



# OYU TOLGOI MINE PROJECT

## IESC REPORT



Interim Report: April 2018





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Interim Report: April 2018**

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Acronyms

<b>AEMP</b>	Atmospheric Emissions Management Plan
<b>AQMP</b>	Air Quality Monitoring Plan
<b>ARFFT</b>	Aircraft Rescue and Firefighting Team
<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>CBM</b>	Core Biodiversity Monitoring
<b>CCFV</b>	Critical Control Field Verification
<b>CCV</b>	Critical Control Verifications
<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>ERPr</b>	Emergency Response Procedure
<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>ESWG</b>	Ecosystem Services Working Group
<b>GBC</b>	Global Biodiversity Conservation
<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>HSEC MS</b>	Health, Safety, Environment and Community 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>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>SMART</b>	Spatial Modeling and Reporting Tool
<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:

- evaluate the implementation of the commitments contained within the OMPs and the ESAP;
- identify deviations and/or gaps with respect to the OMPs and ESAP commitments, including recommendation for possible HSE 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 October 2017 IESC Desktop Audit report<sup>5</sup> and in the December 2017 IESC detailed Water Review report<sup>6</sup>.

This report details the findings of the IESC during the April 2018 audit conducted as a desk-top review of the documentation provided and teleconferences with OT site personnel held between the 16<sup>th</sup> and 26<sup>th</sup> April 2018. The main scope was to review the most recent environmental, social, health and safety documentation/data associated with Project operation, to highlight any impacts/incidents reported by the Project since the last IESC site visit and to identify whether the Project mitigation measures are being implemented as required.

The report provides follow-up on the status of non-conformances 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.

The main observations of this desk-top exercise are summarized as follows.

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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> RINA Consulting, “Independent Environmental & Social Compliance Monitoring Report – October 2017 – Interim Report”, Doc. No. 13-391-H11, March 2018.

<sup>6</sup> RINA Consulting, “IESC Report: OT Detailed Water Review – London Meeting: December 5th - 6th, 2017”, Doc. No. 13-391-H12, January 2018.

### ***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. 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.

### ***Water and Wastewater Management***

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).

A1 in 25-year flood event occurred on sit in early August 2017. This flood event resulted in a significant test of the Undai River Diversion. Following this event a Detailed Water Review was completed in December 2017 with results contained in the summary document *IESC Report: OT Detailed Water Review (December 2017)*. Key outputs from the Q4 2017 detailed water review are summarized in this report. The December 2017 Detailed Water Review also incorporated findings of the dispute resolution effort undertaken by under the International Finance Corporation (IFC) Compliance Advisor Ombudsman (CAO). Outputs from that effort are presented in the document *Multi-Disciplinary Team and Independent Expert Panel Joint Fact Finding Summary of the Expert's Reports (December 2016)*.

In the 2017 field season OT completed installation of additional monitoring bores in the Guuni Hooloi region (nine monitoring points across three sites). Drilling and installation of supplementary monitoring bores, as discussed in the Water Monitoring Plan (WMP), has been fully implemented. An additional 20 historic exploration bores will be sealed during the 2018 field season.

OT consumption of raw water from the GH aquifer, which is brackish, averaged 400 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 2017 an overall water recycling efficiency rate of 86.2% was achieved, similar to the 2016 value of 86.2%. 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 advanced with placement of topsoil over NAF and PAF mineral waste layers; vegetation remains to be implemented at the trial area.

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 rockfill for the embankments to provide for projected tailings deposition through 2018 about 32-percent complete. Reclaim water management within the TSF has been managed by the barge pump station, although freeboard levels for the reporting period March 17 to April

6, 2018 were deficient relative to design requirements. Active construction in the vicinity of the reclaim pond should increase freeboard. Seepage emanating from the toe areas in the northeast section of the TSF is within design estimates for the facility, and is being monitored. In December 2017, seepage at the toe of the south embankment was also observed, and the TSF Design Engineer is preparing an updated plan for seepage collection and control.

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

From the information provided during the audit, the Project continues to be self-sufficient in the management of waste produced during operation. The Interim Waste Recycling Center (IWRC) has been decommissioned and handed over to Environmental team from the Infrastructure department since December 2017. The Waste Management Center (WMC) continues to be properly operated by a prime contractor company that is sub-contracting to other recycling companies the management of specific wastes such as technical oil, waste kitchen oil, waste metal, waste battery, waste paper and obsolete cable. The Project continues to use cell 1 for the disposal of general waste which has reached 61% of capacity. Meanwhile, the engineering drawing stage of cell 2 has been completed and construction is planned to start in Q4 2018 together with a third cell.

#### ***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.

A “Purchase and Install flexible windbreak netting in the COS building” project is in progress. This project is expected to significantly reduce particulate wind erosion at the COS building location. The netting which will be sourced new, is made of HDPE, contains an anti-UV agent, is fire retardant, and widely used in various industrial fields to prevent dust emissions. An internal Capital Funding Request has been completed and approved. Installation of the netting is scheduled to commence in Q2 of 2018 and be completed by Q3/Q4 of 2018. It is expected that the netting will significantly reduce wind velocities and dust generation at the COS building and successful implementation will be documented in subsequent audit reports

A new ambient air quality network has been installed at site and commissioned. The system is now operational and resultant data, which will be produced on a continuous monitoring basis, will be reported on in future IESC audit reports.

Emissions quality of the CHP has been a persistent issue having historically been poor relative to Project Standards. A third party Plant Emissions Testing Review identified numerous serious flaws with the existing sampling methodology. In 2018 a Continuous Emissions Monitoring System (CEMS) will be installed on a single main chimney as part of the Phase 2 CHP expansion to 130 MW. This is in accordance with continuous monitoring requirements of the AQMP. Other improvements have recently been made to the CHP including full refractory jobs at all boilers and replacement of over 1,500 bag filters.

OT records greenhouse gas emissions (GHGs) and reports 2017 total emissions of a value of 1,572,355 CO<sub>2</sub> (eq). This is higher than the generation in full year 2016 of 1,429,626 tonnes of CO<sub>2</sub> (eq). The increase in GHG emissions is primarily attributed to the increase in purchased electricity for construction of the Phase 2 underground project. Of the 2017 total over 80% of GHGs generated were related to the purchase of electricity with Scope 2 emissions of 1,274,681 CO<sub>2</sub> (eq). Scope 1 direct emissions were 297,673 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 inventorying 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 the Open Pit Emergency Response Procedure has been updated in 2018. Updating of the ERPr – TSF has not occurred pending refinements planned for delineating the downstream emergency coverage area, and briefing of community residents on the TSF and emergency response plans remains suspended. Updating and plans for implementation of the TSF Community and Stakeholder engagement plan should resume under the current ERPr – TSF.

