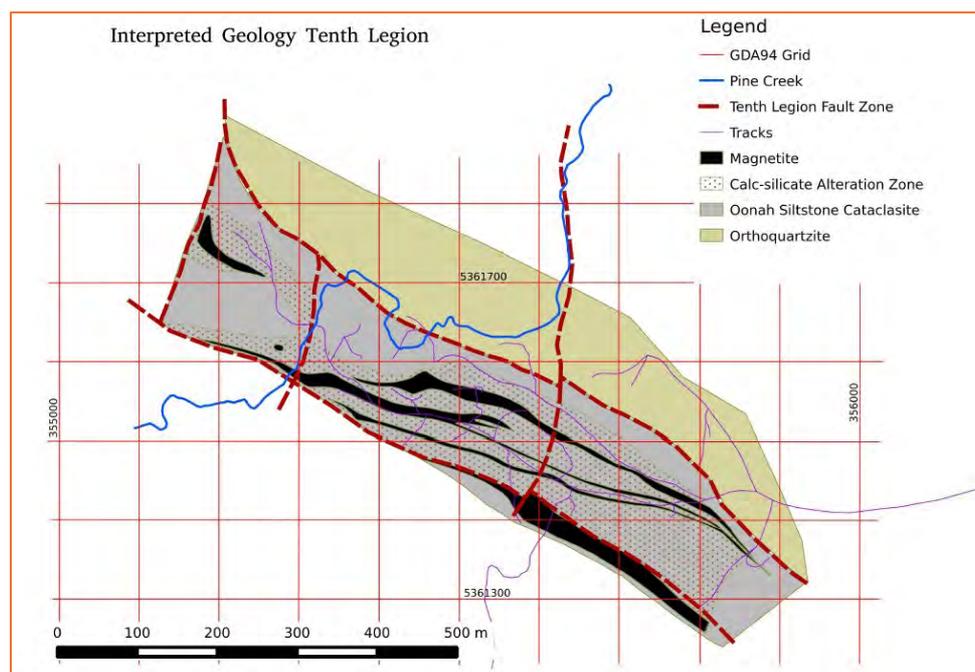


FIGURE 5: TENTH LEGION NORTH INTERPRETIVE GEOLOGY ( Source Veska)

Variable amounts of pyrrhotite, galena and sphalerite to 2-5% are sometimes associated with the magnetite. Increased sulfide contents were recorded at the south end of the Central Lode. Minor amounts of chalcopyrite-pyrite and trace tin, tungsten, gold and bismuth have been reported.

The Oonah Formation is strongly deformed and has been thrust over the younger Cambrian mafic-ultramafic complex and Crimson Creek volcanics by the low angle Tenth Legion Thrust. Later brittle faulting and folding has disrupted the Proterozoic and Cambrian lithologies.

The deposit was first drilled by CRAE in the 1980's. Systematic exploration commenced in 2010 with a definition drilling program by Creat Resource Holdings Limited (CRHL).

Australian Hualong Limited (AHL) acquired the project in 2012 and completed a second phase of resource definition drilling culminating in the resource estimation. The resource estimation is based on diamond drilling including 87 holes for 6537.8m.

The resource is reported in accordance with the 2012 edition of the JORC Code by Tim Callaghan in 2014. The Mineral Resource has been estimated using a block model created with Surpac™ software.

The resource estimate is summarised in **Table 1**. At a cut-off grade of 20% Fe, the oxidised Mineral Resource is 1.8Mt @ 45.5% Fe while the fresh Mineral Resource is 5.8Mt at 36.9% Fe. Total Mineral Resource is estimated at 7.6Mt @ 39.0% Fe, 1.8% Al, 16.9% Si and 0.2% S. **Figure 6** shows a block model.

**Table 1. Tenth Legion Mineral Resource Estimate (Fe>20% cut off)**

	MTonnes	Fe %	Al %	Si %	S %
Indicate Resource	6.23	40.34	2.1	16.9	0.2
Inferred Resource	1.41	32.96	0.7	16.8	0
<b>Total Resource</b>	<b>7.64</b>	<b>38.98</b>	<b>1.8</b>	<b>16.9</b>	<b>0.2</b>



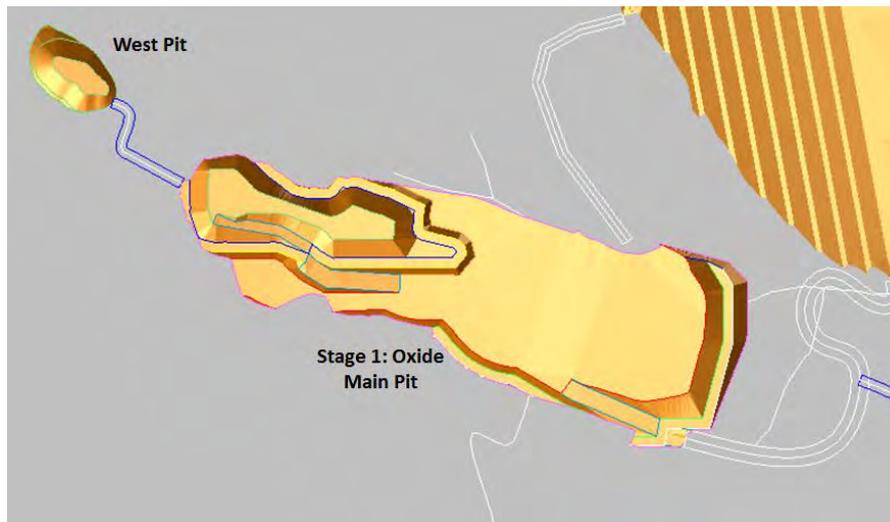
*FIGURE 6: ISOMETRIC BLOCK MODEL VIEW SHOWING BLOCKS ABOVE 20% FE AND A CONCEPTUAL PIT DESIGN*

#### **4.4 Proposed Open Pit Mine**

AHL plan to mine the magnetite resource using traditional open pit mining, with the ore transported to the existing Comstock plant site for beneficiation.

