Western Cape Government

Department of Environmental Affairs and Development Planning

BASIC ASSESSMENT REPORT

THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998) AND THE ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS.

APRIL 2024

BASIC ASSESSMENT REPORT

THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998) AND THE ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS.

May 2026

(For official use only)	
Pre-application Reference Number (if applicable):	
EIA Application Reference Number:	
NEAS Reference Number:	
Exemption Reference Number (if applicable):	
Date BAR received by Department:	
Date BAR received by Directorate:	
Date BAR received by Case Officer:	

GENERAL PROJECT DESCRIPTION

(This must Include an overview of the project including the Farm name/Portion/Erf number)

PROPOSED DEVELOPMENT OF A NEW ALUMINIUM RECYCLING FACILITY ON ERVEN 9874 AND 9875 IN ELSIES RIVER, CAPE TOWN, WESTERN CAPE

IMPORTANT INFORMATION TO BE READ PRIOR TO COMPLETING THIS BASIC ASSESSMENT REPORT

1. **The purpose** of this template is to provide a format for the Basic Assessment report as set out in Appendix 1 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) ("NEMA"), Environmental Impact Assessment ("EIA") Regulations, 2014 (as amended) in order to ultimately obtain Environmental Authorisation.

2. The Environmental Impact Assessment ("EIA") Regulations is defined in terms of Chapter 5 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) ("NEMA") hereinafter referred to as the "NEMA EIA Regulations".

3. *Submission of documentation, reports and other correspondence:*

   The Department has adopted a digital format for corresponding with proponents/applicants or the general public. If there is a conflict between this approach and any provision in the legislation, then the provisions in the legislation prevail. If there is any uncertainty about the requirements or arrangements, the relevant Competent Authority must be consulted.

   The Directorate: Development Management has created generic e-mail addresses for the respective Regions, to centralise their administration. Please make use of the relevant general administration e-mail address below when submitting documents:

   DEADPEIAAdmin@westerncape.gov.za
   Directorate: Development Management (Region 1):
   City of Cape Town; West Coast District Municipal area;
   Cape Winelands District Municipal area and Overberg District Municipal area.

   DEADPEIAAdmin.George@westerncape.gov.za
   Directorate: Development Management (Region 3):
   Garden Route District Municipal area and Central Karoo District Municipal area

   General queries must be submitted via the general administration e-mail for EIA related queries. Where a case-officer of DEA&DP has been assigned, correspondence may be directed to such official and copied to the relevant general administration e-mail for record purposes.

   All correspondence, comments, requests and decisions in terms of applications, will be issued to either the applicant/requester in a digital format via email, with digital signatures, and copied to the Environmental Assessment Practitioner ("EAP") (where applicable).

4. The required information must be typed within the spaces provided in this Basic Assessment Report ("BAR"). The sizes of the spaces provided are not necessarily indicative of the amount of information to be provided.

5. All applicable sections of this BAR must be completed.

6. Unless protected by law, all information contained in, and attached to this BAR, will become public information on receipt by the Competent Authority. If information is not submitted with this BAR due to such information being protected by law, the applicant and/or Environmental Assessment Practitioner ("EAP") must declare such non-disclosure and provide the reasons for believing that the information is protected.

7. This BAR is current as of **April 2024**. It is the responsibility of the Applicant/ EAP to ascertain whether subsequent versions of the BAR have been released by the Department. Visit this Department's website at http://www.westerncape.gov.za to check for the latest version of this BAR.

8. This BAR is the standard format, which must be used in all instances when preparing a BAR for Basic Assessment applications for an environmental authorisation in terms of the NEMA EIA Regulations when the Western Cape Government Department of Environmental Affairs and Development Planning ("DEA&DP") is the Competent Authority.

9. Unless otherwise indicated by the Department, one hard copy and one electronic copy of this BAR must be submitted to the Department at the postal address given below or by delivery thereof to the Registry Office of the Department. Reasonable access to copies of this Report must be provided to the relevant Organs of State for consultation purposes, which may, if so indicated by the Department, include providing a printed copy to a specific Organ of State.

10. This BAR must be duly dated and originally signed by the Applicant, EAP (if applicable) and Specialist(s) and must be submitted to the Department at the details provided below.

11. The Department's latest Circulars pertaining to the "One Environmental Management System" and the EIA Regulations, any subsequent Circulars, and guidelines must be taken into account when completing this BAR.

12. Should a water use licence application be required in terms of the National Water Act, 1998 (Act No. 36 of 1998) ("NWA"), the "One Environmental System" is applicable, specifically in terms of the synchronisation of the consideration of the application in terms of the NEMA and the NWA. Refer to this Department's Circular EADP 0028/2014: One Environmental Management System.

13. Where Section 38 of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) ("NHRA") is triggered, a copy of Heritage Western Cape's final comment must be attached to the BAR.

