SCOPING (INCLUDING IMPACT ASSESSMENT) FOR ACTIVITIES ASSOCIATED WITH RIGHT-PATH INVESTMENT'S WASTE CAR BATTERY RECYCLING FACTORY, LOCATED WITHIN THE INDUSTRIAL AREA OF OKAHANDJA TOWN, OTJOZONDJUPA REGION, NAMIBIA.

March 2020

EXPERTISE AND DECLARATION OF INDEPENDENCE

I.N.K Enviro Consultants cc is the independent firm of consultants that has been appointed by Right-Path Investments (Pty) Ltd to undertake the environmental impact assessment process.

Immanuel N. Katali, the EIA Lead Practitioner holds a B.Arts (Honors) in Geography, Environmental Studies and Sociology and has over 5 years of experience in conducting EIAs in Namibia.

The consultant herewith declare that this report represents an independent, objective assessment of the environmental impacts associated with the activities of the waste car battery recycling factory.

EXECUTIVE SUMMARY

1. INTRODUCTION

1.1 Objectives of the Study and Opportunity to Comment

This Environmental Impact Assessment (EIA) Scoping (including impact assessment) Report has been compiled and will be distributed for a 14-working-day review and comment as part of the EIA process that is being undertaken for the waste car battery recycling facility.

Registered Interested and Affected Parties (I&APs) are being provided with the opportunity to comment on this Scoping (including impacts assessment) Report. Once the comment period ends, the report will be updated to a final report with due consideration of the comments received and will be submitted to the Ministry of Environment and Tourism (MET) for decision-making.

1.2 Introduction to the Proposed Project

Right-Path Investment (Pty) Ltd (hereinafter referred to as Right-Path), intends on obtaining an Environmental Clearance Certificate (ECC) for their car battery recycling facility, located within the Okahandja industrial area, along the B2 road to Swakopmund. The factory aims to burn recycled car batteries using foundry coke as a fuel for burning, to produce lead blocks which would be exported.

The factory, measuring approximately 720 m2, was constructed in 2019, on an industrial designated land purchased from the Okahandja Municipality. However, there has not been any major activities in terms of operations apart from a 3-day equipment test run. It is thereafter, Right-path was informed that an ECC should have been obtained prior to the commencement of the construction and operation activities. The operations at the factory have then ceased and came to a complete standstill until an EIA process is initiated, all potential social and environmental impacts are identified and mitigated, and all relevant certification and permittance are obtained. Therefore, this EIA can only focus on the operational activities of the project.

2. PROJECT MOTIVATION (NEED AND DESIRABILITY)

Namibia experiences increasing traffic numbers, most specifically within towns. As this numbers increase, there tends to be increasing waste car batteries lying around in auto mechanic repair shops and scrapyards across the country. The lead-acid contained in the batteries is hazardous and its exposure poses a risk to humans and the environment if not properly disposed. It is against this background that Right-Path Investments (Pty) Ltd proposes to collect and create a market for waste car batteries,

nationwide. The batteries will be recycled at the factory and produce lead blocks which would be exported.

The waste car battery recycling factory is adopted from various and common practices of car battery recycling in China and it will be the first of its kind in Namibia. The challenge facing the project proponent is its contribution towards achieving these goals while at the same time preventing and/or mitigating potential negative social and environmental impacts.

3. PROJECT DESCRIPTION

3.1 Existing Infrastructure

As mentioned in section 1.2 above, the factory was constructed in 2019 and there has not been any operational activities apart from a 3-day equipment test run.

3.2 Technological Process

Step 1: Waste Car Batteries

The waste car betteries are collected from various parts of the country and transported to the factory on a weekly basis.

Step 2: Waste Battery Treatment

The batteries will arrive at the factory either dried or still containing lead acid. If dried, a battery cutter is used to dismantle and break the battery, but if it still contains lead-acid, it will be removed manually and placed in chemical storage containers that will be transported to the Kupferberg Hazardous Waste Dumping site before it is dismantled.

Step 3: Refining the Lead Process

(A) The wood is placed in a furnace with the door properly shut.
(B) Ignition from furnace hole.
(C) 0pen circulating water pump to cool down the lead smelting furnace.
(D) Turn on the blower, which is used for supporting the combustion of coke and lead plate.
(E) Add foundry coke from the platform, which is used for staff feeding materials such as coke and lead plate.
(F) Add lead plate
(G) Turn on dust remover blower, which is used to filter the slag in the smoke.
(H) Generate lead and coke residue.
(I) Collect the Lead and place it in lead containers as the end product (refer to Figure 10 below).

3.3 Waste Management

Relatively small quantities of waste will be generated during the operation phases. All hazardous waste, i.e. dust from dust remover blower will be stored on site and regularly transported to the Kupferberg Hazardous Waste Disposal Site.

3.4 Access Roads

The factory is located along paths of existing roads. No new roads will be constructed.

3.5 Employment and Housing

About 12 employment opportunities will be created for the operational phase.

The workforce will commute to the factory each day during the operation phase and will be accommodated in Okahandja Town.

4. PROJECT ALTERNATIVES

4.1 Alternative site locations

The 720 m^2 factory falls under an industrial designated land, purchased from the Okahandja Municipality. Other industrial activities on this land includes a brick making factory, which is as well owned by Right-Path Investments (Pty) Ltd.

The proponent has identified the factory location to be the most appropriate due to its reasonable distance from travellers on the main B2 road to Swakopmund which could potentially have a negative visual impact on the travellers and a reasonable distance from the brick making factory, in order to prevent clashing and interference of activities between the waste car battery recycling factory and the brick laying factory. No alternative site has therefore been identified.

4.2 Alternative acid smoke filtering options

The first identified solution to the acid smoke and bad odour released from the factory is placing a water tank in the dust remover blower which will dissolve the acid smoke.

An alternative is raising the stack to a higher altitude. This method allows the eco-friendly smoke that is released to dissolve in the atmosphere before it reaches the ground level.

Adding water to an acid reduces the concentration of ions in the solution, therefore filtering the acid smoke to release clean and eco-friendly smoke into the atmosphere. Due to the higher altitude of the stack,. The clean method is widely used in various factories in China in order to minimize and mitigate air pollution impacts.

4.3 The "no project" option

With reference to section 1.3, Namibia experiences increasing traffic numbers, most specifically within towns. As this numbers increase, there tends to be increasing waste car batteries lying around in auto mechanic repair shops and scrapyards across the country. The lead-acid contained in the batteries is hazardous and its exposure poses a risk to humans and the environment if not properly disposed.

Therefore, the challenge facing the project proponent is its contribution towards achieving these goals while at the same time preventing and/or mitigating potential negative social and environmental impacts. Due to the serious potential health risk associated with the hazardous acid released from the factory during operations, the proponent will have to ensure that the identified mitigation measures and commitments to address air pollution will appropriately be implemented and adhered to.

Without the implementation and adherence of the air pollution commitments in the EMP, the project will be a "fatal flaw".

5. ENVIRONMENTAL IMPACT ASSESSMENT

5.1 Issue/Impact: Air pollution impact on the biophysical and social environment

Introduction

The emission from the factory operation results in air quality-related impacts due to the acid smoke. This could impact the surrounding biophysical environment as well as sensitive receptors in the area.

Table 1: Summary of the assessed impact: Air pollution impact on the biophysical and social environment

Mitigation	Severity	Duration	Spatial Scale	Consequence	Probability	Significance
Unmitigated	H	M	M	M	H	M
Mitigated	M	M	L	L	M	L

5.2 Issue: Impact relating to visual

Introduction

The waste car battery recycling factory will create a negative visual impact to the nearby community. The factory will also be located alongside the B2 road between Okahandja and Karibib posing a visual impact to the travellers on the road.