The Underground Emergency Response Plan was updated in January 2018 and submitted to the Ministry of Mines, which identifies key ongoing activities for the underground mine development through the second half of the year.

#### ***Transport Management***

Transport Service Providers have maintained their induction, communities and environmental awareness training programs, and have continued the fatigue monitoring and management program for copper concentrate truck drivers. To supplement shipping of concentrate via the OT-GSK road, OT Outbound Logistics plans to ship approximately 20 kilotons of concentrate to the Choir rail terminal for export in 2018, and have delivered 9 convoys in February 2018. The Transport Management Plan should be updated to reflect current operations including the OT to Choir roadway corridor, and management controls for safety and monitoring should be implemented and confirmed.

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

The non-conformance on the road mitigation strategy has been closed with a recommendation for additional data collection and interpretation included to achieve a robust mitigation strategy. A new level III non-conformance on avoidance of priority plant species has been raised (specifically for *Spongiocarpella grubovii*).

#### ***Managing impacts associated with powerlines***

##### ***Insulation and bird electrocution monitoring***

Since the previous audit, there have been relatively few electrocutions of birds in the Gunii Hooloi borefield: five bird (four common ravens and one durian jackdaw) electrocutions occurred on Gunii Hooloi power poles (four on non insulated power poles and one on an insulated power poles). This compares with 13 in 2017 and 34 in 2016. Based on the low electrocutions OT did not insulate 11 low risk poles in the Gunii Hooloi bore field. OT will continue to monitor these poles as well as the other 119 poles that were insulated to evaluate the effectiveness of the mitigation (i.e. insulation and bird landing deterrents).

##### ***Priority bird species collision monitoring***

Since the last audit, 22 bird collisions (17 Pallas's sandgrouse, 3 cinereous vulture, 1 owl, 1 whooper swan) occurred on OT's 220kv powerlines. There were no houbara bustard mortalities from collisions and no other priority bird species were involved in collisions.

As part of OT's ongoing efforts to minimize its impacts on houbara bustard or great bustard it is actively engaging with the local NGO (WSSC) who have initiated a multi-year houbara bustard study.

#### ***Stakeholder Engagement***

During this audit the IESC was provided with documentation demonstrating more detailed planning of: a) future engagements and b) records of previous engagements. The IESC was provided with a revised version of the Stakeholder Engagement Plan (SEP) Implementation Record, summarizing meetings that took place in

2017, grouped according to relevant offset projects. Following on from requests made during the previous audit the IESC was also provided with a schedule of stakeholder engagements for 2018 with proposed meetings having been categorized according to their relevance to each of the four offset projects. A schedule of planned 2018 engagements relating to the railway fence removal project was shared with IESC in response to a concern raised by IESC that this level of detailed planning was previously absent.

#### Ecosystem Services

The ESMEP Summary Report (2017) was made available to IESC for review as part of this audit. IESC were informed that generally, supply of ecosystem services has not changed. Use of critical ecosystem services in some cases were changed slightly but no obvious large changes in use were recorded.

OT informed IESC that in 2017 all monitoring for all indicators with thresholds was implemented. However a large number of indicators still do not have thresholds defined, including some that are defined by national government and/or required the development of the Rangeland Metric, which has now been completed. There are a number of biomass, fresh water & water regulation indicators that do not yet have thresholds established. Rehabilitated riverine habitat also needs to take into consideration percentage survival of the species planted.

OT is committed to a demonstrable 10% gain in rangeland quality across 35 000 Ha of pastureland to verify the success of its Sustainable Cashmere Project (SCP). However, overstocking with goats and not having stocking limits in place will likely obstruct the achievement of this goal. The 'Quality of pasture rehabilitated' is pending completion of a report and was therefore not included in the final ESMEP. Some of the pastureland carrying capacity was exceeded by multiple times (red threshold). OT's explanation for this was primarily due to the drought and hay was provided to herders to assist them over the winter months. However, the combination of approximately 1/5 of KB soum's pasture carrying capacity having exceeded the red threshold together with a 76% increase in livestock in the soum since 2010 (goats have almost doubled in numbers since 2010) is cause for concern especially in times of drought when the vegetation is already stressed and additional pressure is placed on good grazing land. These exceedences emphasize the fact that livestock stocking limits urgently need to be set, as has already been recommended by IESC and Lenders during previous audits. There is no threshold for 'number of livestock' and no action has been taking despite the estimated 15% annual increase in livestock.

#### Protection of priority plant species

Previous Lender Audits have expressed concerns over the level of assurance needed regarding ability to achieve required outcomes for priority plant species. Reliable propagation and restoration techniques had not been established for all priority species affected by planned disturbance. Risks to *Spongiocarpella grubovii* were highlighted as a particular case due to the elevated threat status of the species and its coincidence with planned disturbance locations. Specific concerns included lack of understanding of its distribution and habitat requirements on the mining lease area (MLA), lack of progress in developing propagation methods, failure to address potentially significant cumulative impacts and on-going disturbance of this species on the MLA without evidence of successful translocation or propagation. The cumulative impacts on *S. grubovii* are of particular concern as a much of the known distribution of this species within the MLA has already been exposed to impacts from construction of the OT plant and camp infrastructure.

In response to these concerns OT identified six activities (or projects) intended to improve delivery of priority plant commitments and specifically *S.grubovii*. OT has made good progress in a) understanding the distribution of priority plant species on its MLA and in close proximity to its operations (including area and population size) leading to an expansion in range and population size compared to the ESIA baseline distribution; b) its habitat requirements; c) distribution of *S.grubovii* in relation to infrastructure locations; d) engagement of the University of Mongolia to reassess the threatened status of *Spongiocarpella grubovii* – likely to commence in 2019 – as well as to provide support in propagating this species.

OT still needs to gain a better understanding of a) *S.grubovii's* plant life history and its reproduction such as when it flowers and seeds; b) its conservation status in light of recent distribution mapping; c) priority plant

trials already conducted; d) new priority plant propagation trials and importantly e) *S.grubovii*'s ability to transplant particularly considering the large number of individuals that were transplanted from Shaft 4 to the NPPC; and f) national populations to better understand the importance of OTs on- & off-site populations in relation to national populations.

#### Avoidance of impacts on priority plant species

Approximately 200 Ha of new disturbance was permitted through the LDP process since the previous audit. Despite OT's good progress on these activities and its demonstrated ability to avoid impacting part of the *S.grubovii* population associated with the location of Shaft 4 (through use of the Land Disturbance Registration Plan Log Sheets and investigation of alternative infrastructure sites); recent infrastructure locations have impacted on considerable numbers of *S.grubovii* individuals (2800) that were relocated to the NPPC.

