

# OYU TOLGOI MINE PROJECT

## IESC REPORT

Site Visit: May 2017





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## TABLE OF CONTENTS

TABLES	2
FIGURES	3
ACRONYMS	4
EXECUTIVE SUMMARY	7
1 INTRODUCTION	20
2 PROJECT OVERVIEW	22
2.1 CONSTRUCTION AND OPERATIONS STATUS	22
2.2 REPORT ORGANIZATION	23
3 ISSUES TABLE	24

## TABLES

Table 3-1:	Status of Non-Conformances identified by the IESC	25
Table 3-2:	Issues Table	26

## **FIGURES**

**No table of figures entries found.**

## ACRONYMS

<b>AEMP</b>	Atmospheric Emissions Management Plan
<b>AQMP</b>	Air Quality Monitoring Plan
<b>BAP</b>	Biodiversity Action Plan
<b>BMEP</b>	Biodiversity Monitoring and Evaluation Programme
<b>BMP</b>	Biodiversity Management Plan
<b>BRMP</b>	Business Resilience Management Plan
<b>CAO</b>	Compliance Advisor Ombudsman
<b>CCFV</b>	Critical Control Field Verification
<b>CCV</b>	Critical Control Verifications
<b>CEG</b>	Central Engineering Group
<b>CEMS</b>	Continuous Emissions Monitoring System
<b>CEO</b>	Chief Executive Officer
<b>CH</b>	Cultural Heritage
<b>CHMP</b>	Cultural Heritage Management Plan
<b>CHMS</b>	Cultural Heritage Management System
<b>CHP</b>	Central Heating Plant
<b>CHSSMP</b>	Community Health, Safety & Security Management Plan
<b>CIC</b>	Community Interaction Centre
<b>COS</b>	Coarse Ore Stockpile
<b>CRM</b>	Critical Risk Management
<b>CSE</b>	Community and Stakeholder Engagement
<b>CSETS</b>	Community and Stakeholder Engagement Tracking System
<b>CSP</b>	Communities and Social Performance
<b>CSP MS</b>	Communities and Social Performance Management System
<b>DSF</b>	Development Support Fund
<b>EBRD</b>	European Bank for Reconstruction and Development
<b>EC</b>	Electrical Conductivity
<b>ECAs</b>	Export Credit Agencies
<b>EDC</b>	Export Development Canada
<b>EFIC</b>	Export Finance and Insurance Corporation
<b>EHT</b>	Elected Herder Team
<b>EPRP</b>	Emergency Preparedness and Response Plan
<b>ER</b>	Employee relation
<b>ERP</b>	Emergency Response Plan
<b>ERT</b>	Emergency Response Team
<b>ESAP</b>	Environment and Social Action Plan
<b>ESIA</b>	Environmental and Social Impact Assessment
<b>ESMP</b>	Environmental and Social Management Plan
<b>ESMEP</b>	Ecosystem Services Monitoring and Evaluation Plan
<b>FFI</b>	Fauna & Flora International
<b>GH</b>	Gunii Hooloi
<b>GHGs</b>	Greenhouse Gas Emissions
<b>GIIP</b>	Good International Industry Practice
<b>HR</b>	Human Resources
<b>HSE</b>	Health, Safety and Environment
<b>HSE MS</b>	Health, Safety and Environment Management System
<b>HSEC</b>	Health, Safety, Environment and Community

<b>HSESC</b>	Health, Safety, Environment, Security and Communities
<b>IESC</b>	Independent Environmental and Social Consultant
<b>IEP</b>	Independent Expert Panel
<b>IFC</b>	International Finance Corporation
<b>IFIs</b>	International Financial Institutions
<b>IMP</b>	Influx Management Plan
<b>IOM</b>	International Organisation for Migration
<b>IWRC</b>	Interim Waste Recycling Center
<b>KCB</b>	KlohnCrippen Berger, Ltd.
<b>KPI</b>	Key Performance Indicator
<b>LBAP</b>	Lender Biodiversity Action Plan
<b>LDCRMP</b>	Land Disturbance Control and Rehabilitation Management Plan
<b>LDP</b>	Land Disturbance Permit
<b>LMP</b>	Labour Management Plan
<b>LTI</b>	Lost Time Injury
<b>LTIFR</b>	LTI Frequency Rate
<b>LUMP</b>	Land Use Management Plan
<b>MAS</b>	Mongolian Academy of Sciences
<b>MDT</b>	Multi-Disciplinary Team
<b>MEGD</b>	Ministry of Environment and Green Development
<b>MIGA</b>	Multi-lateral Guarantee Agency
<b>MLA</b>	Mine License Area
<b>MoC</b>	Management of Change
<b>MUST</b>	Mongolian University of Science and Technology
<b>MWMP</b>	Mineral Waste Management Plan
<b>NAF</b>	Non-acid forming
<b>NoC</b>	Notice of Change
<b>NPPC</b>	Native Plant Propagation Centre
<b>NPI</b>	Net Positive Impact
<b>OMP</b>	Offsets Management Plan
<b>OT</b>	Oyu Tolgoi
<b>OT-GS</b>	Oyu Tolgoi – Gashuun-Sukhait
<b>OT-KB</b>	Oyu Tolgoi – Khanbogd
<b>PAF</b>	Potentially acid forming
<b>PEM</b>	Participatory Environmental Monitoring
<b>PLIMP</b>	Pastureland and Livelihoods Improvement Management Plan
<b>PMP</b>	Pastureland Management Plan
<b>PR</b>	Performance Requirement
<b>PS</b>	Performance Standard
<b>RAP</b>	Resettlement Action Plan
<b>RT</b>	Rio Tinto
<b>RTBS</b>	Rio Tinto Business Solutions
<b>SC</b>	Standard Chartered Bank
<b>SEP</b>	Stakeholder Engagement Plan
<b>SOW</b>	Scope of Work
<b>SPA</b>	Strictly Protected Area
<b>TDS</b>	Total Dissolved Solid
<b>TMP</b>	Transport Management Plan
<b>TPC</b>	Tripartite Council

<b>TPD</b>	Tonnes per day
<b>TSF</b>	Tailings Storage Facility
<b>UG</b>	Underground
<b>US EXIM</b>	Export-Import Bank of the United States
<b>VWP</b>	Vibrating Wire Piezometer
<b>WCS</b>	Wildlife Conservation Society
<b>WMC</b>	Waste Management Centre
<b>WMP</b>	Water Monitoring Plan
<b>WRD</b>	Waste Rock Dump
<b>WRMP</b>	Water Resources Management Plan

## EXECUTIVE SUMMARY

The Oyu Tolgoi Project (“the Project” or “OT Project”) is a world-scale copper/gold mine located in Khanbogd *soum*<sup>1</sup> of Ömnögovi *aimag*. The project is located, in the South Gobi region of Mongolia, approximately 600 km south of the capital city, Ulaanbaatar, and 80 km north of the Mongolia-China border. The mineral resources consist of a series of deposits containing copper, gold, silver and minor amounts of molybdenum. The project is being developed by Oyu Tolgoi LLC (the “Project Company” or OT), a joint venture between Turquoise Hill Resources (66 per cent) and Erdenes Oyu Tolgoi (34 per cent), a company wholly owned by the Government of Mongolia. Rio Tinto (RT) is a major shareholder in Turquoise Hill Resources and since 2010 is formally managing the Project on behalf of all shareholders. The Project comprises the operation of an existing open pit copper/gold mine and associated ore processing operation as well as the development, construction and operation of an underground copper/gold mine.

Since September 2013, D’Appolonia S.p.A. (from June 5<sup>th</sup>, 2017 RINA Consulting)<sup>2</sup> located in Genoa, Italy, has been appointed to act as the Independent Environmental and Social Consultant (IESC) on behalf of the Senior Lenders<sup>3</sup> group financing the OT Project.

The key role of the IESC is to monitor the compliance of the Project against commitments with applicable Lenders’ standards through desk-top reviews and periodic visits to the Project and, specifically to:

- evaluation of implementation of the commitments contained within the OMPs and the ESAP;
- identification of deviations and/or gaps with respect to the OMPs and ESAP commitments, including recommendation for possible EHS improvements based Good International Industry Practice (GIIP)<sup>4</sup>, if any identified; and
- identify specific issues, and conduct follow-up and closure of findings and observations identified in the August 2016 IESC site visit report<sup>5</sup>.

This report details the findings of the IESC site visit conducted from the 22<sup>nd</sup> to 26<sup>th</sup> of May 2017. The main scope of the visit was to provide an external monitoring evaluation of OT activities with a focus on health, safety, environment and social aspects, to monitor conformance with the environmental and social commitments made for the project operation phase, and to identify whether the Project mitigation measures are being implemented as required.

The audit report also provides follow-up on the status of non-conformances (see Issues Table in Section 3) with respect to the Project commitments as included in the Operational Phase Management Plans (OMPs), the Environmental and Social Impact Assessment (ESIA), the Environmental and Social Action Plan (ESAP), and other reference documents.

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<sup>1</sup> In Mongolia, a *soum* is a second-level administrative subdivision. There are currently c.300 *soums* in Mongolia.

<sup>2</sup> On the 5<sup>th</sup> of June D’Appolonia S.p.A. and the other engineering consulting companies of RINA will integrate to form RINA Consulting. RINA Consulting is therefore the result of the mixing of a number of internationally respected companies including D’Appolonia, Centro Sviluppo Materiali, Edif ERA (ERA Technology), G.E.T., Logmarin Advisors, OST Energy, Polaris, SC Sembenelli Consulting and Seatech, RINA Consulting brings together a rich heritage of engineering consultancy expertise into one unique organisation.

<sup>3</sup> The Senior Lenders group includes: the International Finance Corporation (IFC), the European Bank for Reconstruction and Development (EBRD), Export Development Canada (EDC), Export-Import Bank of the United States (US EXIM), Export Finance and Insurance Corporation (EFIC), the Multi-lateral Guarantee Agency (MIGA), Standard Chartered Bank (SC) and BNP-Paribas.