Table 2: Summary of cumulative Physical Impacts on Visual Environment

MITIGATION	SEVERITY	DURATION	SPATIAL SCALE	CONSEQUENCE	PROBABILITY	SIGNIFICANCE
Unmitigated	**M**	**M**	**M**	**M**	**H**	**M**
Mitigated	**M**	**M**	**M**	**L**	**H**	**M**

5.3 Issue/Impact: Waste Management

Introduction

With reference to section 4.3.4, relatively small quantities of general and hazardous waste will be generated during the operation phases. The general non-hazardous waste will be transported to the Okahandja landfill site, while all hazardous waste, i.e. dust from dust remover blower, will be stored on site in sealed containers and regularly transported to the Kupferberg Hazardous Waste Disposal Site.

Table 3: Summary of the assessed impact: Air pollution impact on the biophysical and social environment

Mitigation	Severity	Duration	Spatial Scale	Consequence	Probability	Significance
Unmitigated	M	M	L	M	M	M
Mitigated	L	M	L	L	L	L

5.4 Issue/Impact: Economic impact relating job creation and skills development

Introduction

About 12 employment opportunities (low and high skilled) will be created for the operational phase.

The workforce will commute to the factory each day during the operation phase and will be accommodated in Okahandja Town.

Table 4: Summary of the assessed impact: Job creation and skills development

Mitigation	Duration	Extent	Consequence	Probability	Significance
Unmitigated	H	H	H+	H	H+
Mitigated	H	H	H+	H	VH+

6. *CONCLUSIONS*

The environmental aspects associated with the waste car battery recycling factory have been successfully identified and assessed as part of this EIA Scoping process.

Mitigation measures have been identified and recommended by I.N.K Enviro Consultants cc to promote the positive impacts of the project, as well as to avoid / minimise the negative impacts to acceptable levels. An EMP was further developed which identifies potential impacts of the project during the operation phase. The EMP is a legally binding document, which the proponent must adhere to.

I.N.K concludes that should the management actions and mitigation measures provided in the EIA and EMP report be implemented, the project would have an acceptably low significant impact on the surrounding biophysical and social environment.

7. WAY FORWARD

The way forward for the EIA scoping phase is as follows:

- I&APs review the reports
- I.N.K consider comments received and finalised the reports
- MET review the final Scoping (including impact assessment) Report and MET provide record of decision.

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LIST OF ACRONYMS, ABBREVIATIONS AND UNITS

BID	Background Information Document
DEA	Department of Environmental Affairs
EAPs	Environmental Assessment Practitioners
ECC	Environmental Clearance Certificate
EIA	Environmental Impact Assessment
EMA	Environmental Management Act
EMP	Environmental Management Plan
I&APs	Interested and Affected Parties
I.N.K	I.N.K Enviro Consultants cc
M^2	Meter Squares
MET	Ministry of Environment and Tourism
MITSMED	Ministry of Industrialisation, Trade and SME Development
MLIREC	Ministry of Labour and Industrial Relations and Employment Creation
MPE	Ministry of Public Enterprises
SME	Small Medium Enterprise

1 INTRODUCTION

This section discusses the aims and objectives of the study and provides a brief introduction on the waste car battery recycling facility.

1.1 Objectives of the Study and Opportunity to Comment

This Environmental Impact Assessment (EIA) Scoping (including impact assessment) Report has been compiled and was distributed for a 14-working-day review and comment as part of the EIA process that is being undertaken for the waste car battery recycling facility.

This Scoping (including impacts assessment) Report summarises the EIA process being followed and provides an overview of the affected environment. It includes an assessment of the environmental impacts that the activities are likely to have and sets out the consultants' recommendations. The proposed management and mitigation measures relating to the operation activities are documented in an Environmental Management Plan (EMP).

Registered Interested and Affected Parties (I&APs) are being provided with the opportunity to comment on this Scoping (including impacts assessment) Report. Once the comment period ends, the report will be updated to a final report with due consideration of the comments received and will be submitted to the Ministry of Environment and Tourism (MET) for decision-making.

1.2 Introduction to the Proposed Project

Right-Path Investment (Pty) Ltd (hereinafter referred to as Right-Path), intends on obtaining an Environmental Clearance Certificate (ECC) for their waste car battery recycling facility, located within the Okahandja industrial area, along the B2 road to Karibib (refer to Figure 1). The factory aims to burn recycled car batteries using foundry coke as a fuel for burning, to produce lead blocks which would be exported.

The factory, measuring approximately 720 m^2, was constructed in 2019, on an industrial designated land purchased from the Okahandja Municipality. However, there has not been any major activities in terms of operations apart from a 3-day equipment test run. It is thereafter, Right-path was informed that an ECC should have been obtained prior to the commencement of the construction and operation activities. The operations at the factory have then ceased and came to a complete standstill until an EIA process is initiated, all potential social and environmental impacts are identified and mitigated, and all relevant certification and permittance are obtained. Therefore, this EIA is only focused on the operation activities of the project.

Prior to commencement of the operation activities, an Environmental Clearance Certificate (ECC) is required on the basis of an approved Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP). It is with this background that, I.N.K Enviro Consultants cc (I.N.K) an

independent firm of consultants, was appointed to undertake the Environmental Impact Assessment process for this project. More details regarding the EIA process that was followed are presented in Section 1.4.1.

