

Environmental Impact Management Plan

(Applicable to)

Plan Prepared for

Company Name

TEMPLATE

Template Prepared by

 **srk** consulting

Environmental Impact Management Plan (Applicable to)

Company Name

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Table of Contents

List of Abbreviations	iii
1 Introduction	1
2 Scope.....	1
3 Description of the receiving environment.....	2
3.1 Land ownership.....	2
3.2 Demographics of surrounding communities	2
3.3 Land use	2
3.4 Terrestrial habitats and sensitive features	2
3.5 Topography and geology	2
3.6 Water resources.....	2
3.7 Climate.....	2
4 Process Description.....	4
5 Roles and Responsibilities.....	4
6 Impact Identification.....	4
7 Impact Assessment.....	7
8 Objectives and Actions.....	8
9 EIMP Implementation (Management Units 1 – 10).....	11
9.1 Management Unit 1: Cane blocks A and B (owned by Mr. F. Brown).....	12
9.2 Management Unit 2.....	13
9.3 Management Unit 3.....	13
9.4 Management Unit 4.....	13
9.5 Management Unit 5.....	13
9.6 Management Unit 6.....	13
9.7 Management Unit 7.....	13
9.8 Management Unit 8.....	13
9.9 Management Unit 9.....	13
9.10 Management Unit 10.....	13
10 Environmental Awareness.....	14
11 Environmental Emergencies	14
12 Monitoring, Compliance and Amendments.....	14
Appendices	15
Appendix A: Add title	16

List of Tables

Table 6-1: Aspect and impact table.....4
Table 8-1: Impacts, objectives and actions table9

List of Figures

Figure 2-1: Spatial representation of the location and unit of certification of this EIMP 1
Figure 3-1: Spatial representation of ownership and servitudes3
Figure 3-2: Spatial representation of land use and environmental features3

List of Abbreviations

This can be deleted if not required.

TEMPLATE

1 Introduction

Provide a brief factual statement to introduce the plan and its purpose and outline what it covers.

2 Scope

Detail the location and boundary of the study area / "Unit of Certification".

Detail what the plan includes, for example mill, raw material storage, infrastructure, planted areas etc. Linked to the following section that should detail all these aspects in detail.