<sup>4</sup> Good International Industry Practice (GIIP) as defined in the April 2007 IFC EHS General Guidelines as “the exercise of professional skill, diligence, prudence and foresight that would be reasonably expected from skilled and experienced professionals engaged in the same type of undertaking under the same or similar circumstances globally...”.

<sup>5</sup> D’Appolonia, “Independent Environmental & Social Compliance Monitoring Report – August 2016 – Site Visit Report”, Doc. No. 13-391-H9, October 2016.

The main observations of this site visit report are summarized as follows.

***Environmental and Social Management System***

The Environmental and Social Management System provides for administering the project and meeting the Project Standards, the laws and regulations of Mongolia, permit conditions, Investment Agreement of 6 October 2009, as well as the environmental, health & safety and social policies, standards and requirements of the IFC and EBRD. The management system and associated Environmental and Social Management Plan (ESMP) include planning, operations, reporting checks, and review elements with a focus on continual improvement. Specific operating plans define the project commitments, key performance indicators and monitoring parameters, and reference specific implementation documents. Updating of the operating plans has been performed over 2015 and 2016, and the ESMP is scheduled to be updated by the end of 2017. Also included in the system is a Management of Change (MoC) process, which has been implemented by the Project to address modifications of project plans and commitments, as discussed in associated sections of the report. The Lenders have accepted most of these, while others that have yet to be accepted are subject to ongoing review and monitoring to reach resolution.

***Water and Wastewater Management***

OT implemented the Undai River Partial Adjustment and Protection project as a result of being unable to implement the full Undai Diversion as described in the ESIA. A long-term delay in issuing a Land Use Permit prohibited OT from constructing aspects of the Undai River Diversion project that were to take place outside of the fenced Mine License Area (MLA). A detailed water review was undertaken in November 2014 to assess available hydrogeological data related to system performance of the Undai River Partial Adjustment and Protection project. The detailed water review did not identify a risk of significant impact to groundwater resources as a result of the current system. Notice of Change 2015-005 acknowledges that the Undai River Partial Adjustment and Protection Project maintains continuity of groundwater flow and is serving as a valid mitigation in accordance with the original goals of the Undai River Diversion as described in the ESIA.

In December 2014 OT and the Elected Herder Team (EHT) agreed to transition the IFC's Compliance Advisory Ombudsman (CAO) facilitated meetings into a permanent dialogue, inclusive of local stakeholders, to further the topic of final Undai River Diversion configuration. Stakeholders include OT, the EHT, and the Khanbogd government. Collectively these entities constitute the Tripartite Council (TPC). The TPC accepted the Undai River Partial Adjustment and Protection Project provided certain conditions are met, mainly related to maintenance of existing water resources and actions to limit evaporation from the Undai Channel within the MLA. OT has addressed all of these considerations. A NoC reflecting the finalized Undai River Diversion configuration was submitted in late May 2017 and approved by the Lenders in June 2017 (Noc 2016 – 014).

OT has coordinated with the Tripartite Council (TPC), Basin Administration and others to realize abandonment of all cascading bores previously identified in down hole camera surveys. A total of 37 monitoring points are to be installed in the Gunii Hooloi (GH) region, within the MLA, and within the OT active mining operations footprint (i.e., at the open pit, in drainage channels, and upstream/downstream of the TSF). A total of 20 supplementary bores were installed in 2016. Nine additional monitoring points will be installed in 2017 (across three locations).

OT consumption of raw water from the GH aquifer, which is brackish, averaged 423 Liters of water consumed/ton of ore produced in 2016. This is below the target of 547 L/ton-ore and well below the global average rate of 1,220 L/ton-ore. In 2016 an overall water recycling efficiency rate of 86.6% was achieved, an improvement relative to the 2015 value of 85.6%. Both values are above the 80% key performance indicator.

***Mineral Waste Management***

Mineral waste management associated with the Open Pit, Waste Rock Dump (WRD), and Tailings Storage Facility (TSF) is continuing under the Project strategy. Waste rock stockpiled or placed in dumps is subject to segregation of potentially acid forming (PAF) materials from non-acid forming materials, and monitoring under the geotechnical ExPit program and MWMP. With resumption of underground mine development, waste rock

is being hauled to the new integrated waste rock dump for PAF materials. Initial work on the WRD Re-Vegetation Trial Project at a remote area of the South Dump commenced with the installation of lysimeters, although placement of NAF and PAF mineral waste layers and establishment of topsoil / vegetation remains to be implemented at the trial area. Preliminary plans for the South WRD rehabilitation has identified a proposed separate trial area that replicates slope conditions subject to more aggressive erosion and moisture retention conditions.

Tailings from the Concentrator are pumped to the TSF for disposal and recovery of process water. Cell 1 of the TSF continues to be operated, with construction of embankments to provide for projected tailings deposition through 2017 within about 50 to 80-percent complete. Reclaim water management within the TSF has been effectively managed by the barge pump station. Surveillance is critical to identifying and addressing geotechnical conditions, and OT installed additional instrumentation and updated the TSF Construction, Operations and Monitoring Manual. Seepage emanating from the toe areas in the northeast section of the TSF is within design estimates for the facility, and is being monitored. Water quality within the tailings reclaim pond and seepage contains generally high concentrations of TDS and salts. Consistent with the TSF design, seepage water is collected and pumped back to the TSF for recovery to the Concentrator. Subsurface seepage detected along the south TSF perimeter is being monitored with an expanded program of piezometers and monitoring bores.

An update to the TSF feasibility study was prepared in December 2016, and introduces potential refinements for proposed Cell 2 including downstream slope and filter zones, pending completion of independent technical reviews.

#### ***Non-Mineral Waste Management***

The Project continues to be self-sufficient in the management of waste produced during operation. Since the last IESC visit, the use of the Interim Waste Recycling Center (IWRC) has been completely discontinued and residual waste from the construction period are either transferred to the Waste Management Center (WMC) or removed and recycled with local recyclers. According to the latest waste production forecasts provided, the first cell currently in use should be filled up by Q2 2018. Earthworks for additional two cells are complete and further capital works for their operation have been approved for next year.

In August 2016 the IESC assigned a Level I NC because waste were accumulated at the IWRC and a clear timeframe for replacing the contracts with local recyclers was not defined. During the present visit the IESC received evidence that contracts with local recyclers have been finalized for a number of waste streams and therefore the NC is closed as the Project is now in line with the principles and strategy included in the Waste Management Plan.

One significant change in the management and disposal of waste is the imminent decommissioning of the incinerator and its replacement with a new autoclave to treat medical waste.

#### ***Air Quality***

Historically there has been significant dust generation at the coarse ore stockpile (COS) facility. As mitigation a foam dust suppressant system (surfactant system) has been installed. This has resulted in visual reduction of TSP concentrations from within the COS facility; however ambient air particulate monitoring data continue to exceed the Project Standard. Significant improvements have been made over the last year. These include installation of canvas covers on drive ends of conveyors, scrapers to minimize material carry-back on the grinding (SAG mill) circuit, and safety netting underneath conveyors to allow safe access for period cleaning. Mini-foam systems are being trialed in tunnels leading from conveyors to the sag mill. If these trials are successful a permanent foam application system may be installed.

As noted in prior audits the ambient air monitoring network available on site requires improvement to monitor ambient air quality relative to Project Standards, and to assess the overall efficacy of implemented mitigation measures. In Q4 of 2016 the necessary equipment was delivered to site. Civil works have been completed

including installation of power supply to the equipment and trial operations. Full commissioning and on-site training is planned for Q3 of 2017 at which time the equipment will become operational.

Emissions quality of the CHP has been a persistent issue being historically poor relative to Project Standards. A third party Plant Emissions Testing Review identified numerous serious flaws with the existing sampling methodology. A Continuous Emissions Monitoring System (CEMS) will be installed on the main single stack, in accordance with AQMP requirements, as part of the Phase 2 CHP expansion to 130 MW. Other improvements have recently been made to the CHP including full refractory jobs at all boilers and replacement of over 1,500 bag filters.

There have been long-term issues with incinerator performance as emissions quality has not historically met Project Standards. OT has since contracted to a company with an autoclave for treatment of the approximately 100 kg of medical waste that is generated on a monthly basis. Other potentially hazardous waste streams, such as oily rags, can be managed at the lined waste management center or via other recycling initiatives. It is expected that by the end of this year (a) the incinerator will be decommissioned and no longer in use; and (b) the autoclave will be fully functioning.

OT records greenhouse gas emissions (GHGs) and reports 2016 total emissions of a value of 1,429,619 CO<sub>2</sub> (eq). This is relatively consistent with the generation in full year 2015 of 1,463,057 tonnes of CO<sub>2</sub> (eq). Of the 2015 total over 80% of GHGs generated were related to the purchase of electricity with Scope 2 emissions of 1,159,647 CO<sub>2</sub> (eq). Scope 1 direct emissions were 269,972 CO<sub>2</sub> (eq) and indirect Scope 3 emissions are negligible.

A third party *Review of Oyu Tolgoi's Greenhouse Gas Emissions* report was prepared in 2016. This report described current GHG tracking efforts undertaken to comply with RT's Greenhouse and Energy Usage workbook requirements. The approach has since been validated in accordance with the 2016 *Rio Tinto Guidance for Greenhouse Gas Energy Workbook*. Rio Tinto's GHG inventoring is based on definitions described in the World Business Council for Sustainable Development/World Resources Institute Greenhouse Gas Protocol.

#### **Emergency Preparedness & Response**

The Emergency Preparedness and Response Plan (EPRP) is supported by Emergency Response Procedures (ERPr) to address potential incidents specific to Project areas/departments where high and critical risks exist. Fifteen ERPr have been prepared to address the general site area or specific areas/departments, and several are scheduled for review and updates in 2017. The Emergency Response Team and Communities Team initiated engagement with government officials to acquaint them with the TSF, distributed copies of the ERPr – TSF, and updated the procedure to reflect emergency contact information and TSF personnel. Further engagement planned to brief community residents on the TSF and emergency response plans should a release occur has paused and further analysis of the extent of a tailings flowslide in the event of a TSF dam breach has been conducted. This analysis is currently in final draft phase and should be reviewed and considered relative to previous analysis used to map the downstream emergency coverage area. Any required updates to the map of the coverage area contained in the ERPr – TSF should be resolved, and reflected in engagement with community officials and residents. A TSF Community and Stakeholder engagement plan is to be finalized at the end of 2017, including emergency response coverage area and preparedness measures in the event of an emergency.

