

wardell-armstrong.com

ENERGY AND CLIMATE CHANGE  
ENVIRONMENT AND SUSTAINABILITY  
INFRASTRUCTURE AND UTILITIES  
LAND AND PROPERTY  
MINING AND MINERAL PROCESSING  
MINERAL ESTATES  
WASTE RESOURCE MANAGEMENT



**KRUMOVGRAD GOLD MINE PROJECT, BULGARIA  
DUNDEE PRECIOUS METALS**

**DRAFT ENVIRONMENTAL AND SOCIAL ACTION PLAN (ESAP)**

**December 2014**

*your earth our world*



**DATE ISSUED:** December 2014  
**JOB NUMBER:** ZL521077  
**VERSION:** V0.2  
**REPORT NUMBER:** R001  
**STATUS:** Draft for Disclosure

**KRUMOVGRAD GOLD MINE PROJECT, BULGARIA  
DUNDEE PRECIOUS METALS**

**DRAFT ENVIRONMENTAL AND SOCIAL ACTION PLAN (ESAP)**

**December 2014**

**PREPARED BY:**

Dr Liz Adey Principal



With inputs from EBRD and  
DPM.

**APPROVED BY:**

James McNally Technical Director



Wardell Armstrong is the trading name of Wardell Armstrong International Ltd,  
Registered in England No. 3813172.

Registered office: Sir Henry Doulton House, Forge Lane, Etruria, Stoke-on-Trent, ST1 5BD, United Kingdom

UK Offices: Stoke-on-Trent, Cardiff, Carlisle, Edinburgh, Greater Manchester, London, Newcastle upon Tyne,  
Sheffield, Taunton, Truro, West Bromwich. International Offices: Almaty, Moscow

ENERGY AND CLIMATE CHANGE  
ENVIRONMENT AND SUSTAINABILITY  
INFRASTRUCTURE AND UTILITIES  
LAND AND PROPERTY  
MINING AND MINERAL PROCESSING  
MINERAL ESTATES  
WASTE RESOURCE MANAGEMENT

---

**CONTENTS**

1 ENVIRONMENTAL AND SOCIAL ACTION PLAN, KRUMOVGRAD GOLD MINE PROJECT..... 1

1.1 Introduction ..... 1

1.2 Purpose of Report..... 1

1.3 Environmental and Social Action Plan ..... 3

## **1 ENVIRONMENTAL AND SOCIAL ACTION PLAN, KRUMOVGRAD GOLD MINE PROJECT**

### **1.1 Introduction**

The proposed Krumovgrad gold mine project (the 'Project') is located in southern Bulgaria near the town of Krumovgrad. The Project is being developed by Dundee Precious Metals (DPM). The European Bank for Reconstruction and Development (EBRD) is considering providing finance for the Project and is acting as Environmental Agent for DPM's lending consortium.

The Project has been categorised as 'A' in terms of the EBRD's Environmental and Social Policy (ESP, 2008) as it could result in potentially significant adverse and diverse environmental and social impacts and is listed in "Appendix 1: Category A projects" of the ESP. Category A projects require an Environmental and Social Impact Assessment in line with the EBRD Performance Requirements (PRs).

DPM received national level environmental permits for the Project in 2011 (EIA Resolution No 18-8, 11/2011) based on a local Environmental Impact Assessment produced and submitted to the Bulgarian environmental authorities in 2010. The environmental authorities deemed the EIA compliant with Bulgarian law and relevant European Union Directives and issued the relevant approvals. The EIA also included a compatibility assessment in line with the EU Habitats Directive.

Wardell Armstrong International (WAI) was appointed by the EBRD to act as lenders advisor and provide independent review of the environmental and social documentation developed for the Project, together the Project ESIA and which includes the local Bulgarian EIA and supplementary environmental and social documentation, to confirm that the Project meets the EBRD PRs and is fit for purpose and disclosure. WAI undertook a gap analysis of the local Bulgarian EIA in April 2014 to identify areas where supplementary information and studies were required to meet the PRs. Since undertaking the gap analysis, WAI has been involved in reviewing these supplementary documents, which form part of the Project ESIA.