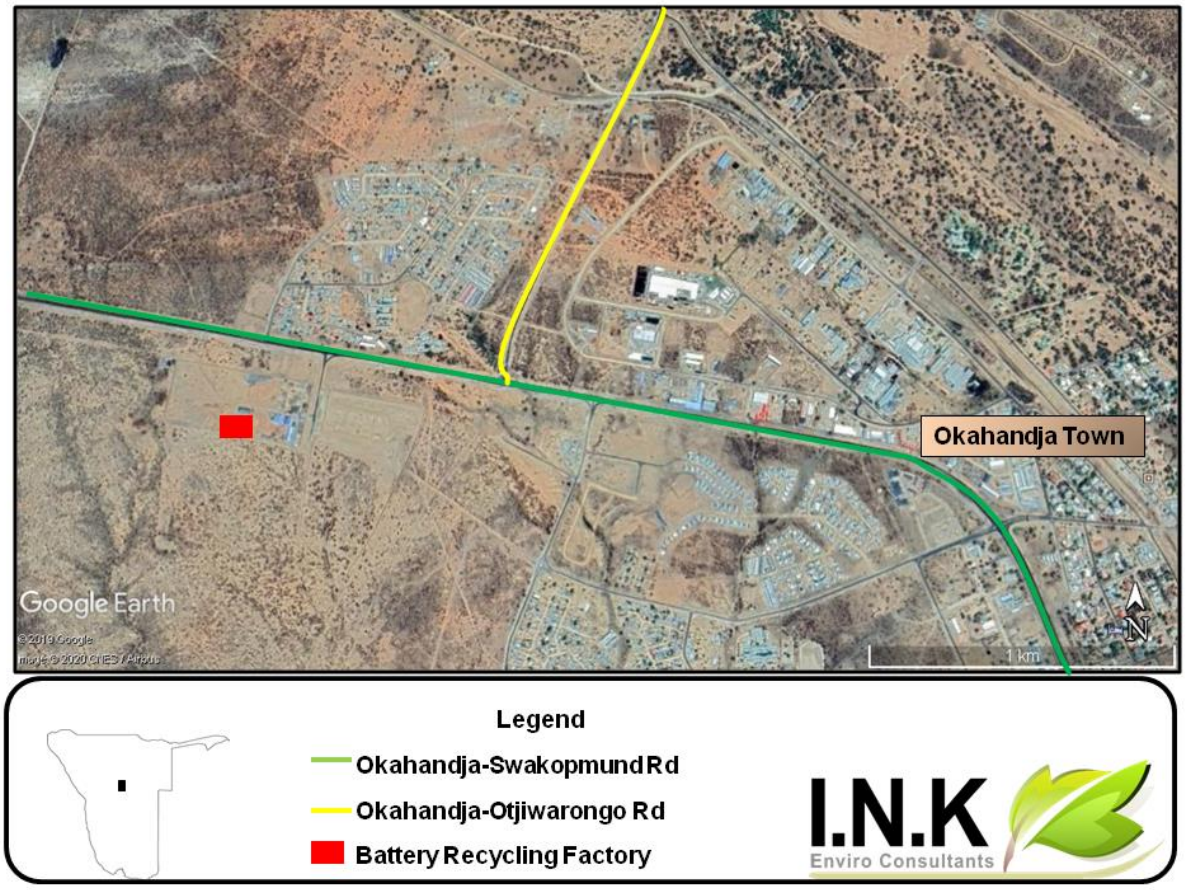

Figure 1: Location of the Waste Car Battery Recycling Factory

1.3 Project Motivation (Need and Desirability)

Namibia experiences increasing traffic numbers, most specifically within towns. As this numbers increase, there tends to be increasing waste car batteries lying around in auto mechanic repair shops and scrapyards across the country. The lead-acid contained in the batteries is hazardous and its exposure poses a risk to humans and the environment if not properly disposed. It is against this background that Right-Path Investments (Pty) Ltd proposes to collect and create a market for waste car batteries, nationwide. The batteries will be recycled at the factory and produce lead blocks which would be exported.

The waste car battery recycling factory is adopted from various and common practices of car battery recycling in China and it will be the first of its kind in Namibia. The challenge facing the project proponent is its contribution towards achieving these goals while at the same time preventing and/or mitigating potential negative social and environmental impacts.

1.4 Introduction to the Environmental Impact Assessment

Environmental Impact Assessments are regulated by the Ministry of Environment and Tourism (MET) in terms of the Environmental Management Act, 7 of 2007. This Act was gazetted on 27 December 2007 (Government Gazette No. 3966) and enacted on 6 February 2012. The Environmental Impact Assessment Regulations: Environmental Management Act, 2007 (Government Gazette No. 4878) were promulgated on 6 February 2012.

1.4.1 EIA Process

Table 5: EIA Process

Objectives	Corresponding activities
Project initiation and Screening phase (January 2020)	
• Initiate the screening process • Initiate the environmental impact assessment process.	• Site Visit • Identify Key Stakeholders • Early identification of environmental aspects and potential impacts associated with the proposed project.
EIA Phase with combined Scoping and Assessment (January - February 2020)	
• Notify the decision-making authority of the proposed project • Identify interested and/or affected parties (I&APs) and involve them in the scoping process through information sharing. • Identify potential environmental issues associated with the proposed project. • Consider alternatives. • Identify any fatal flaws. • Determine the terms of reference for additional assessment work.	• Notify government authorities and I&APs of the project and EIA process (telephone calls, e-mails, faxes, newspaper advertisements and site notices). • Investigations by technical project team. • Compilation of draft scoping (combined assessment) and EMP reports. • Distribute draft scoping (combined assessment) and EMP reports to authorities and I&APs for review. • Forward the final scoping (combined assessment) and EMP reports and I&APs comments to MET for review. • MET review and Record of Decision.

• Provide a detailed description of the potentially affected environment. • Assessment of potential environmental impacts. • Design requirements and management and mitigation measures. • Receive feedback on application.	

Within this framework, the required components of the scoping (including impact assessment) report are discussed in more detail as part of the scoping methodology in Section 2 below.

EIAs are influenced by national legislation and a range of guidelines. The legislation applicable to this project and the EIA process is discussed further in Section 3 below.

1.4.2 EIA Team

I.N.K Enviro Consultants cc is the independent firm of consultants that has been appointed by Right-Path Investments (Pty) Ltd to undertake the environmental impact assessment and related processes.

Immanuel N. Katali, the EIA project manager and lead practitioner holds a B.Arts (Honours) Degree in Geography, Environmental Studies and Sociology and has over five years of relevant experience in conducting/managing EIAs, compiling EMPs and Socio-Economic Studies. Immanuel is certified as an environmental practitioner under the Environmental Assessment Professionals Association of Namibia (EAPAN).

2 SCOPING METHODOLOGY

2.1 Information collection

I.NK used various information sources to identify and assess the issues associated with the proposed project. These include:

- Site visits by I.N.K;
- Consultation with Project Technical Team (Right-Path) and relevant information shared by Right-Path;
- Consultation with MET via online application system;
- Consultation with I&APs and the Okahandja Municipality;
- Atlas of Namibia;
- Google Earth; and
- Internet sources.

2.2 Scoping Report

The main purpose of this Scoping Report is to indicate which environmental aspects relating to the proposed project might have an impact on the environment, to assess them and to provide management and mitigation measures to avoid or minimise these impacts.

Table 6 outlines the Scoping Report requirements as set out in Section 8 of the Environmental Impact Assessment Regulations that were promulgated in February 2012 in terms of the Environmental Management Act, 7 of 2007.

Table 6: Scoping report Requirements stipulated in the EIA regulations

Requirements for a Scoping Report in terms of the February 2012 regulations	Reference in report
(a) the curriculum vitae of the EAPs who prepared the report;	Section 1.4.2 and
(b) a description of the proposed activity;	Section 4
(c) a description of the site on which the activity is to be undertaken and the location of the activity on the site;	Sections 4 & 6
(d) a description of the environment that may be affected by the proposed activity and the manner in which the geographical, physical, biological, social, economic and cultural aspects of the environment may be affected by the proposed listed activity;	Sections 6, 7 and 8
(e) an identification of laws and guidelines that have been considered in the preparation of the Scoping Report;	Section 3

(f) details of the public consultation process conducted in terms of regulation 7(1) in connection with the application, including - (i) the steps that were taken to notify potentially interested and affected parties of the proposed application; (ii) proof that notice boards, advertisements and notices notifying potentially interested and affected parties of the proposed application have been displayed, placed or given; (iii) a list of all persons, organisations and organs of state that were registered in terms of regulation 22 as interested and affected parties in relation to the application; and (iv) a summary of the issues raised by interested and affected parties, the date of receipt of and the response of the EAP to those issues;	Sections 2.3, 2.4, 2.5
(g) a description of the need and desirability of the proposed listed activity and any identified alternatives to the proposed activity that are feasible and reasonable, including the advantages and disadvantages that the proposed activity or alternatives have on the environment and on the community that may be affected by the activity;	Sections 1.3 and 5
(h) a description and assessment of the significance of any significant effects, including cumulative effects, that may occur as a result of the undertaking of the activity or identified alternatives or as a result of any construction, erection or decommissioning associated with the undertaking of the proposed listed activity;	Sections 7 and 8
(i) terms of reference for the detailed assessment; and	Section 7 & 8
(j) a management plan, which includes - (i) information on any proposed management, mitigation, protection or remedial measures to be undertaken to address the effects on the environment that have been identified including objectives in respect of the rehabilitation of the environment and closure; (ii) as far as is reasonably practicable, measures to rehabilitate the environment affected by the undertaking of the activity or specified activity to its natural or predetermined state or to a land use which conforms to the generally accepted principle of sustainable development; and (iii) a description of the manner in which the applicant intends to modify, remedy, control or stop any action, activity or process which	Separate Document

causes pollution or environmental degradation remedy the cause of pollution or degradation and migration of pollutants.	

