


|   |                       |                                       |              |
|---|-----------------------|---------------------------------------|--------------|
|  | Roads Management Plan | Issue Date: March 16, 2016<br>Rev.: 5 | Page 1 of 25 |
|   | Environment           | Document #: BAF-PH1-830-P16-0023      |              |

# Baffinland Iron Mines Corporation


## Roads Management Plan

**BAF-PH1-830-P16-0023**

**Rev 5**

**Prepared By:** Andrew Vermeer  
**Department:** Environment  
**Title:** Environmental Coordinator  
**Date:** March 16, 2016  
**Signature:**

**Approved By:** Bikash Paul  
**Department:** General Manager  
**Title:** Operations  
**Date:** March 16, 2016  
**Signature:**


|   |                              |   |              |
|---|------------------------------|---|--------------|
|  | <b>Roads Management Plan</b> | <b>Issue Date:</b> March 16, 2016<br><b>Rev.: 5</b> | Page 2 of 25 |
|   | <b>Environment</b>           | <b>Document #:</b> BAF-PH1-830-P16-0023             |              |

## DOCUMENT REVISION RECORD

| Issue Date<br>MM/DD/YY | Revision | Prepared<br>By | Approved<br>By | Issue Purpose                |
|------------------------|----------|----------------|----------------|------------------------------|
| 12/01/2010             | 0        | -              | -              | Document issued for approval |
| 11/09/2011             | 1        | JB             | JM             | Issued for FEIS              |
| 05/01/2013             | 2        | TM             | JM             | Issued for 2013 Work Plan    |
| 03/05/2014             | 3        | SR             | MA             | Approved for Use             |
| 03/18/2015             | 4        | TM             | TW             | Updated for 2015 Work Plan   |
| 03/16/16               | 5        | AV             | BP             | Updated for 2016             |
|                        |          |                |                |                              |
|                        |          |                |                |                              |
|                        |          |                |                |                              |
|                        |          |                |                |                              |
|                        |          |                |                |                              |


### Index of Major Changes/Modifications in Revision 5

| Item No. | Description of Change                    | Relevant Section |
|----------|--|------------------|
| 1        | Updated Introduction                     | Section 1.1      |
| 2        | Updated Construction Mitigation Measures | Section 4.1      |
| 3        | Updated Operation Mitigation Measures    | Section 4.2      |
| 4        | Updated Roles and Responsibilities       | Section 5        |
| 5        | Updated Tote Road Travel Procedures      | Attachment B     |
| 6        | Added Whiteout and Wind Storm Conditions | Attachment C     |
| 7        | Updated Traffic Management Plan          | Attachment D     |
| 8        | Added Mine Traffic Patterns Procedures   | Attachment G     |

|   |                       |                                       |              |
|---|-----------------------|---------------------------------------|--------------|
|  | Roads Management Plan | Issue Date: March 16, 2016<br>Rev.: 5 | Page 3 of 25 |
|   | Environment           | Document #: BAF-PH1-830-P16-0023      |              |

## TABLE OF CONTENTS

|          |  |           |
|----------|--|-----------|
| <b>1</b> | <b>INTRODUCTION.....</b>                         | <b>6</b>  |
| 1.1      | Purpose.....                                     | 6         |
| 1.2      | Regulatory Framework and Work Scope.....         | 7         |
| 1.3      | Baffinland Road Policy .....                     | 7         |
| 1.4      | Relationship to Other Management Plans .....     | 7         |
| 1.5      | Baffinland’s Commitments.....                    | 8         |
| <b>2</b> | <b>BAFFINLAND POLICIES .....</b>                 | <b>9</b>  |
| 2.1      | Health Safety and Environment (HSE) Policy.....  | 9         |
| 2.2      | Baffinland Sustainable Development Policy.....   | 11        |
| <b>3</b> | <b>TARGETED VECS .....</b>                       | <b>14</b> |
| <b>4</b> | <b>Mitigation Measures.....</b>                  | <b>14</b> |
| 4.1      | Construction of Roads.....                       | 14        |
| 4.1.1    | Road Alignment.....                              | 15        |
| 4.1.2    | Creek and River Crossings .....                  | 15        |
| 4.2      | Operation.....                                   | 16        |
| 4.2.1    | Road Maintenance .....                           | 16        |
| 4.2.2    | Freshet Management and Spring Thaw .....         | 17        |
| 4.2.3    | Speed Control and Signs.....                     | 17        |
| 4.2.4    | Right of Way.....                                | 18        |
| 4.2.5    | Use of Road by the Public .....                  | 18        |
| 4.2.6    | Wildlife Sighting .....                          | 18        |
| 4.2.7    | Communication .....                              | 18        |
| <b>5</b> | <b>ROLES AND RESPONSIBILITIES.....</b>           | <b>18</b> |
| 5.1      | Maintenance and Management Responsibilities..... | 18        |
| 5.1.1    | Mine Operations Manager .....                    | 19        |
| 5.1.2    | Site Services Manager .....                      | 19        |
| 5.1.3    | Ore Handling Manager .....                       | 19        |
| 5.1.4    | Ore Handling Superintendent .....                | 19        |
| 5.1.5    | Supervisor.....                                  | 19        |
| 5.1.6    | Ore Haul Dispatcher .....                        | 20        |
| 5.1.7    | PSC and MSC Security .....                       | 20        |
| 5.1.8    | Employee.....                                    | 20        |

|   |                       |                                       |              |
|---|-----------------------|---------------------------------------|--------------|
|  | Roads Management Plan | Issue Date: March 16, 2016<br>Rev.: 5 | Page 4 of 25 |
|   | Environment           | Document #: BAF-PH1-830-P16-0023      |              |

|       |  |    |
|-------|--|----|
| 5.2   | Environmental Responsibilities .....           | 20 |
| 5.2.1 | Environmental Project Team.....                | 20 |
| 5.3   | Mary River Project Organizational Charts ..... | 23 |
| 6     | PERFORMANCE INDICATORS AND THRESHOLD .....     | 24 |
| 7     | MONITORING AND REPORTING REQUIREMENTS.....     | 24 |
| 7.1   | Road Maintenance .....                         | 24 |
| 7.2   | Incidents .....                                | 24 |
| 7.3   | Use of Roads by Non-Project Individuals .....  | 24 |
| 7.4   | Wildlife Sighting .....                        | 24 |
| 8     | ADAPTIVE STRATEGIES .....                      | 25 |

## LIST OF TABLE

|   |    |
|---|----|
| TABLE 5-1: BAFFINLAND IRON MINES CORPORATION SENIOR MANAGEMENT .....          | 20 |
| TABLE 5-2: BAFFINLAND IRON MINES CORPORATION ON-SITE ENVIRONMENTAL TEAM ..... | 21 |

## LIST OF FIGURE

|   |    |
|---|----|
| FIGURE 5-1: MARY RIVER PROJECT ORGANIZATION CHART ..... | 23 |
|---|----|

## List of Appendix

*Attachment A – Dust Management Protocol*

*Attachment B – Tote Road Travel Procedure*


*Attachment C – Whiteout and Wind Storm Procedure*

*Attachment D – Traffic Management Plans*

*Attachment E – Steensby / Mid-Rail Information*


*Attachment F – Hunter and Visitor Site Access Procedure*

*Attachment G – Mine Traffic Patterns Procedure*

|   |                              |   |              |
|---|------------------------------|---|--------------|
|  | <b>Roads Management Plan</b> | <b>Issue Date:</b> March 16, 2016<br><b>Rev.: 5</b> | Page 5 of 25 |
|   | <b>Environment</b>           | <b>Document #: BAF-PH1-830-P16-0023</b>             |              |