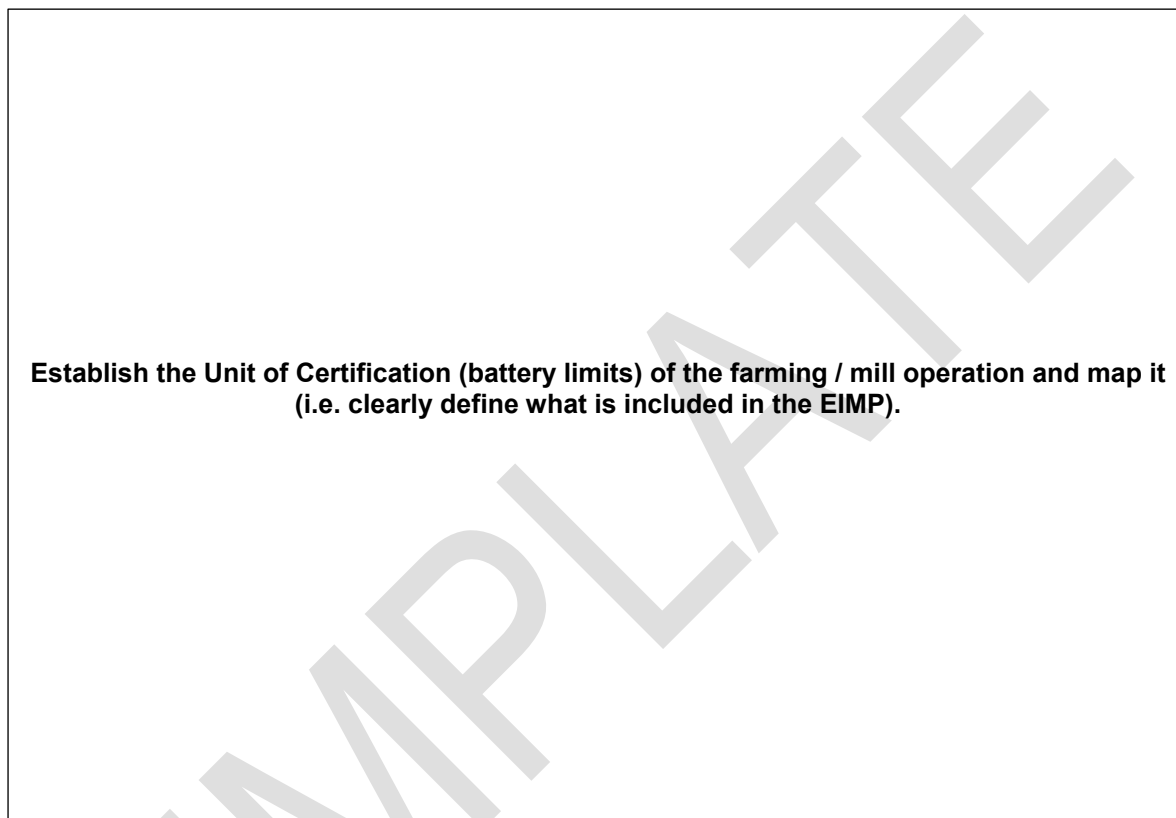


Figure 2-1: Spatial representation of the location and unit of certification of this EIMP

3 Description of the receiving environment

3.1 Land ownership

Detail the ownership of the area within the scope of the plan. Identify any land ownership issues or land tenure issues in surrounding areas that have relevance.

Insert a table listing property names, area and owners.

Show the property boundaries and any applicable land-legal features (e.g. servitudes) on Figure 3-1.

3.2 Demographics of surrounding communities

Describe population dynamics and socio-economic conditions that surround the site. This should include population density, economic status and opportunities, male/female and age distribution and leadership structures.

3.3 Land use

Describe the land use within and surrounding the study area.

Can refer to a map (e.g. in Figure 3-2) to spatially represent land uses.

3.4 Terrestrial habitats and sensitive features

Map and describe terrestrial habitats and species within and surrounding the study area.

Can refer to a map (e.g. in Figure 3-2) to spatially represent habitats or sensitive features.

3.5 Topography and geology

Describe the topography of the study area and the underlying geology and soil characteristics with a focus on the erodibility of the soil type.

Refer to map (e.g. in Figure 3-2) which should include contour data (if available).

3.6 Water resources

Map water resources within and surrounding the study area. Describe the condition of the water resources, in particular any resources that may be impacted on for example, abstraction or discharge points.

Refer to a map (e.g. in Figure 3-2) to spatially represent water courses, wetlands, abstraction points, etc.

3.7 Climate

Describe the climate and meteorological conditions applicable to the study area. Attention should be given to rainfall and for mills to conditions that may affect the dispersion of emissions from the facility to the atmosphere.

