Referral of a Proposal to the Environmental Protection Authority under Section 38(1) of the Environmental Protection Act.

Referral by the Proponent

PURPOSE OF THIS FORM

Section 38(1) of the Environmental Protection Act 1986 provides that where a development proposal is likely to have a significant effect on the environment, a proponent may refer the proposal to the Environmental Protection Authority (EPA) for a decision on whether or not it requires assessment under the Act.

A referral to the EPA by a proponent under Section 38(1) must be made on this form. A request for consideration by the EPA of the likely environmental impacts of a proposal will not be treated as a referral until all information requested by this form has been provided.

Before completing this form, proponents are encouraged to familiarise themselves with the EPA’s General Guide for Referral of Proposals to the EPA under section 38(1) of the EP Act 1986 (accessed at the EPA’s website at www.epa.wa.gov.au or by contacting the EPA on 6467 5419).

Proponents need to complete Parts A and B of the form by marking the appropriate boxes and providing explanatory or additional information where requested. Part B should be completed based on information known to the proponent. Only those sections of Part B that are pertinent to the proposal need to be completed. If space is insufficient, attach additional pages. Where information is contained in a report that is to be submitted with the referral form, the proponent may complete sections of the form by referring to the pertinent section of the report.

Proponents are encouraged to attach any other environmental information they consider may be relevant to the EPA for making a decision on whether or not to assess the proposal, and, if it is to be assessed, the level of assessment. In general, referrals should contain information on the potential environmental impacts of the proposal, the proposed management mechanisms to be implemented to minimise and mitigate for these impacts, and how the principles of the EP Act have been addressed by the proposal.

In addition to providing a hard copy of referral documentation, proponents are also requested to provide an electronic copy of the referral document, noting that section 39(2) of the EP Act provides for a proponent to request that matters of a confidential nature not be kept on the public record. If confidential matters are included in the referral, proponents are requested to identify the confidential information at this stage of the process, specifically request that it be treated as confidential, and submit the confidential information in a separate hard copy attachment to the referral document. The electronic copy of the referral should be identical to the hard copy of the referral document, excluding any confidential attachment.

You may need to contact government agencies or local authorities to obtain information required by this form. A list of key agencies and their contact details is provided in Attachment 1.

Where the EPA decides that a proposal will be assessed at the level of Public Environmental Review or Environmental Review and Management Programme, it will also require the proponent to prepare an Environmental Scoping Document (refer Environmental Impact Assessment (Part IV Division 1) Administrative Procedures 2002).

Proponents should also be aware of the need to determine their obligations under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act). The EPBC Act is separate legislation to the Environmental Protection Act and it identifies a number of matters of national environmental significance which are subject to assessment and approval by the Commonwealth. The matters identified as triggers for the Commonwealth assessment and approval regime are World Heritage properties, Ramsar wetlands, nationally threatened species and ecological communities, migratory species, Commonwealth marine areas, and nuclear actions (refer to the Department of Environment and Water Resources website at www.environment.gov.au). Questions in this referral form that may be relevant to matters of national environmental significance are marked with a #.
1. PROPONENT DETAILS, PROPOSAL DESCRIPTION AND LOCATION

1.1 Proponent information

- **Proposal title**
  Sorby Hills Silver Lead Zinc Project (Sorby Hills Project)

- **Name of the Shire in which the proposal is located**
  The entire Sorby Hills Project area is within the Shire of Wyndham East Kimberley. Details for the key contact within the Council are as follows:

  Mr Nick Kearns  
  **Executive Manager Development Services**  
  Shire of Wyndham East Kimberley  
  PH: 08 9168 4100  
  FX: 08 9168 1798  
  Mob: 0428 473 432

- **Name of proponent (Person or entity proposing to implement the proposal)**
  Sorby Management Pty Ltd

- **Names of Joint Venture entities (if applicable)**
  KBL Mining Limited (KBL) and Henan Yuguang Gold and Lead (HYG&L) (see Appendix 1 in attached Mining Proposal for details).