The Underground Emergency Response Plan was updated in January 2017 and submitted to the Ministry of Mines, which identifies key ongoing activities for the underground mine development through the first six months of the year.

### ***Transport Management***

Transport Service Providers have maintained their induction, communities and environmental awareness training programs, and have fully implemented the fatigue monitoring and management program for copper concentrate truck drivers, including the use of SmartCap (providing operator alerts in real time) and Readiband technology (improving understanding of sleep patterns). The fatigue monitoring and management program is implemented with support from the Health Department to help address this risk.

With increased coal traffic at the border crossing, and changes in border traffic processing of trucks, a number of traffic incidents involving convoy trucks occurred at the end of 2016 prompting OT to investigate measures to address operational and safety concerns.

### ***Ecological Management and Biodiversity***

OT's biodiversity-related plans form the framework for OT to plan its biodiversity monitoring activities, manage its impacts on biodiversity, adapt its management responses if needed and implement offset projects, with a view to achieving a net gain. A biodiversity-focused Stakeholder Engagement Plan (SEP) is used to program specific engagement activities, notably those needed to progress offsets and achieve necessary levels of national and regional collaboration.

#### *Managing impacts associated with powerlines*

OT has installed power line insulation on its own power lines, and then conducted a pilot to install it on non-OT power lines as part of an offset project. Initial monitoring results are positive, showing reductions in average electrocution rate of individual birds per pole from 0.25 to less than 0.05. A post mitigation survey of non-OT power lines showed that only 1 Saker Falcon had been electrocuted compared to 29 individuals on the same lines prior to installation of new insulation. As part of its efforts to promote Power Line insulation more widely in Mongolia, OT is represented on a new national Power line Standard Development Working Group and is now planning further insulation of non-OT lines. OT recorded two Houbara bustard collisions during its monitoring in 2017.

#### *Stakeholder Engagement*

Through the BAP OT committed to develop a "targeted Stakeholder Engagement Plan" (SEP) to cover implementation of on-site mitigation, OMP implementation and engagement related to regional/landscape level planning as well as providing a basis for verifying OT's progress in stakeholder engagement to Lenders. A biodiversity-related SEP is now in place as an annex to OT's overall SEP, but the need for more detailed, topic-specific stakeholder engagement action plans was identified in the previous audit to improve programming of key engagement activities for OT's four offset projects. The non-conformance remains open pending OT's completion of topic-specific engagement plans for its four offset projects.

#### *Ecosystem Services*

This Level I non-compliance is now closed. The Ecosystem Services Monitoring and Evaluation Plan (ESMEP) was updated in response to recommendations and comments received from the IESC in September 2016. Despite some remaining gaps, it is recommended the plan now be implemented. Its effectiveness in meeting OTs overall project objectives and the appropriateness of current indicators and thresholds as well as monitoring results will be reassessed during the next Audit site visit.

#### *Land Disturbance Control and Land Rehabilitation*

##### Avoidance of impacts on priority plant species

OT uses a Land Disturbance Plan Registration Log Sheet to track upcoming land disturbance, supported by a map indicating spatial distribution of the four priority plant species found in the MLA and the four others found in close proximity in relation to planned land disturbance. *Spongiocarpella grubovii*, one of the species for which OT has an NPI commitment, has been located at a few sites on the MLA and at one site north of the mine lease area. Since some of the locations on the MLA have already been impacted by mine construction

activities any further loss of this species must be strictly avoided by OT and the propagation of *S.grubovii* should be seen as a top priority. During the site visit IESC were informed by the flora team that due to the Mine Planning Department constantly optimising and re-optimising the mine plan the map of priority plant species locations has proved less useful than anticipated. OT needs to investigate this issue and provide a report back during the next audit.

A small amount of *S.grubovii* seed has been collected by the Native Plant Propagation Centre (NPPC) and needs to be used to test germination. However, additional seed needs to be collected without damaging remaining plants or compromising their regeneration *in situ* and a restoration plan for the species needs to be developed. A non-conformance has been identified in relation to this issue because clear restoration strategies are not in place for priority plants, including one species that is currently in deficit.

#### Mitigation and plant propagation

The NPPC has been in operation for six years and has been very effective in developing propagation techniques for Gobi species, as well as producing large quantities of seedlings and saplings for use in biological rehabilitation although, as noted below biological rehabilitation is not being prioritized by OT. The NPPC will be managed by Ecomineral from July 2017 onwards. The next Audit will review OT's ability to secure stocks of appropriate native species for rehabilitation and any implications of the management transition in terms of resources needed to support essential research.

#### Rehabilitation: technical and biological

OT has not met its technical rehabilitation commitments, submitted and approved by government, for the past two years: 140 Ha planned compared to 120 Ha implemented in 2015 and 43 Ha planned compared to 33 Ha implemented in 2016. In 2017 OT significantly reduced its planned rehabilitation areas submitted to government. A total of 367 Ha has been biologically rehabilitated between 2012-2016 with 93 Ha completed in 2016. The Land Disturbance Permit (LDP) system could be better utilized to set more realistic annual rehabilitation targets that are more closely aligned with actual land take. Experience in implementing the re-vegetation completion criteria appears to have been hampered by low rates of biological rehabilitation since the last audit.

OT is not convinced that biological rehabilitation is better than natural revegetation that occurs over time once technical rehabilitation has been completed. OT subsequently does not appear to be prioritising biological rehabilitation on the MLA. However, some trial experiments need to be undertaken to assess whether this is the case or not. The risk with this approach is that in instances where Critical Habitat qualifying priority plant species (e.g. *S.grubovii*) are impacted they may be lost on site before OT has demonstrated that it is able to successfully propagate them. This places the project at risk due to its potential failure to meet both government regulatory requirements as well as its own NPI commitment - in the case of the four Critical Habitat qualifying species - and NNL - in the case of the other four priority plant species. IESC noted that a recent ground survey established the extension of the *S.grubovii* population just north of the MLA.

The Flora team has halved its staff but the workload has remained constant. It is understood that this will be addressed through hiring of contractors such as Ecomineral.

#### Bor Ovoo Spring

A two-hectare area adjacent to the spring was fenced to protect re-established target vegetation from grazing pressure, following collaboration with the TPC. At the end of October 2016, seedlings, produced at the NPPC, and seedlings were planted inside the fenced area. Ecomineral, due to start a 3-year contract in July 2017, will be responsible for replacing any plants that die and fixing the section of the fence that was identified as damaged during the IESC May 2017 site visit. Specific revegetation completion criteria have been developed and approved since the last audit. Assessment against these criteria will take place in Autumn 2017 and the findings reported and reviewed during the next site visit audit.

Waste Rock Dump revegetation trials

The revegetation trials have not yet started as OT were awaiting the correct type of PAF from the open pit to place on the Waste Rock Trials.

*Managing impacts related to traffic and transport*

Since the last audit OT has experienced one incidence of *khulan* mortality caused by collision with an OT convoy truck on 28 December 2016. A goitered gazelle was also killed on the TSF road (on-site) in February 2017. BAP13 requires OT to develop and implement an OT-GSK Road Mitigation Strategy. The draft Road Mitigation Strategy submitted to lenders in 2016 for review was not considered to conform with the BAP.

OT has convened a Road Mitigation Strategy Panel ('The Panel') to provide an independent opinion and resulting recommendations on a series of technical questions related to the OT Road Mitigation Strategy (BAP4). The panel had its first conference call on 23 February 2017, and members undertook a site visit (10 - 17 May 2017). 'The Panel' is due to submit its final report by 31 July 2017.

In the absence of an opportunity to review 'The Panel's' report, OT and the lenders permitted the IESC to hold a telephone-discussion with the Chair of 'The Panel'. Once 'The Panel's' final report has been made available to the auditors this non-compliance will need to be re-assessed, as there was no opportunity to review new information in this visit.

*Managing pollution impacts*

Dust monitoring

The previous IESC report indicated that resources have not been allocated to monitoring OT's 32 permanent vegetation plots for the last 3.5 years. OT reported that a request had been submitted to procurement for an external contractor to monitor whether dust is affecting plant growth – specifically along the road to Khanbogd.

Selenium

OT has been monitoring Selenium levels, which are reported in the quarterly TSF seepage monitoring reports. This has been supported by bird counts as part of an ongoing risk assessment in relation to potential toxic effects. Since the last audit, Selenium levels have been well below perceived toxic levels to birds. Species observed using the water bodies have largely been migrants of low conservation concern. Although Ruddy Shelduck were confirmed to be nesting in May 2017 this species is of least conservation concern.

Ongoing monitoring of Selenium levels and usage by birds is considered appropriate because of the possibility of toxic thresholds being exceeded, the pathway for exposure of birds remains open, some species are breeding there and there is a possibility that species of conservation concern (e.g. Short-toed snake-eagle, endangered or Saker Falcon, vulnerable) could potentially be exposed in future. If incidences of raised levels are detected in future, a more systematic approach to bird observations should be implemented, to allow residence time and level of exposure to elevated Selenium to be determined.

No other incidences of pollution affecting biodiversity have been identified since the last site visit.

*NPI and offsets management plan*

Through its NPI forecast and Offset Management Plan OT has committed to undertake interventions that will address its residual impacts on biodiversity and then go beyond this to deliver the enhancements needed to achieve a NPI on biodiversity in the southern Gobi. During the audit, an update was provided on progress with OT's four biodiversity offset projects.

Noteworthy accomplishments since the last audit included obtaining approval from the Ministry of Green Development and Tourism (MEGDT) for OTs Sustainable Cashmere Project (SCP) as the official project offset considered sufficient to meet national offset requirements. Government requirements are for gains in area and quality of habitat, making the planned SCP particularly important in the national context. Secondly, obtaining

approval from the railway authorities for a pilot project, to be undertaken in collaboration with MAS and WCS, to undertake railroad fence redesign and implement railroad fence removal and monitoring. OT has developed the pilot project scope of work to cover the socio-economic component and monitor ungulate movement. OT has installed power line insulation on its own power lines, and then conducted a pilot to install it on non-OT power lines as part of an offset project.