The conceptual open pit design is based on the mining and processing of both oxide and fresh ores at the site. The conceptual pit design has two stages of pit operation, which are an initial oxide pit and a final pit.

**Figure 7** shows the Stage 1 oxide pit and **Figure 8** the Stage 2 Final. Both are subject to final design.



*FIGURE 7: CONCEPTUAL STAGE 1 OXIDE PIT DESIGN*

The Oxide Main Pit is approximately 550m long and 160m wide. It is a shallow pit with a maximal depth of approximately 30m below surface. It contains the 240, 250, 260, 270, and 280m RL benches.



*FIGURE 8: CONCEPTUAL STAGE 2 FINAL MINE PIT DESIGN*

The Final Main Pit is approximately 570m long and 160m wide. The base of the pit is extended to 200m RL, and the maximal depth is approximately 80m below the surface. It is essentially based on the optimal pit shell for the combined oxide/fresh ore option but may be varied depending on market demand and contracts.

Mining method is a conventional open pit mining method, including a drill-and-blast operation, loading of ore and waste by an excavator, and a truck haulage operation. Dewatering from the pit will be required. This would be directed south via settlement ponds/wetlands to Comstock Creek as the northern catchment has higher values.

Total materials in the oxide and final pits consist of 6.13 Mt of waste including low-grade mineralized materials, 0.20 Mt of DSO at 59.65% Fe, 1.45 Mt of oxide ore at 41.59% Fe, and 1.62 Mt of fresh ore

at 42.30% Fe.

Waste rock management is discussed in the next section.

Non acid forming waste rock will be removed and disposed of either/or in a waste rock dump on site, the tailings dam walls at Comstock, as a cap on the existing Comstock waste rock dump and/or in the abandoned Allison's Pit.

## 4.5 Waste Rock

### 4.5.1 Waste Rock Characteristics and Quantities

There has been extensive drilling of both the waste rock and orebody and a quite good understanding of the types of waste rock to be generated. AHL has analysed the full length of some drill holes for sulphur and this has allowed a sulphur model to be generated. AHL has conducted geochemical assessment of the waste rock and this is discussed in some detail in Section 7.5. Additional verification studies are proposed.

The sulfur model indicates that approximately 65% of the waste contains minimal sulfide sulfur (<0.2%) and is classed as Non-acid Forming (NAF) . Using the waste characterisation assessment and assuming minimal contribution to acid neutralisation from the contained acid neutralising rock material (calc-silicates and dolomites) the remaining 35% of the waste has been divided into PAF high capacity and PAF low capacity. Further, the static testwork indicates that there is excess acid neutralising capacity in some of the samples tested suggesting about 30% of the Low Capacity PAF and 30% of the NAF is potentially acid consuming as summarized (**Table 2**).

Table 2: Waste classification for Tenth Legion Project.

Waste and Low Grade Ore Type	Classification Criteria	Tonnes	Percentage of total Waste and Low Grade Ore tonnage
Potentially Acid Forming High Capacity (PAF-HC)	>1%S	613,400	10%
Potentially Acid Forming Low Capacity (PAF-LC)	>0.2% <1%S	1,073,450	17.50%
Non Acid Forming (NAF)	<0.2%S	2,790,970	45.50%
Acid Consuming	<1%S and ANC >100kg H2SO4/t	1,656,180	27%
Total		6,134,000	100%

### 4.5.2 Waste Rock Management

The excess of acid consuming waste rock has the potential to be used at the Comstock site for existing acid mine drainage remediation and best practice waste rock management for on site waste rock management, with excess disposed in a waste rock dump close to the Tenth Legion Pit as shown in **Figure 3**.

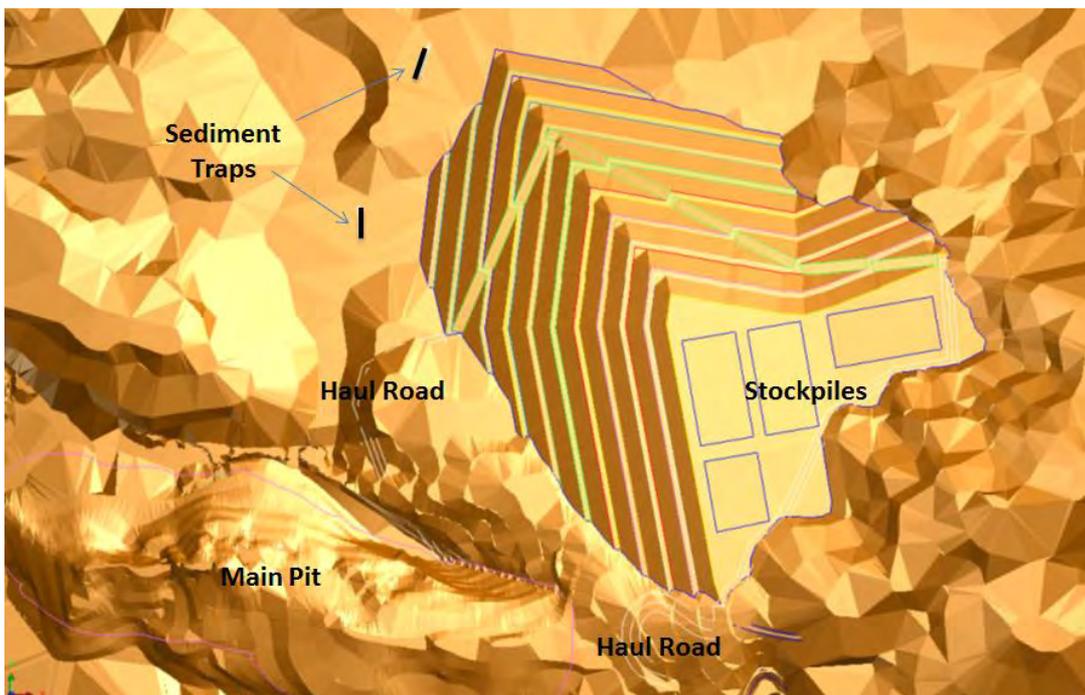
AHL is proposing to truck of at least some of the waste rock to the Comstock site for use in the reconstruction of the tailings dam, encapsulation of the existing PAF waste rock dump and/or backfilling in the existing Allison's Open Pit. These materials would be NAF and/or Acid Consuming.