14. The Screening Tool developed by the National Department of Environmental Affairs must be used to generate a screening report. Please use the Screening Tool link https://screening.environment.gov.za/screeningtool to generate the Screening Tool Report. The screening tool report must be attached to this BAR.

15. Where this Department is also identified as the Licencing Authority to decide on applications under the National Environmental Management: Air Quality Act (Act No. 29 of 2004) ('NEM:AQA"), the submission of the Report must also be made as follows, for-
Waste Management Licence Applications, this report must also (i.e., another hard copy and electronic copy) be submitted for the attention of the Department's Waste Management Directorate (Tel: 021-483-2728/2705 and Fax: 021-483-4425) at the same postal address as the Cape Town Office.

    Atmospheric Emissions Licence Applications, this report must also be (i.e., another hard copy and electronic copy) submitted for the attention of the Licensing Authority or this Department's Air Quality Management Directorate (Tel: 021 483 2888 and Fax: 021 483 4368) at the same postal address as the Cape Town Office.

DEPARTMENTAL DETAILS	
CAPE TOWN OFFICE: **DIRECTORATE: DEVELOPMENT MANAGEMENT (REGION 1)** (City of Cape Town, West Coast District, Cape Winelands District & Overberg District)	~~**GEORGE REGIONAL OFFICE:**~~ ~~**DIRECTORATE: DEVELOPMENT MANAGEMENT (REGION 3)**~~ ~~(Central Karoo District & Garden Route District)~~
The completed Form must be sent via electronic mail to: DEADPEIAAdmin@westerncape.gov.za Queries should be directed to the Directorate: Development Management (Region 1) at: E-mail: DEADPEIAAdmin@westerncape.gov.za Tel: (021) 483-5829 Western Cape Government Department of Environmental Affairs and Development Planning Attention: Directorate: Development Management (Region 1) Private Bag X 9086 Cape Town, 8000	~~The completed Form must be sent via electronic mail to:~~ ~~DEADPEIAAdmin.George@westerncape.gov.za~~ ~~Queries should be directed to the Directorate: Development Management (Region 3) at:~~ ~~E-mail: DEADPEIAAdmin.George@westerncape.gov.za~~ ~~Tel: (044) 814-2006~~ ~~Western Cape Government~~ ~~Department of Environmental Affairs and Development Planning~~ ~~Attention: Directorate: Development Management (Region 3)~~ ~~Private Bag X 6509~~ ~~George,~~ ~~6530~~

MAPS

Provide a location map (see below) as Appendix A1 to this BAR that shows the location of the proposed development and associated structures and infrastructure on the property.	
Locality Map:	The scale of the locality map must be at least 1:50 000. For linear activities or development proposals of more than 25 kilometres, a smaller scale e.g., 1:250 000 can be used. The scale must be indicated on the map. The map must indicate the following: • an accurate indication of the project site position as well as the positions of the alternative sites, if any; • road names or numbers of all the major roads as well as the roads that provide access to the site(s) • a north arrow; • a legend; and • a linear scale. For ocean based or aquatic activity, the coordinates must be provided within which the activity is to be undertaken and a map at an appropriate scale clearly indicating the area within which the activity is to be undertaken. Where comment from the Western Cape Government: Transport and Public Works is required, a map illustrating the properties (owned by the Western Cape Government: Transport and Public Works) that will be affected by the proposed development must be included in the Report.
Provide a detailed site development plan / site map (see below) as Appendix B1 to this BAR; and if applicable, all alternative properties and locations.	
Site Plan:	Detailed site development plan(s) must be prepared for each alternative site or alternative activity. The site plans must contain or conform to the following: • The detailed site plan must preferably be at a scale of 1:500 or at an appropriate scale. The scale must be clearly indicated on the plan, preferably together with a linear scale. • The property boundaries and numbers of all the properties within 50m of the site must be indicated on the site plan. • On land where the property has not been defined, the co-ordinates of the area in which the proposed activity or development is proposed must be provided. • The current land use (not zoning) as well as the land use zoning of each of the adjoining properties must be clearly indicated on the site plan. • The position of each component of the proposed activity or development as well as any other structures on the site must be indicated on the site plan. • Services, including electricity supply cables (indicate aboveground or underground), water supply pipelines, boreholes, sewage pipelines, storm water infrastructure and access roads that will form part of the proposed development **must** be clearly indicated on the site plan. • Servitudes and an indication of the purpose of each servitude must be indicated on the site plan. • Sensitive environmental elements within 100m of the site must be included on the site plan, including (but not limited to): o Watercourses / Rivers / Wetlands o Flood lines (*i.e.*, 1:100 year, 1:50 year and 1:10 year where applicable);