#### *Monitoring and Adaptive Management*

OT continues to monitor populations of priority species in line with its Core Biodiversity Monitoring Plan. The work is carried out by WCS with Sustainability. The 2016 Core Biodiversity Monitoring focused on *khulan* (*Equus hemionus*), short-toed snake eagle (*Circaetus gallicus*), elm trees (*Ulmus pumila*), granite outcrop floral communities, priority plants and rangeland in the southern Gobi region. Several recommendations are made, based on data collected in 2016. While OT is not obligated to adopt all recommendations, it would be advisable to produce a clear response or rationale for monitoring activities, so that reasons for reduced emphasis are understood and the implications for adaptive management are clear.

The death of one *khulan* from an Oyu Tolgoi contractor vehicle in 2016 represents the only biodiversity indicator where an orange threshold value had been exceeded. The 2016 monitoring results indicate that no other threshold values have been exceeded.

Some priority species have undergone changes in Red List category, partly due to OT survey efforts that have provided better data for conservation assessments. OT's risk profile of priority species needs to be reassessed and the project needs to re-prioritize its mitigation actions accordingly as part of the company's adaptive management.

#### *Resources and staffing*

OT has recently appointed a new Principal Biodiversity Advisor who commences in July 2017. The PBA will be employed on a two-year contract thereafter the Superintendent for Biodiversity will absorb these responsibilities.

A number of OT's biodiversity staff are currently based part-time in Ulaanbaatar partially due to a cost-savings exercise being implemented across the mine and partially to address work life balance for its employees. The team still visit site regularly on rotation. The team need to ensure their work location balances meeting OT's NPI commitments and time at site must focus on a) priority plant species seed collection and b) land disturbance permit approvals requiring on-site investigation of vegetation by a Flora expert prior to permitting clearing for construction activities. In the absence of key personnel the necessary checks for priority plant species prior to disturbances may not be undertaken in a timely manner. Issues like gaps in fencing, observed at the Bor Ovoo spring during the site visit, may also be missed if staff do not undertake regular checks. To ensure that things don't go wrong OT needs to ensure regular presence on the MLA or an equivalent appropriate system.

OT continues to use specialist and consultant support specifically from Wildlife Conservation Society, Global Biodiversity Conservation and Ecomineral who will begin their new contract from 1 July 2017.

### **Social**

#### *Labour and Working Conditions*

As at 30 April 2017, according to the OT Workforce Ratio report there were 10,736 workers at the OT operation, including 2,592 employed by OT LLC and 8,144 workers engaged by 115 contractor companies. These include workers at the mine site (including the UG), Ulaanbaatar and Khanbogd. A total of 10,010 are Mongolian nationals, or 93.24%. 2,000 workers are from Ömnögovi *aimag*.

The workforce ramp up continues, with another 533 workers anticipated to be on-boarded by November 2017, and a total of 5,000-7,000 workers will be accommodated on site.

Project Rose has been recently introduced by OT to assess and identify non critical site-based roles to minimize FIFO and maintain accommodation for the workforce within the Project footprint and therefore potential Project impacts on neighbours. Approximately 300 roles will be relocated to Ulaanbaatar, Dalanzadgad or Khanbogd over the course of three phases in 2017; relocation will be dependent in some later cases on installation of appropriate IT infrastructure to allow roles to support work on the site remotely. The IESC notes that OT is conducting a series of notification meetings to ensure sufficient engagement with the workforce on this initiative.

All workers are currently accommodated on site, including the growing UG Project workforce; this is key in mitigating potential in-migration issues. An average of 4,576 people are housed onsite each day and the Oyut II camp construction will be critical in providing accommodation for a maximum of another 5,508 persons at full capacity, and is due for completion by December 2017. Construction timelines will be critical in maintaining all workers accommodation within the MLA.

A partnership with the Inner Mongolian Administration Region (IMAR) is under development, to facilitate engagement with Chinese authorities particularly in relation to cross-border issues. The IESC recommends that the results of risk assessments undertaken by OT be shared with Lenders to demonstrate how this office will be run to ensure appropriate risk avoidance, mitigation and management measures are applied.

SpeakOut remains an active mechanism for receiving worker grievances, with 34 received since the previous audit. With approximately half of those received closed as unsubstantiated, OT is urged to consider whether these are all reasonable dismissals of claims or if an amendment to closure of these claims is required, particularly for maintaining worker trust in the mechanism.

The regular program of Employee Relations audits have been conducted internally, and contractor audits have additionally been progressing of major contracts, with no major findings.

The Culture by Design program is being rolled out across OT, contractors and sub-contractors to encourage a common work culture across the wider workforce in areas of Safety, Health and Wellbeing; Training and Capability Development; Project Enablers; and Social activities, with positive results to date.

#### *Resettlement, Compensation and Livelihoods Improvement*

The resettlement program component of the OT's operations is considered complete, however all herders in Khanbogd *soum* will continue to be supported and monitored by OT for some time, including through OT's commitment to mitigate economic displacement impacts for identified herders and to achieve herder livelihood improvements. Employment Agreements with all former Road Maintenance Workers have now reached closure and sustainable, alternative employment provided for 25 individuals and access to Sustainable Livelihood Support Training (SLST) for 92 herders. This program provides highly customized curricular to directly affected herders and seeks to build their skills in managing livelihoods and animal herding practices in a sustainable manner. The SLST is delivered by the Dornod Polytechnical College and will run until December 2017. Feedback to date from participants is highly positive, and OT is recommended to evaluate livelihoods outcomes of the program, in addition to course satisfaction, appropriateness and responsiveness of the course themes to local needs and interests as part of the Outcome Evaluation (OE).

The Multi-disciplinary Team (MDT) study has concluded but was not able to fulfil the requirements of an OE. OT has advertised an Expression of Interest for this work, and at the time of this audit, has engaged with Lenders and the IESC to develop a detailed scope of work that will provide useful and actionable results. Non-conformance M1.23 remains open until the successful completion of the OE.

The Participatory Environmental Monitoring (PEM) program will be reviewed under the TPC joint action plan, as a result of the MDT study having identified three complaints about the PEM program. The review seeks to increase participation in PEM and provide for broader community benefits. The redesign is to be undertaken by the end of 2017 for implementation at the commencement of 2018. The IESC recommends that the redesign is clear on the intent of the PEM program (e.g. PEM as an engagement tool for environmental quality, or as an

alternative livelihoods mechanism, or some other goal). A logical framework tool is one approach that could be applied in the redesign, for clear articulation of goals and intended outcomes of the program.

Vulnerable households continue to receive support from OT in partnership with Khanbogd *soum* authorities, as documented in the OT-KB *soum* joint plan. The total number of vulnerable households has changed over time as the *soum* adjusts its criteria each year. Vulnerable people identified as identified in the RAP has now declined to zero, however the IESC notes that while these activities are all run by the *soum* and independently of OT, it is important for OT to continue to monitor and evaluate the effectiveness of interventions with vulnerable displaced households, including if intended outcomes are being achieved, until such time that a RAP completion audit has been satisfactorily implemented.

#### *Stakeholder Engagement*

The CSP team has continued with a range of engagement activities with Khanbogd and other target communities. The SEP is the overarching plan that sets out the approach to stakeholder engagement, which was reviewed by the IESC in August 2016 with significant comments provided by the IESC/Lenders; this OMP was strengthened and approved by Lenders in July 2016. Topic-specific SEPs include: Ecosystem Services SEP, Undai River SEP; the TSF Emergency Response SEP and UG Project SEP.

The Community Information Centre (CIC) in Khanbogd continues to play a key role in receiving visitors and providing a venue through which to engage citizens, with 719 visitors received since the previous audit. OT has undertaken detailed analysis of stakeholders on engagement type, stakeholder group and attitudes being analysed, using data from engagement records. 49% of all engagement activities are consultative. Most attitudes are positive towards OT, and genuine feedback provided to OT has informed an upcoming review of the PEM program, demonstrating a responsive community engagement system.

Information dissemination is additionally undertaken, with 40% of all communities records showing meetings for this purpose. The Khanbogd and Dalanzadgad Open Days (held in September 2016 and March 2017 respectively), were effective at enabling a broad reach to potential employees, contractors and the wider Ömnögovi community. The event was also supported by the *aimag* government and is intended to be held jointly each year.

Grievances and feedback from the community is also tracked, with 11 complaints received since the last audit. Complaints were raised regarding two themes: 4 were regarding the environment and 7 procurement/contractor related. Additionally, 2 instances of positive feedback were also received. Investigation by OT internally of two off-road driving incidents has led to a review of the grievance management system. An additional improvement of risk assessing complaints or incidents has also been introduced. This continual improvement is commended and the IESC will follow up at the next audit on the outcomes of conducting this system change. External reporting of grievance data is regularly provided for in the monthly community newsletter as well as through internal management structures.

The TPC has continued meeting since the previous audit, and through the CAO process has signed two Herder Complaint Resolution Agreements in May 2017 with detailed actions to resolve complaints on both the Undai River diversion and Compensation; the agreements provide for a detailed action plan, and a Compensation Claim Committee process. The agreements also formalize the transition of both complaints from Open to Monitoring status in the CAO dispute resolution process. All parties are commended on reaching this important milestone, which will see one further year of monitoring by the CAO to determine if the complaints reach final closure.

In January 2017, the MDT/IEP Phase II studies were completed and as intended, serve as the basis for the TPC joint action plan to address the two complaints lodged with the IFC CAO. The joint action plan sits within the aforementioned Complaint Resolution Agreements. The results of the MDT study are discussed in the Resettlement section of this report.