PAF waste rock has been identified in the pits and it is planned that these materials would be mined and stockpiled and placed into the base of the pit(s) after completion. These would be flooded on closure.

The Final Main Pit has a design pit floor at 200 to 210m RL, which is approximately 40-50m below the water level in the nearby creek.

#### 4.5.3 Waste Rock Dump

A total of approximately 3.5 million cubic metres of waste rock will be produced. AHL consultants have developed a waste rock dump design immediately north east of the pit with a design capacity sufficient to store all the waste rock from the planned pits (**Figure 9**). A swell factor of 30% was considered. This dump design will be refined after the quantities to be deposited to be refined. AHL are considering trucking waste rock to the Comstock site for site remediation and tailings dam construction.



*FIGURE 9: CONCEPTUAL WASTE ROCK DUMP DESIGN*

As shown in **Figure 9**, the conceptual waste dump design has considered the following:

- A haul road access to the lower levels of the dump to construct two sediment traps, which will be an integral part of a site environmental management plan
- Another haul road access to the upper levels of the dump to build a pad for various stockpiles over the life of the mine. Stockpiles will include clay and top soil, a temporary ore stockpile area, and marginal mineralized materials.
- Dual accesses during and post production for the rehabilitation of the dump by forming a closed circuit of the haul roads.

#### 4.6 Ore Processing

Based on metallurgical test work, two separate processing methods are proposed for the oxide and fresh ore:

- Oxide ore will be mined in the initial years. The beneficiation plant will consist of a crushing circuit and a dry gravity and magnetic separation circuit. Final products include a Direct Shipping Ore (“DSO”) and beneficiated lump and fine Iron ore products. Grades and recovery for the iron ore products are targeted at 60-65% Fe and 85% respectively.

- Fresh ore will be mined and processed when the oxide resource is exhausted. A flowsheet consisting of a crushing circuit, a ball mill and a LIMS circuit has been proposed for the fresh ore. Grade and recovery for the iron concentrate are estimated at 65% Fe and 94% respectively.

There has been limited test work for the oxidized ore. Further metallurgical test work is proposed for the oxidized ore.

Geochemical testwork has determined that the ore tested were NAF.

#### ***4.7 Tailings***

Tailings will be disposed of in a rebuilt or new tailings dam at the existing Comstock site.

Geochemical testwork has determined that the tailings tested were NAF and acid consuming. Tailings annual production will be about 150,000 tonnes.

The existing tailing dam and its feasibility for reuse or raising will be investigated. A site downstream of the existing site may be utilized if required. It is planned that waste rock from the Tenth Legion mine will be used for embankment construction.

Figure 4 shows the possible investigation area.

#### ***4.8 Infrastructure***

##### **4.8.1 Power**

Power will be provided from the existing supply.

##### **4.8.2 Water**

Water supplies will be provided from the existing on site sources such as the existing settlement and tailings dam, site runoff and Comstock Creek flows. It is not expected that any other water supplies will be required as the processing plant requirements are small and tailings water will be recirculated.

#### ***4.9 Production Rates and Operating Hours***

Ore processing rates of 2000 tonnes per day are planned, which will equate to approximately 600,000 tonnes of ore processed per year.

Contractors will supply all the mining mobile equipment and determine operating hours. These may be 24/7 but are more likely to be day-shift only operation with two crews and a 7 days per week continuous operation with one 12-hour shift per day.

Ore processing may be similar but may require 24/7 operations at 2000 tonnes per day.

#### ***4.10 Transport***

Processed ore will be carted via public roads to the Melba Flats siding, for railing to Burnie and shipping to overseas markets.

### **5 Location**

The Project is located approximately 10km west of the township of Zeehan on the west coast of Tasmania (**Figure 1**). Figure 2 shows the tenement details and proposed mining lease boundary.

## 6 Stakeholder consultation

Consultation has taken place with Sustainable Timber Tasmania, Parks and Wildlife Service, West Coast council and Mineral Resources Tasmania to date. AHL will consult with the West Coast Council, and local community as part of the development application process.

Given the continuing nature of the operations and relative isolation from residents, AHL does not intend to conduct any wider consultation with the community.