### **1.2 Purpose of Report**

This Environmental and Social Action Plan (ESAP) includes key actions to ensure that the EBRD PR's are met during all phases of the Project, including construction, operation, closure and post closure. These actions will need to be implemented before specific phases of the Project, i.e. prior to construction work commencing, before the mine becomes operational or before the mine closes.

This ESAP builds on the April 2014 gap analysis, in addition to findings from the development of the supplementary documents and it will support DPM in managing the environmental and social issues and risks identified therein. The ESAP is also aimed at promoting the benefits associated with the Project.

This ESAP has been developed in close liaison with the EBRD and it will form part of the financing agreement between the EBRD and DPM. DPM will be required to report on the implementation of the actions in this ESAP to the EBRD, and the other lenders if required. This reporting will initially take place quarterly during construction and annually thereafter for the life of the loan.

This is a draft version of the ESAP, which will be finalised post the mandatory 60 day EBRD disclosure period for Category A projects. The final version of the ESAP will be disclosed post this period and will reflect stakeholder concerns and feedback received during the disclosure period if necessary.

### 1.3 Environmental and Social Action Plan

No.	Action	Bulgarian Regulation/ EBRD PR (2008)	Timetable for Action to be Completed	Target and Evaluation Criteria for Successful Implementation	Status Update
<b>Performance Requirement 1: Environmental and Social Appraisal and Management</b>					
1.1	<p>Develop and implement an integrated environmental, social and health and safety management system (ESHS MS) for the Project including appropriate policies, procedures and documentation. This work will integrate changes made to management plans within the overall management system. Where required, appoint appropriately qualified staff to implement the ESHS MS and manage the environmental and social impacts and risks associated with the project throughout its life cycle.</p> <p>The ESHS MS is required to be developed and implemented consistent with ISO 14001 and OHSAS 18001 international standards. Formal certification is not required but is optional.</p>	EBRD PR 1	Prior to construction work commencing and maintain during the life of the Project.	<p>Integrated environmental, social and health and safety management system (ESHS MS) in place and consistent with ISO 14001 and OHSAS 18001 standards.</p> <p>Appropriate resources in place and effective ESHS management.</p> <p>Appointment of suitably qualified and experienced ESHS manager(s) who receive regular training.</p>	

No.	Action	Bulgarian Regulation/ EBRD PR (2008)	Timetable for Action to be Completed	Target and Evaluation Criteria for Successful Implementation	Status Update
1.2	Submit an environmental and social (includes worker health and safety and community issues) report to the EBRD, including other lenders if required, on the environmental and social performance of the Project and the status of this ESAP.	EBRD PR 1	<p>During construction and commissioning: quarterly environmental and social reports and ESAP progress update to the EBRD together with an annual consolidated report (i.e. three quarterly reports and one consolidated report per year).</p> <p>During operation: annual environmental and social report and ESAP progress update to the EBRD within 60 days of year-end.</p>	<p>Environmental and social reports (template to be provided by the EBRD) and ESAP progress updates received.</p> <p>Reports and progress against this ESAP satisfactory to the EBRD.</p>	
1.3	Maintain the existing suite of Environmental and Social Management Plans through a process of continual monitoring, review, updates and improvements such that they are fit for purpose and effective, meet the needs of the Project and address the associated potential environmental and social risks, are in line with good international practise and the PRs and are applicable to the relevant stage of Project development (preparation, construction, operation and closure). These plans include the following:	EBRD PR1-6, 8 and 10	<p>Management plans finalised prior to construction work commencing and maintained during life of the Project including during closure where applicable.</p> <p>Finalised plans provided to the EBRD prior to construction.</p> <p>Updates and documentation, where relevant, provided to EBRD as part of quarterly (during</p>	<p>Environmental and social management plans in place that are fit for purpose and effective, meet the needs of the Project and address the associated potential environmental and social risks, are in line with good international practise and the PRs and are applicable to the relevant stage of project development.</p>	