*Regional and Community Development*

Regional and community development is one of the main functions of the CSP team, and the Cooperation Agreement (CA), established on 22 April 2015, is operational. The DSF Board Meeting of March 2017 considered the 25 proposals put forward following advice from the Relationship Committee and approved 16 of these. The Board approved proposals to the value of MNT 2,605,140,405 (approximately USD \$1.1m). The DSF team is introducing a new model to enable the team to better manage the number of proposals being received through a 'call for proposals' model, which will consider proposals twice per year in line with strategic priorities aligned with the *aimag* development master plan. The IESC supports measures that enable the DSF team to better manage proposals and effectively provide monitoring for those that are accepted, and will follow up on this development at the next audit, along with results from the first DSF Annual Report (anticipated June 2017).

The Gobi Oyu Microloan program partner has been selected, Khan Bank. 75% of proposals received in the period 1 February-20 March 2017 were supported. Business sectors/activities supported by microloans are: greenhouses, tailoring, car servicing, beauty salon, and a bakery, each to a maximum loan value of 30 million MNT.

The OT-Asian Development Bank (ADB) joint-funded Khanbogd bulk water supply project was commissioned in December, now providing potable water to a population of 13,000 people, with an option to extend capacity to 32,000 as required in the future. The IESC congratulates those involved to deliver this significant project, with Khanbogd now the only *soum* in Mongolia with water mains and wastewater systems. In other community infrastructure works, the OT-GSK Road project is now on hold pending funding consideration and approval, with appointment of a contractor dependent on project finance. The OT-KB road is progressing on schedule for practical completion in October 2018.

Since the previous audit, OT has completed a thorough review of the Influx MP, now In-migration MP. Lenders have approved the amended IMP. OT management responsibilities are documented, including the activities of the OT representatives in what was the South Gobi Steering Committee for its implementation; OT must still contribute to the recently established Partnership Committee and this activity must be transparently and publicly disclosed. OT has also conducted a verification of the population changes in Khanbogd, through application of a number of tools (including of the population 'spike' at the time of the last audit). Both formal and informal population data, key informant interviews and triangulation using GIS and aerial mapping have been used; OT is commended for using a number of approaches to monitoring, valuable not only to OT but also the *soum*.

The expansion and reorganization of the South Gobi Steering Committee to form a new Partnership Committee is central to engagement and activities on in-migration matters. The Partnership Committee comprises OT, the Ömnögovi government and local government, and seeks to better coordinate development efforts across all parties. The IESC will follow up on ongoing implementation of the Committee and the long term South Gobi Strategy intended to be developed through this Committee by Q4/17, at the next audit. The above measures close out the previous non-conformance on the Influx MP.

***Worker Health and Safety***

The Health Team is a centralized entity under the HSES Department, and includes occupational health services and the main ISOS clinic. Occupational health services continue to focus on noise, respirable dust, silica and welding fume exposures to workers in high risk areas. In addition to the assessments and improvement actions being performed, education programs for improving workers understanding of health risks is also being conducted. In 2017, the Health Team has also introduced a mental health and wellbeing program.

The ramp up for the underground project will result in the addition of approximately 3,500 staff this year, many who have limited experience with OT's safety programs and underground construction. In addition to ensuring that the ongoing safety programs are equipped to handle the increase in OT employees along with contractor personnel, OT initiated a Culture by Design program to stress working together in support of safety practices.

The Critical Risk Management program, focusing on 17 critical risks to site personnel and conducting critical risk control verification, has been implemented throughout the site, including underground activities and operations by contractors. A new emphasis on quality critical control verifications is being implemented to further embed the program throughout the leadership and workers. Process Safety Management, to address potential hazards from the plant operating systems, considering chemical release, fire, explosion and other hazards, has been introduced in the Concentrator, Central Heating Plant, and Maxam explosives facility. The Health Team has also emphasized programs for fatigue management among truck operators in the Open Pit, TSF and Outbound Logistics areas, and manual handling risks in several departments, evaluating a large number of tasks to identify priority tasks and improvement plans.

### **Community Health and Safety**

Community health program initiatives continue, including the Healthy Herder program, funded by the DSF. All equipment has been purchased as planned and health screening activities for herders and *soum* residents have commenced; both in the countryside and in Khanbogd *soum* centre. A total of 1,139 individuals were health tested in this first round of screening (October 2016).

The adolescent- and youth-friendly clinic based in Khanbogd has, in January 2017, provided health screening for 450 10-17 year olds. The clinic is based at the Khanbogd *soum* hospital and works additionally through other youth programs in the *soum* to encourage youth participation and subsequent health screening.

OT reported no community safety incidents or concerns for this audit. Crime statistics continue to be monitored by OT and a small number of rare cases of criminal activity relating to the coal road and traffic at Tsagaan Khad were evident. OT is recommended to continue to engage with Police and other *soum* authorities in Khanbogd on potential safety and crime issues, particularly as they may impact OT's border/cross-border activities and future office in the Inner Mongolian Administration Region. Proactive engagement with the Khanbogd authorities appears to have been successful in limiting potential community-camp incidences at the Summer Camp accommodating the OT-KB road construction team; the team is commended for keeping close control over the contractor and management of this site in order to minimize any potential negative social issues associated with the camp.

The Emergency Response Procedure (ERPr) – Tailings Storage Facility (TSF) preparation continues with sensitisation of the Communities and local government teams on emergency notification processes demonstrating the sensitivity of this issue in the community. Herder households in the potential emergency area have been and continue to be engaged with contact information updated and a TSF-Emergency preparedness engagement plan in draft. Formal emergency response plans have been submitted to the *soum* office via the KB Emergency response committee. IESC recognises that the engagement on this topic will be an ongoing and sensitive process.

The ERPr–TSF includes records of potentially impacted households who are seasonally resident (i.e. have winter shelters in the potential emergency area). A TSF Community and Stakeholder engagement plan is to be finalized at the end of 2017 and will identify steps for communication with community officials and affected residents and herders within the emergency response coverage area to acquaint them with the OT emergency response program and preparedness measures in the event of an emergency. The IESC anticipates further discussion on both household identification and associated engagement activities at the next audit.

### **Cultural Heritage Management**

The OT Cultural Heritage Management Plan (CHMP) remains in place and the zero CH incident status has been maintained. Under the Cultural Heritage Management System (CHMS) procedures, a total of 830 Community Relations and Cultural Heritage inductions were provided in the audit period, along with 60 Land Disturbance Permits issued.

Cultural heritage site monitoring is occurring on 6 sites, specifically: Chog cave, Khurdet cave, OT-KB road, Shar Tsav, Melhii Tsohio, and Demchig Monastery. Under new laws in Mongolia, management of most sites has

now been taken over by cultural heritage rangers (local herders), training for these roles is being undertaken by the *aimag* Education Department.

Shar Tsav and Kurdet cave measures funded through the DSF are moving ahead. At Shar Tsav, the information centre, pedestrian walkway and observation stage have been constructed at the dinosaur footprint site, while protection fencing and information boards have been constructed at the Khurdet Cave, completing the first phase of work. From June 2017, additional protection measures and signage will be installed. The IESC commends OT and DSF partners in seeing positive implementation of these programs.

## 1 INTRODUCTION

The Oyu Tolgoi copper/gold mining Project (“the Project” or “OT Project”) is located in the *aimag* of Ömnögovi, in the South Gobi region of Mongolia, approximately 600 km south of the capital city, Ulaanbaatar, and 80 km north of the Mongolia-China border. The mineral resources were discovered in 2001 and consist of a series of deposits containing copper, gold, silver and minor amounts of molybdenum. The project involves a combination of open pit and underground operations, with ore processed through a 100,000 tons per day concentrator and with an expected concentrate production in excess of 500,000 tons per year. Shipment of product to customers commenced in July 2013.

In September 2013, D’Appolonia S.p.A. (from June 5<sup>th</sup>, 2017 RINA Consulting), located in Genoa, Italy, was retained by Oyu Tolgoi LLC to act as the Independent Environmental and Social Consultant (IESC)<sup>6</sup> for the OT Project being developed by Oyu Tolgoi LLC (the “Project Company” or OT), a strategic partnership between the Government of Mongolia, Rio Tinto (RT) and Turquoise Hill Resources. Since 2012 RT has also been appointed as the manager of the project on behalf of the shareholders.

RINA Consulting’s role as the IESC is to support the Senior Lenders by providing an external/independent monitoring evaluation of OT mine project activities with focus on (Health, Safety and Environment) HSE and social aspects during project operation that began on 1<sup>st</sup> September 2013. Within this role, the IESC reports periodically to the Lenders group on conformance with the environmental and social provisions contained within the Operational Management Plans which define how OT will implement the mitigation strategies set out in the ESIA and in the other relevant project documents. These include the Project’s Environmental and Social Impact Assessment ESIA, an Environment and Social Action Plan (ESAP) which included a list of time-bound future commitments and the Operations Phase ESMPs that represent the reference documents used by the IESC to monitor the Project Environment, Social, Health and Safety (ESHS) performances throughout operation.

This report presents the IESC’s understanding and assessment of conformance of Project commitments from an EHS and social perspective, based on site observations, written information made available by the Project through existing reports, disclosed studies and ad-hoc presentations, as well as from interviews with OT site personnel. The document provides a snapshot of the Project’s state at the time of the May 2017 visit. Although focus has been given to the assessment of how the commitments included in the Operational Management Plans are implemented by the Project, the audit is also a review of those issues identified in previous IESC visits that might still have implications during current project operation.

Specific activities conducted included the following:

- desk review of the EHS and social documentation and other project-related reports provided by OT;
- visits to the project sites and “spot” onsite observations of the implementation of EHS and social requirements;
- meeting with the project teams responsible for HSE and social compliance monitoring and review relevant plans and procedures;
- evaluation of implementation of the commitments contained within the OMPs and the ESAP;
- identification of deviations and/or gaps with respect to the OMPs and ESAP commitments, including recommendation for possible EHS improvements based on Good International Industry Practice (GIIP);
- follow-up and closure of findings and observations identified in the August 2016 IESC Audit Report<sup>7</sup> and

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<sup>6</sup> IESC Team members: Giovanni Battista De Franchi (Project Manager and Team Leader – EHS Specialist), Robert Snow (Senior Reviewer - HS and Mining Specialist), Dana Strength (Environmental / Hydrologist Specialist), Angela Reeman (Social / Community Specialist), Jo Treweek (Biodiversity Specialist).