## 7 Environment Description

### 7.1 General Description

The deposit is located on the rolling hills of mainly low buttongrass vegetation to the immediate west of the Trial Harbour Road between Zeehan and Trial Harbour. It is located to the NW of the Comstock mine site and to the NE of the Avery Mine (**Figures 1 and 2**).

### 7.1 Land Use and Tenure

The deposit is to the south of the Mount Heemskirk Regional Reserve (**Figure 10**). There are no houses in proximity. The only other land use activity (other than natural vegetation and forestry) is mining. The study area is under the management of Sustainable Timber Tasmania. Liaison with the District is required to determine the conditions under which forest clearance may be permitted.

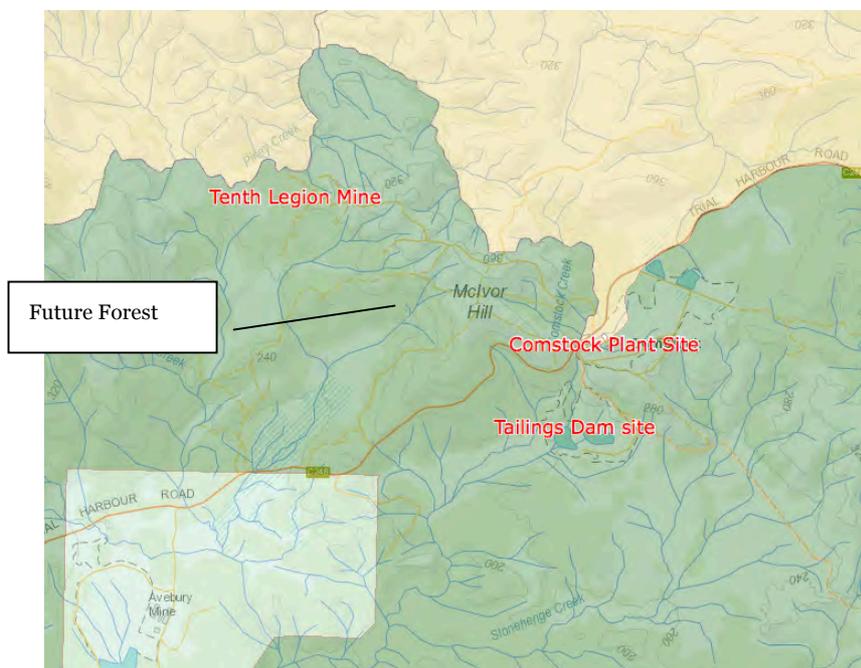


FIGURE 10: LAND TENURE (Source: The List)

### 7.2 Natural Values

Two flora and fauna surveys have been conducted by North Barker which includes the deposit, possible haul road location and the Comstock site. The 2019 Report is attached

The vegetation over this area consists of ten native vegetation communities and is shown in **Figure 11**.

North Barker conclusions are as follows:

*The vegetation on site is in good condition overall. Disturbance is in the form of powerlines and tracks associated with hydroelectric activity and more recent disturbance from the current exploration activities in the form of roads, exploration tracks, cut lines and drilling platform areas.*

### **Vegetation**

*No threatened vegetation communities are present in the study area.*

### **Flora**

*No threatened flora species are considered likely to be found in the study area or be significantly impacted upon if they occur there.*

### **Fauna**

*The Tasmanian devil and spotted-tailed quoll are likely to utilise the study area to some degree. No optimal denning habitat is present for either but 12 ha in the proposal are suboptimal denning habitat for these species. Tasmanian wedge-tailed eagles are unlikely to utilise the study area for nesting. Potential albeit low levels of impacts to these species could arise from loss of habitat and a potential increase in mortality from road kill. The impacts are not likely to be significant in the context of the EPBCA.*

*The scale of impacts on the Tasmanian masked owls is inconclusive. Additional surveys using song meters should be employed to identify the presence of owls within the study area.*

*Suitable habitat for the Australian grayling may be present in affected water ways. The water quality in affected water ways should be protected.*

*Weeds and Plant Pathogens No weed species were recorded, and signs of phytophthora and myrtle wilt were not evident. A strategy needs to be in place to avoid the introduction of new weeds and the introduction of plant pathogens. A weed management and hygiene plan should be prepared and implemented.*

These findings, with the NB recommendations will be taken into account in mine planning and development.

## **7.3 Surface Waters Hydrology and Water Quality**

The proposed mine is located at the top of the Comstock Creek catchment at an elevation of approximately 270 metres RL, with drainage to the south and in an area disturbed by past mining operations. (**Figure 12**). To the north is Piney Creek which is in a relatively undisturbed state with habitat values.