No.	Action	Bulgarian Regulation/ EBRD PR (2008)	Timetable for Action to be Completed	Target and Evaluation Criteria for Successful Implementation	Status Update
	<ul style="list-style-type: none"> <li>• Mine Closure and Rehabilitation Plan (MCRP) including the provision of financial guarantees;</li> <li>• Air Quality Management Plan;</li> <li>• Biodiversity Action Plan;</li> <li>• Hazardous Materials Management Plan;</li> <li>• Community Health and Safety Plan;</li> <li>• Emergency Response Plan;</li> <li>• Traffic Management Plan; and</li> <li>• Social Management Plan (see action 1.5).</li> </ul> <p>Some plans are currently framework plans developed as part of the Project ESIA and will need to be further developed into full management plans. This list is not exhaustive. The Project will need to be responsive and, through a process of adaptive management, may need to develop additional plans as may be required to address specific issues or risks.</p>		construction and commissioning) and annual reporting (during operation).	<p>Management plans implemented and subject to regular review and revision where necessary.</p> <p>Update provided to EBRD on finalisation of management plans, their implementation and effectiveness, revisions and issues, if any.</p> <p>Electronic copies of finalised and revised plans to be provided to EBRD together with a summary of the changes and additions made to such plans. EBRD reserves the right to provide feedback on such plans if deemed necessary. Finalised plans to be provided prior to construction commencing.</p>	
1.4	Drawing on, and to complement where relevant, the environmental and social management plans and the Project ESIA's	EBRD PR1-6, 8 and 10	Prior to construction work commencing and maintained	Environmental and social monitoring plans and procedures in place and implemented.	



No.	Action	Bulgarian Regulation/ EBRD PR (2008)	Timetable for Action to be Completed	Target and Evaluation Criteria for Successful Implementation	Status Update
	<p>Environmental Monitoring Plan, DPM will maintain and implement a comprehensive suite of monitoring plans and procedures focusing on the following:</p> <ul style="list-style-type: none"> <li>• Progressive mine closure and rehabilitation;</li> <li>• Air quality, emissions and GHG emissions;</li> <li>• Noise and vibration;</li> <li>• Biodiversity ;</li> <li>• Surface and groundwater quality;</li> <li>• Groundwater usage;</li> <li>• Waste;</li> <li>• Hazardous materials management ;</li> <li>• Community health, safety and security;</li> <li>• Traffic impacts; and</li> <li>• Social performance and key performance indicators.</li> </ul> <p>Monitoring plans and procedures may be included in the environmental and social management plans, in the existing Environmental Monitoring Plan or exist as standalone documents.</p>		<p>during life of the Project including during closure where applicable.</p> <p>Finalised plans and procedures provided to the EBRD prior to construction. This may be in combination with Action 1.3.</p> <p>Updates and documentation, where relevant, provided to EBRD as part of quarterly (during construction and operation) and annual reporting (during operation).</p>	<p>Update provided to EBRD on finalisation of monitoring plans and procedures, their implementation and effectiveness, revisions and issues, if any.</p> <p>Electronic copies of finalised and revised plans and procedures to be provided to EBRD together with a summary of the changes and additions made to such procedures and plans. EBRD reserve the right to provide feedback on such plans if deemed necessary.</p> <p>EBRD to be provided with any monitoring reports produced by DPM, or its consultants, that document Project monitoring activities and outcomes, for example tortoise monitoring reports.</p>	