IESC acknowledges the considerable progress OT has made on previous IESC recommendations relating specifically to *Spongiocarpella grubovii* including a) extensive field surveys that have led to a substantial increase in distribution range and population size of this species in the region; b) engagement of the University of Mongolia to assist in reassessing the threatened status of this species as well as fast-tracking methods of propagation and c) efforts to avoid and minimise impacts on *S.grubovii* through investigation of alternative infrastructure locations.

However, IESC has raised a level III non-conformance<sup>7</sup> with respect to impacts on priority plant species (specifically *Spongiocarpella grubovii*). The impact on 2800 individuals since the last audit (estimated as >20% of the population on the MLA), coupled with lack of evidence that successful propagation, translocation or restoration can be achieved for this species, means there is insufficient assurance that a net gain can be achieved in line with lender requirements (PS6 and PR6). OT's Biodiversity Management Plan commits it to applicable Lender Standards including PS6 & PR6. As is made very clear in paragraphs 14 & 17 of PS6 and in PR6, a case must be made for achieving net gain with strong evidence prior to major disturbance taking place in natural critical habitat or areas occupied by priority biodiversity features. Propagating, translocation & restoring threatened plants to post-mining landscapes frequently fails.

Currently, due to recent impacts the population on-site is in deficit and the methods that will be used to achieve gains through restoration are not established.

#### Mitigation/ Propagation of priority plants

No further progress since last audit as over winter months. OT will continue to improve its knowledge on propagation of priority plant species from seed already collected and will continue to collect new seed. Information obtained on habitat preferences, during plant distribution mapping, will also assist in the successful propagation of species. OT has engaged the University of Mongolia to assist with propagating this species; a three-year research plan has been developed to help fast-track progress. Additional seed of *S.grubovii* needs to be collected as a priority at the correct time of year.

#### Rehabilitation

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<sup>7</sup> After discussion of the IESC concern related to avoidance and propagation of *S. grubovii* and the Level III non-conformance, OT has issued an objection to this non-conformance based on the following. Impacts to priority plants during construction were identified in the ESIA and the commitment was not to maintain net positive impact during the construction phase of the project. To minimize and mitigate the impacts to priority plants, including *S. grubovii*, hierarchical processes have been incorporated into the Land Disturbance Control and Rehabilitation Management Plan (OT-10-E14-PLN-0005) and the Priority Plant Protection Procedure (OT-10-E14-PRC-007). All requirements under these plans and procedures are applied by OT through construction and operational activities. As outlined in the Priority Plant Protection Procedure, research is required to develop alternative methods of propagating plants for future use in rehabilitation and this research is underway for *S. grubovii* and two other priority plant species. The established OT procedures are being followed and will continue to be followed through the latter stages of construction and during operations, to minimize impacts to *S. grubovii* (and other species of priority plants).

There has not been any additional rehabilitation since the last audit due to it being winter.

*Bor Ovoo Spring*

There has been no change since the last audit due to winter conditions.

*Waste Rock Dump revegetation trials*

Subsoil and topsoil placement took place between 1-4 December 2017 on the WRD revegetation trial. With the assistance of open pit heavy machinery soil was unloaded and spread at various depths. Seeding, either by hydroseeder or seed drill is scheduled to take place in Spring 2018, in late May and early June to avoid high speed wind season.

*Managing impacts related to traffic and transport*

Since the October 2017 desktop audit there have been no wildlife incidents involving OT vehicles. A single khulan, a gazelle and several camels were killed by non-OT vehicle using the OT-GSK road. OT continues to monitor incidents occurring as outlined in the BAP, BMP and Road Mitigation Strategy (RMS) so that corrective actions can be identified if appropriate.

The RMS Panel suggested that the greatest contribution by OT, and the best way to achieve a net gain/net positive impact for these species would be to successfully implement biodiversity offsets that reduce cumulative effects over the long term across the south Gobi by targeting the greatest sources of pressure, (currently not the OT-GS road), and supporting those efforts with the scientific knowledge that OT can generate from this program.

Khulan continued to be tracked through 2018 and movement data was analyzed and included in the CBM report. Specific to the OT-GSK Road the number of road crossings remained within the Green Threshold, as outlined in the BMEP.

No changes in monitoring have occurred following the RMS Panel's recommendations: OT plans to continue the monitoring of movements using GPS collars. However the Panel recommended a greater emphasis on studying black-tailed (goitered) gazelle since they are more threatened and less well understood. An additional 20 GPS collars will be deployed on goitered gazelles in September-October 2018. WCS annually evaluates the GPS data to evaluate khulan movements.

Based on the recommendations of WCS and the RMS Panel, a revised RMS was prepared in Q1 2018 and submitted to Lenders. This is based on 4 pillars, with an emphasis on monitoring and offsets:

- 1) develop and support a Road Mitigation Review Panel;
- 2) monitor vehicle numbers and speed on the OT-GSK Road;
- 3) monitor wildlife movements, including road crossings (i.e., of radio-collared khulan and gazelle); and
- 4) deliver the offset projects and contribute to the cumulative effects management of the South Gobi region."

IESC considers it appropriate to incorporate an additional explicit step or pillar addressing earlier steps in the Mitigation Hierarchy, to allow management responses to be identified should monitoring results suggest they are necessary, rather than relying on offsets alone (e.g. "assess and evaluate monitoring results to determine need for impact mitigation (minimisation) measures". These measures might include traffic management measures or measures to encourage crossing at certain locations (e.g. by enhancing positive features associated with regularly used crossing points).

The non-conformance on this issue has been closed since Lenders have approved the Road Mitigation Strategy however IESC suggests that OT should commit time and resources to enhance understanding of the ecological basis for use of particular road crossing points. This is in line with specialist recommendations to finalise a "detailed model of khulan behavior that includes a good understanding of the factors that drive khulan movement" and crossing behaviour, "such as the need for water, pasture, and shelter, and social behaviors like

finding mates and foaling". The IESC commends the investments that have been made by the Project to establish a robust analytical framework through monitoring. To complement this, it is important to ensure that the results are reflected in the RMS, by collecting the empirical evidence and conducting the analytical work needed to improve knowledge of the factors determining where khulan cross and to use this to confirm the need (or not) for impact minimisation measures as the road network grows or if traffic levels increase in future. Such evidence is also likely to be needed to underpin the relevant offset project and account for net gain.

In the current situation, the barrier and fragmentation effects associated with OT's road are relatively minor in comparison with those of the coal road at the border between Mongolia and China that has an estimated road queue of trucks 100 km long at times. OT informed IESC that the Government has implemented changes in coal delivery to reduce congestion on the coal road and levels of off-road driving, which started in December 2017. IESC still needs to review records of correspondence between government and OT.