	○ Coastal Risk Zones as delineated for the Western Cape by the Department of Environmental Affairs and Development Planning ("DEA&DP"): ○ Ridges; ○ Cultural and historical features/landscapes; ○ Areas with indigenous vegetation (even if degraded or infested with alien species). • Whenever the slope of the site exceeds 1:10, a contour map of the site must be submitted. • North arrow A map/site plan must also be provided at an appropriate scale, which superimposes the proposed development and its associated structures and infrastructure on the environmental sensitivities of the preferred and alternative sites indicating any areas that should be avoided, including buffer areas.
Site photographs	Colour photographs of the site that shows the overall condition of the site and its surroundings (taken on the site and taken from outside the site) with a description of each photograph. The vantage points from which the photographs were taken must be indicated on the site plan, or locality plan as applicable. If available, please also provide a recent aerial photograph. Photographs must be attached to this BAR as **Appendix C**. The aerial photograph(s) should be supplemented with additional photographs of relevant features on the site. Date of photographs must be included. Please note that the above requirements must be duplicated for all alternative sites.
Biodiversity Overlay Map:	A map of the relevant biodiversity information and conditions must be provided as an overlay map on the property/site plan. The Map must be attached to this BAR as **Appendix D**.
Linear activities or development and multiple properties	GPS co-ordinates must be provided in degrees, minutes and seconds using the Hartebeeshoek 94 WGS84 co-ordinate system. Where numerous properties/sites are involved (linear activities) you must attach a list of the Farm Name(s)/Portion(s)/Erf number(s) to this BAR as an Appendix. For linear activities that are longer than 500m, please provide a map with the co-ordinates taken every 100m along the route to this BAR as **Appendix A3**.

ACRONYMS

DAFF:	Department of Forestry and Fisheries
DEA:	Department of Environmental Affairs
DEA& DP:	Department of Environmental Affairs and Development Planning
DHS:	Department of Human Settlement
DoA:	Department of Agriculture
DoH:	Department of Health
DWS:	Department of Water and Sanitation
EMPr:	Environmental Management Programme
HWC:	Heritage Western Cape
NFEPA:	National Freshwater Ecosystem Protection Assessment
NSBA:	National Spatial Biodiversity Assessment
TOR:	Terms of Reference
WCBSP:	Western Cape Biodiversity Spatial Plan
WCG:	Western Cape Government

ATTACHMENTS

Note: The Appendices must be attached to the BAR as per the list below. Please use a ✓ **(**tick) or a **x** (cross) to indicate whether the Appendix is attached to the BAR.

The following checklist of attachments must be completed.

APPENDIX			**✓ (Tick) or x (cross)**
Appendix A:	**Maps**		
	Appendix A1:	**Locality Map**	✓
	Appendix A2:	**Coastal Risk Zones as delineated in terms of ICMA for the Western Cape by the Department of Environmental Affairs and Development Planning**	**X**
	Appendix A3:	**Map with the GPS co-ordinates for linear activities**	**X**
Appendix B:	**Appendix B1:**	**Site development plan(s)**	✓
	Appendix B2	**A map of appropriate scale, which superimposes the proposed development and its associated structures and infrastructure on the environmental sensitivities of the preferred site, indicating any areas that should be avoided, including buffer areas;**	**X**
Appendix C:	**Photographs**		**X**
Appendix D:	**Biodiversity overlay map**		✓
Appendix E:	**Permit(s) / license(s) / exemption notice, agreements, comments from State Department/Organs of state and service letters from the municipality.**		
	Appendix E1:	**Final comment/ROD from HWC**	Comment will be obtained from this department during PPP
	Appendix E2:	**Copy of comment from Cape Nature**	Comment will be obtained from this department during PPP
	Appendix E3:	**Final Comment from the DWS**	Comment will be obtained from this department during PPP
	Appendix E4:	**Comment from the DEA: Oceans and Coast**	**X**
	Appendix E5:	**Comment from the DAFF**	Comment will be obtained from this department during PPP
	Appendix E6:	**Comment from WCG: Transport and Public Works**	Comment will be obtained from this department during PPP
	Appendix E7:	**Comment from WCG: DoA**	Comment will be obtained from this department during PPP
	Appendix E8:	**Comment from WCG: DHS**	Comment will be obtained from this