<sup>7</sup> D’Appolonia, “Independent Environmental & Social Compliance Monitoring Report – August 2016 Site Visit Report”, Doc. No. 13-391-H9, October 2016.

- drafting of an IESC report (this report) to be publicly disclosed.

A close out meeting was held at the OT site offices on May 25<sup>th</sup> to share preliminary findings and to present the result of observations made during the visit that form the basis for this report.

The information, observations, and opinions presented in this report are those of RINA Consulting and are independent of those of the Project and/or the Senior Lenders. Where topics are not referred to, no risks to the Project have been identified.

## 2 PROJECT OVERVIEW

### 2.1 CONSTRUCTION AND OPERATIONS STATUS

The Project consists of a series of mineral deposits containing copper, gold, silver, and molybdenum to be mined by a combination of open pit and underground mining techniques. The Project has a mine life based on Proven and Probable Reserves of about 40 years (from 2016). Ore deposits are referred to as the Southern Oyu deposit and the Hugo Dummett deposit which together contain a currently identified resource of almost 25.4 million tons of copper, 81,600 tons of Molybdenum, about 5,150 tons of Silver, and 1,000 tons of gold. The development of the mine involves the construction of an open pit copper-gold mining operation at the Southern Oyu deposit, supplemented by production from the underground (Hugo Dummett deposit). The initial concentrator design is based on processing raw ore at a rate of 35 million tons per year (nominal capacity of 100,000 tons per day) with an expected concentrate production ultimately in excess of 500,000 tons per year.

The open pit mine started during Q2 2012 as a conventional truck and shovel operation operating 24 hours per day. The pit includes a series of 'benches' cut and blasted into the rock that act to stabilize the slopes within the open pit and also serve as the haul roads to enable ore and waste rock to be removed by trucks.

The underground mine is being planned as a block cave operation which involves the excavation of material that provides natural support from beneath the ore, causing it to fracture and collapse into the excavated void under the force of gravity. In addition to being a cost-effective underground mining technique, this process allows for the greatest proportion of ore body to be extracted relative to waste rock.

The process design to convert the ore into concentrate is based on conventional milling and flotation technology and proven equipment. The process includes primary crushing with coarse ore stockpiling. Crushed ore from the primary crusher is transferred via a 2.7 km overland conveyor to a stockpile near the concentrator and from here into the grinding circuit where a series of large diameter mills reduce the ore to small particles before either flotation and further processing or recycling to the grinding circuit. The flotation system separates valuable ore from less desirable minerals in large floatation cells where the Copper-containing materials are skimmed off for the next stage of the process while the sludge (tailings) are thickened to 60% solids in two thickeners and pumped to the Tailings Storage Facility (TSF) for disposal. Water from the tailings thickeners and TSF are recycled back to the concentrator. The final concentrate containing copper and gold is then thickened and filtered before storage in sealed bags for transport via trucks to the Gashuun Sukhait/Ganqimaodao border crossing with China.

Ancillary facilities that allow operation of the mine include a regional airport, main power supply currently via a dedicated 220 kilovolt (kV) overhead power line from the Inner Mongolian electricity grid in northern China, coal-fired central heating plant (CHP), water supply and treatment systems, maintenance facilities and warehouses, administration buildings, waste disposal facilities, fuel storage depots, administration facilities and accommodations camps, roads and transport facilities.

The Project achieved the operation phase in 2013 with open pit mining ongoing, the concentrator production rates progressively increasing, and the concentrate exported to China. For 2015, OT's second full year of production, the mine operated at record levels. Productivity improvements in the concentrator implemented throughout the year led to throughput exceeding nameplate capacity by year-end. Copper production for 2016 was 201,300 tons, and gold production was 300,000 ounces. Concentrator throughput through the first quarter of 2017 was approximately 112,100 tons per day, which was a record throughput. However, OT expects to produce 130,000 to 160,000 tons of copper and 100,000 and 140,000 ounces of gold in concentrates in 2017. The lower production when compared to 2016 is primarily the result of approximately one-quarter less copper head grade and approximately one-half less gold head grade from the current operating areas of the Open Pit.

After suspension in 2013, underground mining activities under the Restart program resumed in 2016 with ramping up of resources and personnel in 2017 for the Phase 2 Underground Project. Lateral development, mine infrastructure, ore handling equipment and construction of the conveyor decline are all advancing with attention to safety and quality. Local partnerships with international contractors are supporting the Project. With completion of underground development and cave establishment, the mine plans substitution of open pit ore with higher-grade underground ore beginning in 2020 and resulting in significantly increased copper production.

During the IESC May 2017 field visit, activities for the underground mine included advancement of the Conveyor to Surface decline and laterals development, the tie-in of Shaft 2 to mine workings to provide improved ventilation and serve as a second egress, initiation of the primary crusher construction and development for the underground magazine and workshops, and continued installation of ground support elements, improvements or upgrades to other mine infrastructure, and training and skills development for the underground work force.

No further decisions have been made regarding the potential development of a coal-fired project Power Plant and the expansion of the concentrator's capacity above 100 ktpd, both items subject to further environmental and social impact assessment as established in the ESAP.

## 2.2 REPORT ORGANIZATION

Subsequent sections of this report are organized as follows:

- Section 3.0– Issues Table;
- Section 4.0 – Health, Safety, Environment and Social Performance Management Systems;
- Section 5.0 – Environment;
- Section 6.0 – Social;
- Section 7.0 – Health and Safety; and
- Section 8.0 – Cultural Heritage.

The basic findings of the IESC review are presented in the form of observations, comments and recommendations that are generally described within this report. Two types of findings are included:

- non-conformances, included in the Issues Table (Section 3), which refer to issues related to Project commitments included in the Operational Management Plans and/or GIIP; and
- recommendations, included at the end of each section (4 – 8) which are suggestions for the proper implementation of required actions and closure of open issues and which are based on the collective experience and expertise of the IESC team members.

IESC's "recommendations" are not considered mandatory and therefore their implementation is not critical. However, the IESC encourages the Project to consider the usefulness of all these recommendations and incorporate them, as appropriate and if technically/economically feasible, into new management activities.

### 3 ISSUES TABLE

This chapter tabulates a summary of key non-conformances raised in this report based on observations made during the site visit, interviews with OT staff, as well as review of documentation provided during and after the site visit and consistent with our scope of work.

The table has been structured to provide a color-coding for strict non-conformances referenced with respect to Project commitments as included in the Operational Management Plans, in the ESAP and in the underlying OT monitoring documents and procedures which all together define how the OT operations comply with applicable Lenders' Environmental and Social Standards. The nomenclature of the color-coded categorizations is assigned based on the same non-conformance levels defined in the OT ESMP<sup>8</sup> which reflects the RT HSEC Management System classification.

The following descriptions are provided:

- **Class IV** - A critical non-conformance, materially inconsistent with the Project Standards or Management Plans, resulting in or reasonably likely to result in irreversible impacts to sensitive receptors or important resources or significant damage or irreversible harm or damage to an ecologically or socially sensitive resource or has the potential for an extreme health and safety incident.
- **Class III** - A material non-conformance, materially inconsistent with the Project Standards or Management Plans, that has not resulted in clearly identified impacts to sensitive receptors or important resources or material damage or irreversible harm or damage to an ecologically or socially sensitive resource or have the potential for an extreme health and safety incident, but it is reasonably likely to have such effects.
- **Class II** - A material non-conformance with the Project Standards or Management Plans, but not reasonably likely to result in impacts to sensitive receptors or important resources or material damage or irreversible harm or damage to an ecologically or socially sensitive resource or have the potential for an extreme health and safety incident.
- **Class I** - An incident not materially consistent with the Project Standards or Management Plans and not reasonably likely to present a threat to the environment, community or worker health and safety.

Action items are identified by the number of the mission (MX.Y), where X is the mission number and Y is the related action item number. It should be noted that the text description of the recommendations could be revised from one visit to the next to better reflect current field conditions; however the original item numbers are retained until closed as they refer to the same main issue.

Each non-conformance identified in the table will require actions from OT and will be followed-up by the IESC in subsequent site visits. The table includes a description of the finding, the level of non-conformance assigned, the reference to the Project commitments and/or relevant project document as well as recommendations for improvement based on the collective experience and expertise of the IESC. Please also note that non-conformances not sufficiently addressed, according to IESC opinion, could result in a level increase, independent from the actual material consequences due to the conditions, unless an explanation is provided to justify the decision to avoid any corrective action.

Overall, results of the present audit are as follows:

- No Class IV non-conformances have been identified;
- No Class III non-conformances identified;
- Two Class II non-conformances identified; and
- Seven Class I non-conformances identified.

The table below summarizes the status of non-conformances starting from the October 2013 IESC site visit.

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<sup>8</sup> Environmental and Social Management Plan (ESMP) - Doc. No. OT-10-PLN-0003 dated 01.09.2013.