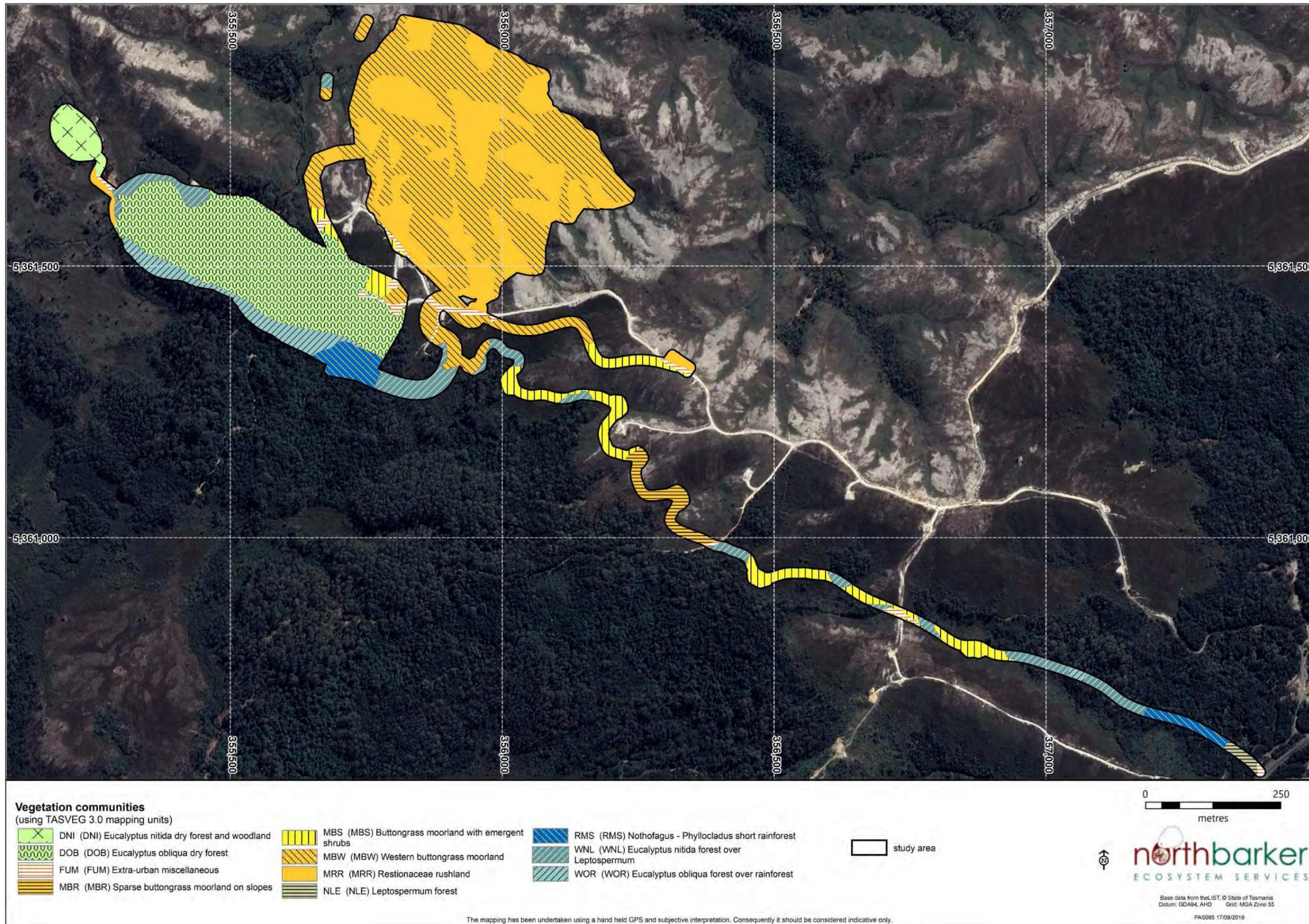


Figure 11: Vegetation communities in the study area.

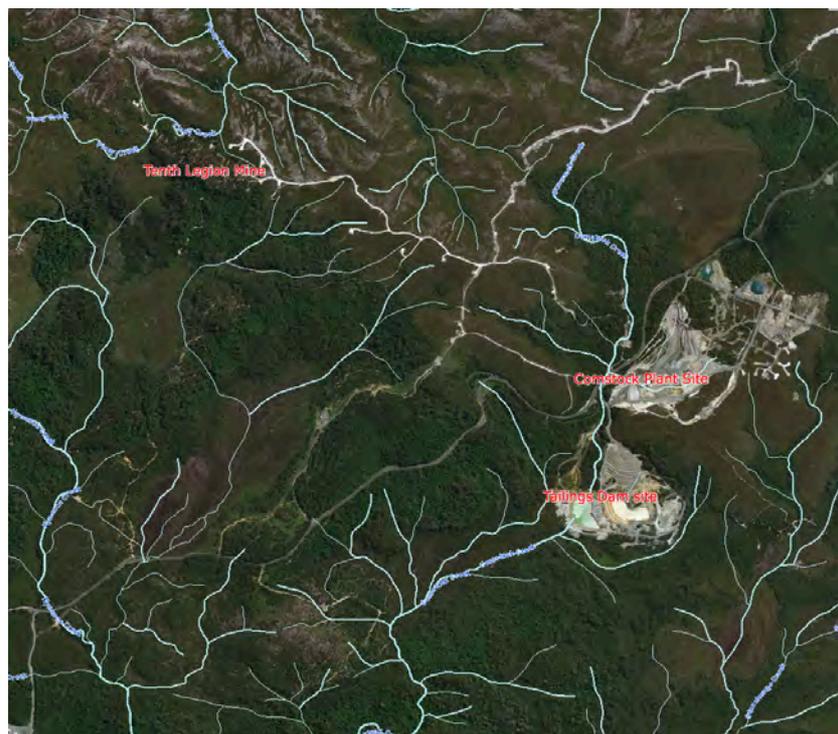


FIGURE 12: SURFACE HYDROLOGY (Source: The List)

To the south is the Kynance Creek catchment with eventual drainage to Comstock Creek which is mining affected, and the Little Henty River to the sea.

Water sampling from the Creeks is limited, but water quality is expected to be good.

No flow gauging has been conducted.