2.3 Public participation process

The public participation process for the proposed project is conducted to ensure that all persons and/or organisations that may be affected by, or interested in the proposed project, were informed of the project and could register their views and concerns. By consulting with relevant authorities and I&APs, the range of environmental issues to be considered in this Scoping Report (including the assessment of impacts) has been given specific context and focus.

Included below is a summary of the I&APs consulted, the process that was followed and the issues that were identified.

2.4 Waste Car Battery Recycling Factory I&APs

The following table (Table 7) provides a list of persons, group of persons or organisations that were informed about the project and were requested to register as I&APs should they be interested and/or affected.

Table 7: Waste Car Battery Recycling Factory Stakeholders

IAP Grouping	Organisation
Government Ministries	▪ Ministry of Environment and Tourism (MET); • Department of Environmental Affairs (DEA);
Local Governance	The Otjozondjupa Regional Council and the Okahandja Municipality
Informal Settlement Residents	Sonderwater Informal Settlement
Media	Newspaper adverts: Die Republikein and The Namibian Sun
Other interested and affected parties	Any other people with an interest in the proposed project or who may be affected by the proposed project.

2.5 Steps in the consultation process

Table 8 sets out the steps that were followed as part of the consultation process:

Table 8: Consultation process with I&APs and Authorities

TASK	DESCRIPTION	DATE
Notification - regulatory authorities and IAPs		
Notification to MET	I.N.K submitted the Application Form (online system) to MET.	6 February 2020
IAP identification	A stakeholder database was developed for the proposed project and EIA process. Additional I&APs will be updated during the EIA process as required.	February 2020 - throughout the process
Distribution of background information document (BID)	BIDs were made available to all I&APs on the project's stakeholder database and were available at the scoping meetings. Copies of the BID were available on request to I.N.K. The purpose of the BID was to inform I&APs and authorities about the proposed project, the EIA process, possible environmental impacts and means of providing input into the EIA process. Attached to the BID was a registration and response form, which provided I&APs with an opportunity to submit their names, contact details and comments on the project.	February 2020 – throughout the process
Site notices	A site notice was placed at the entry point of the Right-Path Investments (Pty) Ltd premises.	February 2020
Newspaper Advertisements	Block advertisements were placed as follows: ▪ Die Republikein (14 and 21 February 2020) ▪ The Namibian Sun (14 and 21 February 2020)	February 2020
Public meeting and Focus Group meetings and submission of comments		
Scoping Meetings	Several consultations were made with I&APs. This included meetings and telephonic conversations. Focus group meetings were held with key stakeholders and affected parties as follows: ▪ Sonderwater informal settlement on the 22nd of February	February 2020

TASK	DESCRIPTION	DATE
	▪ The Otjozondjupa Regional Council was consulted through Ms. Patricia Hawases. The same project information was presented/shared at all meetings.	
Comments and Responses	Minutes of the meetings were taken.	
Review of draft Scoping Report		
IAPs and authorities (excluding MET:DEA) review of Scoping Report and updated EMP	The Scoping Report (Main Report excluding Appendices) were sent via email to all parties who registered or showed an interest in this EIA process. Electronic copies of the full report (including appendices) will be made available on request to I.N.K. A Hard copy is made available at the Okahandja Municipality for public review. Authorities and IAPs were given 14-working days to review the Scoping Report and submit comments in writing to I.N.K.	March-April 2020
MET review of Scoping Report and EMP	A copy of the final Scoping Report, including authority and I&AP review comments, will be submitted to MET on completion of the public review process via the online application system.	April 2020

2.6 Summary of issues raised

All issues that have been raised to date by authorities and IAPs have been recorded as part of the Scoping Report. Below is a summary of the key issues raised:

- Air Pollution;
- Health impacts on people and animals;
- Waste Management (disposal of the filtered waste); and
- Relocation of the residents of Sonderwater Informal Settlement.

3 ENVIRONMENTAL LAWS AND POLICY

This section discusses and describes the governing laws, policies and acts that are relevant to the environmental impact assessment for the proposed Horticulture Irrigation Project.

The Republic of Namibia has five tiers of law and several policies relevant to environmental assessment and protection, which includes:

- The Constitution
- Statutory law
- Common law
- Customary law
- International law

Key policies currently in force include:

- The EIA Policy (1995).
- Namibia's Environmental Assessment Policy for Sustainable Development and Environmental Conservation (1994).

As the main source of legislation, the Constitution of the Republic of Namibia (1990) makes provision for the creation and enforcement of applicable legislation. In this context and in accordance with its constitution, Namibia has passed numerous laws intended to protect the natural environment and mitigate against adverse environmental impacts.

3.1 Applicable Laws and Policies

In the context of the proposed irrigation project, there are several laws and policies currently applicable. They are reflected in Table 9 below.

Table 9: Relevant Legislation And Policies

YEAR	NAME	Natural Resource Use (energy & water)	Emissions to air (fumes, dust & odours)	Emissions to land (non-hazardous & hazardous	Emissions to water (industrial & domestic)	Noise	Visual	Impact on Land use	Impact on biodiversity	Impact on Archaeology	Socio-economic	Safety & Health
1990	The Constitution of the Republic of Namibia of 1990	X	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
2007	Environmental Management, Act 7 of 2007	X	X	X	X	X	X	X	X	X	X	X
2012	Regulations promulgated in terms of the Environmental Management, Act 7 of 2007	X	X	X	X	X	X	X	X	X	X	X
1976	Atmospheric Pollution Prevention		X	X					X		X	X

	Ordinance 11 of 1976											
1995	Namibia's Environmental Assessment Policy for Sustainable Development and Environmental Conservation	X	X	X	X	X	X	X	X	X		X
2003	Agricultural (Commercial) Land Reform Amendment Act										X	

3.2 Institutional Context

The Government institutions which oversee laws and policies relevant to the proposed project are listed in Table 10: (GRN Oct 2015)

Table 10: Government Institutions of relevance to the Proposed Project

Government Institution	Mandate / Role	Relevance to the Project
Ministry of Environment and Tourism (MET)	MET is tasked to manage the country's ecological processes and life-support systems, conserve biological diversity, and ensure that natural resources are sustainable for the benefit of all Namibians, both present and future.	To this end, the Environmental Management Act requires this proposed project to apply for an Environmental Clearance Certificate.
Ministry of Public Enterprises (MPE)	MPE aims to make the State-Owned Companies such as the Roads Authority, NamPower, NamWater, TransNamib and Telecom, more accountable to Government as their sole shareholder.	The project will need to work closely with the Roads Authority which manages the national road network with a view to support economic growth. This is required for the transportation of the waste to the Kupferberg waste disposal site.
Ministry of Industrialization, Trade and SME Development (MITSMED)	MITSMED is responsible for the development and management of Namibia's economic regulatory regime, on the basis of which the country's domestic and external economic relations are conducted. It is also responsible for promoting growth and development of the economy through the formulation and implementation of appropriate policies to attract investment, increase trade, develop and expand the country's industrial base.	There may be opportunities for Small and Medium Enterprises (SMEs) and labour-based works to be involved in the operations phase which will support government's industrialisation and employment creation policies.
Ministry of Labour, Industrial Relations and Employment Creation (MLIREC)	This ministry is responsible for the execution of the Labour Act No. 11 of 2007, the Social Security Act No. 34 of 1994, the Employees Compensation Amendment Act No. 5 of 1995 and the Affirmative Action Act (Employment) No. 29 of 1998. Compliance is enforced and monitored through the office of the Labour Commissioner.	The project must comply with the various Acts which stipulate, amongst other things, sound labour relations, employment equity, fair employment practices, training, minimum basic conditions of service, workplace health and safety and retrenchment.
//Okahandja Municipality	The Okahandja Municipality is responsible for regulating activities within Okahandja and for the provision and operation of bulk water supplies, sewerage and solid waste management, fire services, public amenities, cemeteries and sport and recreation facilities.	The proposed project is going to have close links with Okahandja Municipality to ensure that any negative impact identified during the life of the project will be addressed.