Table 3-1: Status of Non-Conformances identified by the IESC

Mission No.	Site Visit	New Non-Conformances identified	Non-Conformances closed	Non-Conformances remaining open
M1	October 2013	26	N.A.	N.A.
M2	April 2014	11	8	29
M3	Desktop Audit August 2014	2	3	28
M4	November 2014	7	10	25
M5	Desktop Audit April 2015	0	3	22
M6	September 2015	4	6	20
M7	Desktop Audit April 2016	1	9	12
M8	August 2016	4	2	14
M9	May 2017	1	6	9

OYU TOLGOI MINE PROJECT

Table 3-2: Issues Table

Mission / Issue No.	Site Visit	Closing Date	Description	Non-Conformance	Reference	Status	Comments / Report Reference
<b>Environment – Water and Wastewater Management</b>							
M1.5	Oct.13 April 14 Desktop Audit Aug. 14 Nov.14 Desktop Audit April 15 Sept.15 Desktop Audit April 2016 Aug. 16	May 2017	Mitigations are required in the event of interconnection of hydrogeological units. These mitigations have not yet been implemented in all instances. OT is progressing efforts to abandon or convert to productive use these interconnecting bores.	II	IESC - April 2013 Audit  Water Resources Management Plan (WR04, 14)	Closed	See Section 5.1.2.8. Remaining six cascading bores in the Gunnii Hooloi bore field area have been successfully sealed and abandoned. OT has provided evidence of authorized decommissioning by the KB governor. Decommissioning performed in collaboration with the Basin Administration, TPC and local community participation. All nine cascading bores have now been sealed and abandoned.
M2.3	April 14 Desktop Audit Aug. 14 Nov.14 Sept.15 Desktop Audit April 2016 Aug. 16 May 2017		The drilling and installation of supplementary monitoring bores, as discussed in the WMP, has not yet been implemented.	I	Water Monitoring Plan, Section 3.2.6, 3.3.5  Water Resources Management Plan (WR14, WRm06)	Open	See Section 5.1.2.9. The drilling and installation of supplementary monitoring bores, as discussed in the WMP, has not fully been completed. A total of 20 supplementary bores were installed in the 2016 field season with an additional 11 piezometers installed to the southeast of the TSF, in an area of previously limited monitoring points. Additional supplementary monitoring bores in the Guuni Hooloi region will be installed during the 2017 field season (nine monitoring points across three sites). This has been reduced to a Class 1 non-conformance (from Class 2) reflecting near-term confirmed plans by OT to complete supplementary monitoring bore installation.
<b>Environment – Non-Mineral Waste Management</b>							
M8.1	Aug. 16	May	All contracts with local recyclers are expired since July 2015 and a	I	Non-Mineral Waste	Closed	See Section 5.3.2. Contracts with local vendors and recyclers for selected waste categories including plastic,

OYU TOLGOI MINE PROJECT

Mission / Issue No.	Site Visit	Closing Date	Description	Non-Conformance	Reference	Status	Comments / Report Reference
		2017	timeframe for replacing these contracts was not defined. In the meantime, recyclable waste such as plastic, metals, etc. are accumulated at the Interim Waste Recycling Center (IWRC) and at the new Waste Management Centers (WMC).		Management Plan (WM01, WM05)		scrap metal, car batteries, waste oil, and kitchen oil have been established with waste progressively removed from the site and disposed at Project authorized facilities. The Project is now in line with the principles and strategy included in the Waste Management Plan and is consistent with Good International Industry Practice (GIIP) requirements as well as with the provision of Lenders' standards.  This non-conformance is therefore closed.
<b>Environment – Air Quality</b>							
M1.11	Oct.13 April 14 Desktop Audit Aug. 14 Nov. 14 Desktop Audit April 15 Sept. 15 Desktop Audit April 16 Aug. 16 May 2017		Significant dust (particulate) emissions are generated intermittently at the coarse ore stockpile. A foam dust suppressant system installed and other mitigations have been employed with anecdotally overall good results. Better ambient air monitoring will allow more meaningful interpretation of overall success of these mitigations.	I	Atmospheric Emissions Management Plan (AQ05)	Open	See Section 5.5.2.1. There has historically been significant dust generation at the coarse ore stockpile (COS) facility. Numerous operational changes and other forms of mitigation have been realized resulting in visual reduction in TSP presence within the vicinity of the COS facility. Ambient monitoring to quantify particulate reduction has been difficult as samples have to date been collected only on a monthly basis, and thus highly susceptible to wind conditions and other operational considerations. A new continuous ambient air quality network will allow much better tracking of the efficacy of dust mitigation efforts and resultant potential impacts to sensitive environmental receptors (primarily the concentrator workforce and the Manlai camp). Significant mitigations have been implemented to reduce dust emissions from the COS. This non-conformance will be closed when meaningful ambient air quality monitoring data reflect adequate protection of the concentrator and camp environmental receptors. A much-improved ambient air quality monitoring network will soon become operational, as referenced in M1.12 below. Future interpretation of this data, in conjunction with demonstration of adequate occupational health and safety precautions, will allow closure of this item. This has been reduced to a Class 1

OYU TOLGOI MINE PROJECT

Mission / Issue No.	Site Visit	Closing Date	Description	Non-Conformance	Reference	Status	Comments / Report Reference
							non-conformance (from Class 2) reflecting near-term confirmed plans by OT to complete installation of the ambient air quality network.
M1.12	Oct.13 April 14 Desktop Audit Aug. 14 Nov. 14 Desktop Audit April 15 Sept. 15 Desktop Audit April 16 Aug. 16 May 2017		There are limitations to the existing ambient air monitoring network. The revised AQMP describes additional necessary equipment to monitor ambient air conditions relative to Project Standards.	I	Atmospheric Emissions Management Plan (AQMP-KPI02; Air Quality Monitoring Plan Sections 2.5, 4.1; Appendix B;)	Open	See Section 5.5.2.1. As noted in prior audits the existing ambient air monitoring network required improvement to meet commitments made in the revised AQMP, and to monitor ambient air quality relative to Project Standards. In Q4 of 2016 the necessary equipment was delivered to site. Since that time civil works have been completed including installation of power supply to the equipment and trail operations. Commissioning and on-site training is planned for Q3 of 2017 at which time the equipment will become operational. This has been reduced to a Class 1 non-conformance (from Class 2) reflecting near-term confirmed plans to complete installation of the ambient air quality network
M1.13	Oct.13 April 14 Desktop Audit Aug. 14 Nov. 14 Desktop Audit April 15 Sept. 15 Desktop Audit April 16 Aug. 16 May 2017		Stack emission sampling results from boilers at the Central Heating Plant (CHP) and KB airport do not meet Project Standards.	II	Atmospheric Emissions Management Plan (AM03)  Air Quality Monitoring Plan – Appendix B)	Open	See Section 5.5.2.2. Emissions quality of the CHP has been a persistent issue being historically poor relative to Project Standards. A third party Plant Emissions Testing Review identified numerous serious flaws with the existing sampling methodology. A Continuous Emissions Monitoring System (CEMS) will be installed on the single stack, in accordance with AQMP requirements, as part of the Phase 2 CP expansion to 130 MW. Other improvements have recently been made to the CHP including full refractory jobs at all boilers and replacement of over 1,500 bag filters.  This has been maintained as a Level II non-conformance due to near-term plans for OT to submit a NoC related to existing Project Standards and long-term for conformance with the same. It is expected that the

OYU TOLGOI MINE PROJECT

Mission / Issue No.	Site Visit	Closing Date	Description	Non-Conformance	Reference	Status	Comments / Report Reference
							submitted NoC will reflect adoption of Best Available Technologies (BAT) in conformance with applicable Project Standards.
M2.4	<p>April 14 Desktop Audit Aug. 14</p> <p>Nov.14 Desktop Audit April 15</p> <p>Sept. 15 Desktop Audit April 16</p> <p>Aug. 16 May 2017</p>		Stack emission sampling results from the incinerator do not meet Project Standards.	I	<p>Atmospheric Emissions Management Plan (AM06)</p> <p>Air Quality Monitoring Plan – Appendix C</p>	Open	<p>See Section 5.5.2.2. There have been long-term issues with incinerator performance as emissions quality has not historically met Project Standards. OT has since contracted to a contractor with autoclave for treatment of the approximately 100 kg of medical waste that is generated on a monthly basis. Other potentially hazardous waste streams, such as oily rags, can be managed at the lined waste management center.</p> <p>This has been downgraded to a Level I non-conformance due to near-term plans to decommission the incinerator. Instead alternative disposal and treatment methods will be employed for the disposal of potentially hazardous waste streams (e.g., oily rags and autoclaving of medical waste). It is expected that by the end year t (a) the incinerator will be decommissioned and no longer in use; and (b) the autoclave will be fully functioning.</p>
M7.1	<p>Desktop Audit April 16</p> <p>Aug. 16</p>	May 2017	Greenhouse gas emissions inventorying requires review to ensure consistency with international best practice reporting requirements (e.g., World Business Council for Sustainable Development).	I	Atmospheric Emissions Management Plan (AQ02 and AQ07)	Closed	See Section 5.5.2.4. A 2016 third-party Review of Oyu Tolgoi's Greenhouse Gas Emissions report was finalized in February 2016. This report provided recommendations including checking the consistency of emission estimation methods used by the Rio Tinto workbook approach. This consistency has since been verified in accordance with the 2016 Rio Tinto Guidance for Greenhouse Gas Energy Workbook. Rio Tinto's GHG inventorying is based on definitions provided in the World Business Council for Sustainable Development/World Resources Institute Greenhouse Gas Protocol.
<b>Environment – Biodiversity and Ecological Management</b>							

OYU TOLGOI MINE PROJECT

Mission / Issue No.	Site Visit	Closing Date	Description	Non-Conformance	Reference	Status	Comments / Report Reference
M2.6	Apr 14 Desktop Audit Aug 14 Nov 14 Desktop Audit April 15 Sept 15 Desk Audit April 16 Aug 16	May 17	Stakeholder Engagement Plan for biodiversity and ecosystem services.	I	Biodiversity Management Plan (B05) LBAP ID 24, (BMP Annex C)	Closed	<p>Section 5.9.2.2. Through the BAP OT committed to develop a “targeted Stakeholder Engagement Plan” (SEP) to cover implementation of on-site mitigation, OMP implementation and engagement related to regional/landscape level planning (BAP16) as well as providing a basis for complying with the BAP17 requirement for verifying OT’s progress in stakeholder engagement to Lenders. The Ecosystems Working Group has developed a biodiversity-related Stakeholder Engagement Plan (SEP) as an annex (Annex F) to OT’s overall SEP and a draft was submitted to lenders for review in July 2016.</p> <p>The need for more detailed, topic-specific stakeholder engagement action plans was identified in the previous audit to improve programming of key engagement activities for OT’s four offset projects..</p> <p>The SEP now identifies a comprehensive list of biodiversity stakeholders, specifies their areas of biodiversity interest and defines key messages that OT needs to convey. It articulates mechanisms, frequencies and levels of engagement and assigns responsibilities for doing so. SEP implementation records are maintained on a monthly basis specifying the biodiversity objective of engagement, key messages conveyed and outcomes of meetings. A copy of the May 2017 record provided evidence of engagement events specifically planned to address biodiversity issues, including illegal hunting. As part of the anti-poaching offset discussions regarding the collection of plants were included in community meetings and in information pamphlets. Table 1 in Annex F is partway towards planning stakeholder engagement activities. Some additional items have been recommended by the IESC to assist with advance scheduling of stakeholder engagements as well as tracking/monitoring the accomplishment of stakeholder</p>