#### 7.4 Groundwater

There is limited data on the groundwater regime in the area. It is expected that the basement rock dominating the hydrogeology in this region has effectively zero primary hydraulic conductivity and that the secondary hydraulic conductivity due to fracturing is not extensive. This implies relatively steep drawdown cones and low pit inflow volumes.

There are no beneficial users of groundwater in the area.

#### 7.5 Waste Rock Geochemistry

##### 7.5.1 Sampling

Drilling of the Tenth Legion deposit and host rocks undertaken includes 87 diamond core holes for 9523.3m used for resource estimation, included in the drillhole database.

Knight Piésold Pty Limited (KP), in January 2016 conducted geochemical studies of the Tenth legion deposit and host rocks. This involved collection of 48 samples collected from potential waste rock that occur within or adjacent to the proposed pit shell as defined by AHL. The drillhole database was used by KP to select drillholes from which the 48 samples were collected. **Figure 13** shows the mine grid, drillhole collar locations and drillholes selected for sampling by KP. **Figure 14** shows the long section projection and distribution of sampled drill intervals.

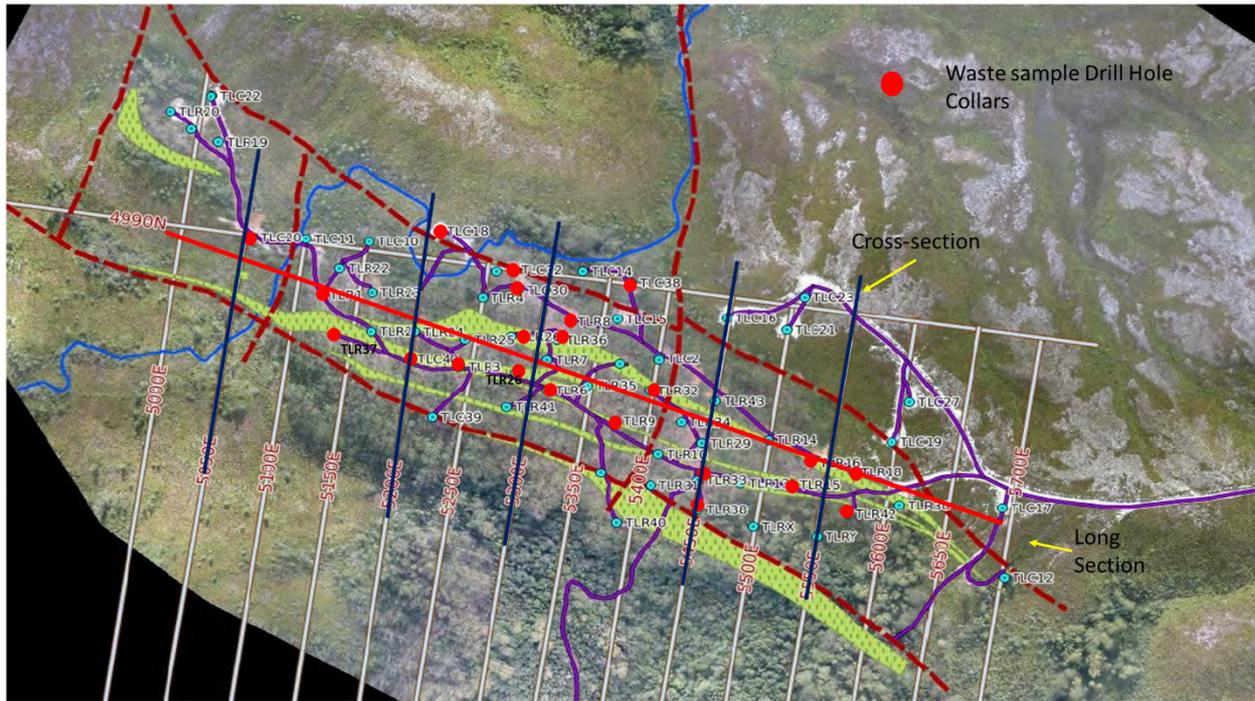


FIGURE 13: PLAN OF TENTH LEGION ORE ZONE, MINE GRID AND DRILL HOLE COLLAR LOCATION (Source AHL)

Figure 13 and 14 show that the samples collected are spatially representative of the mine stratigraphy that will be impacted by mining the deposit.