4 PROJECT DESCRIPTION

This section discusses and describes the proposed waste car battery factory and associated operation activities.

4.1 Introduction

The factory is located within the Okahandja industrial area, along the B2 road to Swakopmund and covers a total area of approximately 720 m^2.

The factory aims to burn waste car batteries using foundry coke as a fuel for burning, to produce lead blocks which would be exported.

Right-Path will be accepting waste car batteries, either containing the lead-acid or batteries that have already been dried of the lead-acid, from suppliers across the country at a market price. However, this market price and rates are not yet determined by Right-Path.

4.2 Existing Infrastructure

As mentioned in section 1.2 above, the factory (refer to Figure 2) was constructed in 2019 and there has not been any operational activities apart from a 3-day equipment test run.

Figure 2: The Existing Waste Car Battery Recycling Factory

4.3 Technological Process

4.3.1 Step 1: Waste Car Batteries

The waste car batteries are collected from various parts of the country and transported to the factory on a weekly basis.

4.3.2 Step 2: Waste Battery Treatment

The batteries will arrive at the factory either dried or still containing lead acid. If dried, a battery cutter is used to dismantle and break the battery (refer to Figure 3 below), but if it still contains lead-acid, it will be removed manually and placed in chemical storage containers that will be transported to the Kupferberg Hazardous Waste Dumping site before it is dismantled.

Figure 3: Battery Cutter

4.3.3 Step 3: Refining the Lead Process

(A) The wood is placed in a furnace with the door properly shut.

(B) Ignition from furnace hole.

Figure 4: Furnace Hole

(C) Open circulating water pump to cool down the lead smelting furnace.

(D) Turn on the blower, which is used for supporting the combustion of coke and lead plate.

Figure 5: Blower

(E) Add foundry coke from the platform, which is used for staff feeding materials such as coke and lead plate.

Figure 6: Platform

(F) Add lead plate

(G) Turn on dust remover blower, which is used to filter the slag in the smoke (refer to Figure 7).

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Figure 7: Dust Remover Blower

(H) Generate lead and coke residue (refer to Figure 8 &9).

Figure 8: Lead Residue

Figure 9: Coke Residue

(I) Collect the Lead and place it in lead containers as the end product (refer to Figure 10 below).

Figure 10: Lead Blocks (End Product)

4.3.4 Waste Management

Relatively small quantities of waste will be generated during the operation phase. All hazardous waste i.e. dust from dust remover blower will be stored on site and regularly transported to the Kupferberg Hazardous Waste Disposal Site.

4.3.5 Access Roads

The factory is located along paths of existing roads. No new roads will be constructed.

4.3.6 Employment and Housing

About 12 employment opportunities will be created for the operation phase.

The workforce will commute to the factory each day during the operation phase and will be accommodated in Okahandja Town.

5 PROJECT ALTERNATIVES

This section discusses and identifies alternatives to the factory, to have the best working models that may have none or those that have the least minimal effects.

5.1 Alternative site locations

The 720 m^2 factory falls under an industrial designated land, purchased from the Okahandja Municipality. Other industrial activities on this land includes a brick making factory, which is as well owned by Right-Path Investments (Pty) Ltd.

The proponent has identified the factory location to be the most appropriate due to its reasonable distance from travellers on the main B2 road to Swakopmund which could potentially have a negative visual impact on them and a reasonable distance from the brick making factory, in order to prevent clashing and interference of activities between the waste car battery recycling factory and the brick laying factory. No alternative site was identified prior construction.

5.2 Alternative acid smoke filtering options

The first identified solution to the acid smoke and bad odour released from the factory is placing a water tank in the dust remover blower which will dissolve the acid smoke. Adding water to an acid reduces the concentration of ions in the solution, therefore filtering the acid smoke to release clean and eco-friendly smoke into the atmosphere. The clean method is widely used in various factories in China in order to minimize and mitigate air pollution impacts.

An alternative is raising the stack to a higher altitude. This method allows the eco-friendly smoke that is released to dissolve in the atmosphere before it reaches the ground level.

5.3 The "no project" option

With reference to section 1.3, Namibia experiences increasing traffic numbers, most specifically within towns. As this numbers increase, there tends to be increasing waste car batteries lying around in auto mechanic repair shops and scrapyards across the country. The lead-acid contained in the batteries is hazardous and its exposure poses a risk to humans and the environment if not properly disposed.

Therefore, the challenge facing the project proponent is its contribution towards achieving these goals while at the same time preventing and/or mitigating potential negative social and environmental impacts. Due to the serious potential health risk associated with the hazardous acid released from the factory during operations, the proponent will have to ensure that the identified mitigation measures and commitments to address air pollution will appropriately be implemented and adhered to.

Without the implementation and adherence of the air pollution commitments in the EMP, the project will be a "fatal flaw".

6 DESCRIPTION OF THE CURRENT ENVIRONMENT

This section discusses and describes the receiving and baseline environment from a local, regional and national context to determine potential positive and negative environmental issues/impacts that will require further assessment in detail.

This section was compiled utilising the following sources of information:

- Visual observations during a site visit by I.N.K
- Google Earth
- Atlas of Namibia
- Internet sources

6.1 Climate

The Atlas of Namibia (Mendelsohn et al., 2002) shows the study area to have an annual average temperature of between 18 and 20°C, with an average maximum of 30 to 32°C during the hottest month and an average minimum of 4 to 6°C during the coldest month, with an average of 10 to 20 frost days per year.

6.1.1 Rainfall

Okahandja experiences significant seasonal variation in monthly rainfall. The rainy period of the year lasts for 6.0 months, from November to May, with a sliding 31-day rainfall of at least 0.5 inches.

6.2 Soils

The dominant soil type in Okahandja is a mixture of Lithic Leptosols, Eutric Regosols and Chromic Cambisols. Lithic means 'very thin and shallow soils' and Leptosols means 'soils which typically form in actively eroding land scapes, especially in hilly or undulating areas. The soils are course textured and characterised by their limited depth caused by the presence of a continuous hard rock highly calcareous'. Eutric means 'fertile soils with high base saturation' and Regosol are 'soils with medium to fine textured of actively eroding land scapes'. Chromic means 'soils with bright colours' and Cambisols means soils that were formed quite recently in geological time, mainly from medium and fine textured parent material deposited during sporadic flooding (W. Midzi, 2008).

6.3 Geology

The project area is located within the Kuiseb Formation of the south-central zone of the Damara Supergroup. Generally, the rocks of the Swakop Group can be classified as metamorphosed continental shelf deposits. Metamorphism occurred during the Pan African collision of the Congo and Kalahari cratons roughly 750 to 550 Ma. The rock types include moderate to high temperature, low pressure metamorphic rocks such as schist, marble and gneiss together with glaciogenic tillite and diamictite. The metasedimentary rocks are characterised by a general NE-SW elongation and NE-SE trending faults.

The general geology of the upper Swakop River catchment is shown in Figure 11.