#### Managing pollution impacts

##### Dust monitoring

The draft report on the impact of dust on rangeland, written in Mongolian, was submitted to OT in April 2017. IESC will be provided with a copy of this report to review during the next audit.

##### Selenium

Since the last audit (during winter), there were no birds nesting or any bird observed around TSF seepage. There has been no nesting as winter conditions have been present since the previous audit.

Water quality in TSF seepage water remained relatively constant throughout 2017. With respect to selenium concentrations, these were at or below detection limits (0.1 mg/L) in the 2017 samples. There were no samples taken between November 2017 and March 2018 due to winter conditions as the seepage ponds were frozen. Monitoring of the seepage ponds has resumed with the thawing of the ponds.

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.

**Anti-poaching:** IESC were provided with a copy of the anti-poaching annual report. Work has been progressing as planned. Although there were some obstructions to planned activities, such as MAPU and MAT patrols; these issues have been resolved and teams were able to return to normal operations. Data suggests anti-poaching may be declining although this can only be verified through longer-term data collection. Khulan monitoring shows a focus on water points which makes them attractive to targets; this finding is being incorporated into adaptive management on monitoring. Household surveys suggest reduced consumption in goitered gazelle, saxaul & khulan (2015-2017). The anti-poaching project includes a component on illegal harvesting of rare plants.

**Sustainable cashmere initiative:** A rangeland metric has been developed by Mongolia Country Program (WCS) and the Arthur Rylah Institute for Environmental Research (ARI). This will assist OT considerably with monitoring rangeland condition. Although the cashmere sale took place in April 2018 the results of the sale were not available at the time of undertaking this audit therefore IESC was not able to assess whether previous recommendations had been acted upon. GPS collaring of goats showed in some instances, where pasture was sufficient, intensive goat grazing occurred in a very small area (1km) whilst in instances where grazing was poor goats displayed considerable long distance movement patterns. The crucial issue of developing incentivization schemes to reduce stocking rates is still a work in progress. Alternative sustainable livelihoods are also still a work in progress but OT is planning discussions with Mongolian banks about micro-loans.

**Powerline insulation expansion project:** The kick-off meeting for the insulation of additional 330km long of 15kV powerlines took place in November 2017 and implementation of project scope commenced the same month. WSCC, the appointed insulation contractor, accomplished a few tasks over the winter months and insulation is scheduled to be completed by Q2 2018.

The national powerline standard proposal was finalized and will be included as a schedule of the existing contract of WSCC. The revised scope includes an avian friendly national standard for low-and medium-voltage powerlines as well as a feasibility study for high voltage powerline impacts.

**Railway fence removal:** The fence removal pilot project has obtained all necessary permissions. A kick-off meeting took place on 10<sup>th</sup> April 2018 including all stakeholders.

#### Monitoring and Adaptive Management

After one year of monitoring most of the indicators and thresholds appear to be fit-for-purpose although a number of indicators are still lacking thresholds. In 2017 only two indicators exceeded orange thresholds: 'Carcass density within the anti-poaching offset landscape' increased from 1/200 km<sup>2</sup> (2016) to 1/52.6km<sup>2</sup>.

Monitoring was not possible for a number of indicators due to absence of data (P1 and P11), absence of an appropriate rangeland metric (P2) although this now exists, absence of thresholds that needed to be provided by government. The following features were not monitored in 2017: ungulate population ground survey; goitered gazelle movement via GPS collaring; argali population size and distribution; houbara bustard/ raptor community; tall Saxaul; rare plant survey; granite outcrop floral community survey. OT's routine on-site monitoring included monthly wildlife surveys (for short-tied snake eagles, small mammals, ungulates in OT MLA, bird surveys, Raven counts at WMC), Traffic volume monitoring, Bor Ovoor monitoring, animal incidents, and illegal wildlife inspections. Off-site monitoring undertaken by WCS included khulan movement, khulan foal counts, khulan carcass survey, rangeland condition monitoring, Siberian elm tree monitoring, poplar groves, priority plants, 220KV powerline monitoring,, low- and mid-voltage powerline monitoring, OT-GS road monitoring, small mammals, bird flight diverter malfunction and wildlife observations along OT related infrastructure.

#### Resources and staffing

There have been no changes in OT staffing (including previous staff relocations to Ulaanbataar) and/ or contractor resourcing since the previous audit. However, several members of the monitoring, flora and fauna teams will be changing rosters in summer 2018 to spend more time on-site. Some will return to be permanently based at site, others will have a regular roster that has them splitting time between site and UB.

The CBM budget for 2018 has increased primarily due to the planned khulan and goitered gazelle collaring.

All of the biodiversity monitoring and offset projects are currently under multi-year contracts. Wildlife Conservation Society (WCS) and Ecomineral continue to provide support under their existing multi-year contracts until 2020. A new three-year contract was awarded to Global Biodiversity Conservation (GBC) in Q1 2018.

### **Social**

#### Labour and Working Conditions

As at 28 February 2018, according to the OT Workforce Ratio report there were 14,037 workers at the OT operation, including those employed by OT LLC and by contractor companies. This is an increase of 1,192 from the previous audit. These include workers at the mine site (including UG), Dalanzadgad, Ulaanbaatar and Khanbogd. A total of 13,169 are Mongolian nationals, or 93.82%, which is comparable to ratio to the previous audit. Investment Agreement requirements are met, with 98.18% of mining and mining-related contractors are Mongolian nationals (minimum requirement is 75%), and 90.62% of construction workers are Mongolian nationals (minimum requirement is 60%).

The number of workers from Ömnögovi has increased by 355 since the previous audit. As at 28 February, of the 2,635 workers from Ömnögovi, 55.1% are from Khanbogd, and 30.4% are from Dalanzadgad. Of the Ömnögovi workers, 20 are in leadership positions, 23 are engineers and professionals, 173 are operators, 104 are in trades and 2,315 (87.9%) are in non-mining roles.

Measures to increase local employment are ongoing. Implementation of the relocation strategy “Project Rose” was completed in January 2018, where non-critical site based roles were moved to UB, DZ or KB offices. In total, 237 roles were relocated, while OT also continues its efforts with the soum to populate the South Gobi Skills Database, and match local people to work opportunities. As of 28 February 2018, OT reports 1,667 individuals are registered in the database. OT’s Khanbogd-based HR Officer continues to support local applicants to be matched with OT or its contractor companies, and provides training for jobseekers to strengthen their applications.