## Abbreviations

|                          |  |
|--------------------------|--|
| Baffinland .....         | Baffinland Iron Mines Corporation                      |
| EHS .....                | Environmental, Health, and Safety                      |
| EHS Policy .....         | Environmental, Health, and Safety Policy               |
| EIS .....                | Environmental Impact Statement                         |
| EPCM .....               | Engineering, Procurement, Construction, and Management |
| EPP .....                | Environmental Protection Plan                          |
| ERP.....                 | Early Revenue Phase                                    |
| ESIA .....               | Environmental and Social Impact Assessment             |
| HADD .....               | Harmful Alteration, Disruption, or Destruction         |
| INAC .....               | Indian and Northern Affairs Canada                     |
| Mary River Project ..... | the Project  |
| NLCA .....               | Nunavut Land Claims Agreement                          |
| NTI .....                | Nunavut Tunngavik Incorporated                         |
| OH&S .....               | Occupational Health and Safety                         |
| OHSAS .....              | Occupational Health and Safety Management System       |
| QIA .....                | Qikiqtani Inuit Association                            |
| VEC .....                | Valued Ecosystem Component                             |
| VSEC.....                | Valued Socio-Economic Component                        |

|   |                              |   |              |
|---|------------------------------|---|--------------|
|  | <b>Roads Management Plan</b> | <b>Issue Date:</b> March 16, 2016<br><b>Rev.:</b> 5 | Page 6 of 25 |
|   | <b>Environment</b>           | <b>Document #:</b> BAF-PH1-830-P16-0023             |              |

# 1 INTRODUCTION

## 1.1 PURPOSE


As required by Baffinland Iron Mines Corporation's (Baffinland) Type A Water Licence No. 2AM-MRY1325 Amendment No. 1 (Type A Water Licence) and Type B Water Licence No. 2BE-MRY1421 (Type B Water Licence) for the Mary River Project (Project), a review of Project Environmental Management and Monitoring Plans (EEMPs) was completed. The Roads Management Plan was updated to meet the requirements of the Type A and B water Licences. Further and continual modifications and revisions to this Plan shall be completed based on future work scope modifications, road management procedures, and associated approvals. Updates to this Plan shall be completed in accordance to the terms and conditions of Baffinland's Water Licences, QIA Commercial Lease – Q13C301, issued September 6, 2013, the amended Project Certificate No. 005 issued by the Nunavut Impact Review Board (NIRB) and any subsequent requirements which may be issued.

The Roads Management Plan for the Mary River Project (the Project) has been developed to ensure the protection of people, wildlife and the environment by establishing the proper management of Project roads in recognition of applicable best practices, permits, authorizations, approvals and Inuit Knowledge. The purpose of the Roads Management Plan is to provide controls for a safe and efficient road network for use by the Project and to set out the responsibilities, policies and procedures adopted by the Project to achieve project objectives. The Roads Management Plan applies to all personnel and equipment working for or on-behalf of Baffinland Iron Mines Corporation (Baffinland) including Contractors and Sub-contractors (herein identified as "Contractors").

The Roads Management Plan is applicable to all roads that comprise the Mary River Project road network. The Mary River Project road network consists of the following:

- Service roads around Milne Port facilities.
- The road between Milne Port and Mine Site (the "Tote Road").
- Service roads around the Mine Site facilities, including the mine haul and waste rock haul roads.

The Roads Management Plan (the Plan) provides a practical way to facilitate field implementation of operational, safety or environmental related regulations, practices, and procedures required to eliminate or reduce potential risks. The Plan is a working document for use in the workplace by Project personnel and Contractors, as well as at the corporate level for ensuring commitments made in policy statements are implemented and monitored.

|   |                              |   |              |
|---|------------------------------|---|--------------|
|  | <b>Roads Management Plan</b> | <b>Issue Date:</b> March 16, 2016<br><b>Rev.:</b> 5 | Page 7 of 25 |
|   | <b>Environment</b>           | <b>Document #:</b> BAF-PH1-830-P16-0023             |              |

## 1.2 REGULATORY FRAMEWORK AND WORK SCOPE

A 2016 Work Plan was submitted to the Nunavut Water Board and others on October 31, 2015 by Baffinland. Works and activities proposed have been screened by the NIRB, unless noted otherwise, and have been considered in the amended Project Certificate No. 005 - Amendment 1 issued by the NIRB on May 28, 2014. The general scope for the 2016 Work Plan includes:

- The continued development and construction of additional infrastructure, laydowns, pads and access roads required at Milne Port and the Mine Site for progressing the Early Revenue Phase of the Mary River Project.
- The continuation of Tote Road upgrades including bridge maintenance, localized road realignment, road widening, culvert modifications and the reduction of steep grades and sharp curves where necessary.
- Ongoing environmental effects monitoring and data collection
- Ongoing development of approved quarries and borrow sources to provide access to aggregate for road upgrades, construction projects and sand for winter sanding, minor fill, and routine road maintenance.
- The development and operation of the mine, ore crushing and land transportation, stockpiling and marine shipment of ore

To support the above activities, Baffinland will need to use and to further develop the Mary River Project road network as described within this Plan under authorization from the Mary River Project Certificate No. 005 - Amendment 1, Baffinland's Commercial Lease (Q13C301) with the Qikiqtani Inuit Association (QIA) and respective Water Licence(s) and Land Use Permits.

The existing Mary River Project road network infrastructure at Milne Port and the Mine Site will continue to be used as approved and designed for, with personnel levels remaining within the design capacity at each site. For 2016, this Plan will be applied as appropriate to all project sites applicable under project authorizations.

## 1.3 BAFFINLAND ROAD POLICY

For safety reasons, use of service roads at Milne Port and the Mine Site will be restricted to Baffinland's employees and Contractors.

The Milne Port–Mine Site road (Tote Road) is considered a public road. Baffinland will not restrict access to this road.


## 1.4 RELATIONSHIP TO OTHER MANAGEMENT PLANS

The construction, upgrade, and maintenance of the Mary River Project road network can affect site water quality, fish habitat, vegetation and other environmental components. Therefore, this plan must be viewed in consideration with:

---

The information contained herein is proprietary to Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.

|   |                              |   |              |
|---|------------------------------|---|--------------|
|  | <b>Roads Management Plan</b> | <b>Issue Date:</b> March 16, 2016<br><b>Rev.:</b> 5 | Page 8 of 25 |
|   | <b>Environment</b>           | <b>Document #: BAF-PH1-830-P16-0023</b>             |              |

- Environmental Protection Plan (BAF-PH1-830-P16-0008)
- Surface Water and Aquatic Ecosystems Management Plan (BAF-PH1-830-P16-0026)
- Fresh Water Supply, Sewage and Wastewater Management Plan (BAF-PH1-830-P16-0010)
- Interim Closure and Reclamation Plan (BAF-PH1-830-P16-0012)
- Air Quality and Noise Abatement Management Plan (BAF-PH1-830-P16-0002)
- Emergency Response Plan (BAF-PH1-830-P16-0007)
- Spill Contingency Plan (BAF-PH1-830-P16-0036)
- Explosives Management Plan (BAF-PH1-830-P16-0009)
- Terrestrial Environmental Management and Monitoring Plan (BAF-PH1-830-P16-0027)
- Waste Management Plan (BAF-PH1-830-P16-0028)
- Borrow Pits and Quarry Management Plan (BAF-PH1-830-P16-0004)
- Borrow Source Management Plan (BAF-PH1-830-P16-0005)
- Oil Pollution Emergency Plan - Milne Port (OPEP) (BAF-PH1-830-P16-0013)
- Cultural and Heritage Resource Protection Plan (BAF-PH1-830-P16-0006)


## 1.5 BAFFINLAND'S COMMITMENTS

Baffinland will provide the necessary human, material and financial resources to implement and maintain the Health, Safety and Environment Management System. For Baffinland's Health, Safety, and Environment Policy, see FIGURE 2-1. For Baffinland's Sustainable Development Policy, see FIGURE 2- 2.