OYU TOLGOI MINE PROJECT

Mission / Issue No.	Site Visit	Closing Date	Description	Non-Conformance	Reference	Status	Comments / Report Reference
							engagement overall objects for each of the offset projects. This non-conformance is now considered closed.
M4.5	Nov.14 Desktop Audit April 15 Sept.15 Desktop Audit April 2016 Aug.16	May 2017	Monitoring of critical Ecosystem Services	I	LBAP 17  ESAP Item 7; Pastureland and Livelihood Improvement Strategy; RAP Entitlements Matrix  BAP ID6	Closed	Section 5.9.2.3. Through the Ecosystem Services Group, OT undertook to develop a Monitoring and Evaluation Program for critical ecosystem services.  To comply with the requirements of PS6, OT must indicate its planned approach to monitoring, with appropriate consideration of ecosystem functioning and also levels of use and the benefits or values that people from Ecosystem Services. The monitoring framework must allow for any necessary corrective action that might be needed if a decline in the value or functionality of critical ecosystem services is detected over time.  A draft Ecosystem Services Monitoring and Evaluation Plan (ESMEP) was submitted to Lenders for review in June 2016. Lenders requested inclusion of indicators for ecosystem service use and benefit to allow OT to be able to demonstrate that it is not adversely affecting the benefits that people obtain from critical services. The ESMEP was updated in response to recommendations and comments received from the IESC in September 2016. OT has evolved the plan substantially and improved its ability to quantify change in supply and use of ecosystem services.  Despite some remaining gaps it is recommended that the plan should now be implemented and then its effectiveness in meeting OTs overall project objectives reassessed during the next Audit site visit.  This non-conformance is now closed
M8.2	Aug. 16 May 2017		Road Mitigation Strategy	II	BAP (13)	Open	Section 5.9.2.5. OT undertook to “develop and implement an OT-GSK road mitigation strategy that explores, but will not necessarily be limited to, the

OYU TOLGOI MINE PROJECT

Mission / Issue No.	Site Visit	Closing Date	Description	Non-Conformance	Reference	Status	Comments / Report Reference
							<p>following elements: a) road closures, restrictions on vehicle movements; b) formal engagement with regional bodies and institutions involved with regional-scale sustainable development on the implementation of certain mitigation measures that have relevance to regional-scale sustainable development; and c) traffic monitoring of the OT – GSK road as well as non-OT roads and monitoring of its impact on animal behavior”. The draft Strategy s submitted to lenders in July 2016 did not cover all aspects required to conform to the specification in the BAP. In particular it did not explore mitigation options, give any indication of proposed approach to monitoring of traffic or explain how animal behavior and responses would be addressed, for example through modeling or other interpretive approaches.</p> <p>As per the specifications of the BAP, OT and the Lenders agreed upon the formation of an independent expert panel to review road mitigation panel. The independent expert panel has completed its work and a draft report is in the review process.</p> <p>It is therefore not possible at this stage to provide further comment on the adequacy of OT’s Road Mitigation Strategy. This non-conformance will therefore remain until the panel report and OT/lender agreement on actions (per the BAP) are agreed.</p>
M8.3	Aug. 16 May 2017		Monitoring vegetation plots for potential effects of dust on pastureland	I	BMP B15	Open	Section 5.9.2.6. OT undertook to monitor vegetation plots for potential effects of dust pollution, as livestock production from pasture is a critical ecosystem service for the project and some complaints were made during the construction phase about elevated dust levels suppressing vegetation growth. . It is unlikely that dust from OT currently has significant impacts on pastureland growth, but there are no data to back this up or provide a basis for responding to any future complaints. OT should undertake an assessment to clarify overall

OYU TOLGOI MINE PROJECT

Mission / Issue No.	Site Visit	Closing Date	Description	Non-Conformance	Reference	Status	Comments / Report Reference
							<p>significance of this issue and necessity for dust monitoring. Resources have not been allocated to monitoring OT's 32 permanent vegetation plots for the last two years. A contractor (National Society of Ecosystem Conservation) has been selected for this work and it is a work in progress.</p> <p>This non-conformance from the previous Audit remains as there is still no evidence to allow it to be closed out. OT has reportedly submitted a request to procurement for an external contractor to monitor whether dust is affecting plant growth – specifically along the road to Khanbogd and this non-conformance will be closed when this work is underway.</p>
M9.1	May 2017		Propagation of priority plant species	I	<p>BMP (Appendix 1) (OT-10-E14-PLN0003)</p> <p>OMP (OT-10-E14-PLN-0007) Table 9</p> <p>Land Disturbance Procedure (OT-10-E14-PRC-0003-E)</p> <p>Priority Plant Protection Procedure (OT-10-E14-PRC-0007-E)</p>	Open	<p>Section 5.9.2.4; 5.9.2.8. Measures to protect priority plant species and avoid and minimize project-related impacts are described in the Land Disturbance and Priority Plant Procedures and are implemented through application of the mitigation hierarchy. The Priority Plant Protection Procedure describes the necessity for OT to develop techniques to grow priority plant species and specifically research how to propagate them, where species have been or may be impacted.</p> <p>A priority plant survey of Khanbogd soum was carried out in 2016. OT has mapped locations of priority plants in the MLA and this information is used as part of the project review under the Land Disturbance Procedure.</p> <p>Pre-disturbance surveys are done as part of the project review, and include an assessment for the presence of priority plants.</p> <p>Trials of propagation methods in the nursery continue and efforts to improve understanding of the distribution and habitat requirements of priority plants are also ongoing.</p> <p>Despite commendable progress, however, some priority</p>

OYU TOLGOI MINE PROJECT

Mission / Issue No.	Site Visit	Closing Date	Description	Non-Conformance	Reference	Status	Comments / Report Reference
							<p>plant species that have already been exposed to impacts still do not have assured propagation methods either developed or researched. For example, <i>Spongiocarpella grubovii</i>, a species for which OT needs to demonstrate a net positive impact, was found at a few sites on the MLA and a recent survey established that its distribution extends slightly north of the mine lease. The IESC were not provided with distribution for this species throughout Mongolia. For OT to meet its NPI commitment for this species it needs to: a) ensure remaining populations on the MLA are completely protected from any further disturbance b) search for additional populations off the MLA and c) demonstrate ability to propagate this species, particularly since the on-site population has already been impacted.</p> <p>Further targeted searches for some species are needed, including <i>Incarvillea potaninii</i>. These need to be carried out an appropriate time of year (e.g. when plants are flowering) and are particularly important in the light of uncertainties about development planning footprint and decreased presence of biodiversity staff on-site. Detailed descriptions of the habitat features associated with priority plants where they occur will be helpful to improve understanding of habitat requirements and assist in development of propagation techniques. OT needs to demonstrate that it has a comprehensive programme of research on propagation techniques for all priority species under way, including all those that have already been exposed to impact, such as <i>S.grubovii</i>.</p>
<b>Social –Resettlement, Compensation and Livelihoods Improvement</b>							
M1.23	Oct.13 April 14 Desktop Audit		An Outcome Evaluation of affected herders is a specific commitment in the Resettlement Action Plan and is due to be conducted for economically displaced and other affected herders in	I	Resettlement Action Plan (Sections 10.1, 10.2 and 10.4)	Open	Section 6.3.2.2. The Multi-disciplinary Team (MDT) study commenced in early 2016. The MDT team was selected and methodology and timeframe discussions occurred, including engagement on the research approach of 100 participant herder households in

OYU TOLGOI MINE PROJECT

Mission / Issue No.	Site Visit	Closing Date	Description	Non-Conformance	Reference	Status	Comments / Report Reference
	Aug. 14 Nov. 14 Desktop Audit April 15 Sept 15 Desktop Audit April 2016 August 16 May 17		Khanbogd <i>soum</i> .				<p>Khanbogd and a control group in Sevrei <i>soum</i>. A joint fact finding mission and conflict resolution training were also been conducted with the TPC, MDT and IEP, organized by the IFC/CAO. Fieldwork was undertaken in May 2016, during which 110 households were interviewed (10 more than design), with a draft report to be provided to the Tripartite Council in mid-September. The work was completed in Q1/2017. While it was positive to see tangible progress made, the report was not able to address this outstanding action. The process of evaluating outcomes for herders in Khanbogd has been significantly delayed and it is important that this study reaches a timely conclusion. In August 2016 the IESC advised the importance of all parties agreeing to success criteria or 'outcomes' that once achieved, will enable the economic displacement program to be eventually considered closed. The MDT study is now closed and this item remains open.</p> <p>As of May 2017, the Communities Team has announced an EOI for an Outcome Evaluation and has engaged with Lenders and the IESC to provide additional, detailed technical advice on the work (ongoing at the time of this report). This non-conformance remains open until the successful completion of the Outcome Evaluation.</p>
<b>Social – Influx Management</b>							
M8.4	August 2016	May 2017	Allocate appropriately experienced human resources, from OT, RT, and/or others, to updating OT's approach to influx management. Finalise the revision of the Influx MP in a manner that accurately reflects the current situation locally and regionally. Ensure that influx risks are adequately integrated into OT management processes including the South Gobi	II	IFC PS1 (s.19)	Closed	See Section 6.5.2.2. The South Gobi Steering Committee terms of reference did not identify influx management (including strategic advice and operational decision-making) as an item of responsibility; the CSP staff allocated to influx management were not sufficiently experienced to address this issue requiring senior-level coordination and past experience to ensure appropriate, targeted, and responsive management of this complex and cross-cutting issues, for which social risks have already been experienced. The revision of the Influx MP

OYU TOLGOI MINE PROJECT

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			Steering Committee.				<p>had been noted as a work in progress.</p> <p>As at the site visit May 2017, the In-migration MP has now been comprehensively re-written. Governance arrangements have been established with the <i>soum</i> and a suite of management actions established for implementation through the updated MP.</p>