- **Address of proponent**
  Level 3  
  2 Elizabeth Plaza  
  North Sydney, NSW, 2060

- **Key contact for the proposal**
  A summary of the key contacts and tenement information associated with the Sorby Hills Project is presented below; the tenement boundaries are illustrated in Plan 1.

  **Mr Edgar Newman**  
  Project Manager – Sorby Management Pty Ltd  
  Ph: (02) 9927 2006  
  Fax: (02) 9927 2050  
  Mobile: 0458 881 445  
  Email: ednewman@kimberleymetals.com.au  
  Address: Level 3, 2 Elizabeth Plaza  
  North Sydney, NSW, 2060

  **Ms Sharon Arena**  
  Principal HSE Adviser - Animal Plant Mineral Pty Ltd  
  Ph: (08) 9397 1998  
  Fax: (08) 6296 5199  
  Mobile: 0419 934 461  
  Email: sharon@animalplantmineral.com.au  
  Address: 68 Westgrove Drive,  
  Ellenbrook, W.A.

This EPA referral relates to activities on tenements M80/197 and M80/286.
Does the proponent own the land on which the proposal is to be established? If not, what other arrangements have been established to access the land?

Tenements related to the Sorby Hills Project are situated on unallocated Crown Land Lot 373 on Deposited Plan 51355 (see Appendix 2 in attached Mining Proposal). This land was previously covered by a pastoral lease and is currently stocked under a grazing permit issued by the Department of Regional Development and Lands.

This EPA referral relates to activities on tenements M80/197 and M80/286.

Is rezoning of any land required before the proposal can be implemented?

(please tick) ☐ Yes ☑ No

If yes, please provide details.

Is approval required from any Commonwealth or State Government agency or Local Authority for any part of the proposal?

☐ Yes ☐ No

If yes, complete the table below, naming all Agencies and Local Authorities from which any approval is required and identify the approval required.

Table 1 below details all the applicable legislation required by Commonwealth and State Government Agencies or local Authorities for mining proposals.

<table>
<thead>
<tr>
<th>Act</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Protection Act 1986</td>
<td>Part IV – environmental impact assessment and approval (Statement 783).</td>
</tr>
<tr>
<td></td>
<td>Part V – prevention, control and abatement of pollution and environmental harm; clearing of vegetation.</td>
</tr>
<tr>
<td></td>
<td>• Dangerous Goods Safety (Road and Rail Transport of Non explosives) Regulations 2007</td>
</tr>
<tr>
<td></td>
<td>• Dangerous Goods Safety (Storage and Handling of Non explosives) Regulations 2007</td>
</tr>
<tr>
<td></td>
<td>• Dangerous Goods Safety (Explosives) Regulations 2007</td>
</tr>
<tr>
<td></td>
<td>• Dangerous Goods Safety (Goods in Ports) Regulations 2007</td>
</tr>
<tr>
<td>National Environment Protection Council (Western Australia) Act 1996</td>
<td>State requirement to implement National Environment Protection Measures (NEPMs) – Ambient Air Quality.</td>
</tr>
<tr>
<td>Rights in Water &amp; Irrigation Act 1914</td>
<td>Water rights &amp; management of impacts on downstream users/beneficial uses, licences for groundwater extraction for ore processing.</td>
</tr>
<tr>
<td>Health Act 1911</td>
<td>Protection of public health.</td>
</tr>
<tr>
<td>Mining Act 1978</td>
<td>Right to mine, land access and environmental assessment.</td>
</tr>
<tr>
<td>Mine Safety &amp; Inspection Act 1994</td>
<td>Safety of the mine and mining operations; occupational health and safety issues.</td>
</tr>
<tr>
<td>Occupational Safety and Health Act 1984</td>
<td>Occupational health and safety issues.</td>
</tr>
</tbody>
</table>
Table 2 below details all the approval requirements for the Sorby Hills Project.