---

The information contained herein is proprietary to Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.

|   |                       |                                       |              |
|---|-----------------------|---------------------------------------|--------------|
|  | Roads Management Plan | Issue Date: March 16, 2016<br>Rev.: 5 | Page 9 of 25 |
|   | Environment           | Document #: BAF-PH1-830-P16-0023      |              |

## 2 BAFFINLAND POLICIES

### 2.1 HEALTH SAFETY AND ENVIRONMENT (HSE) POLICY



This Baffinland Iron Mines Corporation Policy on Health, Safety and Environment is a statement of our commitment to achieving a safe, healthy and environmentally responsible workplace. We will not compromise this policy for the achievement of any other organizational goals.

We implement this Policy through the following commitments:

- Continual improvement of safety, occupational health and environmental performance
- Meeting or exceeding the requirements of regulations and company policies
- Integrating sustainable development principles into our decision-making processes
- Maintaining an effective Health, Safety and Environmental Management System
- Sharing and adopting improved technologies and best practices to prevent injuries, occupational illnesses and environmental impacts
- Engaging stakeholders through open and transparent communication.
- Efficiently using resources, and practicing responsible minimization, reuse, recycling and disposal of waste.
- Reclamation of lands to a condition acceptable to stakeholders.


Our commitment to provide the leadership and action necessary to accomplish this policy is exemplified by the following principles:

- As evidenced by our motto “Safety First, Always” and our actions Health and safety of personnel and protection of the environment are values not priorities.
- All injuries, occupational illnesses and environmental impacts can be prevented.
- Employee involvement and active contribution through courageous leadership is essential for preventing injuries, occupational illnesses and environmental impacts.
- Working in a manner that is healthy, safe and environmentally sound is a condition of employment.
- All operating exposures can be safeguarded.
- Training employees to work in a manner that is healthy, safe and environmentally sound is essential.
- Prevention of personal injuries, occupational illnesses and environmental impacts is good business.
- Respect for the communities in which we operate is the basis for productive relationships.

---

The information contained herein is proprietary to Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.

|   |                              |   |               |
|---|------------------------------|---|---------------|
|  | <b>Roads Management Plan</b> | <b>Issue Date:</b> March 16, 2016<br><b>Rev.: 5</b> | Page 10 of 25 |
|   | <b>Environment</b>           | <b>Document #: BAF-PH1-830-P16-0023</b>             |               |

We have a responsibility to provide a safe workplace and utilize systems of work to meet this goal. All employees must be clear in understanding the personal responsibilities and accountabilities in relation to the tasks we undertake.


The health and safety of all people working at our operation and responsible management of the environment are core values to Baffinland. In ensuring our overall profitability and business success every Baffinland and business partner employee working at our work sites is required to adhere to this Policy.

Brian Penney  
Chief Executive Officer  
March 2016

---

The information contained herein is proprietary to Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.

|   |                              |   |               |
|---|------------------------------|---|---------------|
|  | <b>Roads Management Plan</b> | <b>Issue Date:</b> March 16, 2016<br><b>Rev.:</b> 5 | Page 11 of 25 |
|   | <b>Environment</b>           | <b>Document #:</b> BAF-PH1-830-P16-0023             |               |

## 2.2 BAFFINLAND SUSTAINABLE DEVELOPMENT POLICY



### SUSTAINABLE DEVELOPMENT POLICY

At Baffinland Iron Mines Corporation (Baffinland), we are committed to conducting all aspects of our business in accordance with the principles of sustainable development & corporate responsibility and always with the needs of future generations in mind. Baffinland conducts its business in accordance with the Universal Declaration of Human Rights and ArcelorMittal's Human Rights Policy which applies to all employees and affiliates globally.

Everything we do is underpinned by our responsibility to protect the environment, to operate safely and fiscally responsibly and with utmost respect for the cultural values and legal rights of Inuit. We expect each and every employee, contractor, and visitor to demonstrate courageous leadership in personally committing to this policy through their actions. The Sustainable Development and Human Rights Policy is communicated to the public, all employees and contractors and it will be reviewed and revised as necessary on a regular basis. These four pillars form the foundation of our corporate responsibility strategy:

1. Health and Safety
2. Environment
3. Upholding Human Rights of Stakeholders
4. Transparent Governance

## 1.0 HEALTH AND SAFETY

- We strive to achieve the safest workplace for our employees and contractors; free from occupational injury and illness, where everyone goes home safe everyday of their working life. Why? Because our people are our greatest asset. Nothing is as important as their health and safety. Our motto is "Safety First, Always".
- We report, manage and learn from injuries, illnesses and high potential incidents to foster a workplace culture focused on safety and the prevention of incidents.
- We foster and maintain a positive culture of shared responsibility based on participation, behaviour, awareness and promoting active courageous leadership. We allow our employees and contractors the right to stop any work if and when they see something that is not safe.


## 2.0 ENVIRONMENT

- Baffinland employs a balance of the best scientific and traditional Inuit knowledge to safeguard the environment.

---

The information contained herein is proprietary to Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.

|   |                              |   |               |
|---|------------------------------|---|---------------|
|  | <b>Roads Management Plan</b> | <b>Issue Date:</b> March 16, 2016<br><b>Rev.:</b> 5 | Page 12 of 25 |
|   | <b>Environment</b>           | <b>Document #:</b> BAF-PH1-830-P16-0023             |               |

- Baffinland applies the principles of pollution prevention, waste reduction and continuous improvement to minimize ecosystem impacts, and facilitate biodiversity conservation.
- We continuously seek to use energy, raw materials and natural resources more efficiently and effectively. We strive to develop more sustainable practices.
- Baffinland ensures that an effective closure strategy is in place at all stages of project development to ensure reclamation objectives are met.

### 3.0 UPHOLDING HUMAN RIGHTS OF STAKEHOLDERS

- We respect human rights, the dignity of others and the diversity in our workforce. Baffinland honours and respects the unique cultural values and traditions of Inuit.
- Baffinland does not tolerate discrimination against individuals on the basis of race, colour, gender, religion, political opinion, nationality or social origin, or harassment of individuals freely employed.
- Baffinland contributes to the social, cultural and economic development of sustainable communities in the North Baffin Region.
- We honour our commitments by being sensitive to local needs and priorities through engagement with local communities, governments, employees and the public. We work in active partnership to create a shared understanding of relevant social, economic and environmental issues, and take their views into consideration when making decisions.
- We expect our employees and contractors, as well as community members, to bring human rights concerns to our attention through our external grievance mechanism and internal human resources channels. Baffinland is committed to engaging with our communities of interest on our human rights impacts and to reporting on our performance.