			department during PPP
	Appendix E9:	**Comment from WCG: DoH**	Comment will be obtained from this department during PPP
	Appendix E10:	**Comment from DEA&DP: Pollution Management**	Comment will be obtained from this department during PPP
	Appendix E11:	**Comment from DEA&DP: Waste Management**	Comment will be obtained from this department during PPP
	Appendix E12:	**Comment from DEA&DP: Biodiversity**	Comment will be obtained from this department during PPP
	Appendix E13:	**Comment from DEA&DP: Air Quality**	Comment will be obtained from this department during PPP
	Appendix E14:	**Comment from DEA&DP: Coastal Management**	**X**
	Appendix E15:	**Comment from the local authority**	Comment will be obtained from this department during PPP
	Appendix E16:	**Confirmation of all services (water, electricity, sewage, solid waste management)**	Comment will be obtained from this department during PPP
	Appendix E17:	**Comment from the District Municipality**	Comment will be obtained from this department during PPP
	Appendix E18:	**Copy of an exemption notice**	**X**
	Appendix E19	**Pre-approval for the reclamation of land**	**X**
	Appendix E20:	**Proof of agreement/TOR of the specialist studies conducted.**	**X**
	Appendix E21:	**Proof of land use rights**	**X**
	Appendix E22:	**Proof of public participation agreement for linear activities**	**X**
Appendix F:	**Public participation information: including a copy of the register of I&APs, the comments and responses Report, proof of notices, advertisements and any other public participation information as is required.**		To be included in the Post Application BAR
Appendix G:	**Specialist Report(s)**		✓
Appendix H:	**EMPr**		✓

Appendix I:	**Screening tool report**	✓
Appendix J:	**The impact and risk assessment for each alternative**	**X**
Appendix K:	**Need and desirability for the proposed activity or development in terms of this Department's guideline on Need and Desirability (March 2013)/DEA Integrated Environmental Management Guideline**	**X**
Appendix…..	**Any other attachments must be included as subsequent appendices**	**X**

SECTION A: ADMINISTRATIVE DETAILS

Highlight the Departmental Region in which the intended application will fall	CAPE TOWN OFFICE: REGION 1		~~GEORGE OFFICE: REGION 3~~
	(City of Cape Town, West Coast District	~~(Cape Winelands District & Overberg District)~~	~~(Central Karoo District & Garden Route District)~~

Duplicate this section where there is more than one Proponent Name of Applicant/Proponent:	Alvi's Creations CC	
Name of contact person for Applicant/Proponent (if other):	Donovan Lender	
Company/ Trading name/State Department/Organ of State:	AC Alloys	
Company Registration Number:	2006/083666/23	
Postal address:	1 Steenbrass Road, Sand Industrial, Athlone, Cape Town	
		Postal code: 7764
Telephone:	(021) 370 0041	Cell: 068 470 4330
E-mail:	Recycle354@gmail.com	
Company of EAP:	Sillito Environmental Consulting	
EAP name:	Chantel Muller	
Postal address:	Suite 401, Tokai on Main, 2 Burchell Road, Tokai	
		Postal code: 7945
Telephone:	(021) 712 5060	Cell: 076 785 7736
E-mail:	chantel@environmentalconsultants.co.za	
Qualifications:	Review EAP: Chantel Muller	
EAP registration no:	2019/1362	
Duplicate this section where there is more than one landowner Name of landowner:	**A. Markel Properties CC**	
Name of contact person for landowner (if other):	Sonja Kirsten	
Postal address:	PO Box 780, Maitland	
		Postal code: 7405
Telephone:	+27(21) 510 2473	Cell:
E-mail:	admin@markelproperties.co.za	
Name of Person in control of the land:	**Alvi's Creations CC**	
Name of contact person for person in control of the land:	Donovan Leander	
Postal address:	1 Steenbrass Road, Sand Industrial, Athlone, Cape Town	
		Postal code: 7764
Telephone:	(021) 370 0041	Cell: 068 470 4330
E-mail:	Recycle354@gmail.com	Fax: ( )

Duplicate this section where there is more than one Municipal Jurisdiction Municipality in whose area of jurisdiction the proposed activity will fall:	City of Cape Town	
Contact person:	Maurietta Stewart (Regional Head Environmental & Heritage Region (Central)	
Postal address:	Floor 8, 44 Wale Street, Cape Town	
		Postal code: 8000
Telephone	+27(0)21 370 0041	Cell: N/A
E-mail:	maurietta.stewart@capetown.gov.za lungelo.mbandazayo@capetown.gov.za City.manager@capetown.gov.za	