The partnership between OT and the Inner Mongolian Administration Region (IMAR) to establish a representative office continues to progress, with the appointed staff member due to commence in April 2018.

In the period since the previous audit, OT recorded a total of 36 employee grievances through its grievance mechanism, “SpeakOut”, in areas including bribery and corruption, conflicts of interest, fraud, discrimination, recruitment, other personnel issues and workplace health. The category with most complaints was bullying/harassment, where 3 of the 7 complaints were found to be substantiated, while 2 complaints in this category remain open cases under investigation.

Contractors’ Employee Relations (ER) are being managed through an assurance program, which includes implementation of ER Management Plans (ERMPs), contractor remuneration scales and analysis, ER audits, monthly reporting and action plans. ERMP agreements have been made with the 15 biggest contractor companies to facilitate consistency within the Project. ERMP audits have been completed for 14 of the contractors while corrective actions for 12 companies have been completed, with 2 ongoing. Encouraging results from the internal audits include on contractor companies’ employee engagement and recognition/incentive programs, while areas requiring strengthening include document control and discipline management. The IESC notes the role of the Contractors’ ER processes in building business capacity in Mongolia, and support by OT’s HR professionals specifically in Ömnögovi.

The “Khamdaa / Culture by Design” program implementation continues, as a key mechanism to bring OT, RT, contractors and subcontractors working on the UG into alignment on a ‘One OT’ common work culture. There have been 41 two-day workshops with 913 attendees, and 149 Frontline workshops with 3,201 attendees. Additionally, the Leadership Behaviours 30-minute introduction has been deployed at 55 pre-start meeting locations, reaching 3,667 employees and contractors, and generating excellent feedback from participants.

In February, a review of the Collective Agreement (2016-17) was undertaken jointly by OT’s HR managers and the OT Trade Union. The review concluded that 98% of the Collective Agreement has been implemented, with two (partially) outstanding issues yet to be resolved relating to safety of workers travelling to and from work where they reside in locations other than UB or DZ. While one outstanding clause affects only a small portion of the workforce, this has also been an ongoing issue for this cohort raised over a number of years to OT. Notwithstanding this issue, it is anticipated that a new Collective Agreement will be negotiated.

Within the OT site footprint, there are three camps currently operating: Oyut, Manlai, and the Power camp, while the new Oyut II camp is partially operational. Offsite, the Summer Camp near Khanbogd is accommodating the OT-Khanbogd road construction team, in addition to some of the workforce that cannot be accommodated within the available site-based camp. There is variation between figures on manpower forecasts, actual demand and accommodation capacity. Projections of these figures indicate that without implementation of specific management measures, accommodation capacity is broadly unable to meet projected daily bed requirements until December 2018, with a peak shortage is 1,152 beds in May 2018. A range of approaches are being implemented to manage this situation as Oyut II capacity increases. The IESC notes that while OT has developed a 10 year master plan for the camp, accommodation with sufficient space for workers, and adequate recreation facilities must be provided. The IESC was not able to determine during

the desk-top audit if this is yet causing any indirect, adverse impacts or issues, and as such, will follow up at the next site visit to confirm that accommodation is in line with Lender requirements.

#### Resettlement, Compensation and Livelihoods Improvement

The outstanding non-conformance from previous audits relates to the completion on an Outcome Evaluation (OE) for economically displaced herder households. The work to prepare an OE was undertaken from October to December 2017, and centred on determining the adequacy of livelihood restoration against 'core' and 'wider wellbeing' indicators for the 92 households interviewed. The OE report is nearing finalisation and OT is encouraged to ensure that it adequately enables the company to robustly demonstrate which households have restored, improved or declined livelihoods. It is noted that the final OE is likely to make recommendations for some ongoing and/or additional support measures. Non-conformance M1.23 remains open until the successful completion of the OE.

The Sustainable Livelihood Support Training (SLST) was developed for the 92 members from economically displaced herder families following closure of the Road Maintenance Worker Agreements, and seeks to build skills for compensated herders to manage livelihoods and animal herding practices in a sustainable manner. Twelve months of training classroom and practical training has been completed with the support of the Dornod Polytechnic College. Of the displaced household cohort, 11 households had opted out of participation in SLST projects, as they are satisfied with their current livelihood status. A total of 52 households had a member who is now permanently employed, while 35 affected persons continued to participate in an SLST project until its conclusion.

The Pastureland and Livelihood Improvement Management Plan (PLIMP) is being implemented, alongside thematic workshops to develop the Gobi Oyu DSF three-year strategy, with representatives from across from the *soum*, NGOs, herders, water management, animal health and veterinary experts. The "Pasture Assessment" Project integrates with other pasture-related work by the *aimag* authorities, thus expanding the work from Khanbogd to the whole of Ömnögovi. The Pasture Water project plan under the PLIMP intends to create 77 new water points, pasture use condition improvement and hand well maintenance work in Khanbogd, Bayan-Ovoo, Manlai and Tsogt-Ovoo *soums*. This is to be funded through the DSF, to a value of over MNT 820 million. Under the PLIMP animal husbandry program, the "Selective Flock" project is being implemented in three non-mining *soums*, with DSF funding of 139 million MNT. The program supports stock recording, tracking and breeding quality improvements. The IESC notes these positive contributions to pasture management for mining and non-mining *soums* alike.

Implementation of the Vulnerable Households Action Plan, developed jointly with the Khanbogd *soum* welfare department, continued in the current audit period. The action plan includes measures to support both groups and individuals, as well as a semi-annual fund raising/cultural event for vulnerable households. The IESC notes that there are no RAP-affected households in the joint OT/*soum* list of vulnerable households for 2018. The IESC additionally notes that the OE contains a specific component discussing vulnerable households, and whether, and if so, how, any ongoing, targeted support should be provided to this cohort. It is important for the OE report ensure that outcomes for RAP vulnerable households are fully assessed.

#### Stakeholder Engagement

Ongoing engagement activities with specific stakeholder groups include participation in bagh meetings, engagement with economically displaced herder households and those downstream of the TSF. More widely, the KB Community Interaction Centre remains active, and received 805 calls for information over the audit period and 1,586 visitors, while the Dalanzadgad office received 42 calls and 1,685 visitors over the audit period. OT Site tours have been undertaken by 9 community groups and 333 visitors, while 660 OT employees and contractors participated in the informative 'Welcome to Khanbogd' joint event, hosted with the *soum*.

Engagement records continue to be tracked by the Communities and Social Performance (CSP) team for completion and stakeholder attitudes (as assessed by CSP). Over the period Q4/2017 to Q1/2018, 94 engagement records have been tracked relating to engagement with 1,459 people. Changes in attitude since the previous audit again reflect a trend toward more positive perceptions following the engagement.