### 4.0 TRANSPARENT GOVERNANCE

- Baffinland will take steps to understand, evaluate and manage risks on a continuing basis, including those that may impact the environment, employees, contractors, local communities, customers and shareholders.
- Baffinland endeavours to ensure that adequate resources are available and that systems are in place to implement risk-based management systems, including defined standards and objectives for continuous improvement.
- We measure and review performance with respect to our safety, health, environmental, socio-economic commitments and set annual targets and objectives.
- Baffinland conducts all activities in compliance with the highest applicable legal & regulatory requirements and internal standards.
- We strive to employ our shareholder's capital effectively and efficiently and demonstrate honesty and integrity by applying the highest standards of ethical conduct.

---

The information contained herein is proprietary to Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.

|   |                              |   |               |
|---|------------------------------|---|---------------|
|  | <b>Roads Management Plan</b> | <b>Issue Date:</b> March 16, 2016<br><b>Rev.:</b> 5 | Page 13 of 25 |
|   | <b>Environment</b>           | <b>Document #:</b> BAF-PH1-830-P16-0023             |               |


## 4.1 FURTHER INFORMATION

Please refer to the following policies and documents for more information on Baffinland's commitment to operating in an environmentally and socially responsible manner:

Health, Safety and Environment Policy  
 Workplace Conduct Policy  
 Inuktitut in the Workplace Policy  
 Site Access Policy  
 Hunting and Fishing (Harvesting) Policy  
 Annual Report to Nunavut Impact Review Board  
 ArcelorMittal Canada Sustainability and Corporate Responsibility Report

If you have questions about Baffinland's commitment to upholding human rights, please direct them to [contact@baffinland.com](mailto:contact@baffinland.com).

Brian Penney  
 Chief Executive Officer  
 March 2016

|   |                              |   |               |
|---|------------------------------|---|---------------|
|  | <b>Roads Management Plan</b> | <b>Issue Date:</b> March 16, 2016<br><b>Rev.:</b> 5 | Page 14 of 25 |
|   | <b>Environment</b>           | <b>Document #:</b> BAF-PH1-830-P16-0023             |               |

### 3 TARGETED VECS

The targeted valued ecosystem components (VECs) and valued socio-economic components (VSECs) are:

- Water quality.
- Fish habitat.
- Terrestrial wildlife.
- Vegetation.
- Health and safety of employees.
- Cultural resources and heritage.

In addition to the VECs and VSECs, this plan considers the occasional use of the roads by residents of the neighbouring communities (Pond Inlet and Igloolik/Hall Beach residents).


### 4 MITIGATION MEASURES

#### 4.1 CONSTRUCTION OF ROADS

Road design shall be based on current Best Engineering Practice, for example Design of Surface Mine Haulage Roads - A Manual (US Department of the Interior, Bureau of Mines) and shall comply with applicable federal and local laws and regulations. The wearing surface of the roads will be designed based on the loads from the specific design vehicle for the road and shall be profiled to drain water from the surface to appropriately designed swales or drainage pathways adjacent to the road. At suitable intervals along the swales or pathways, settlement ponds or other sedimentation controls shall be placed to provide sediment capture prior to the water being channelled to existing water courses, as required. Swales, settlement ponds and other sedimentation controls shall be designed to cope with the peak flow specified with the required return period event.

Roads are constructed for all-season use. Cut and fill locations along road alignments and excavation of sand and gravel from borrow areas exposes soil that is potentially prone to erosion. These activities can result in a change in the ground thermal regime, as a new active layer is introduced. Modification to the thermal regime can induce melting of permafrost and ground ice present, resulting in thaw settlement and depressions, and therefore areas that are more prone to erosion and ponding of water and ultimately road hazards. Roads will be designed to minimize the potential for permafrost and ground ice melting, erosion, and ponding of water and enable rapid discharge of water through the road embankment via existing drainages and creeks/streams (e.g., by appropriately designed and constructed culverts).

Whenever practicable, road construction will be scheduled to minimize impacts on the receiving environment.

|   |                              |   |               |
|---|------------------------------|---|---------------|
|  | <b>Roads Management Plan</b> | <b>Issue Date:</b> March 16, 2016<br><b>Rev.:</b> 5 | Page 15 of 25 |
|   | <b>Environment</b>           | <b>Document #: BAF-PH1-830-P16-0023</b>             |               |

The Surface Water and Aquatic Ecosystems Management Plan (BAF-PH1-830-P16-0026) will be applied to road construction and operational activities in an effort to minimize erosion, sedimentation, and to ensure the protection of fish habitat along the road where there are stream crossings or nearby water bodies.

#### 4.1.1 ROAD ALIGNMENT


Before finalizing the alignment of a road, unique landform and archaeological resources will be surveyed. Whenever possible, the alignment of new roads will avoid unique landforms and archaeological sites. At all times activity in or around unique landforms and archaeological sites will be conducted as per Baffinland's Cultural Heritage and Resource Protection Plan (BAF-PH1-830-P16-0006).

#### 4.1.2 CREEK AND RIVER CROSSINGS

Construction activities at water crossings must comply with the terms and conditions of Baffinland's water licences, Department of Fisheries and Oceans (DFO) authorizations, and any other regulatory approvals. For mitigation measures related to the protection of surface water quality and fish habitat, refer to the Surface Water and Aquatic Ecosystem Management Plan (BAF-PH1-830-P16-0026). For a complete list of fisheries crossings identified on Project sites see the 2015 Annual Report to the DFO (BAF-PH1-830-P19-0001 r1).

Several operating procedures have been developed to mitigate the negative impacts of erosion and damage to creek crossing structures and fish habitat. These measures include:

- Clearing snow from roads where culverts/crossings are located.
- Excavating snow downstream and upstream of crossings before the onset of freshet and monitoring culverts for clearance of snow and ice.
- Where snow and ice blockage occurs, ensuring that blockage is removed to re-establish adequate flow.
- Regular monitoring of crossing conditions to ensure acceptable conditions for fish migration.
- Performing repairs/modifications to crossing structures as required based on results of monitoring and risk assessment considering fish habitat protection.
- For locations where there is a problem with culvert outlet scour and erosion, construction of rocky ramps downstream of the crossings will be considered. Occasionally, reinstalling culverts and/or installation of additional overflow culverts will be required.
- For all works requiring the use of explosives (blasting) in or near water bodies (i.e. docks, bridges), the Guidelines for Use of Explosives in or near Canadian Fisheries Water, 1998" will be followed. For any locations where the guidelines cannot be conformed with, DFO will be consulted before blasting starts. Fuel required for road or water crossing works will be stored in fuel drums or double-walled day tanks within secondary containment. All refueling activities will occur at least 31 meters from any water body or watercourse. Drip pans will be used during refuelling operations to prevent spills.

|   |                              |   |               |
|---|------------------------------|---|---------------|
|  | <b>Roads Management Plan</b> | <b>Issue Date:</b> March 16, 2016<br><b>Rev.:</b> 5 | Page 16 of 25 |
|   | <b>Environment</b>           | <b>Document #: BAF-PH1-830-P16-0023</b>             |               |

- All bridges and culvert crossings are designed for an appropriate hydraulic event return period with allowance made for ice accumulation.
- Each stream/river crossing is assessed for potential loss of fish habitat. In the case that a crossing(s) may result in serious harm to existing fish habitat, under the Fisheries Act, an authorization, amendment or Letter of Advice will be sought from DFO.
- Permanent refuelling stations are equipped to contain minor spills or leaks during refuelling activities. The liner (e.g., 40-mm hypolon liner or equivalent) is protected by sand bedding. Vehicles and mobile equipment drive onto this bedding for refuelling. All fuel transfer is done using pumps and within the lined area.
- For each method of fuel storage and transfer, specific procedures related to fuel storage and transfer will be developed and proper containment and emergency response equipment will be provided to meet or exceed regulatory requirements,(refer to the EPP for more detail on the necessary fuel storage/transfer protection measures)
- The Spill Contingency Plan (BAF-PH1-830-P16-0036) will govern land-based operations, and a Transport Canada-approved Oil-Handling Facility (OHF) Plan (i.e. Milne Port OPEP) will govern ship-to-shore fuel transfers. Both plans shall be used alongside the Emergency Response Plan (BAF-PH1-830-P16-0036).