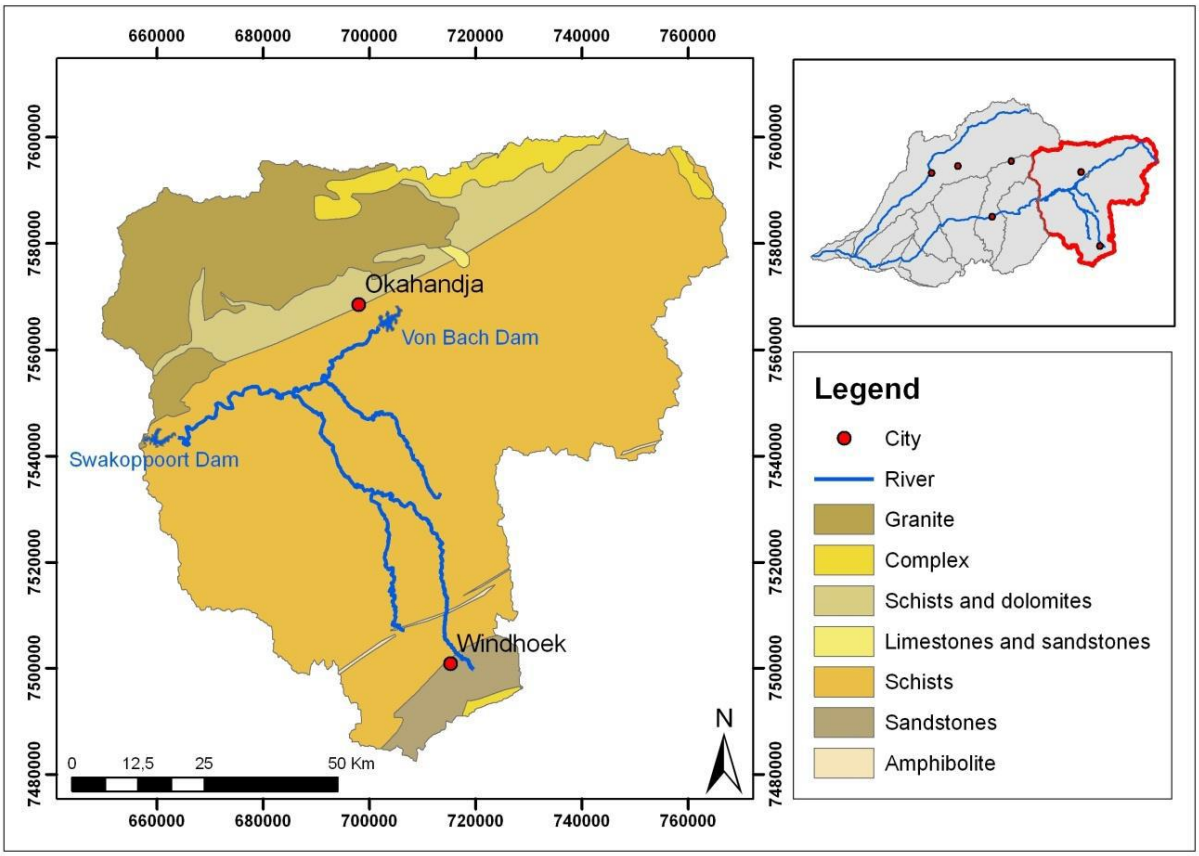

Figure 11: Geology of the Study Area

6.4 Land Use

The factory, measuring approximately 720 m2, was constructed in 2019, on an industrial designated land purchased from the Okahandja Municipality. There is a brick-making factory west of the factory and an informal settlement to the east.

6.5 Topography

The landscape is classified as being in Central-western Plains, which is an area of dissection and erosional cutback. The site is located within the catchment of the Okakango River, an ephemeral river draining in an eastern direction.

The relief of small dry river courses and streams running in and around the area remains well developed and contributes well to drainage in the area. Surface drainage takes place through these waterways in the area, which eventually flows into the Okakango River/Swakop River.

6.6 Hydrogeology

The general geology in the area consists of mica schist, minor quartzite, graphic schist and marble of the Kuiseb Formation – Namibian Age (Nk)

Groundwater flow is expected to take place through primary porosity in the topsoil cover, while it is expected to flow along fractures, faults (secondary porosity) and other geological structures present within the underlying formations (hard rock formations).

The seasonal/ephemeral Okakango River flows through Okahandja where it joins the Otjiruze River just south of the town. These are all subsidiaries of the Swakop River. The town of Okahandja currently derives its water from Namwater vi pipelines rom Von Bach Dam, situated about 5 km southeast of the town.

6.7 Biodiversity

6.7.1 Flora

The project area is situated in the Namib Karoo and Western Highlands Savannah Biomes. In the Namib Karoo Biome, tree cover is 2 to 10%, tree height is 2 to 5m, shrub height is 0.5 to 1m, grass cover is 0.1 to 1% and grass height is >1.5m. The dominant vegetation in this biome according to the ranking is acacia montis-ustii, acacia robynasiana, cyohostemma currorii, strcutia africana, and calicorema capitiatia and orthanthyera albiadia (Mendelson, 2002). The above mentioned vegetation hosted in the Namib Karoo Biomes are of medium values.

In the Western Highlands Savannah Biomes, tree cover is 2 to 10%, tree height is 2 to 5m, shrub cover is 2 to 10%, and grass height is >0.1m. The dominant vegetation type in this biome according to the ranking is acacia reficiens, euphorbia geuerichiana, colophospermum mopane, maerua schinzii, and ademolobius garipensis (Mendelson, 2002).

6.7.2 Fauna

The project area consists of livestock and poultry farming practised by the residents of the neighbouring and immediate Sonderwater informal settlement.

6.8 Noise

Existing noise sources within and around the project site include:

- natural sounds from wind, animals, and birds;
- vehicle movement on the B2 road to Karibib;
- vehicle movement from the brick making factory; and
- Sonderwater Informal Settlement adjacent to the factory.

The immediate surroundings of the project site has inhabitants of the Sonderwater informal settlement.. The sensitivity of noise receptors usually increases at night when conditions are quiet, and ambient noise levels are at their lowest. However, no operational activities are anticipated at night time.

6.9 Visual

The factory is located adjacent to the Sonderwater informal settlement and it is approximately 350 m from the B2 road to Karibib on the outskirt of Okahandja. The factory is visible to the residents of the settlement and travellers on the B2 road. Other infrastructure in the area is the brick making factory, approximately 100 m from the factory.

7 IDENTIFICATION OF ENVIRONMENTAL ASPECTS AND POTENTIAL IMPACTS

This section discusses the environmental aspects of project activities and the resultant potential environmental impacts.

The consultation process with key stakeholders that included government authorities and I &APs allowed the opportunity to raise the issues associated with the project development. It was identified that the following aspects will need to be further assessed:

- Social (relocation of the Sonderwater informal settlement residents;
- Air Pollution
- Waste Management

The relevance of the potential impacts ("screening") are also presented in the tables below to determine aspects of the operation phase, to be assessed in further detail (Section 8 of this report).

7.1 Information collation

I.N.K used various sources to identify both the environmental issues associated with the factory and the Terms of Reference for the required investigations.

Information for the preparation of the EIA Report was sourced from:

- Project information provided by Right-Path Investments (Pty) Ltd which includes:
  - Technical and process information.
- Site visit by I.N.K;
- Consultation with the Technical Project Team;
- Consultation with I&APs as indicated above;
- Consultation with relevant authorities; and
- Atlas of Namibia.

In case of people related impacts, the assessment focused on third parties and did not assess health and safety impacts on workers because the assumption was made that these aspects are separately regulated by health and safety legislation, policies and standards.