SECTION B: CONFIRMATION OF SPECIFIC PROJECT DETAILS AS INLCUDED IN THE APPLICATION FORM

1.	Is the proposed development (please tick):	New	X	~~Expansion~~		
2.	Is the proposed site(s) a brownfield of greenfield site? Please explain.					
The site (Erf 9874 and 9875) is classified as a brownfield site because it has already been developed and currently houses a warehouse structure. There is no natural vegetation on or around the site.						
~~3.~~	**~~For Linear activities or developments~~**					
~~3.1.~~	~~Provide the Farm(s)/Farm Portion(s)/Erf number(s) for all routes:~~					
~~3.2.~~	~~Development footprint of the proposed development for all alternatives.~~					
~~3.3.~~	~~Provide a description of the proposed development (e.g. for roads the length, width and width of the road reserve in the case of pipelines indicate the length and diameter) for all alternatives.~~					
~~3.4.~~	~~Indicate how access to the proposed routes will be obtained for all alternatives.~~					
~~3.5.~~	~~SG Digit codes of the Farms/Farm Portions/Erf numbers for all alternatives~~					
~~3.6.~~	**~~Starting point co-ordinates for all alternatives~~**					
	~~Latitude (S)~~	~~º~~	~~‘~~	~~“~~		
	~~Longitude (E)~~	~~º~~	~~‘~~	~~“~~		
	~~Middle-point co-ordinates for all alternatives~~					
	~~Latitude (S)~~	~~º~~	~~‘~~	~~“~~		
	~~Longitude (E)~~	~~º~~	~~‘~~	~~“~~		
	~~End point co-ordinates for all alternatives~~					
	~~Latitude (S)~~	~~º~~	~~‘~~	~~“~~		
	~~Longitude (E)~~	~~º~~	~~‘~~	~~“~~		
~~Note: For Linear activities or developments longer than 500m, a map indicating the co-ordinates for every 100m along the route must be attached to this BAR as Appendix A3.~~						
4.	**Other developments**					
4.1.	Property size(s) of all proposed site(s):					933.95m2
4.2.	Developed footprint of the existing facility and associated infrastructure (if applicable):					517m2
4.3.	Development footprint of the proposed development and associated infrastructure size(s) for all alternatives:					517m2
4.4.	Provide a detailed description of the proposed development and its associated infrastructure (This must include details of e.g. buildings, structures, infrastructure, storage facilities, sewage/effluent treatment and holding facilities).					

The proposed development includes the installation of an aluminium furnace in an existing industrial warehouse.

- A steel chimney with an electrostatic adsorption filter will be installed.
- The chimney will be 8m long with a 250mm diameter. 3.575m of the chimney will extrude from the roof of the warehouse. The filter will remove 90-95% of dust from the exhaust gas.
- Raw materials will be stored outside the warehouse, and the aluminium dross and captured dust will be stored under a roofed area outside the warehouse.
- The finished product (aluminium ingots) will be packed into bundles and stored in the warehouse prior to being loaded onto a flatbed truck or into a 20-foot container, depending on the customer's transport requirements.

Dross and filter-captured dust storage (roofed area outside warehouse):

Aluminium dross generated during melting or casting and dust captured by the abatement system will be stored in a dedicated covered (roofed) external storage bay outside the warehouse. The storage bay will be located on an impermeable hardstand surface (e.g., concrete slab) to prevent migration of material and contain any contaminated runoff.

Where the existing surface is not demonstrably impermeable, it will be upgraded prior to commissioning. The storage bay will be bunded to prevent migration of solids and to allow containment of any contaminated runoff from the storage area. The area will be stormwater protected by diverting clean stormwater runoff away from the bay and managing the bay as a controlled area, such that any runoff arising within the bay is contained and prevented from discharging off-site.

Dust generation will be controlled by prevention and containment rather than wet suppression: filter dust will be kept in sealed, labelled containers and dross will be kept under cover with handling controls. Water spraying will not be applied to dross or dust unless a site-specific risk assessment confirms it is safe and appropriate for the waste stream.

Aluminium dross will be characterised and managed in accordance with the National Norms and Standards for the Assessment of Waste for Landfill Disposal (GN 635 of 2013). Where feasible, aluminium dross may be supplied to authorised recyclers as a secondary raw material. All waste generated at the facility will be stored, transported and disposed of in accordance with the National Environmental Management: Waste Act (Act 59 of 2008) and applicable municipal requirements.

Filter-captured dust (and dross, where managed as a waste stream) will be classified in terms of applicable waste classification requirements prior to routine disposal; until classification results are available, the dust will be handled as potentially hazardous, stored sealed and removed by an appropriately authorised waste contractor. The filter-captured dust will be transported by a registered service provider to a licensed disposal facility authorised to accept the classified waste stream.

Figure 1: The location of the proposed development, outlined in blue. Please refer to the appendices for the Locality Map and the proposed site layout plans.