## 4.2 OPERATION

### 4.2.1 ROAD MAINTENANCE

Roads will be regularly graded to prevent rutting (furrow creation). Active borrow sites will be maintained to secure access to sand and gravel as required for road maintenance (refer to Borrow Pit and Quarry Management Plan, BAF-PH1-830-P16-0004). Culvert and bridge crossings will be regularly monitored to ensure unobstructed passage of water through natural drainages and existing streams and rivers. Maintenance will be performed as required.

#### **Snow Removal**

During the winter months, drifting snow is likely to accumulate in certain areas of the road network. Roads will be designed to minimize drifting snow on the road embankment. Snow fence installations will be considered in areas of unavoidable accumulation to minimize these effects if required. Roads will be cleared of snow as necessary. The Site Snow Management Procedure (BAF-PH1-320-PRO-005) will govern how snow is removed and stored at Project sites to prevent sediment and debris from being released into nearby waterbodies during spring freshet.


#### **Dust Control**

During the summer months, road dust has the potential to become a Health, Safety and Environmental concern. Where and when appropriate, dust suppressants (E.G. CaCl<sub>2</sub> brines) may be used on the roads, particularly on heavy-use sections, as per Dust Management Protocol for the Mary River Project road

---

The information contained herein is proprietary to Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.

|   |                              |   |               |
|---|------------------------------|---|---------------|
|  | <b>Roads Management Plan</b> | <b>Issue Date:</b> March 16, 2016<br><b>Rev.:</b> 5 | Page 17 of 25 |
|   | <b>Environment</b>           | <b>Document #: BAF-PH1-830-P16-0023</b>             |               |

network (refer to Attachment A). During the winter months there will be no dust suppressants used on the roadways.

### **Road Closure and Management**

Whenever unsafe conditions are identified (washout, severe rutting, vehicle breakdown, whiteout conditions, etc.), the road will be closed until the required maintenance is completed or conditions have improved. Road closure and traffic management will be directed by the senior Ore Haul management representative, in consultation with the other senior management members onsite. . Tote Road travel and road management will adhere to the Tote Road Travel Procedure (BAF-PH1-810-PRO-0002) as presented in Attachment B, the Mine Traffic Patterns Procedure (BAF-PH1-340-PRO-0002) as presented in Attachment G and the Whiteout and Wind Storm Conditions Procedure (BAF-PH1-810-PRO-0001) as presented in Attachment C.


#### **4.2.2 FRESHET MANAGEMENT AND SPRING THAW**

High flows occurring during freshet can result in erosion and damage to road embankments, stream-crossing structures, and fish habitat. Under Baffinland's DFO authorizations and Letters of Advice for road and stream-crossing construction and ongoing operations, Harmful Alteration, Disruption or Destruction (HADD) to fish habitat must be identified, impacts on fish habitat minimized and fish passage for all life stages maintained (2015 Annual Report to the DFO - BAF-PH1-830-P19-0001 r1-). Several operating procedures have been developed to mitigate potential impacts caused by freshet events. These procedures include:

- Establishing/markings locations of all susceptible crossings.
- Clearing of snow from roads where culverts/crossings are located.
- Excavating snow downstream and upstream of creek crossing before freshet.
- Monitoring culverts for clearance of snow and ice.
- Where snow and ice blockage occurs, ensure blockages are removed to facilitate water passage.
- Monitoring crossing conditions regularly to ensure acceptable conditions for fish migration.
- Conducting repairs/modifications to crossing structures as required.

#### **4.2.3 SPEED CONTROL AND SIGNS**

Speed limits for Project roads have been established and communicated to all Project personnel. All project personnel who operate vehicles are required to undergo vehicle specific training sessions prior to the operation of any vehicle on-site which includes training on all traffic management procedures and restrictions. Road signs will indicate hazards and blind road curves or intersections, radio frequencies, and radio call-in requirements. Traffic Management Plans for the Mine Site and Milne Port that detail existing Project Site roads have been developed, presented in Attachment D.

|   |                              |   |               |
|---|------------------------------|---|---------------|
|  | <b>Roads Management Plan</b> | <b>Issue Date:</b> March 16, 2016<br><b>Rev.:</b> 5 | Page 18 of 25 |
|   | <b>Environment</b>           | <b>Document #:</b> BAF-PH1-830-P16-0023             |               |

Markers are positioned approximately each kilometre along to the Tote Road. These markers are used to identify position of incidents, in the case of emergencies, and road users. . They are also used for reporting wildlife sightings and non-Project human visitor observations.

#### 4.2.4 RIGHT OF WAY

Whenever possible, all traffic will yield to wildlife encountered on roads and the lighter vehicle will yield to heavier equipment. In the case of approaching ore haul trucks on the Tote Road, the southbound ore haul truck will yield to the northbound ore haul truck.

#### 4.2.5 USE OF ROAD BY THE PUBLIC

The Tote Road may also be used by non-Project individuals (snowmobile, ATV) from nearby communities (e.g., Pond Inlet and Igloolik). Extreme care must be taken at all times whenever non-Project individuals are sighted along Project roads as they might not be aware of the hazards associated with Project activities and traffic.

Sightings of non-Project personnel are reported to Security of the nearest Project site and recorded on the Human Use logs posted at accommodation complexes. Refer to the Environmental Protection Plan (BAF-PH1-830-P16-0008), Section 2.2 for more details.

All visitors and non-Project individuals traveling near the Tote Road or visiting Project sites will adhere to the Hunter and Visitor Site Access Procedure (BAF-PH1-810-PRO-0002) as presented in Attachment F.

#### 4.2.6 WILDLIFE SIGHTING

Wildlife sightings along roads are reported and recorded as incidental observations on posted wildlife logs at accommodations complexes. Refer to the Environmental Protection Plan (BAF-PH1-830-P16-0008), Section 2.23 for more details.

#### 4.2.7 COMMUNICATION

Baffinland vehicles are equipped with radios. Incidents or unsafe road conditions must be reported by drivers to Ore Handling Dispatch and Security of the nearest camp. To ensure safety and prevent accidents, drivers must radio their positions when departing or arriving at camps and when approaching blind curves or hills. These call-in locations are posted and communicated to vehicle operators during orientation and mandatory training sessions.

## 5 ROLES AND RESPONSIBILITIES


### 5.1 MAINTENANCE AND MANAGEMENT RESPONSIBILITIES

The responsibility of the Mary River Project road network use, maintenance and management is as follows:

---

The information contained herein is proprietary to Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.

|   |                              |   |               |
|---|------------------------------|---|---------------|
|  | <b>Roads Management Plan</b> | <b>Issue Date:</b> March 16, 2016<br><b>Rev.:</b> 5 | Page 19 of 25 |
|   | <b>Environment</b>           | <b>Document #:</b> BAF-PH1-830-P16-0023             |               |

#### 5.1.1 MINE OPERATIONS MANAGER

- Reports to the General Manager
- Provides oversight for all Mine operations, including the operation, construction and maintenance of the Mine Haul Road from the Mine to Crushing operations.