Table 7-1 Environmental aspects and potential impacts associated with the waste car battery recycling factory

ACTIVITY / FACILITY	ASPECT	POTENTIAL ENVIRONMENTAL IMPACT	RELEVANCE (SCREENING) OF POTENTIAL IMPACT	Ref
General operational activities.	Oil and diesel spillages from vehicles and other equipment	Impact on surface water and groundwater water quality.	The project may pose the risk of contamination of water resources, mainly through accidental spills of oil and diesel etc. Due to the nature of the project, there is a low risk of big hydrocarbon spillages.	**R01**
	Noise from the factory	Increase in disturbing noise levels (nuisance impact to third parties)	The factory is located on an industrial designated land that is administered by the Okahandja Municipality. Adjacent to the factory, is an informal settlement. However, the 3-day test run identified that the factory generates very low noise levels, therefore, there is a low risk of high noise levels. The sensitivity of noise receptors usually increases at night when conditions are still, and ambient noise levels are at their lowest. However, no operational activities are anticipated at night time.	**R02**
	Waste management	Emissions to land, impact on biodiversity, environmental degradation and nuisance impacts.	Waste generated will be separated at source and stored in a manner that there can be no discharge of contamination to the environment. Some waste types will be recycled or reused where possible. Where recycling/re-using is not possible non-hazardous, non-recyclable waste will be disposed of at the Kupferberg Hazardous Waste disposal site. The related management and mitigation measures are stipulated in the EMP.	**R03**

ACTIVITY / FACILITY	ASPECT	POTENTIAL ENVIRONMENTAL IMPACT	RELEVANCE (SCREENING) OF POTENTIAL IMPACT	Ref
	Visual Impacts	Changes in visual conditions	The factory is in a currently disturbed area due to activities of the much bigger brick making factory and its contribution to a negative visual impact is therefore minimal. However, the factory may be visible from a far distance due to the possibility of raising the stack higher. The potential visual impact is therefore assessed in that respect. A Qualitative visual assessment was therefore conducted by I.N.K in section 7 of this report.	**R04**
	Air pollution	Impact on the people and animals in the informal settlement	The factory emits an acidic smoke into the atmosphere during the operations that could potentially impact the people and animals living in the nearby settlement. The related management and mitigation measures are stipulated in the EMP and a Qualitative air pollution assessment was therefore conducted by I.N.K in section 7 of this report.	**R05**

ACTIVITY / FACILITY	ASPECT	POTENTIAL ENVIRONMENTAL IMPACT	RELEVANCE (SCREENING) OF POTENTIAL IMPACT	Ref
	Economic impacts	Impacts on local economy, informal settlements, • Increased employment opportunities • Opportunity for skills transfers • Increasing pressure on government services • Increased demand for basic infrastructure	The operation phase will employ ±12 people. However, it is likely that a certain number of the project's low skilled workforce will come from Okahandja. It is likely that many job-seekers will come to the area; many will not be successful but with no other prospects, they may wait in the area in the hope that a job is forthcoming. The potential economic impacts (positive and negative) have therefore been assessed as part of this EIA. Refer to Section 7 for the assessment of these potential impacts.	**R06**

8 ENVIRONMENTAL IMPACT ASSESSMENT

This section discusses, provides ratings and gives recommendation on the major positive and negative potential issues/impacts identified.

With reference to section 1.2, the factory, measuring approximately 720 m2, was constructed in 2019.

Therefore, this assessment is only focused on the operation activities of the project.

8.1 Assessment Approach and Methodology

Both the criteria used to assess the impacts and the method of determining the significance of the impacts is outlined in Table 2. This method complies with the EIA Regulations: EMA, 2007 (Government Gazette No. 4878) EIA regulations.

Part A provides the approach for determining impact consequence (combining severity, spatial scale and duration) and impact significance (the overall rating of the impact). Impact consequence and significance are determined from Part B and C. The interpretation of the impact significance is given in Part D.

Both mitigated and unmitigated scenarios are considered for each impact in the EIA results.

Table 2: Assessment Methodology and Criteria

PART A: DEFINITION AND CRITERIA		
Definition of SIGNIFICANCE		**Significance = consequence x probability**
Definition of CONSEQUENCE		**Consequence is a function of severity, spatial extent and duration**
Criteria for ranking of the SEVERITY/NATURE of environmental impacts	**H**	Substantial deterioration (death, illness or injury). Recommended level will often be violated. Vigorous community action. Irreplaceable loss of resources.
	M	Moderate/ measurable deterioration (discomfort). Recommended level will occasionally be violated. Widespread complaints. Noticeable loss of resources.
	L	Minor deterioration (nuisance or minor deterioration). Change not measurable/ will remain in the current range. Recommended level will never be violated. Sporadic complaints. Limited loss of resources.
	L+	Minor improvement. Change not measurable/ will remain in the current range. Recommended level will never be violated. Sporadic complaints.
	M+	Moderate improvement. Will be within or better than the recommended level. No observed reaction.
	H+	Substantial improvement. Will be within or better than the recommended level. Favourable publicity.
Criteria for ranking the DURATION of impacts	**L**	Quickly reversible. Less than the project life. Short term
	M	Reversible over time. Life of the project. Medium term
	H	Permanent. Beyond closure. Long term.
Criteria for ranking the SPATIAL SCALE of impacts	**L**	Localised - Within the site boundary.
	M	Fairly widespread – Beyond the site boundary. Within 20 km of the site boundary.
	H	Widespread – Far beyond site boundary. Regional/ national

PART B: DETERMINING CONSEQUENCE

SEVERITY = L

DURATION	Long term	**H**	Medium	Medium	Medium
	Medium term	**M**	**Low**	**Low**	Medium
	Short term	**L**	**Low**	**Low**	Medium

SEVERITY = M

DURATION	Long term	**H**	Medium	High	High
	Medium term	**M**	Medium	Medium	High
	Short term	**L**	**Low**	Medium	Medium

SEVERITY = H

DURATION	Long term	**H**	High	High	High
	Medium term	**M**	Medium	Medium	High
	Short term	**L**	Medium	Medium	High
			L	**M**	**H**
			Localised Within site boundary Site	Fairly widespread Beyond site boundary Local	Widespread Far beyond site boundary Regional/ national
			SPATIAL SCALE		

PART C: DETERMINING SIGNIFICANCE

PROBABILITY (of exposure to impacts)	Definite/ Continuous	**H**	Medium	Medium	High
	Possible/ frequent	**M**	Medium	Medium	High
	Unlikely/ seldom	**L**	**Low**	**Low**	Medium
			L	**M**	**H**
			CONSEQUENCE		

PART D: INTERPRETATION OF SIGNIFICANCE	
Significance	**Decision guideline**

High	It would influence the decision regardless of any possible mitigation.
Medium	It should have an influence on the decision unless it is mitigated.
Low	It will not have an influence on the decision.

8.2 Issue/Impact: Air pollution impact on the biophysical and social environment

Introduction

The emission from the factory operation results in air quality-related impacts due to the acid smoke that is emitted. This could impact the surrounding biophysical environment as well as sensitive receptors in the area. However, the Otjozondjupa Regional Council, in collaboration with the Okahandja Town Council, are currently in the process of relocating the informal settlement residents.

Assessment of impact

Severity

The presence of human receptors within close proximity of the project results in a **high** severity with regard to air pollution impacts in the unmitigated scenario. These acid emissions could as well as result in the smothering of sensitive vegetation in the local area. The severity of this impact would be **high** in the unmitigated scenario and could be reduced to **medium** through mitigation.

Duration

The visual impact is reversible overtime therefore the duration in the unmitigated and mitigated scenarios are **medium**.

Spatial Scale

The air pollution impacts would extend beyond the site boundaries. The spatial scale is therefore **medium** in both the unmitigated and mitigated scenarios.

Consequence

the consequence of this impact is **medium** in the unmitigated scenario and **low** in the mitigated scenario.

Probability

The probability of the air pollution impact occurring is **high** in the unmitigated scenario and **medium** in the mitigated.

Significance

The significance of air pollution impacts is **medium** because the consequence and probability of the impacts occurring are **medium** and **high,** respectively.