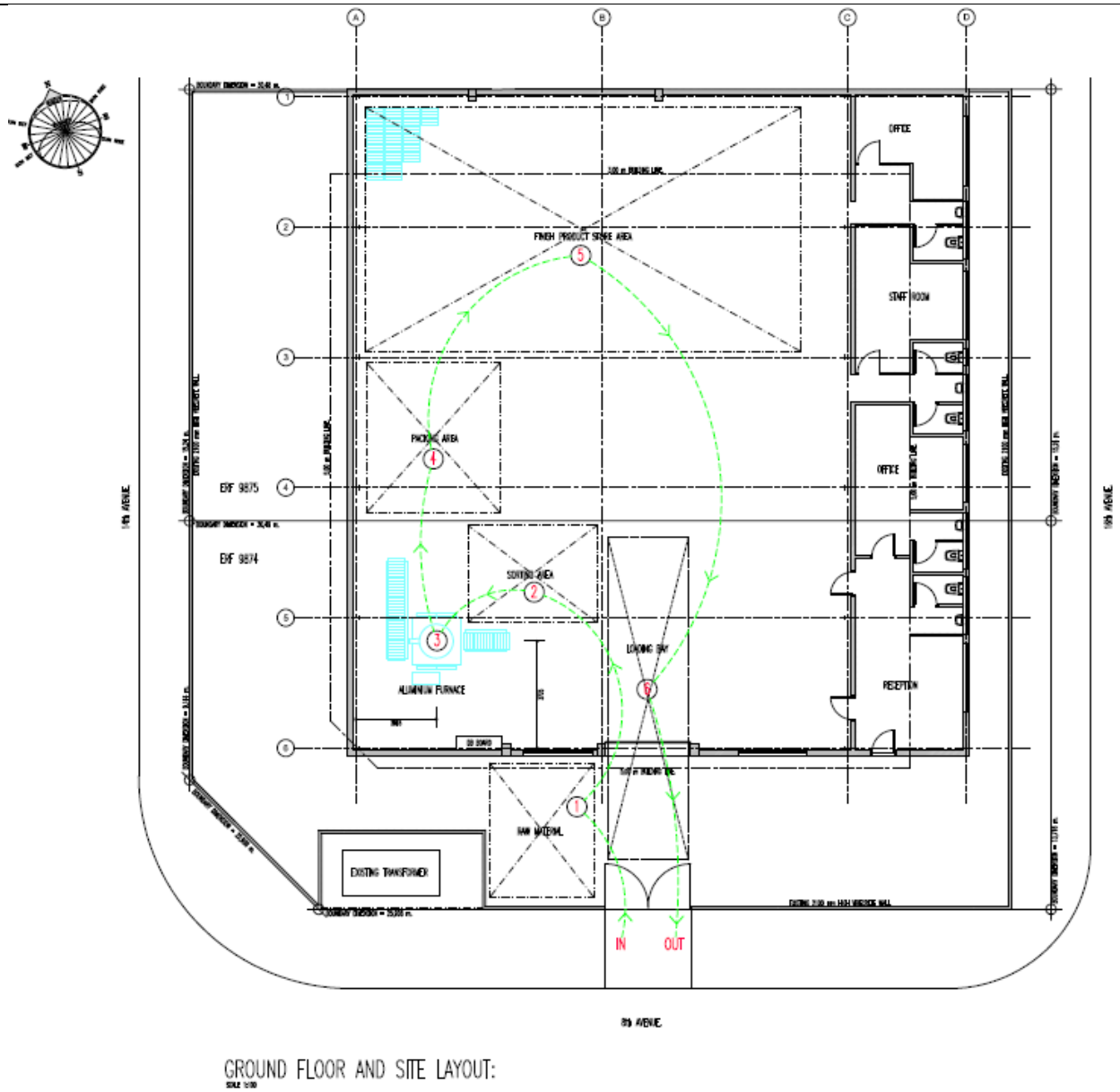
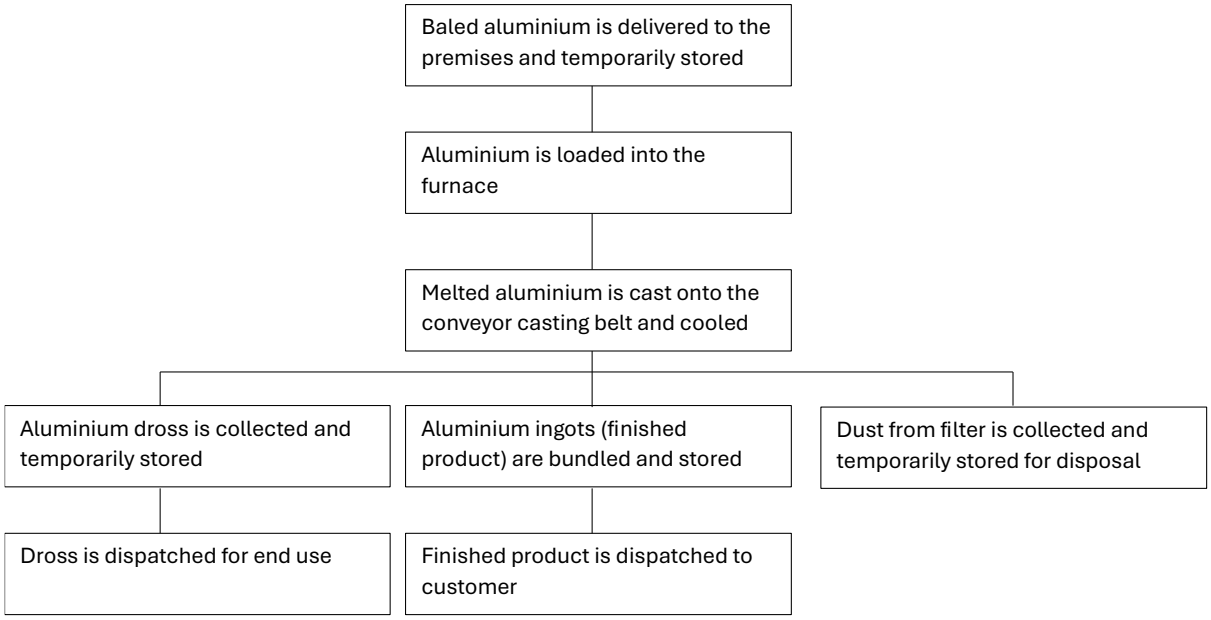