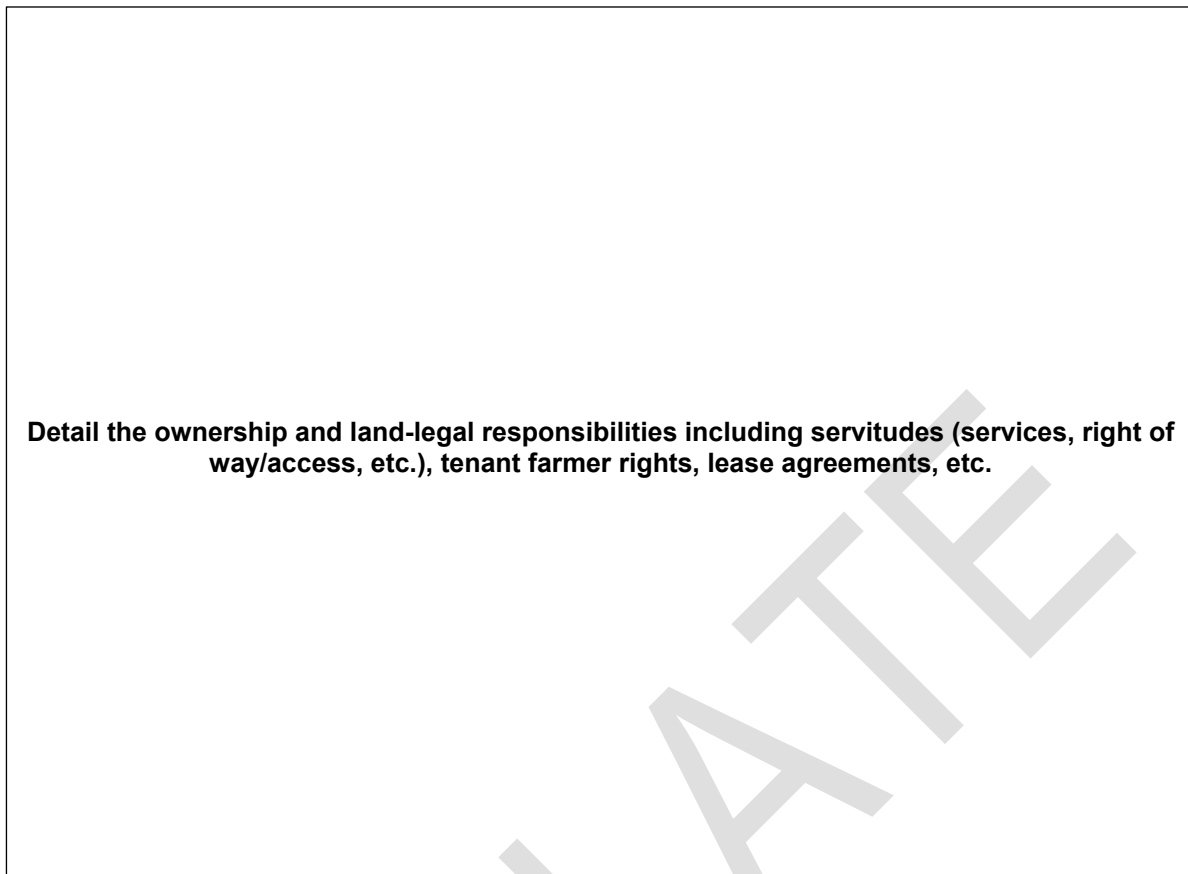


Figure 3-1: Spatial representation of ownership and servitudes

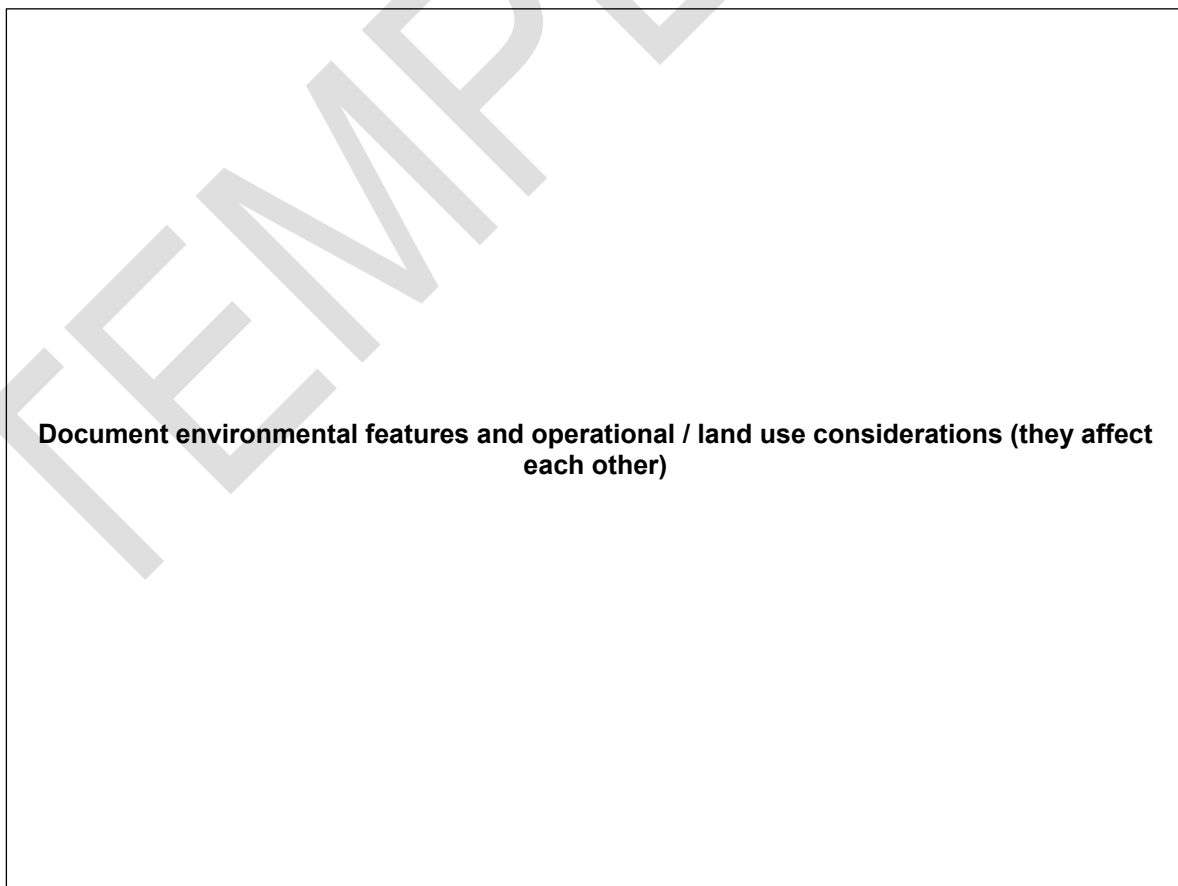


Figure 3-2: Spatial representation of land use and environmental features

4 Process Description

Identify all the activities, infrastructure, products or services that the plan will apply to.

Identify inputs and outputs for each. Include in the description resource (energy, water, raw material) usage, waste generation and any emissions for different aspects.

Can refer to a map (e.g. Figure 3-2) to spatially represent operational activities, services and / or infrastructure.

5 Roles and Responsibilities

Detail all individuals/ departments/ organisations etc. responsible for implementation, monitoring and amendment of the EIMP and their respective requirements as identified in the EIMP.

6 Impact Identification

Identification of all **impacts** associated with the **aspects**. Aspects will be informed by the process description as above.

Text Box 1: Definitions as per ISO 14001:2015

- **ASPECT:** “An element of an organisation’s activities or products or services that can interact with the environment.”
- **IMPACT:** “Any change to the environment, whether adverse or beneficial, wholly or partly resulting from an organisation’s environmental aspects.”