### Table 2  Approval Requirements for the Sorby Hills Project.

<table>
<thead>
<tr>
<th>Agency/Authority</th>
<th>Approval required</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Project Management Plan (PMP)</td>
<td>Application to be submitted January 2012.</td>
</tr>
<tr>
<td></td>
<td>• Native Vegetation Clearing Permit</td>
<td>Application to be submitted December 2011.</td>
</tr>
<tr>
<td></td>
<td>• Dangerous Goods Site Licence</td>
<td>To be obtained prior to commencement of operations.</td>
</tr>
<tr>
<td></td>
<td>• Explosives Storage Licence</td>
<td>To be obtained prior to commencement of operations.</td>
</tr>
<tr>
<td>Environmental Protection Authority (EPA)</td>
<td>• EPA Referral</td>
<td>This document forms the referral.</td>
</tr>
<tr>
<td>Department of Environment and Conservation (DEC)</td>
<td>• Works Approvals</td>
<td>Application submitted 12 December 2011.</td>
</tr>
<tr>
<td></td>
<td>• Environmental Protection Licence</td>
<td>To be granted by DEC upon completion of construction activities, prior to commencement of operations.</td>
</tr>
<tr>
<td>Department of Water (DoW)</td>
<td>• 5C Licence to Take Groundwater</td>
<td>Application to be submitted January 2012</td>
</tr>
<tr>
<td></td>
<td>• 26D Licence for bore construction</td>
<td>To be obtained prior to bore construction.</td>
</tr>
<tr>
<td>Shire of Wyndham East Kimberley (SWEK)</td>
<td>• Building Licence</td>
<td>Application to be submitted January 2012</td>
</tr>
<tr>
<td></td>
<td>• Application to Construct or Install an Apparatus for the Treatment of Sewage</td>
<td>Application to be submitted January 2012</td>
</tr>
</tbody>
</table>

- If yes above, have you lodged any of the necessary applications or have you discussed the proposal with any person(s) at the Agency or Local Authority?
  - Yes  □ No
  - If yes, name all Agencies and Local Authorities for which applications have been submitted or with whom the proposal has been discussed.

See Table 2 above for details of all the necessary applications which have been lodged and for those that have not yet being lodged, the Agencies or Local Authorities with which the proposal has been discussed. See also the Stakeholder consultation register (Appendix 17 in attached Mining Proposal).
What is the current land use on the property, and the extent (area in hectares) of the property?

The Sorby Hills Mining Act tenure area covers 12,612.40ha, with this Project proposal covering an area of 1,782.27ha (tenements M80/197 and M80/286) and a total disturbance footprint of approximately 639.45 ha for mine infrastructure and approximately 100 ha for firebreaks. The areas covered by each tenement are detailed in Table 3.

Table 3 Area calculations of each of the SMPL tenements.

<table>
<thead>
<tr>
<th>Tenement</th>
<th>Area (ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>M80/196</td>
<td>998.13</td>
</tr>
<tr>
<td>M80/197</td>
<td>993.91</td>
</tr>
<tr>
<td>M80/285</td>
<td>557.43</td>
</tr>
<tr>
<td>M80/286</td>
<td>788.36</td>
</tr>
<tr>
<td>M80/287</td>
<td>815.15</td>
</tr>
<tr>
<td><strong>Sub Total</strong></td>
<td><strong>4,152.98</strong></td>
</tr>
<tr>
<td>E80/1187</td>
<td>8459.42</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>12,612.40</strong></td>
</tr>
</tbody>
</table>

This Unallocated Crown Land is currently stocked under a grazing permit issued by the Department of Regional Development and Lands however the permit will be rescinded and the area de-stocked prior to operations commencing.

1.2 Location information

Sorby Hills is situated in the north-east Kimberley region of Western Australia close to the Northern Territory border. The Sorby Hills Project mine site is located approximately 50km by road north-east from the regional centre of Kununurra. The relevant Sorby Hills Project tenements lie to the east of the currently proposed Ord Irrigation Expansion Project stage two, with a common boundary on the north-western edge of the Sorby Hills Project (tenement M80/196). A general location map is provided as Figure 1, a regional location map is provided as figure 2, and a site layout plan is provided as figure 3. Table 4 details the locations of the corner points of the project area.

Table 4 Corner points of the Sorby Hills Project area.