Figure 2: Site Layout Plan

The process flow will be as follows:



Feedstock, largely in the form of aluminium beverage cans, will be delivered to site via road transport and stored under a roofed area. Finished products will be in the form of aluminium ingots. These ingots will be bundled and stored inside the warehouse prior to dispatch to customers via flatbed truck or container, depending on the customer's requirements.

A steel chimney with electrostatic adsorption will be installed to manage exhaust gases and dust. The filters will remove 90-95% of dust from the exhaust gas. Since the furnace will be electrically powered, there will be no combustion exhaust.

The site will use approximately 126 tons of feedstock per month and produce approximately 120 tons per month of finished product. The aluminium dross and dust captured by the filters will be stored under a roofed area outside of the warehouse. The dross will be dispatched to customers for further processing, while the dust will be disposed of at a suitable landfill site.

4.5.	Indicate how access to the proposed site(s) will be obtained for all alternatives.

The site is located in an existing industrial area with road connections, and the site has an existing access point. The site will be accessed via 8th Avenue

4.6.	SG Digit code(s) of the proposed site(s) for all alternatives: **Erf 9874**	C	0	1	6	0	0	1	9	0	0	0	0	9	8	7	4	0	0	0	0	0
	SG Digit code(s) of the proposed site(s) for all alternatives: **Erf 9875**	C	0	1	6	0	0	1	9	0	0	0	0	9	8	7	5	0	0	0	0	0

4.7.	Coordinates of the proposed site(s) for all alternatives:			
	Latitude (S)	**33°**	**54′**	**57.09″**
	Longitude (E)	**18°**	**34′**	**7.38″**

SECTION C: LEGISLATION/POLICIES AND/OR GUIDELINES/PROTOCOLS

1. Exemption applied for in terms of the NEMA and the NEMA EIA Regulations

Has exemption been applied for in terms of the NEMA and the NEMA EIA Regulations. If yes, include a copy of the exemption notice in Appendix E18.	~~YES~~	NO

2. Is the following legislation applicable to the proposed activity or development.

The National Environmental Management: Integrated Coastal Management Act, 2008 (Act No. 24 of 2008) ("ICMA"). If yes, attach a copy of the comment from the relevant competent authority as Appendix E4 and the pre-approval for the reclamation of land as Appendix E19.	~~YES~~	NO
The National Heritage Resources Act, 1999 (Act No. 25 of 1999) ("NHRA"). If yes, attach a copy of the comment from Heritage Western Cape as Appendix E1.	~~YES~~	NO
The National Water Act, 1998 (Act No. 36 of 1998) ("NWA"). If yes, attach a copy of the comment from the DWS as Appendix E3.	~~YES~~	NO
The National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004) ("NEM:AQA"). If yes, attach a copy of the comment from the relevant authorities as Appendix E13.	YES	~~NO~~
The National Environmental Management Waste Act (Act No. 59 of 2008) ("NEM:WA")	YES	~~NO~~
The National Environmental Management Biodiversity Act, 2004 (Act No. 10 of 2004 ("NEMBA").	~~YES~~	NO
The National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003) ("NEMPAA").	~~YES~~	NO
The Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983). If yes, attach comment from the relevant competent authority as Appendix E5.	~~YES~~	NO

3. Other legislation

List any other legislation that is applicable to the proposed activity or development.

- Spatial Planning Land Use Management Act 16 of 2013
- The National Environmental Management Act, Act 107 of 1998, as amended.
- EIA Regulations, 2014 (GN R982) and Listing Notices 1–3 (GN R983–R985), *as amended,* regulations R982, R983, R984 and R985 of December 2014.

4. Policies

Explain which policies were considered and how the proposed activity or development complies and responds to these policies.

- **Western Cape Spatial Development Framework (PSDF), 2014:** The PSDF provides the provincial spatial planning direction and supports integrated, long-term spatial planning through SDFs and IDPs, including spatial transformation and resilience interventions. The proposed aluminium recycling facility is located within an existing, serviced urban/industrial area and uses an already transformed site, thereby supporting efficient use of existing infrastructure and avoiding greenfield expansion, while contributing to economic activity within an appropriate urban location. Rent 5-year cycle)

- **City of Cape Town Municipal Integrated Development Plan (IDP):** The IDP includes programmes for waste minimisation and recycling and explicitly commits to circular economy principles to unlock economic opportunities and environmental benefits from valuable waste streams. The proposed activity supports these objectives by increasing aluminium recycling capacity, reducing waste requiring landfill disposal, and contributing to job creation, within an established industrial area compatible with surrounding land uses.