Information dissemination by OT to partner *soums* and other stakeholders continues including through Open Days, the monthly community newsletter and online news updates. Monthly, 4,400 copies of the newsletter are distributed, double that of the previous audit, incorporating disclosure on quarterly operational scorecard updates, monitoring and feedback data on grievances and other metrics. These results, and CSP's responsive community engagement system, are highly commended.

The number of grievances received by OT are low; in the audit period, four community complaints have been received, of which two have been resolved. Grievances were: 2 regarding environmental issues, one related to compensation and one regarding herder scholarships, with the last grievance received in February. One case of positive feedback was received in the same period. These suggest overall knowledge of the OT systems in the community and trust that reasonable requests will be considered.

The CAO process had reached a milestone in establishing an agreement between TPC parties and the CAO, resulting in the preparation of a detailed action plan of 65 items. Thirteen of the actions for which OT has responsibility have been completed. The CAO's monitoring role will be completed in May 2018, after which, TPC will present its position at the TPC May 2018 meeting on whether to close the complaint. Thereafter, based on TPC's presentation and other data, the CAO will then make its conclusion on whether the complaint is to be closed. The IESC looks forward to hearing the result on this process.

The Participatory Environmental Monitoring (PEM) program redesign was finalised and resulted in establishment of the Munkh Nagoon Galba NGO in November 2017 to commercially conduct the PEM work for OT. Governance processes have been clearly articulated and agreed, and 6 full time jobs created to undertake activities, including monitoring at five points for water, pasture, air quality, fauna, the Undai River ecosystem monitoring, as well as promoting environmental awareness.

#### Regional and Community Development

Regional and community development is one of the main functions of the CSP team, and is implemented largely through the Cooperation Agreement (CA) for the South Gobi. This is supported by OT investment into a Development Support Fund (DSF), which is administered by a Relationship Committee and DSF Board, and implemented through a community partnership model. The Cooperation Agreement has now been operating since April 2015, including implementation of the Gobi Oyu Development Support Fund. Over this time, 72 projects with an investment of USD \$15.4 million have been supported, two-thirds of which are in social services and social infrastructure, directed to Khanbogd and Dalanzadgad *soums*. The DSF Monitoring and Evaluation (M&E) framework is being finalised, a milestone of significance for the DSF. This will enable an adequate framework for monitoring both DSF-funded and more complex, jointly funded programs to be consistently managed for outcomes as well as outputs.

The Future Generation Fund (5% of the DSF) funded 57 student scholarships in 2017, with an overall investment of 151 million MNT, and 11 SME Microloans to a maximum value of 30 million MNT each, in the current audit period. OT continues to report good academic success of scholarship recipients and no defaults on SME loans to date.

Khanbogd infrastructure projects due for completion in 2017-2018 include the OT-funded OT-KB Road, which remains on target for practical completion in Q4/2018. Excavation earthworks are almost complete, and gravel base has been laid, while bridges and culverts have just commenced. The OT-GS Road project (also fully OT-funded) remains on hold.

The In-Migration Management Plan (IMP) describes the broad categories of management controls for in-migration management, being: management of worker residency patterns through recruitment and procurement and through camp accommodation; and to contribute to the provision of sufficient social infrastructure and services in KB and DZ for their actual populations. The external Partnership Committee (the key delivery mechanism of the IMP), comprises representatives from Ömnögovi aimag; Khanbogd, Manlai, Bayan-Ovoo and Dalanzadgad *soums*; OT and Erdenes Oyu Tolgoi; and the Gobi Oyu DSF. The Partnership Committee provides recommendations to five working groups: Local procurement; Local employment; Strategy alignment; Khanbogd development; and the Cooperation Agreement implementation and DSF Relationship

Committee. The Working Groups are active in also being able to make decisions on issues for reporting to the Partnership Committee.

Local employment and local procurement efforts are continuing in line with the IMP. Local employment continues to be promoted through the Ömnögovi *aimag* skills database. The Local Employment working group is meeting regularly as scheduled, and results up to the end of Q1/2018 show that 2,746 local people are employed with OT or its contractors, and 1,480 of those individuals are from Khanbogd. Local procurement opportunities continue, with more than \$722m in contract value has been awarded to Mongolian National companies.

#### ***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. This year will represent a peak number of OT and contractor personnel on-site for the underground project, and resources and capabilities have been ramped-up. A Principal Hygiene Advisor has been appointed for the Health Team and a new underground hygiene superintendent will be coming on-board to support monitoring activities. The UG Project is continuing focus on high-risk activities and diesel particulate matter (DPA), and experimental dust suppression systems are being evaluated including a water sprinkler system and chemicals.

The Critical Risk Management program, focusing on 17 critical risks to site personnel and conducting critical risk control verification, has been maintained throughout the site, including underground activities and operations by contractors. Process Safety Management, to address potential hazards from the plant operating systems, considering chemical release, fire, explosion and other hazards, has been implemented in the Concentrator, Central Heating Plant, Maxam explosives facility, and Fuel Farm. The Health Team has also emphasized programs for fatigue management among truck operators in the Open Pit, TSF and Outbound Logistics areas.

#### ***Community Health and Safety***

Community engagement on the TSF, specifically regarding emergency response in the event of TSF failure, is a specific component of the TSF emergency response plan. OT's CSP team continues to periodically update the local stakeholder list. The potential emergency area has not been finalised which limits, inter alia, the ability of the CSP team to engage most effectively with potentially affected community members in an agreed area. The CSP team is monitoring the area in the interim while also engaging with relevant Government Emergency Response authorities.

No community safety incidents or concerns were reported during the audit period, and monitoring of crime statistics has continued through engagement by the CSP team with the *soum* Police Department. However data indicate an increase in driving offences as a result of more vehicles (including trucks) on the road in the *soum*. OT reported that issues relating to coal trucks, especially after Tsagaan Sar period, led to an increase in crimes occurring with approximately 9,000 trucks were queuing to cross the border. The Government of Mongolia is taking action to address this issue through a new MoU regarding the border area with China. It is anticipated the Government will develop a new parking lot at Tsagaan Khad, and associated social services, including emergency medical services, in the crossing area. The IESC acknowledges that the Tsagaan Khad border crossing is not the responsibility of OT, however has implications for OT's community health, safety and security.

Community health programs are now almost fully funded through the DSF, in collaboration with Ömnögovi *aimag* and *soums*, as well as new partner organisations. A 4-year partnership agreement is to be imminently signed between the Goviin Oyu DSF, Unicef, WHO, UNFPA, and Government of Australia to focus on maternal and child health. Rates of child and maternal mortality are currently highest in Ömnögovi *aimag* compared to the rest of Mongolia. This program will provide increased and better quality coverage for women, adolescents and youth to health services across 15 *soums*. The IESC recognises this is an excellent example of leveraging DSF funds with other partners to provide expanded support across the region.