<table>
<thead>
<tr>
<th>Location Point</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Degrees</td>
<td>Minutes</td>
</tr>
<tr>
<td>NW point</td>
<td>15</td>
<td>25</td>
</tr>
<tr>
<td>NE point</td>
<td>15</td>
<td>25</td>
</tr>
<tr>
<td>SE point</td>
<td>15</td>
<td>28</td>
</tr>
<tr>
<td>SW point</td>
<td>15</td>
<td>28</td>
</tr>
</tbody>
</table>
Figure 1: General location map.
Figure 2: Locality map showing the location of the project in relation to the Ord Irrigation Expansion Weaber Plains development area.
Figure 3: Detailed site layout plan
1.3 Proposal Description (Please attach extra pages where necessary)

☐ Provide a description of the proposal.

The Sorby Hills Project area is situated on land that was once covered by pastoral leases and as such pastoral tracks, cattle yards, dams, water and production bores, a small cattle loading ramp, a diesel pump and other limited infrastructure is present on the tenements. At present cattle graze in the project area but the land will be de-stocked prior to mining.

Drilling programs at Sorby Hills have been quite intensive and comprehensive; approximately 888 holes were completed for ~95,000m from 1972 to 1988. Of these drill holes approximately 374 were diamond holes requiring the clearing of drill pads and the construction of sumps. Post 1990 little work was completed and the project was shelved in the late 1990s due to uncertainty surrounding the Ord River expansion scheme. In 2006 CBH Resources Ltd (CBH) reactivated the Sorby Hills Project undertaking a large amount of desktop research and a small scale diamond drilling program comprising only 13 holes. KBL acquired the Sorby Hills Project in 2008 and an additional 99 hole Reverse Circulation and Diamond drilling program was completed in 2010. Some remnant disturbed areas and access tracks plus a core storage area are present on the Sorby Hills mining tenements from previous exploration.

The Sorby Hills Project is being developed by the Sorby Hills Joint Venturers being KBL Mining Limited (KBL) (formerly Kimberley Metals Limited) of Australia (75%) and Yuguang (Australia) Pty Ltd a wholly owned subsidiary of China’s largest lead producer, Henan Yuguang Gold and Lead Co., Ltd (HYG&L) (25%). The Manager of the Joint Venture is Sorby Management Propriety Limited (SMPL), which is 100% owned by KBL. The Certificate of Incorporation and the Joint Venture Agreement are included as Appendix 1 in attached Mining Proposal.

Mining Operations

The project comprises three open cut pits which are to be mined sequentially as separate entities, however as mining progresses the three ore bodies will be contained within one larger pit. A 3D modelling image of the final pit design, showing the three separate ore bodies in one pit, is provided in

The overburden in the project area consists of black soil ranging from 5-25m in thickness; shallow slope angles of 20-25° will be used in this material. The first bench immediately below the black soil cover will be designed as a wide accessible bench; this will be necessary for cleaning as the black soil material may accumulate on the bench and create a hazard. Once into the hard rock below the soil cover the slope angles will be adjusted to a 40-45° angle and will be consistent with a typical pit design.

A detailed rock mechanics analysis of the project area was undertaken in 1979 for a preliminary feasibility study. Although this analysis was aimed largely at an underground venture for IPOD the deposits are fairly uniform across the project and the results are also applicable to open cut proposals. To further advance the geotechnical work completed to date, an addition assessment will be completed prior to commencement of mining operations. The original report, completed by Mount Isa Mines Limited, is included as Appendix 20 in attached Mining Proposal.

There is a groundwater aquifer in the mineralised dolomites and a dewatering system will be required to enable mining. SMPL will construct periphery dewatering bores and install a typical in pit sump. Further detail is provided in section Error! Reference source not found. Error! Reference source not found..
Figure 4: Final Pit Design Model. Appendix 18 in attached Mining Proposal details the monthly mine schedule for D pod for the first 2 years of operation, including estimated waste and ore tonnages. Mining is planned to take place over a period of 14 years at an ore production rate of 400,000 – 600,000 tonnes per annum with the focus on resources within 70m of the surface. The ore will be processed by flotation and a concentrate produced for export through Wyndham. In addition to the open cut the project will consist of a ROM pad, waste dumps, haul roads, a mill and concentrator, laboratory, road train loading area, tailings dam, access roads, workshop, site office and laydown facilities at Wyndham Port.