Table 3: Summary of the assessed impact: Air pollution impact on the biophysical and social environment

Mitigation	Severity	Duration	Spatial Scale	Consequence	Probability	Significance
Unmitigated	H	M	M	M	H	M
Mitigated	M	M	M	L	M	L

Recommendations and mitigation measures

Objective

To minimize the impacts of air pollution emitted from the factory during operations on the biophysical and social environment,

Right-Path will:

- Implement the water tank method for clean and eco-friendly smoke by ensuring that it is placed in the dust remover blower, in order to dissolve the acid chemical in the smoke before it is emitted in the environment.
- Ensure liaison with the Okahandja Municipality to relocate the residents of the Sonderwater Informal Settlement prior to the operation activities of the factory.

Emergency situation

Right-Path will maintain good relations with the surrounding communities and have clear points of contact to enable a speedy response to an emergency situation.

8.3 Issue: Impact relating to visual

Introduction

The waste car battery recycling factory will create a negative visual impact to the nearby community. The factory will also be located alongside the B2 road between Okahandja and Karibib posing a visual impact to the travellers on the road.

Severity

The severity of visual impacts is determined by assessing the change to the visual landscape as a result of the project for receptors in the area. The visual receptors are the immediate informal settlement and travellers on the B2 road about 350 m away from the factory. As explained in Section 7, there is likely not to be a change in visual due to the current activities of the brick-making factory. However, there is a possibility of raising the stack higher which would make it visible from a far distance posing a negative visual impact. The severity of the impact will therefore be **medium** in the unmitigated scenario and **medium** in the mitigated scenario.

Duration

The duration of the visual impact, will be for the life of the project and therefore will be **medium** in both the unmitigated and mitigated scenarios.

Spatial Scale

The human receptors and change of visible visual landscape will result in a **medium** spatial scale of visual impact.

Consequence

The consequence of this impact is **medium** in both the unmitigated and mitigated scenarios.

Probability

The probability of the visual impact occurring is **high** in both the unmitigated and mitigated scenarios for the reasons described above.

Significance

The significance is **medium** in both the unmitigated and mitigated scenarios.

Table 4: Summary of Cumulative Physical Impacts on Visual Environment

MITIGATION	SEVERITY	DURATION	SPATIAL SCALE	CONSEQUENCE	PROBABILITY	SIGNIFICANCE
Unmitigated	M	M	M	M	H	M
Mitigated	M	M	M	M	H	M

Recommendaions and mitigation measures

The objective of the mitigation measures is to limit visual impacts. Key mitigation measures revolve around ensuring that the operations and facilities are well maintained and kept in good order. Poor maintenance and housekeeping would result in the creation of a negative visual impact.

8.4 Issue/Impact: Waste Management

Introduction

With reference to section 4.3.4, relatively small quantities of general (domestic) and hazardous waste will be generated during the operation phases. The general non-hazardous waste will be transported to the Okahandja landfill site, while all hazardous waste, i.e. dust from dust remover blower, will be stored on site in sealed containers and regularly transported to the Kupferberg Hazardous Waste Disposal Site.

Assessment of impact

Severity

The hazardous and non-hazardous waste that will be generated results in a **medium** severity in the unmitigated scenario and **low** in the mitigated scenario.

Duration

The waste management impact is reversible overtime therefore the duration in the unmitigated and mitigated scenarios are **medium**.

Spatial Scale

The waste management impacts would be localised within the site boundaries. The spatial scale is therefore both **low** in the unmitigated and mitigated scenarios.

Consequence

The consequence of this impact is **medium** in the unmitigated scenario and **low** in the mitigated scenario.

Probability

The probability of the waste management impact occurring is **medium** in the unmitigated scenario and **low** in the mitigated.

Significance

The significance of waste management impacts is **medium** because the consequence and probability of the impacts occurring are **medium**.

Table 5: Summary of the assessed impact: Air pollution impact on the biophysical and social environment

Mitigation	Severity	Duration	Spatial Scale	Consequence	Probability	Significance
Unmitigated	M	M	L	M	M	M
Mitigated	L	M	L	L	L	L

Recommendations and mitigation measures

Objective

To minimize the impacts of waste management on site during operations:

Right-Path will:

- Ensure suitable receptacles with lids for waste disposal is available on site at all times.
- Ensure animals and people do not have access to waste bins.
- If rubbish containers are used, ensure these can be sealed from animals or strong wind and during transportation.

- Waste shall be transported to the Okahandja waste disposal site on a weekly basis.
- No disposal of waste inside the factory and no burning of waste.
- Hazardous Waste (including waste from dust remover blower and the hydrocarbon contaminated material) will be disposed off at the nearest Kupferberg hazardous waste disposal facility.
- Medical waste where appropriate shall be disposed of at the medical waste facility.
- Written evidence of safe disposal of waste will be kept.

8.5 Issue/Impact: Economic impact relating job creation and skills development

Introduction

About 12 employment opportunities (low and high skilled) will be created for the operational phase.

The workforce will commute to the factory each day during the operation phase and will be accommodated in Okahandja Town.

Assessment of impact

Intensity

Job creation is a high priority to the Namibian government to combat widespread unemployment and disparities in income. As some of the proposed jobs created can be filled by training unskilled people, the factory will make a small but useful contribution. Employment provides incomes to the employees, their immediate household members and to relatives living elsewhere in Namibia who depend on cash remittances. As long as the jobs created do not cause the loss of jobs in the surrounding area, the impact can be summarised as having a **high positive** effect.

Duration

The contribution to skills development will be long-lasting so the duration will be **high**.

Spatial Scale

The spatial scalet is **high** as employees will be sourced locally and from the neighbouring regions and nationally.

Consequence

The consequence of the impact is **high positive**.

Probability

The probability is **high** as jobs will definitely be created for the life of the factory.

Significance

The significance of this potential impact is **high positive** and can be enhanced further. Our confidence in this rating is **high**.

Table 6: Summary of the assessed impact: Job creation and skills development

Mitigation	Duration	Extent	Consequence	Probability	Significance
Unmitigated	H	H	H+	H	H+
Mitigated	H	H	H+	H	VH+

Recommendations and mitigation measures

The enhancement objective is to maximise employment and skills development opportunities for the local, regional and national population.

The factory requires low, semi-skilled to highly skilled labour force so there is a great need to provide up-front skills training. Skills acquisition/upgrading provides greater opportunities for the local labour force to participate in the project and makes a crucial contribution towards long-term sustainability, beyond the life of the factory. It can also contribute to improving gender equality and the empowerment of women.

Right-Path will:

- Have approachable person as she/he will be a key link between the community in the area and the factory.
- Demonstrate its efforts to recruit employees from Okahandja and Otjozondjupa Region.
- Be gender sensitive and select women for interview, training and recruitment.

9 CONCLUSIONS

The environmental aspects associated with the waste car battery recycling factory have been successfully identified and assessed as part of this EIA Scoping process.

Mitigation measures have been identified and recommended by I.N.K Enviro Consultants cc to promote the positive impacts of the project, as well as to avoid / minimise the negative impacts to acceptable levels. An EMP was further developed which identifies potential impacts of the project during the operation phase. The EMP is a legally binding document, which the proponent must adhere to.

I.N.K concludes that should the management actions and mitigation measures provided in the EIA and EMP report be implemented, the project would have an acceptably low significant impact on the surrounding biophysical and social environment.

10 WAY FORWARD

The way forward for the EIA scoping phase is as follows:

- I&APs review the reports
- I.N.K consider comments received and finalised the reports
- MET review the final Scoping (including impact assessment) Report and MET provide record of decision.

11 REFERENCES

Midzi, W., 2018. A Mini Thesis Submitted In Partial Fulfilment Of The Requirements For The Degree Of Master Of Science In Nuclear Science Of The University Of Namibia.

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