*Cultural Heritage Management*

The cultural heritage program continues to maintain a zero CH incident status, while providing 579 Community Relations and Cultural Heritage inductions during the audit period. Land disturbance permits continue to be issued with 50 over the audit period, and 896 visitors have been received at the OT Culture Ger. Cultural heritage monitoring is ongoing at 4 heritage sites.

The IESC notes the reach of the CH program. Khanbogd heritage projects include support for cultural heritage protection rangers at the CH sites (including Shar Tsav and Khurdet Cave); production of five documentaries on CH and natural and paleontological sites; and sharing CH program activities with the President's cultural advisor.

## **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>8</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) with 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 findings of the IESC during the April 2018 audit conducted as a desk-top review of the documentation provided and teleconferences with OT site personnel. The report provides an update on the Project status limited to some key topics as well as a follow-up of the status of the non-conformances identified in the previous IESC reports. Findings identified in this report are based on written information made available by the Project through existing reports, disclosed studies and ad-hoc presentations, as well as from interviews via conference calls with OT employees. Any other topic not covered in this report will be addressed during the next site visit expected to take place in Q3 2018 when the entire IESC team will be mobilized.

Specific activities conducted included the following:

- desk review of the HSE and social documentation and other project-related reports provided by OT;
- conference calls held between the 16<sup>th</sup> and 26<sup>th</sup> April, 2018 with the project teams responsible for HSE and social compliance monitoring and review of 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 HSE improvements based on Good International Industry Practice (GIIP);
- follow-up and closure of findings and observations identified in the October 2017 IESC desktop Audit Report<sup>9</sup> and in the December 2017 IESC detailed Water Review report<sup>10</sup>; and
- drafting of an IESC report (this report) to be publicly disclosed.

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<sup>8</sup> IESC Team members: Giovanni Battista De Franchi (Project Manager and Team Leader – HSE Specialist), Robert Snow (Senior Reviewer - HS and Mining Specialist), Dana Strength (Environmental / Hydrologist Specialist), Angela Reeman (Social / Community Specialist), Jo Treweek (Biodiversity Specialist).

<sup>9</sup> RINA Consulting, “Independent Environmental & Social Compliance Monitoring Report – October 2017 Interim Report”, Doc. No. 13-391-H11, March 2018.

<sup>10</sup> RINA Consulting, “IESC Report: OT Detailed Water Review – London Meeting: December 5<sup>th</sup> - 6<sup>th</sup>, 2017”, Doc. No. 13-391-H12, January 2018

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. OT anticipates shipping approximately two percent of copper concentrate by convoy to the Choir rail terminal about 450 kilometers northeast of the Project in 2018 to supplement south to the Gashuun Sukhait border crossing.

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, productivity improvements in the concentrator led to throughput exceeding nameplate capacity by year-end. Copper production for 2016 and 2017 was 201,300 tons and 157,400 tons, respectively, and gold production was 300,000 ounces and 114,000 ounces, respectively. Concentrator throughput for the fourth quarter of 2017 was approximately two percent greater than the third quarter. For 2017, OT set operational records for total material mined and concentrator throughput. 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. OT expects to produce between 125,000 and 155,000 tons of copper, and between 240,000 and 280,000 ounces of gold concentrate in 2018.

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 Underground Project. Lateral development, mine infrastructure, ore handling equipment and construction of the conveyor decline are advancing with attention to safety and quality. Sinking of Shafts 2 and 5 have been completed, with work continuing on the Shaft 2 material handling system. Shaft 5 ventilation fans are nearing completion, and when put into service will significantly increase ventilation underground. Over 10,000 meters of lateral development has been achieved, and progress on the decline has been increasing and is about 3,000 meters of advance toward the total of 14,000 meters. Earthwork for Shafts 3 and 4 commenced during the first quarter of 2018. Eight accommodation buildings in the Oyut II camp are completed and occupation has commenced. 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.

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. In February 2018, the government of Mongolia notified OT that the Power Sector Cooperation Agreement has been canceled, which indicates that the Tavan Tolgoi power project is no longer a viable option. As a result of the cancelation, OT must develop a domestic source for power within four years.

## **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>11</sup> which reflects the RT Health, Safety, Environment and Community (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;
- one Class III non-conformances identified;
- no Class II non-conformances identified; and
- three 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>11</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
M10	Desktop Audit October 2017	0	3	6*
M11	Desktop Audit April 2018	1	3	4

Note:

Among these, one is related to Water and Wastewater Management which was not reviewed as a part of the October 2017 audit and was treated in a separate standalone water audit in December 2017.

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>							
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.	Closed	Water Monitoring Plan, Section 3.2.6, 3.3.5  Water Resources Management Plan (WR14, WRm06)	Closed	See Section 5.1.2.9. This non-conformance was closed during the IESC Detailed Water Review of December 2017. In the 2017 field season OT completed installation of the additional monitoring bores in the Guuni Hooloi region (nine monitoring points across three sites). Drilling and installation of supplementary monitoring bores, as discussed in the Water Monitoring Plan (WMP), has been fully implemented.
<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		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

Mission/ Issue No.	Site Visit	Closing Date	Description	Non- Conformance	Reference	Status	Comments / Report Reference
	16 Aug. 16 May 2017 Oct. 17						<p>concentrator workforce and the Manlai camp). Significant mitigations have been implemented to reduce dust emissions from the COS. Importantly a "Purchase and Install flexible windbreak netting in the COS building" project is in progress, to be completed by Q3/Q4 of 2018. This project is expected to significantly reduce particulate wind erosion at the COS building location.</p> <p>Future monitoring data, in conjunction with demonstration of adequate occupational health and safety precautions, will allow closure of this item.</p>
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 Oct. 17		<p>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.</p>	Closed	<p>Atmospheric Emissions Management Plan (AQMP-KPI02; Air Quality Monitoring Plan Sections 2.5, 4.1; Appendix B;)</p>	Closed	<p>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. The system is now operational and data produced from continuous monitoring is being collected. Although there have been some episodic exceedences of ambient air quality standards these do not represent a risk to occupational health and safety.</p>