The Bonsucro Guide (2016)¹ specifies ten “key environmental issues” to be addressed in an EIMP (see Text Box 2). Table 6-1 presents a proposed template for identification of activities and their associated aspects and impacts for each of the “key environmental issues” listed in the Bonsucro Guide. The right-hand column allows for an impact reference or identity that can be carried forward to impact assessment and actions tables in Sections 7 and 8 below.

Table 6-1: Aspect and impact table

Activity	Aspect	Impact	Impact ID
Key issue 1: <u>Biodiversity</u>			
			B1
			B2
			B3
Key issue 2: <u>Ecosystem services</u>			
			ES1
			ES2
			ES3
Key issue 3: <u>Soil</u>			
			S1
			S2
			S3

¹ Reference: Bonsucro’s “Guidance for the Production Standard (version 4.2, December 2016)”

Activity	Aspect	Impact	Impact ID
Key issue 4: <u>Water</u>			
			W1
			W2
			W3
Key issue 5: <u>Air</u>			
			A1
			A1
			A3
Key issue 6: <u>Climate change</u>			
			CC1
			CC2
			CC3
Key issue 7: <u>Use of agro-chemicals</u>			
			AC1
			AC2
			AC3
Key issue 8: <u>Use of artificial fertilisers</u>			
			F1
			F2
			F3
Key issue 9: <u>Cane burning</u>			
			CB1
			CB2
			CB3
Key issue 10: <u>Waste and noise</u>			
			WN1
			WN2
			WN3
Other			
			O1
			O2
			O3

The impacts identified in Table 6-1 are assessed to determine their significance in Section 6 below.

Text Box 2: Key environmental issues to be addressed by an EIMP (Bonsucro Guide, 2016)

Section 4.1.3 of the Bonsucro Guide (2016) stipulates:

“The key environmental issues to be covered by the EIMP are:

- 1. Biodiversity - For example: loss or reduction of biodiversity, conservation of natural fauna and flora, including rare, threatened or endangered species, habitats, provision of habitat corridors, constitution of set-aside area to enhance biodiversity, management of HCVs, conservation of wetlands and other natural areas in a satisfactory state;*
- 2. Ecosystem Services - For example: protection or restoration of riparian areas, constitution of natural wind screen or vegetative buffer zones, flood control, filtration, management of HCVs;*
- 3. Soil - For example: loss of nutrient, erosion, alkalisation, acidification, loss of carbon, erosion, microbiological fauna, trash blanket, fallow cropping, compaction;*
- 4. Water - For example: availability of water resources, pollution of water basin, impact of intake of water on water availability, consumption of water, quality of effluents, management of irrigation systems, quality of irrigation water;*
- 5. Air - For example: level of micro particles emitted, ashes from boilers, volatilisation of chemicals;*
- 6. Climate Change - For example GHG emissions, energy consumption;*
- 7. Use of agro-chemicals - for example: implementation of a weed management plan, implementation of integrated pest management plan, avoiding most harmful chemicals, use of biologic control;*
- 8. Use of artificial fertilisers - For example: implementation of a fertiliser management plan, impact on surface and groundwater bodies, use of vinasses, type of fertilisers used, leaching, use of organic fertilisers;*
- 9. Cane Burning - For example fallout from fire, dust;*
- 10. Waste and Noise.”*

7 Impact Assessment

The extent to which impacts need to be assessed in the EIMP is largely driven by the complexity of the study area and the impacts themselves. The Impact Assessment may need to be customised to the legal requirements of each individual country but in instances where there are no other obligations for assessment, an identification of the most critical impacts in need of management should suffice.

Any assessment of impacts should consider following:

- **Nature** (description): will the impact have a positive or negative outcome on the biophysical and/or social environment?
- **Extent** (spatial scale): will the impact affect the national, regional or local environment, or only that of the site?
- **Duration** (temporal scale): how long will the impact last?
- **Magnitude** (severity): will the impact be of high, moderate or low severity?
- **Probability** (likelihood of occurring): how likely is it that the impact may occur?
- **Cumulative Impacts (integration)**: will the impact interact and exacerbate or improve other impacts?

Notes:

- There are various impact assessment methodologies which can be employed. The grower / mill will need to select a methodology appropriate to the scale and activities of their operations / Unit of Certification.
- Of the impacts assessed, those with “low” or “insignificant” ratings, need not be carried forward into the “impacts, objectives and actions table” in Section 8.

8 Objectives and Actions

For all significant impacts, objectives and actions to address the impact must be identified together with responsibilities and timing. In practice, policy makers for individual countries will most commonly define sustainability objectives for the different components of the environment. The plan, at a minimum, should aim to achieve the legal or policy objectives in addition to the Bonsucro Standard in the setting of objectives. In the absence of legal or policy objectives, objectives should be informed by international good practice.

Text Box 3: Clarity on “objectives” and “actions”

The **objectives** identify what implementation of management measures hopes to achieve. It is critical that objectives be measurable.

Actions detail specifically what will be done, by whom and when or how often. Alternatively, “actions” could refer to an operating procedure or Better Management Practice guidelines².

It is important to note the difference between objectives and actions. Any change to the objectives of an EIMP could require buy in / acceptance from stakeholders and potentially authorities. By separating objectives from actions it makes it possible for the actions to be dynamic and adapt to changing conditions without triggering the need for extensive consultation. This means that if a more efficient alternative that achieves the objective is identified it can be immediately implemented.

The table template below may be broken up between different activities, components of the study area, phases or aspects of the environment or for less complex EIMPs can remain as a single table.

You may also want to separate the table by first just impacts and associated objectives and then summarising objectives and associated actions, timing and responsibility. This would only be required if a number of impacts can be addressed by one or two objectives like addressing numerous sources of water or air quality in a single objective and associated actions for each air and water.

² Resources:

<https://sasri.org.za/knowledge-hub/#information-sheets>;
<https://www.bartens.com/book/good-management-practices/>
<https://sugarresearch.com.au/sra-information/publications/>

Table 8-1: Impacts, objectives and actions table

Impact ID	Impact	Objective	Action	Timing	Responsibility
Key issue 1: <u>Biodiversity</u>					
B1					
B2					
B3					
Key issue 2: <u>Ecosystem services</u>					
ES1					
ES2					
ES3					
Key issue 3: <u>Soil</u>					
S1					
S2					
S3					
Key issue 4: <u>Water</u>					
W1					
W2					
W3					
Key issue 5: <u>Air</u>					
A1					
A1					
A3					
Key issue 6: <u>Climate change</u>					
CC1					
CC2					

Impact ID	Impact	Objective	Action	Timing	Responsibility
CC3					
Key issue 7: <u>Use of agro-chemicals</u>					
AC1					
AC2					
AC3					
Key issue 8: <u>Use of artificial fertilisers</u>					
F1					
F2					
F3					
Key issue 9: <u>Cane burning</u>					
CB1					
CB2					
CB3					
Key issue 10: <u>Waste and noise</u>					
WN1					
WN2					
WN3					
Other					
O1					
O2					
O3					

Note: It will be advantageous to link impacts and actions to mapped features. See implementation maps in Section 9.