No.	Action	Bulgarian Regulation/ EBRD PR (2008)	Timetable for Action to be Completed	Target and Evaluation Criteria for Successful Implementation	Status Update
1.5	Develop a full Social Management Plan or series of plans, based upon the outcomes of the Social Impact Assessment to effectively manage social impacts and enhance social benefits. The Social Management Plan should include a monitoring component or plan to monitor social performance and assess changes to Key Performance Indicators (KPIs) developed from the SIA. The Social Management Plan must be maintained throughout the life of the Project as per Actions 1.4 and 1.5. The SMP or series of plans will complement existing social management documents including the Community Health and Safety Plan.	EBRD PR 1	<p>Prior to construction work commencing and maintain during life of the Project.</p> <p>Finalised plan(s) provided to the EBRD prior to construction.</p> <p>Updates and documentation, where relevant, provided to EBRD as part of quarterly (during construction and operation) and annual reporting (during operation).</p>	<p>Social Management Plan or series of plans in place, implemented and subject to regular review and revision where necessary.</p> <p>Effective management of social issues to satisfaction of EBRD.</p> <p>Update provided to EBRD on finalisation of the management plan(s), their implementation and effectiveness, revisions and issues, if any.</p> <p>Electronic copies of finalised and revised plan(s) to be provided to EBRD together with a summary of the changes and additions made to such plan(s). EBRD reserves the right to provide feedback on the plan(s) if deemed necessary. Finalised plans to be provided prior to construction commencing.</p>	
1.6	DPM will develop a social benefits package for the Project and play an active role in its implementation. Where possible, the	EBRD PR 1	Before the Project becomes operational and maintain during life of the Project.	Inclusive social benefits package in place and implemented over the life of the Project.	

No.	Action	Bulgarian Regulation/ EBRD PR (2008)	Timetable for Action to be Completed	Target and Evaluation Criteria for Successful Implementation	Status Update
	development and implementation of this package should be inclusive, be based upon the outcomes of the social impact assessment (SIA), acknowledge input from various stakeholders and should be sustainable.			<p>Description/summary of social benefits package provided to EBRD.</p> <p>Updates provided to the EBRD on implementation and success of the social benefits package, including revisions thereof, as part of annual reporting to the EBRD.</p>	
1.7	Develop and maintain a process or procedure to ensure compliance by contractors and suppliers (where relevant) with the environmental and social requirements relevant to the Project. Where necessary, and based on size of contract, some contractors will be required to develop and submit to DPM for approval a CESMP (construction environment and social management plan), or equivalent series of plans and procedures, consistent with these environmental and social requirements. The CESMP will describe all the measures planned by the contractor to avoid or minimise its ESHS impacts and risks. DPM will be required to provide	EBRD PRs 1-6, 8 and 10	Prior to construction and maintained during life of the Project.	<p>Contractor compliance with environmental and social requirements.</p> <p>CESMPs in place where relevant and implementation monitored by DPM.</p> <p>Contractor E&amp;S, including H&amp;S, performance monitored by DPM.</p> <p>Capacity building and training provided to contractors by DPM, where necessary.</p>	

No.	Action	Bulgarian Regulation/ EBRD PR (2008)	Timetable for Action to be Completed	Target and Evaluation Criteria for Successful Implementation	Status Update
	<p>assistance, through capacity building and training where necessary, to contractors in the development of such management plans and improving and maintaining their E&amp;S, including H&amp;S, performance.</p> <p>DPM is required to include project environmental and social requirements, where relevant and based on the size of the contract and contractor scope of work, in contractor tender and contract documents. Environmental and social requirements include DPM policies and standards, permits, environmental and social management plans (ESMP), the EBRD Performance Requirements (2008) and this ESAP.</p>				
<b>Performance Requirement 2: Labour and Working Conditions</b>					
2.1	Develop a human resources (HR) policy and occupational health and safety (OHS) policy. The HR policy should be gender inclusive and non-discriminatory and aligned with EBRD PR 2 and the	EBRD PR 2	Before large scale employee recruitment and construction work starts on site and maintain during life of the Project.	Human resources policy and OHS policy in place. Adheres to ILO.	