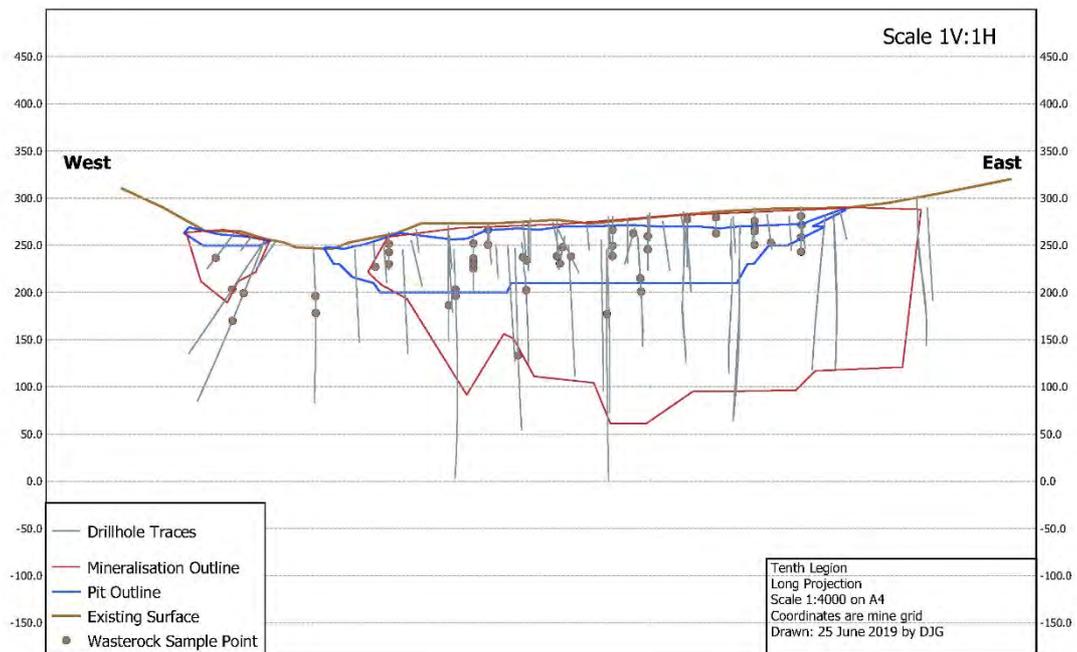


FIGURE 14: LONG SECTION SHOWING DRILL TRACES AND LOCATION OF SAMPLED DRILL INTERVALS.

### 7.5.2 Analyses

Samples were analysed for Acid Base Account, NAG, Sulfur species, ANC species, metals and fibre minerals.

The results of the acid base accounting has been assessed by Peter Scott (Consulting Geochemist) and the results summarized (this information is available on request).

The sulfur speciation results indicate that the total sulfur contents of the samples ranged from below the detection limit of 0.01% to 13.7%, excluding the sample which recorded the extremely high sulfur content of 13.7%, the average is moderate at 0.35%. Further, the median sulfur content is low at 0.08%. Typically the majority of the sulfur is indicated to be present as sulfide, with the measured sulfate concentrations varying from below detection to 0.8% at an average of 0.07%.

The maximum potential acidity was calculated from the sulfide sulfur content varying from negligible to 393 kg H<sub>2</sub>SO<sub>4</sub>/tonne of waste rock at an average of 17 kg H<sub>2</sub>SO<sub>4</sub>/t which is considered to be high. However, excluding the high sulfur sample, the average MPA is 9 kg H<sub>2</sub>SO<sub>4</sub>/t which is low.

The acid neutralising capacity (ANC) of the samples was determined along with the carbonate content.

The calculated carbonate ANC values varied from 0.8 to 891 kg H<sub>2</sub>SO<sub>4</sub>/t at an average of 51 kg H<sub>2</sub>SO<sub>4</sub>/t and median of 2.9 kg H<sub>2</sub>SO<sub>4</sub>/t. The measured ANC values were typically higher than the carbonate-ANC estimates, ranging between 2 and 1002 kg H<sub>2</sub>SO<sub>4</sub>/t at an average of 168 kg H<sub>2</sub>SO<sub>4</sub>/t which is extremely high. These results indicate that significant neutralising capacity is likely to be available from both carbonate and non-carbonate minerals. However, ANC provided by non-carbonate minerals is typically released much more slowly than that provided by carbonates and may only be available under low pH conditions.

In summary, this excess acid neutralising capacity in some of the samples tested suggests that about 30% of the Low Capacity PAF and 30% of the NAF is potentially acid consuming.

The Net Acid Producing Potential (NAPP) of the samples was calculated from the MPA and the ANC, along with the ANC/MPA ratio. Only one sample recorded a positive NAPP and ANC/MPA ratio less than one, indicating excess acid producing potential. However, the average NAPP was -152 kg H<sub>2</sub>SO<sub>4</sub>/t and the average ANC/MPA ratio was 84, indicating overall significant excess neutralising capacity.

The results of the net acid generation test indicate that acid was produced by ten of the 19 samples tested under oxidising conditions up to a maximum of 290 kg H<sub>2</sub>SO<sub>4</sub>/t, with the other nine samples with averaging just 3.7 kg H<sub>2</sub>SO<sub>4</sub>/t. The final pH of the NAG solutions varied from pH 2.2 to 10.1 at a numerical average of 6.9 (noting that pH is based on a logarithmic scale). The pH of the NAG solutions dropped below pH 4.5 in four samples, ranging between pH 2.2 and 3.8.

### 7.5.3 Waste Classification

As part of the ore definition a number of drillholes were tested for total sulfur for the full drilled intercept. These data were used to build a sulfur model (refer to **Figure 15**). The sulfur model indicates that approximately 65% of the waste contains minimal sulfide sulfur (<0.2%) and is classed as Non-acid Forming (NAF). Using the waste characterisation assessment undertaken by KP and assuming minimal contribution to acid neutralisation from the contained acid neutralising rock material (calc-silicates and dolomites) the remaining 35% of the waste has been divided into PAF high capacity and PAF low capacity.

