



Standard 11

11 BIODIVERSITY MANAGEMENT STANDARD

11.1 STANDARD

The purpose of this Standard is to define the requirements for protecting and managing biodiversity to minimize any adverse acute or cumulative impacts on flora and fauna.

11.2 CRITERIA AND REQUIREMENTS

11.2.1 Regulatory Compliance

The management of biodiversity, inclusive of the identification and protection of all protected flora and fauna within and around all sites, shall be conducted in compliance with all relevant in-country regulatory requirements, licence conditions and any other applicable requirements.

Based on applicable regulatory standards and licence limits, sites shall demonstrate protection of aquatic (including groundwater dependent ecosystems), terrestrial and marine environments.

11.2.2 Biodiversity Management Plan

If biodiversity management and protection was identified as a potential or actual environmental risk during original environmental impact or baseline studies or has since been identified as a risk during operations, then these sites shall develop, implement, communicate, adhere to and maintain a Biodiversity Management Plan.

The Biodiversity Management Plan shall consider and incorporate commitments defined in B2Gold's Corporate Biodiversity Policy.

The Biodiversity Management Plan shall describe key management strategies and controls to address identified biodiversity risks and to protect flora and fauna. The Plan shall also define how rare and endangered species and priority conservation listed species are protected.

Where applicable, the Biodiversity Management Plan shall define how pests and weeds on the site are controlled.

11.2.3 Flora and Fauna Surveys

Where applicable, specialist knowledge shall be sourced and utilised in the management and protection of endangered and conservation listed species.

If required, research programs shall be initiated and utilised to improve the understanding of habitats and to protect endangered and conservation listed species.



B2GOLD CORP.
Environmental and Biodiversity Standard 11:
Biodiversity Management

May 2018
Page 2 of 4

11.2.4 Vegetation Clearance

Endangered, conservation listed or protected flora species that may be impacted by site activities shall be identified by surveying, monitoring, context mapping and/or local knowledge.

To prevent unnecessary ground disturbance and to protect areas of known high biodiversity conservation, control measures for minimising access, disturbance to land and clearing of vegetation shall be developed, implemented and monitored.

For mining and related activities, the clearance of all mature vegetation on the lease area requires formal authorisation by personnel from the site Environmental Department. All sites shall develop, maintain and utilise a Vegetation Clearing Permit and retain records of all completed permits.

After the request for vegetation clearance and receipt of the Vegetation Clearing Permit and prior to any ground disturbance, site environmental personnel shall conduct field surveys to identify the presence of any protected flora or sensitive fauna habitat.

Protected vegetation shall be clearly marked in the field (e.g., using flagging tape) or relocated. Field personnel and contractors shall be instructed and made aware of the requirement to protect vegetation that has been marked.

11.2.5 Fauna Protection

Water storage facilities, diversion structures and containment facilities shall be designed to limit and restrict fauna access and to provide as easy as possible egress for any fauna which has entered those facilities or structures.

Water crossings or diversion structures shall be designed and operated to minimise adverse impacts on aquatic ecosystems.

Wildlife crossings on access and haul roads shall be identified and maintained based on field survey data.

Where a potential or actual adverse impact on an endangered, protected or conservation listed species has been identified, sites shall consider control measures inclusive of creating designated offset areas, applying no-access and/or buffer areas, the use of access permits and the requirement for suitable fencing and signage.

Eradication programs should be considered with regards to identified pest fauna species.

Where the operation of mobile machinery can impact wildlife, control measures shall be established, implemented and monitored to reduce injury or mortality. Control measures could include fencing of impacted areas or lease boundaries, reducing speed limits, installation of wildlife corridors and/or training and awareness of relevant employees and contractors.

Where sites store and utilize hazardous materials, operational controls to reduce the availability and/or exposure to hazardous materials, controlling fauna access to containment facilities and/or minimising any open storages of hazardous materials shall be considered.

Where mining townships or accommodation villages are located in the vicinity of the site, suitable controls shall be developed, implemented and communicated to prohibit:

- the unauthorized collection or harvesting of plant species;
- the unauthorized collection of firewood;



B2GOLD CORP.
Environmental and Biodiversity Standard 11:
Biodiversity Management

May 2018
Page 3 of 4

- unauthorized hunting or trapping; and
- minimizing and/or restricting access to designated and/or protected areas.

11.2.6 Pest and Weed Management

Where pest management is required (e.g., feral cats, rats, etc.), suitable control measures shall be implemented including trapping, eradication, relocation and baiting. These programs shall be supported by relevant training and awareness of relevant employees and contractors.

Where weed management is required, control measures that could be considered include wash down facilities, controlled access to designated areas, ongoing monitoring and training of field personnel.

11.2.7 Stock and Wildlife Mortalities

Stock and wildlife mortalities resulting from site related activities shall be reported in accordance with B2Gold internal reporting and any applicable stakeholder and regulatory requirements.

11.2.8 Monitoring

If applicable, biodiversity monitoring programs shall be developed, implemented and periodically reviewed. These monitoring programs shall include the monitoring of any potential or actual adverse biodiversity impacts (e.g., on sensitive or protected areas) and the effectiveness of implemented control measures.

Specialist knowledge shall be sourced and utilised in defining the scale of monitoring and the indicators monitored.

Monitoring data shall be periodically reviewed inclusive of trend analysis, and the results communicated to site management.

11.3 TERMS AND DEFINITIONS

Relevant key terms and definitions that relate to B2Gold's Biodiversity Management Standard are provided below:

Baseline Conditions: The existing environmental conditions, i.e., the physical, chemical, or biological setting, of a proposed project area prior to disturbance by project-related development.

Environmental Impact: Any change to the environment whether adverse or beneficial, wholly or partially resulting from a site's activities.

Hazardous Waste: Any waste containing significant quantities of a substance that may present danger to human health and the environment when released into the environment or is improperly managed. Possesses at least one of five characteristics (ignitable, corrosive, reactive, toxic, radioactive), or is listed in-country as a hazardous waste.

Monitoring: The gathering, analysis (especially for trends) and interpretation of information for the assessment of performance.

Examples of monitoring subjects are: occupational health and safety, air, soil and water quality, flora and fauna, reclamation, social aspects including complaints, operational dust, noise, vibration, property damage, community health, community investment, historical and cultural sites.

Monitoring may be continuous, short-term or long term and may be undertaken manually or automated.



B2GOLD CORP.
Environmental and Biodiversity Standard 11:
Biodiversity Management

May 2018
Page 4 of 4

Reclamation: The return of disturbed land to a physically and chemically stable, self-sustaining condition compatible with future land use objectives.

11.4 REFERENCE MATERIAL

Nil

11.5 DOCUMENT CONTROL

Revision	Approved	Date	Description
Final	Ken Jones	17 th August 2014	Original 2014 issue of the B2Gold Environmental and Biodiversity Performance Standards
Final	Ken Jones	24 th May 2018	2018 revision, update and issue of the original 2014 B2Gold Environmental and Biodiversity Performance Standards