The development of the Sorby Hills project will result in the direct clearing and impact of approximately 639.45 ha for infrastructure and up to 100ha for firebreaks within the Knox Creek plain area. This represents only one third of the 1,782.27ha of the two mining lease areas to which the proposal relates and approximately 8% of the 12,612.40ha covered by all of SMPL’s leases.

Mining will be carried out predominantly during dayshift, with some night operations occurring. The mining technique will consist of:

- Overburden (topsoil and clay) removal; two D10 dozers, four 631 scrapers and one 16H grader will be have been estimated to be required for this purpose.

- Drill and blast operation to drill, load and blast in pre-defined patterns. Drill crew and plant will consist of a single blast hole drill rig (Sandvick DP1100 or similar capacity drill rig) with operator, one bomb ute and shot firer and an explosives mobile manufacturing unit (MMU) with operator. Blasting will only take place at designated blast times during dayshift and only when conditions are favourable. Explosives will be stored in an explosives magazine in compliance with the Explosives and Dangerous Goods Act 2004, the Dangerous Goods Safety (Explosives) Regulations 2007 and Australian Standard AS 2187.1:1998, Explosives – Storage, transport and use, Part 1. Explosives will be stored remote from the mining operations.

- Site geologist and pit technicians will assess broken (blasted) ground to identify and delineate ore, low grade material and waste prior to load and haul commencing in the area.

- The load and haul mining fleet will include a 120T excavator loading four 90T haul trucks, which will transfer ore, low grade material and waste to the respective stockpile areas. Extraction will be predominantly carried out using conventional mining technique. Ore and low grade material will be trucked along the haul road and tipped on the ROM pad. Waste material will be used in road and TSF embankment construction, as well as for flood bunds along the western edge of the site and around the perimeter of the open cuts. All waste is anticipated to be consumed during development of these structures therefore no designated waste dumps will be required for this project.

- The mining fleet will also include support machinery; a 35kL water cart will be required for dust suppression, a grader will be utilised for general earthworks and maintenance of the truck circuit and a 40T excavator will be on site to pull and maintain the batters, excavate drains and in pit sumps, and provide backup for the 120T excavator.

The overburden in the project area consists of black soil ranging from 5-25m in thickness; shallow slope angles of 20-25° will be used in this material. The first bench immediately below the black soil cover will be designed as a wide accessible bench; this will be necessary for cleaning as the black soil material may accumulate on the bench and create a hazard. Once into the hard rock below the soil cover the slope angles will be adjusted to a 40-45° angle and will be consistent with a typical pit design.

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Auth: M Ladyman  
Project: SMPL Sorby Hills  
Date: October 2011  
Datum: GDA94  
MGA Zone 52  

Figure 4: Final pit design model
Ore Processing

The processing plant at the Sorby Hills Project Mine Site will comprise the following components;

- ROM pad and crusher loading facility
- Primary and secondary crusher, screens and associated fine ore bins
- Grinding circuit comprising a sag mill and a ball mill
- Flotation circuit, including flotation tanks, pumps and pipe work
- Associated infrastructure including a thickener, electrical switch room, backup generators and diesel storage area.

A flow diagram of the ore treatment process is presented Figure 5: Flow Diagram of the Ore Treatment Process and a detailed diagram of the ROM pad and processing circuit layout is provided as Figure 6: ROM Pad and Process Circuit Layout.

The processing plant design has been completed by BGRIMM using metallurgical data contained in feasibility study report completed by MIN and from confirmation metallurgical tests carried out in 2008 by AMML (see Appendix 19 in attached Mining Proposal).

The ROM pad will be used to stockpile ore and low grade material prior to processing; material will be delivered by haul trucks and stockpiled according to the material’s characteristics. Ore material from these stockpiles will be fed into the crusher hopper using a front-end loader. If required the material will be blended either through creation of secondary stockpiles or during crusher loading operations.

The feed material will be crushed using a primary jaw crusher then conveyed to a coarse ore stockpile. Material from this stockpile is then fed to a primary sag mill followed by a secondary ball mill. The capacity of the processing circuit is approximately 600,000Tpa based on 24Hr operations.