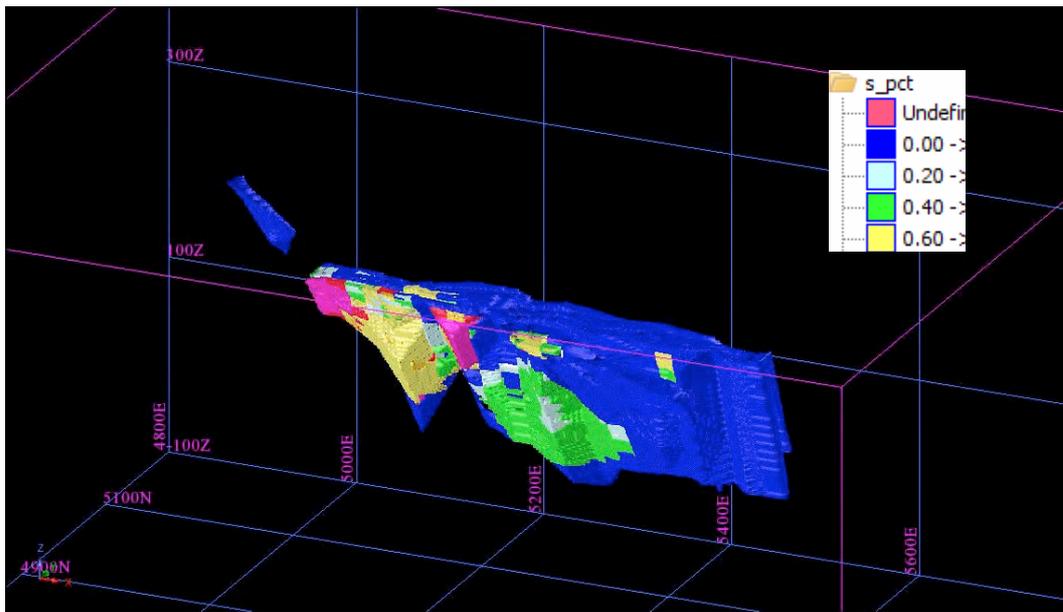


FIGURE 15: SULFUR MODEL OF DEPOSIT.

Further the static testwork indicates that there is excess acid neutralising capacity in some of the samples tested suggesting about 30% of the Low Capacity PAF and 30% of the NAF is potentially acid consuming as summarised. Table 2 summarises the waste classes (Section 4.5.1).

These results are being considered in mine planning.

Further testwork is required to validate the classification including selective ABCC testing to determine the availability of the acid neutralising capacity, kinetic NAG and further Acid Base Accounting to quantify the reactivity of the waste materials.

## 8 Issues

The principal environmental issues related to the mine are well understood, based on experience elsewhere.

Due to the isolation from residences, there are few issues relating to potential effects on the amenity and lifestyle of the area. The community welcomes mining as a source of employment and income.

The main issues are related to the management of waste rock and water. Some of the waste rock is potentially acid forming and waste rock and ore characterisation and management will be important to minimise adverse environment effects from site drainage. Similarly, the management of water from dewatering the pit and site drainage from working areas (include waste rock dumps) with possible acid and metalliferous drainage, and sediment management important. Water quality in receiving waters is good and will require protection.

Site closure will involve the open pit, waste rock dump(s) roads and other disturbance. It is planned to flood the pit on closure.

Other issues, which will require consideration, include:

- heavy vehicle traffic and adequacy of road system (this will be addressed by a Traffic Impact Assessment required under the planning scheme);
- potential impacts on threatened flora, fauna and vegetation communities.

All of these are believed to be capable of management.

## 9 Studies

It is proposed that the following studies will be conducted in the areas of the mine. In many cases these have been commenced

- Natural values/ flora and fauna assessments (including weeds);
- Benthic invertebrates in creeks;
- Geochemical assessment of waste rock (this will mainly be confirmation testing);
- Surface water flows and water quality;
- Hydrogeology of propose pit area
- Traffic assessment;
- Water management plan (including water quality);
- Tailings dam ; and
- Waste management plans.

## 10 Timetable

It is intended that the DPMP will be completed in 12 months.

Project indicative timetable is:

- *Late 2019 : Finalisation of mine planning*
- *Late 2019: Financing*
- *Late 2020 to Mid-2021: Plant construction, Development of pit area*
- *Mid 2021: Production commences using oxide ore, and*
- *2024: Complete open pit mining and commence rehabilitation*

## 11 Commonwealth Approvals

The project is not expected to require approval under the *Environment Protection and Biodiversity Conservation Act 1999*, as there is limited potential to significantly impact upon matters of national environmental significance or upon Commonwealth land. A summary of the potential impacts (Page 47 of the NB Report) has not identified any significant impacts on Commonwealth Government, Matters of National Environmental Significance (MNES).

As such, no approval is expected to be sought from the Commonwealth. No previous referrals have been made.

## 12 State Approvals

The following additional details are provided as required, regarding the status of the proposal under the Land Use Planning and Approvals Act 1993 (LUPAA).

This includes:

a. whether or not the relevant council will require a LUPAA permit application;

A permit is required under LUPAA.

b. whether a single permit application or multiple applications will be required;

A single application will be required.

c. the division of LUPAA under which the application will be made;

The application will be made under s. 57 of LUPAA – applications for discretionary permits.

d. zoning of the proposal site(s), and whether or not rezoning will be required;

The ML is zoned Rural Resource and Environmental Management. The proposed use is 'extractive industry' which is Discretionary for a Level 2 Activity. A rezoning won't be required. Land Tenure is Future Potential Forest Production.

e. if the proposal is for intensification or alteration of an existing activity, the status of the existing activity under LUPAA;

Operation of the mine is a new use and development. Use of the Comstock site is an intensification or alteration of an existing activity.

f. if the proposal is for intensification or alteration of an existing activity, whether or not the council regards the proposal as a substantial intensification for the purposes of subsection 20(6) of LUPAA

To be Determined

If you have any questions relating to the proposal please contact the undersigned, or John Miedecke our consultant. (0418 130672).

Yours sincerely,



Dr. Jianjiao (Joe) Xie  
Director  
Australian Hualong Pty Ltd

Attachments – North Barker Report

CC:

- Mr John Miedecke

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