No.	Action	Bulgarian Regulation/ EBRD PR (2008)	Timetable for Action to be Completed	Target and Evaluation Criteria for Successful Implementation	Status Update
	International Labour Organisation (ILO) Standards.				
2.2	Develop a recruitment plan including local recruitment targets. This may be included in the human resources management plan.	EBR PR 2	Prior to construction activities and large-scale recruitment.	Recruitment plan in place and implemented.	
2.3	Develop a human resources management plan, including associated procedures, relevant documentation and an employee grievance mechanism, in line with ILO standards and EBRD PR 2.	EBRD PR 2	Before large scale employee recruitment and construction work starts on site and maintain during life of the Project.	Human resources management plan in place and DPM adheres to ILO.	
2.4	Prepare and implement a specific procedure for incident and accident investigation and the need for corrective actions. This will also extend to contractors.	EBRD PR 2	Prior to site clearance and construction works.	Incident and accident investigation procedure in place and implemented.  H&S statistics reported to EBRD as part of quarterly and annual reporting.	
2.5	DPM will endeavour to source supplies, raw materials and other equipment locally. Where local companies are not able to meet standards required by the Project, DPM will provide capacity building and training to these companies so that they	EBRD PR 1 and 2	Prior to supplier selection.	Evidence of local procurement and support to local suppliers where necessary.	

No.	Action	Bulgarian Regulation/ EBRD PR (2008)	Timetable for Action to be Completed	Target and Evaluation Criteria for Successful Implementation	Status Update
	can develop their organisations and compete successfully for contracts.				
2.6	<p>DPM will review the potential environmental, social, health and safety risks, as well as reputational risks, associated with potential suppliers to the Project and buyers of concentrate. This will also extend to the identification and selection of concentrate processing facilities. The outcomes of the review and particularly if there are any significant environmental and social risks, should be considered in the decision making process. Social risks extend to workers and working conditions.</p> <p>The review should take into consideration the EBRD Performance Requirements (2008).</p> <p>Where possible, DPM will provide capacity building and training to suppliers to help avoid or minimise these risks, if any.</p>	EBRD PR 2	Prior to supplier and buyer selection.	<p>Supply chain and buyer assessment/review procedure/protocol that focusses on environmental, social and health and safety risks in place and implemented.</p> <p>Outcomes of review taken into consideration in the decision making process.</p>	

No.	Action	Bulgarian Regulation/ EBRD PR (2008)	Timetable for Action to be Completed	Target and Evaluation Criteria for Successful Implementation	Status Update
<b>Performance Requirement 4: Community Health, Safety and Security</b>					
4.1	Undertake discussions with key local communities to disseminate information included in the Community Health and Safety Plan.	EBRD PR 4	Prior to construction work commencing and maintain during life of the Project.	Implemented and effective community health and safety management to satisfaction of EBRD.	
<b>Performance Requirement 5: Land Acquisition, Involuntary Resettlement and Economic Displacement</b>					
5.1	Finalise a compensation plan for derelict chalets and outdoor recreation building.	EBRD PR 5	Prior to construction work commencing.	Compensation programme agreed for loss of public amenities.  Compensation plan provided to the EBRD.	
<b>Performance Requirement 6: Biodiversity Conservation and Natural Resources Management</b>					
6.1	DPM to update EBRD on the implementation of the Biodiversity Action Plan as described in Actions 1.3 and 1.4. This includes the provision of monitoring reports and reporting on the effectiveness of the BAP in achieving its outcomes (i.e. no net loss consistent with PR6).	EBRD PR 6	As part of quarterly and annual reporting.	Updates provided to the EBRD as part of quarterly and annual reporting. This includes the provision of monitoring reports and reporting on the effectiveness of the BAP in achieving its outcomes.	
6.2	DPM to update the EBRD on the implementation of the Mine Closure and Rehabilitation Plan (MCRP). This includes progressive closure and rehabilitation,	EBRD PR 6	As part of annual reporting.	Updates provided to the EBRD as part of annual reporting. This includes the provision of monitoring reports and reporting	