Mission/ Issue No.	Site Visit	Closing Date	Description	Non- Conformance	Reference	Status	Comments / Report Reference
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 Oct. 17		Stack emission sampling results from boilers at the Central Heating Plant (CHP) and KB airport do not meet Project Standards.	I	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.  This has been reduced to a Level 1 non-conformance as OT has demonstrated application of Best Available Technologies (BAT) in conformance with applicable Project Standards. However data is still pending from the planned CEMS to definitively demonstrate with numeric thresholds contained in the revised Project Standard as adopted in NoC 2017-001.
<b>Environment – Biodiversity and Ecological Management</b>							
M11.2	April 2018		Avoidance of impacts on priority plants	III <sup>12</sup>	Land Disturbance Permit	Open	Section 5.9.2.4. OT is committed to net positive impact (NPI) on four priority plants for which the project

<sup>12</sup> After discussion of the IESC concern related to avoidance and propagation of *S. grubovii* and the Level III non-conformance, OT has issued an objection to this non-conformance based on the following. Impacts to priority plants during construction were identified in the ESIA and the commitment was not to maintain net positive impact during the construction phase of the project. To minimize and mitigate the impacts to priority plants, including *S. grubovii*, hierarchical processes have been incorporated into the Land Disturbance Control and Rehabilitation Management Plan (OT-10-E14-PLN-0005) and the Priority Plant Protection Procedure (OT-10-E14-PRC-007). All requirements under these plans and procedures are applied by OT through construction and operational activities. As outlined in the Priority Plant Protection Procedure, research is required to develop alternative methods of propagating plants for future use in rehabilitation and this research is underway for *S. grubovii* and two other priority plant species. The established OT procedures are being followed and will continue to be followed through the latter stages of construction and during operations, to minimize impacts to *S. grubovii* (and other species of priority plants).

Mission/ Issue No.	Site Visit	Closing Date	Description	Non- Conformance	Reference	Status	Comments / Report Reference
					Procedure; BAP; BMEP		<p>affected area qualifies as Critical Habitat and no net loss (NNL) for four priority plants associated with Natural Habitat, as outlined in its ESIA biodiversity management and mitigation commitments. A target date of 2036 was due to coincide with duration of mine life although this is likely to be extended to 2055.</p> <p>Following the mitigation hierarchy, NPI or NNL is to be achieved through a) avoidance or protection of existing plants or habitat (avoidance of impacts), b) relocation/transplanting plants (assuming that the species survives transplanting) when impacts cannot be avoided and c) restoration, relying on effective propagation of new plants from seed or cuttings, or reintroducing plants into suitable conditions and locations.</p> <p>Previous Lender Audits have expressed concerns over the level of assurance needed regarding ability to achieve required outcomes for priority plant species. Plants often die following transplantation and reliable propagation and restoration techniques have not been established for all priority species affected by planned disturbance. Risks to <i>Spongiocarpella grubovii</i> were highlighted as a particular case due to the elevated threat status of the species and its coincidence with planned disturbance locations.</p> <p>In response to these concerns OT identified six activities (or projects) intended to improve ability to meet priority plant commitments.</p> <p>Since the October 2017 audit approximately 200 Ha of new disturbance was permitted through the LDP</p>

Mission/ Issue No.	Site Visit	Closing Date	Description	Non- Conformance	Reference	Status	Comments / Report Reference
							<p>process. Despite OT's good progress on the proposed projects and its demonstrated ability to avoid impacting part of the <i>S.grubovii</i> population associated with the location of Shaft 4 (through use of the Land Disturbance Registration Plan Log Sheets and investigation of alternative infrastructure sites); recent infrastructure locations have impacted on considerable numbers of <i>S.grubovii</i> individuals (2800) that were subsequently relocated to the NPPC.</p> <p>IESC acknowledges the considerable progress OT has made on previous IESC recommendations relating specifically to <i>Spongiocarpella grubovii</i> including a) extensive field surveys that have led to a substantial increase in distribution range and population size of this species in the region and b) engagement of the University of Mongolia to assist in reassessing the threatened status of this species as well as fast-tracking methods of propagation.</p> <p>However, IESC has raised a level III non-conformance with respect to impacts on priority plant species (specifically <i>Spongiocarpella grubovii</i>). The impact on 2800 individuals since the last audit (estimated as &gt;20% of the population on the MLA), coupled with lack of evidence that successful propagation, translocation or restoration can be achieved for this species, means there is insufficient assurance that a net gain can be achieved in line with lender requirements (PS6 and PR6). OT's Biodiversity Management Plan commits it to applicable Lender Standards including PS6 &amp; PR6.</p> <p>Currently, due to recent impacts the population on-site</p>

Mission/ Issue No.	Site Visit	Closing Date	Description	Non- Conformance	Reference	Status	Comments / Report Reference
							is in deficit and the methods that will be used to achieve gains through restoration are not established.
M8.2	Aug. 16 May 2017 Oct. 17	April 2018	Road Mitigation Strategy	I	BAP (13)	Closed	<p>Section 5.9.2.5. OT undertook to “develop and implement an OT-GS road mitigation strategy that explores, but will not necessarily be limited to, the 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”.</p> <p>The Road Mitigation Panel recommended the best way for OT to achieve a net gain/net positive impact for goitered gazelle and khulan would be to successfully implement biodiversity offsets.</p> <p>However, the Road Mitigation Panel also recommended continued monitoring of ungulate movements using GPS collars and a greater emphasis on studying black-tailed (goitered) gazelle since they are more threatened and less well understood. OT plans to deploy an additional 20 GPS collars on goitered gazelles in September-October 2018.</p> <p>The non-conformance on this issue has been closed since Lenders have approved the Road Mitigation Strategy prepared by OT in Q1 2018.</p>
<b>Social –Resettlement, Compensation and Livelihoods Improvement</b>							

Mission/ Issue No.	Site Visit	Closing Date	Description	Non- Conformance	Reference	Status	Comments / Report Reference
M1.23	Oct.13 April 14 Aug. 14 Nov. 14 April 15 Sept. 15 April 16 August 16 May 17 Oct. 17 April 18		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 Khanbogd <i>soum</i> .	I	Resettlement Action Plan (Sections 10.1, 10.2 and 10.4)	Open	<p>Section 6.3.2.2. In October 2017, OT contracted Intersocial Consulting Ltd to conduct an Outcome Evaluation of the economic displacement component of the OT RAP. The study including fieldwork was conducted in November-December 2017. Following internal reviews, a draft was shared with Lenders and the IESC in May 2017. Comments in response to the Outcome Evaluation have been prepared and the finalisation process is underway.</p> <p>At the previous audit, the Multi-disciplinary Team (MDT) study had been undertaken and completed in Q1/2017, however this report, while making tangible progress, 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. The IESC reiterates its earlier advice on the importance of all parties agreeing to success criteria or 'outcomes' that once achieved, will enable the economic displacement program to be considered closed.</p> <p>This non-conformance remains open until the successful completion of the Outcome Evaluation.</p>