#### 5.1.2 SITE SERVICES MANAGER

- Reports to the General Manager
- Provides oversight for all Project Site operations, including the operation, construction and maintenance of the Project Site roads.

#### 5.1.3 ORE HANDLING MANAGER

- Reports to the General Manager
- Provides oversight for all Ore Handling operations, including the operation, construction and maintenance of the Tote Road between the Port and Mine Site.

#### 5.1.4 ORE HANDLING SUPERINTENDENT

Ore Handling Superintendents have the lead responsibility for managing traffic on the Mary River Project road network including:

- Monitoring weather forecasts and conditions.
- Plan, schedule and manage road construction and maintenance
- Identify problem areas on the network that may impact driver safety and take appropriate action.
  - Problem areas may include;
    - White-out conditions
    - Road wash-out
    - Vehicle incidents
    - Poor roadway conditions

#### 5.1.5 SUPERVISOR


Baffinland Supervision is responsible for the following:

- Ensure that any worker operating a vehicle on the Mary River Project road network is trained and qualified regarding road safety and driving communication protocols.
- Ensure that any light vehicles or work equipment travelling the Tote Road in winter months, or in periods of severe weather conditions are equipped with an emergency survival kit.
- Ensure that any workers traveling on the Mary River Project road network have all the required safety equipment, and are following all PPE requirements and procedural controls.
- Ensure their work crews complies with the process for reporting when their vehicles enter and depart Project sites when using the Tote Road.
- Ensure weather conditions are suitable for the travel or work activity required.

---

The information contained herein is proprietary to Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.

|   |                              |   |               |
|---|------------------------------|---|---------------|
|  | <b>Roads Management Plan</b> | <b>Issue Date:</b> March 16, 2016<br><b>Rev.:</b> 5 | Page 20 of 25 |
|   | <b>Environment</b>           | <b>Document #:</b> BAF-PH1-830-P16-0023             |               |

#### 5.1.6 ORE HAUL DISPATCHER

- Distribute, along with Security, Tote Road conditions and status updates
- Monitor ore haul traffic on the Tote Road

#### 5.1.7 PSC AND MSC SECURITY

- Maintain active traffic log of vehicles on Tote Road
- Distribute, along with Ore Haul Dispatch, Tote Road conditions and status updates

#### 5.1.8 EMPLOYEE

All personnel using the Mary River Project road network are responsible to comply with the requirements of this Plan.

### 5.2 ENVIRONMENTAL RESPONSIBILITIES

From an environmental standpoint, environmental impact of the Mary River Project road network construction, maintenance and use will be managed by the Baffinland Environmental Team. The Baffinland Environmental Team is organised into two parts, on site as well as off site. The organisational structure for the Mary River Project in relation to the environment discipline is shown in the Table 5 below. Communication channels are described as liaisons in the tables outlining the responsibilities and accountabilities in the following sections.

#### 5.2.1 ENVIRONMENTAL PROJECT TEAM

##### 5.2.1.1 THE BAFFINLAND ENVIRONMENTAL TEAM


The Baffinland Environmental Team will oversee all environmental and community works on and off site. The Baffinland Corporate Environmental Team responsibilities are summarized in TABLE 5-1.

**TABLE 5-1: BAFFINLAND IRON MINES CORPORATION SENIOR MANAGEMENT**

| <b>Baffinland Iron Mines Corporation Senior Management</b> |  |
|--|--|
| <b>Position</b>  | <b>Responsibilities and Accountabilities</b>   |
| Chief Operations Officer (COO)                             | <ul style="list-style-type: none"> <li>• Reports to Baffinland's CEO</li> <li>• Overall accountability for the operation of the Project</li> <li>• Allocation of resources (human and financial) for the implementation of Baffinland's commitments and objectives related to health, safety and environment during operation</li> <li>• Accountable for on-site environmental, health and safety performance during operation</li> </ul>  |
| VP Sustainable Development, Health, Safety and Environment | <ul style="list-style-type: none"> <li>• Reports to the COO</li> <li>• Accountable for external communication (Governments, media, NGO, others) related to Baffinland's press releases and overall communication of site incidents/events</li> <li>• Establish corporate environmental policies and objectives</li> <li>• Monitors and reports on Baffinland's performance related to environmental, health and safety policies and objectives</li> <li>• Community liaison</li> </ul> |

The information contained herein is proprietary to Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.

|   |                              |   |               |
|---|------------------------------|---|---------------|
|  | <b>Roads Management Plan</b> | <b>Issue Date:</b> March 16, 2016<br><b>Rev.: 5</b> | Page 21 of 25 |
|   | <b>Environment</b>           | <b>Document #: BAF-PH1-830-P16-0023</b>             |               |

| <b>Baffinland Iron Mines Corporation Senior Management</b> |   |
|--|---|
| <b>Position</b>  | <b>Responsibilities and Accountabilities</b>  |
|  | <ul style="list-style-type: none"> <li>• Liaise with regulatory authorities</li> <li>• Obtains necessary permits and authorizations</li> <li>• Monitors compliance with regards to terms and conditions of permits and licences</li> <li>• Routine EHS audit of contractor performance while on site</li> </ul> |
| Chief Procurement Officer                                  | <ul style="list-style-type: none"> <li>• Reports to the COO</li> <li>• Accountable for procurement and purchasing</li> <li>• Ensure that environmental commitments, policies and objectives are included in all contract documents</li> </ul>   |
|  | <ul style="list-style-type: none"> <li>•</li> </ul>   |


The Baffinland Environmental Team will oversee all environmental activities on site. These responsibilities on site are outlined in **TABLE 5-2**.

**TABLE 5-2: BAFFINLAND IRON MINES CORPORATION ON-SITE ENVIRONMENTAL TEAM**

| <b>Baffinland Iron Mines Corporation On-Site Environmental Team</b> |   |
|---|---|
| <b>Position</b>   | <b>Responsibilities and Accountabilities</b>  |
| Environmental Manager   | <ul style="list-style-type: none"> <li>• Reports directly to VP Sustainable Development, Health, Safety and Environment and Indirect reporting and coordination with COO and Director of Sustainable Development</li> <li>• Overall accountability for environmental staff and performance at site</li> <li>• Coordinates implementation and monitors the performance of the Environmental Management System at site</li> <li>• Liaises with the senior management, regulators and stakeholders</li> <li>• Ensures effective monitoring and auditing of environmental performance of departments and contractors on site and identifies opportunities for improvement</li> <li>• Monitors compliance with permits, licenses and authorizations</li> <li>• Ensures all regulatory environmental monitoring and reporting requirements (monthly, annual) are met</li> <li>• Leads and coordinates site permitting requirements.</li> <li>• Initiates and oversees environmental studies</li> <li>• Oversees investigations and reporting of environmental incidents to regulatory bodies, stakeholders and senior management</li> <li>• Reviews and updates environmental management plans</li> </ul> |
| Environmental Superintendent  | <ul style="list-style-type: none"> <li>• Reports to Environmental Manager</li> <li>• Specific accountabilities for environmental monitoring and reporting</li> <li>• Leads investigations and reporting of environmental incidents onsite</li> <li>• Serves as the liaison for regulators during onsite inspections and visits</li> <li>• Provides ongoing environmental education and environmental awareness training to all employees and contract workers</li> <li>• Oversees environmental database management</li> <li>• Prepares updates for management plans</li> </ul>   |
| Environmental Coordinator   | <ul style="list-style-type: none"> <li>• Reports to the Environmental Superintendent and Manager</li> <li>• Specific accountabilities for environmental monitoring and reporting</li> <li>• Provides day to day direction to Environmental staff onsite</li> <li>• Serves as a liaison for regulators during onsite inspections and visits.</li> </ul>  |

The information contained herein is proprietary to Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.


Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.

|   |                              |   |               |
|---|------------------------------|---|---------------|
|  | <b>Roads Management Plan</b> | <b>Issue Date:</b> March 16, 2016<br><b>Rev.: 5</b> | Page 22 of 25 |
|   | <b>Environment</b>           | <b>Document #: BAF-PH1-830-P16-0023</b>             |               |

| <b>Baffinland Iron Mines Corporation On-Site Environmental Team</b> |  |
|---|--|
| <b>Position</b>   | <b>Responsibilities and Accountabilities</b>   |
|   | <ul style="list-style-type: none"> <li>Provides ongoing environmental education and environmental awareness training to all employees and contract workers</li> <li>Assists with environmental database management</li> </ul>                                      |
|   | <ul style="list-style-type: none"> <li></li> </ul>   |
| Environmental Monitor and Technician                                | <ul style="list-style-type: none"> <li>Reports to the Environmental Superintendent or designate</li> <li>Assists with environmental database management</li> <li>Assists with monitoring and sampling activities as per the Project's management plans</li> </ul>  |
| QIA Monitor   | <ul style="list-style-type: none"> <li>Works alongside the Baffinland Environment Department to ensure the proper implementation of all environmental management and monitoring plans</li> <li>Acts as the QIA liaison for onsite environmental matters</li> </ul> |
| Environmental Support Groups (Consultants, etc.)                    | <ul style="list-style-type: none"> <li>Assists with sampling, monitoring and reporting activities as required by permits, licenses and environmental management plans</li> <li>Provides technical expertise to various environmental studies</li> </ul>            |

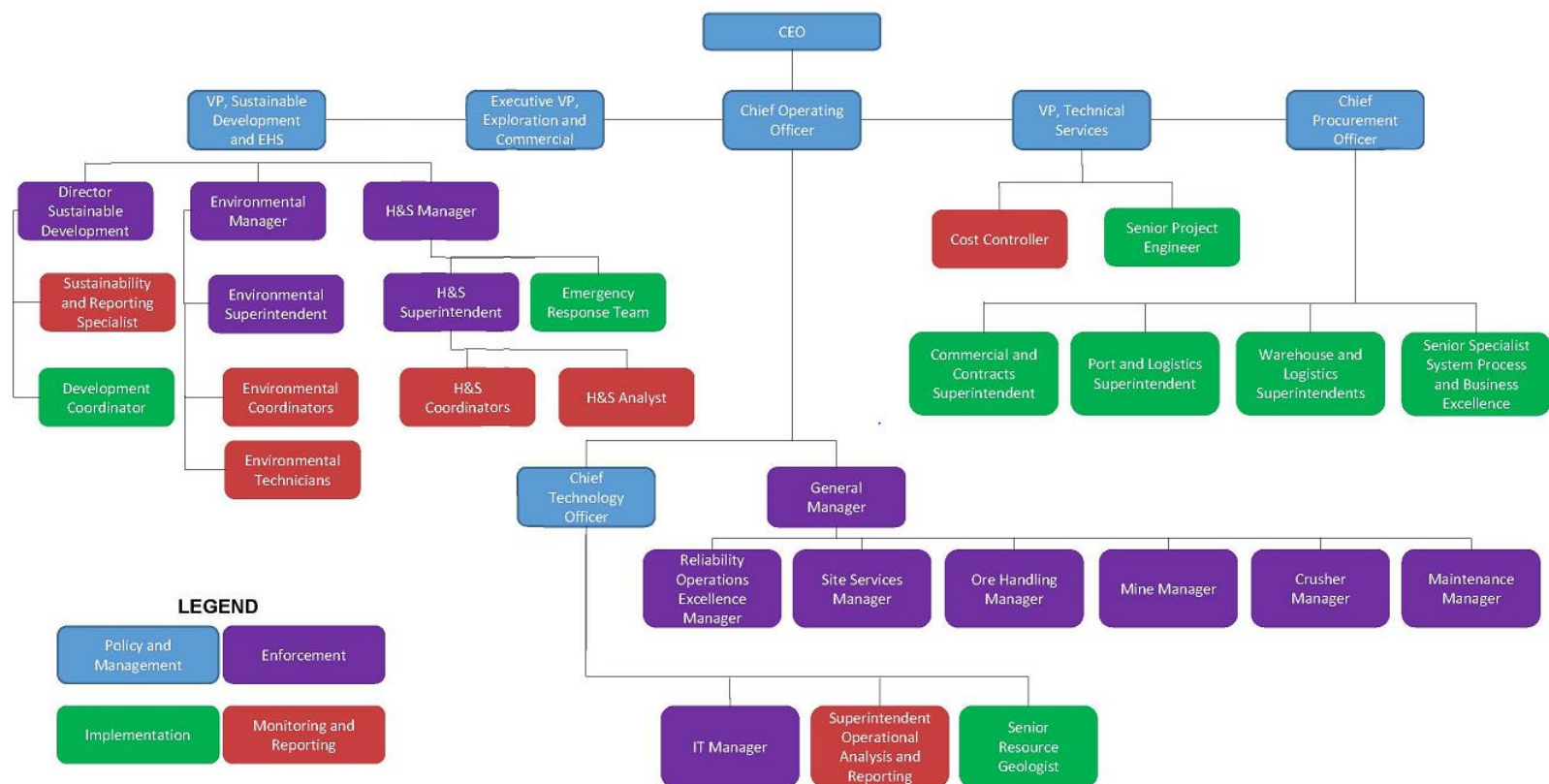
The information contained herein is proprietary to Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.

|   |                              |   |               |
|---|------------------------------|---|---------------|
|  | <b>Roads Management Plan</b> | <b>Issue Date:</b> March 16, 2016<br><b>Rev.: 5</b> | Page 23 of 25 |
|   | <b>Environment</b>           | <b>Document #: BAF-PH1-830-P16-0023</b>             |               |

### 5.3 MARY RIVER PROJECT ORGANIZATIONAL CHARTS


For further information regarding the Mary River Projects organizational structure in relation to the environment discipline, please refer to the FIGURE 5-1 below:



**FIGURE 5-1: MARY RIVER PROJECT ORGANIZATION CHART**

The information contained herein is proprietary to Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.

|   |                              |   |               |
|---|------------------------------|---|---------------|
|  | <b>Roads Management Plan</b> | <b>Issue Date:</b> March 16, 2016<br><b>Rev.:</b> 5 | Page 24 of 25 |
|   | <b>Environment</b>           | <b>Document #:</b> BAF-PH1-830-P16-0023             |               |

## 6 PERFORMANCE INDICATORS AND THRESHOLD

The ultimate performance indicators are the number of vehicle accidents recorded and the number of harmful vehicle-wildlife interactions (e.g., where wildlife are injured or killed). Baffinland's objectives for the Mary River Project road network are ZERO accidents and ZERO road related wildlife kills.

## 7 MONITORING AND REPORTING REQUIREMENTS

### 7.1 ROAD MAINTENANCE

Roads and water crossings are inspected regularly for signs of degradation and maintenance requirements. Periodic visual inspections will be conducted on all roads by trained personnel and will occur at regular intervals and after any vehicle collisions, heavy precipitation events or construction activities occur. The Mary River Project road network shall be continually inspected over the life of the Project. Road safety, stability and erosion are several of the main factors that will be investigated during the routine inspections.