No.	Action	Bulgarian Regulation/ EBRD PR (2008)	Timetable for Action to be Completed	Target and Evaluation Criteria for Successful Implementation	Status Update
	where relevant, and final closure of the mine. This action includes the provision of monitoring reports and reporting on the effectiveness of the MCRP in achieving its outcomes.			on the effectiveness of the MCRP in achieving its outcomes.	
<b>Performance Requirement 8: Cultural Heritage</b>					
8.1	Collate cultural heritage mitigation measures into a cultural heritage management plan. This will include an outline of the 'chance finds procedure' and how it is being implemented on site.	EBRD PR 8	Prior to construction work commencing and maintain during life of the Project.	Cultural heritage management plan or 'chance find procedure' implemented and in compliance with EBRD PR8.	
<b>Performance Requirement 10: Information Disclosure and Stakeholder Engagement</b>					
10.1	Implement the Stakeholder Engagement Plan (SEP) and an accessible grievance mechanism. Ensure SEP is available to stakeholders in an easily readable format and suitable language (English and local language). Update and revise the SEP, if required, during life of the project to ensure that it is relevant and effective in ensuring meaningful consultation and appropriate disclosure of information.	EBRD PR 1	Implemented prior to construction works and maintained during the life of the Project together with the grievance mechanism.	Implementation of SEP and a grievance mechanism.  SEP maintained up to date and relevant. Community relations maintained or improved. Stakeholder support maintained (social licence to operate).  Feedback on SEP implementation provided to EBRD through quarterly and annual reporting.	



wardell-armstrong.com

STOKE-ON-TRENT  
Sir Henry Doulton House  
Forge Lane  
Etruria  
Stoke-on-Trent  
ST1 5BD  
Tel: +44 (0)845 111 7777

CARDIFF  
22 Windsor Place  
Cardiff  
CF10 3BY  
Tel: +44 (0)292 072 9191

EDINBURGH  
Suite 2/3  
Great Michael House  
14 Links Place  
Edinburgh  
EH6 7EZ  
Tel: +44 (0)131 555 3311

GREATER MANCHESTER  
2 The Avenue  
Leigh  
Greater Manchester  
WN7 1ES  
Tel: +44 (0)194 226 0101

LONDON  
Third Floor  
46 Chancery Lane  
London  
WC2A 1JE  
Tel: +44 (0)207 242 3243

NEWCASTLE UPON TYNE  
City Quadrant  
11 Waterloo Square  
Newcastle upon Tyne  
NE1 4DP  
Tel: +44 (0)191 232 0943

SHEFFIELD  
Unit 5  
Newton Business Centre  
Newton Chambers Road  
Thornccliffe Park  
Chapelton  
Sheffield  
S35 2PH  
Tel: +44 (0)114 245 6244

TAUNTON  
Suite E1  
Victoria House  
Victoria Street  
Taunton  
Somerset  
TA1 3JA  
Tel: +44 (0)182 370 3100

TRURO  
Baldhu House  
Wheal Jane Earth Science Park  
Baldhu  
Truro  
TR3 6EH  
Tel: +44 (0)187 256 0738

WEST BROMWICH  
Thynne Court  
Thynne Street  
West Bromwich  
West Midlands  
B70 6PH  
Tel: +44 (0)121 580 0909

**International offices:**

ALMATY  
29/6 Satpaev Avenue  
Hyatt Regency Hotel  
Office Tower, 7th Floor  
Almaty  
Kazakhstan  
050040  
Tel : +7(727) 334 1310

MOSCOW  
Office 4014  
Entrance 2  
21/5 Kuznetskiy Most St.  
Moscow  
Russia  
Tel: (495)626-07-67

**Wardell Armstrong  
Archaeology:**

CUMBRIA  
Cocklakes Yard  
Carlisle  
Cumbria  
CA4 0BQ  
Tel: +44 (0)122 856 4820

*your earth our world*