9 EIMP Implementation (Management Units 1 – 10)

One of the biggest challenges, is the effective and practical implementation of the necessary environmental management requirements.

- For complex projects, Management Plans can be supported by specific plans.
- Environmental Implementation Plans (EIPs) are supporting guidance plans on a micro level.
- They are not complex, easy to understand, prescriptive and uses.
- Requires an understanding of grower and or mill requirements.
- Requires upfront work, dynamic and allows for specialist input during final design.

Where applicable, split project area up into management units. For the example, for a farm scenario, management units could be:

- Management Unit 1: Cane blocks A and B (owned by Mr. F. Brown).
- Management Unit 2: Cane blocks C and D (leased by Mr. F. Brown).
- Management Unit 3: Water resources and use.
- Management Unit 4: Sheds and workshops.
- Management Unit 5: Sensitive habitats (forest and wetlands).
- Management Unit 6: Homesteads and labour compound.
- Management Unit 7: Subsistence farmers.
- Management Unit 8: Borrow pit.
- Management Unit 9: Roads.
- Management Unit 10: Woodlot.

An example of how an implementation plan for a particular Management Unit could look (i.e. for a hypothetical farm scenario) is shown in Section 9.1 below.

9.1 Management Unit 1: Cane blocks A and B (owned by Mr. F. Brown)

ID	Impact	Objective	Actions
Key issue 1: <u>Biodiversity</u>			
B1	Potential loss of Red Data Listed Species: Pickergill's Reed Frog (<i>Hyperolius pickersgilli</i>).	Avoid disturbance / mortality of this species.	<ul style="list-style-type: none"> - Maintain and monitor a buffer zone around frog habitats. - Maintain an eco-strip / ecological corridor to refuge / over wintering habitats.
Key issue 2: <u>Ecosystem services</u>			
ES1	Destruction of wetland and riparian habitats – potential loss of sediment trapping and flood attenuation capabilities and increased erosion.	Protection of habitats that provide valuable ecosystem services.	<ul style="list-style-type: none"> - Construction of roads and other infrastructure should avoid riparian areas (use existing where possible). - Flow and erosion / sedimentation should be monitored in all surface water courses. - Where significant changes / erosion is identified, implement appropriate remediation measures as recommended by an appropriately qualified and experienced person / engineer.
Key issue 3: <u>Soil</u>			
S1	Erosion of topsoil on steep slopes.	Prevent erosion as far as far as possible.	<p>In areas of high erosion potential, ensure:</p> <ul style="list-style-type: none"> - Contour ploughing and access roads. - Storm water attenuation berms. - Grassed water ways (appropriately sloped).
S2	Contamination due to potential hydrocarbon spills.	Minimise the potential for impact from hydrocarbon spills.	<ul style="list-style-type: none"> - Compile and implement a hydrocarbon management procedure and emergency preparedness plan.



9.2 Management Unit 2

9.3 Management Unit 3

9.4 Management Unit 4

9.5 Management Unit 5

9.6 Management Unit 6

9.7 Management Unit 7

9.8 Management Unit 8

9.9 Management Unit 9

9.10 Management Unit 10

10 Environmental Awareness

Detail how the organisation will make staff and stakeholders aware of the requirements of the EIMP, how they can contribute to its implementation and how they can report issues and observed non-conformances.

11 Environmental Emergencies

Detail how environmental emergencies will be addressed. This may need to be broken down further for more complex plans into responses to different types of emergencies. Examples of emergencies include spills or any uncontrolled emissions amongst others.

12 Monitoring, Compliance and Amendments

Detail on how implementation of the EIMP will be monitored (note: monitoring should be aligned with the objectives identified in Section 8) and any need for compliance auditing. Detail also timeframes for EIMP review and amendment.

Prepared by

Reviewed by

[Author]

[Project Reviewer]

[Title (Optional)]

[Title (Optional)]

Appendices

Specific plans or other reference material can be added as Appendices for ease of reference.

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Appendix A: Add title

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