### 7.2 INCIDENTS

Incidents are reported to the Health and Safety Superintendent and/or the Environmental Superintendent, depending on the nature of the incident, who will in turn communicate the incident to senior management. All incidents are reported, using the Baffinland Incident Investigation Form, and investigated to determine the cause(s) of the incident as well as the corrective actions necessary to prevent the reoccurrence of the incident.

### 7.3 USE OF ROADS BY NON-PROJECT INDIVIDUALS

The Health and Safety Manager, in concert with the Environmental Manager, maintains a registry of sightings, locations and frequencies of non-Project-related individuals in a human use log. For reporting requirements and types of observations to be recorded, see the Environmental Protection Plan (BAF-PH1-830-P16-0008), Section 2.2. This information is used to formulate policies and initiatives for Project road use, wildlife harvesting observations, and other related matters. The information is reported annually and upon request to government agencies and stakeholders.


### 7.4 WILDLIFE SIGHTING

The Environmental Manager, maintains a registry of wildlife sighting locations and frequencies. For reporting requirements and types of observations to be recorded, see the Environmental Protection Plan (BAF-PH1-830-P16-0008), Section 2.23. This information is used to inform terrestrial wildlife studies and to formulate mitigation measures for wildlife protection, and is included in annual (or more

---

The information contained herein is proprietary to Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.


|   |                              |   |               |
|---|------------------------------|---|---------------|
|  | <b>Roads Management Plan</b> | <b>Issue Date:</b> March 16, 2016<br><b>Rev.: 5</b> | Page 25 of 25 |
|   | <b>Environment</b>           | <b>Document #: BAF-PH1-830-P16-0023</b>             |               |

frequent) reports to government agencies and stakeholders. Wildlife mortalities on Project sites and roads are reported to the required government agencies and stakeholders.

## 8 ADAPTIVE STRATEGIES

Baffinland is committed to continuous improvement of its work activities with the aim of reducing risks to the environment and improving operational safety and efficiency. The strategy employed at Baffinland is regular monitoring supported by operational change and adoption of other mitigation measures when warranted.

As per the requirements of Baffinland's EHS Management Framework (BAF-PH1-830-STD-0001), Baffinland will conduct and document regular management reviews of its Road Management Plan. Such reviews will ensure monitoring results for the Road Management Plan are integrated with other aspects of the Project and that necessary adjustments are implemented as required. These reviews also provide a formal mechanism to assess effectiveness of management in achieving company objectives and maintaining ongoing compliance with Project permits and authorizations.


|   |                       |                                       |  |
|---|-----------------------|---------------------------------------|--|
|  | Roads Management Plan | Issue Date: March 16, 2016<br>Rev.: 5 |  |
|   | Environment           | Document #: BAF-PH1-830-P16-0023      |  |

## Attachment A - Dust Management Protocol

---

The information contained herein is proprietary to Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.


|   |                       |                                       |  |
|---|-----------------------|---------------------------------------|--|
|  | Roads Management Plan | Issue Date: March 16, 2016<br>Rev.: 5 |  |
|   | Environment           | Document #: BAF-PH1-830-P16-0023      |  |

## Attachment B – Tote Road Travel Procedure

---

The information contained herein is proprietary to Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.


|   |                       |                                       |  |
|---|-----------------------|---------------------------------------|--|
|  | Roads Management Plan | Issue Date: March 16, 2016<br>Rev.: 5 |  |
|   | Environment           | Document #: BAF-PH1-830-P16-0023      |  |

## Attachment C – Whiteout and Wind Storm Conditions Procedure

---

The information contained herein is proprietary to Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.


|   |                       |                                       |  |
|---|-----------------------|---------------------------------------|--|
|  | Roads Management Plan | Issue Date: March 16, 2016<br>Rev.: 5 |  |
|   | Environment           | Document #: BAF-PH1-830-P16-0023      |  |

## Attachment D – Traffic Management Plans

---

The information contained herein is proprietary to Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.

|   |                       |                                       |  |
|---|-----------------------|---------------------------------------|--|
|  | Roads Management Plan | Issue Date: March 16, 2016<br>Rev.: 5 |  |
|   | Environment           | Document #: BAF-PH1-830-P16-0023      |  |

## Attachment E – Steensby/ Mid-Rail Information

There will be no construction and development of Steensby and the Rail camps during 2016 and work is not planned for the immediate future. Updates to these sections of the Plan will be done when required and will be included in a future Annual Report to NWB as required by Part B, Item 4 of existing Type A Water Licence (2AM-MRY1325).

### A.1 Introduction

#### A.1.1 Purpose

The Roads Management Plan is applicable to all roads in which comprise of the Mary River Project road network. The Mary River Project road network consists of the following:

- Railway construction road between the mine and Steensby Port.
- Service roads around Steensby Port facilities.

#### A.1.2 Baffinland Road Policy

The railway construction road is a temporary road. Baffinland acknowledges that this road might be used by local residents while it is in service. The road will be open for public use until it is decommissioned.

### A.2 Mitigation Measures

#### A.2.1 Speed Control and Signs

Markers are positioned approximately each kilometre along to the railway construction road. These markers are used to identify position in case of emergencies. They are also used for reporting wildlife sightings and non-Project human visitor observations.

#### A.2.2 Use of Road by the Public

The railway construction road may also be used by non-project individuals (snowmobile, ATV) from nearby communities (e.g., Pond Inlet and Igloolik). Extreme care must be taken at all times whenever non-Project individuals are sighted along this road as they might not be aware of the hazards associated with Project activities and traffic.


Sighting of non-Project personnel are reported and recorded on posted logs. Refer to the Environmental Protection Plan (BAF-PH1-830-P16-0008), Section 2.2.

### A.3 Monitoring and Reporting Requirements

---

The information contained herein is proprietary to Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.

|   |                              |   |  |
|---|------------------------------|---|--|
|  | <b>Roads Management Plan</b> | <b>Issue Date:</b> March 16, 2016<br><b>Rev.:</b> 5 |  |
|   | <b>Environment</b>           | <b>Document #:</b> BAF-PH1-830-P16-0023             |  |


### **A.3.1 Road Maintenance**

Roads and creek crossings are inspected regularly for signs of degradation and maintenance requirements. The maintenance department keeps a registry of all road maintenance work. Periodic visual inspections will be conducted on all roads by trained personnel and will occur at regular intervals and after any vehicle collision, heavy precipitation event or construction activity occurs. The Railway Access Road will be continually inspected over the Project. Road safety, stability and erosion are some of the things that will be investigated during regular inspections.

---

The information contained herein is proprietary to Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.


|   |                       |                                       |  |
|---|-----------------------|---------------------------------------|--|
|  | Roads Management Plan | Issue Date: March 16, 2016<br>Rev.: 5 |  |
|   | Environment           | Document #: BAF-PH1-830-P16-0023      |  |

## Attachment F – Hunter and Visitor Site Access Procedure

---

The information contained herein is proprietary to Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.

|   |                              |   |  |
|---|------------------------------|---|--|
|  <b>Baffinland</b> | <b>Roads Management Plan</b> | <b>Issue Date:</b> March 16, 2016<br><b>Rev.:</b> 5 |  |
|   | <b>Environment</b>           | <b>Document #:</b> BAF-PH1-830-P16-0023             |  |

## Attachment G – Mine Traffic Patterns Procedure

---

The information contained herein is proprietary to Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.