- **City of Cape Town Municipal Spatial Development Framework:** City of Cape Town Municipal Spatial Development Framework (MSDF): The MSDF is the City's metropolitan-scale spatial framework (part of the IDP suite) that sets the spatial vision, policy parameters and development priorities, supported by the District Plans (DSDF–EMFs). The proposed aluminium recycling facility is located at 14 8th Avenue, Elsies River Industrial, on Erven 9874 and 9875, within an existing industrial area and existing warehouse, and the site is zoned for industrial use. The proposal therefore aligns with the MSDF intent to accommodate appropriate economic/industrial activities within serviced, already-transformed urban areas, while managing potential off-site effects through the applicable licensing and operational controls.

- **City of Cape Town Bioregional Plan, 2015**: The proposed aluminium recycling facility is located within an existing, transformed industrial area and will be accommodated largely within an existing warehouse. Given the highly transformed nature of the site and the limited (if any) remaining natural vegetation within the operational footprint, the development is expected to avoid direct impacts on areas identified in the City's Bioregional Plan (2015) as

biodiversity priority areas. The development will implement appropriate **pollution prevention and stormwater** management measures to prevent indirect impacts on biodiversity features (including any downstream aquatic or terrestrial receptors) arising from contaminated runoff, dust deposition, or accidental releases during construction and operation.

- **City of Cape Town Integrated Waste Management Policy:** The City's waste policy framework prioritises reliable waste services, waste minimisation, diversion of waste from landfill, protection of human health and the environment, resource efficiency, and improved compliance to reduce illegal dumping and pollution. The proposed aluminium recycling activity directly supports these objectives by increasing recycling and beneficiation of aluminium, reducing the quantity of recyclable material requiring disposal, and contributing to a more resource-efficient, circular economy. The facility will also ensure that all process residues and by-products (including furnace dross, dusts and any contaminated materials) are stored, handled, transported and disposed of in a compliant manner, in accordance with applicable waste authorisations, municipal requirements and licence conditions, supported by appropriate on-site containment, housekeeping, and spill prevention measures.

- **City of Cape Town Air Quality Management Plan, 2024:** The AQMP's purpose is to achieve and maintain clean air, with goals including effective air quality management and increased compliance through monitoring and enforcement. The proposed facility responds to this policy by committing to licensing and emission control measures (including installation/operation of the proposed electrostatic adsorption filter), and by demonstrating via atmospheric impact assessment that emissions are expected to be low/localised with no new exceedances predicted.

- **Tygerberg District Plan:** The district plan provides district-level spatial policy to guide compatible land uses and manage land-use interfaces. The proposed facility is situated in an established industrial area (within the urban edge) and is compatible with surrounding industrial land uses, while potential off-site effects (notably air quality/nuisance) are managed through licensing, emission abatement, and operational controls to protect nearby sensitive receptors.

- **DFFE Integrated Environmental Management Guidelines Series, Guideline 5: Assessment of Alternatives and Impacts in support of the Environmental Impact Assessment Regulations**: DFFE's IEM Guideline 5 was used to ensure the BAR assesses reasonable alternatives (including No-Go, layout/technology/operational and waste-handling options) and their impacts in a consistent, transparent way, applying the mitigation hierarchy (avoid, minimise, rehabilitate/restore) and motivating the preferred option as the most feasible and environmentally responsible by using an existing transformed industrial site with auditable emission controls and monitoring to prevent significant off-site effects.

5. Guidelines

List the guidelines which have been considered relevant to the proposed activity or development and explain how they have influenced the development proposal.

The listed guidelines were used to shape both the project design and the assessment approach to ensure the proposal is feasible in an established industrial area while avoiding or reducing off-site impacts. In particular, the guideline requirements influenced the proposal by: (i) structuring the consideration of reasonable alternatives (including No-Go, layout/technology/operational and waste-handling options) and motivating a preferred alternative; (ii) defining a transparent public participation approach and issue-response process; (iii) ensuring the report addresses need and desirability and alignment with the receiving environment; and (iv) confirming specialist scope and review, prioritising air-quality related studies and mitigation given the furnace emissions risk. These guidelines were used to guide the EAP to ensure all the requirements with regards to the consideration of alternatives, public participation, and procedures to assess the need and desirability were assessed and inquired.

- Guideline Document, EIA Regulations, Implementation of Sections 21, 22 and 26 of the Environment Conservation Act, 1998
- DFFE Integrated Environmental Management Guideline Series, Guideline 3: General Guide to the Environmental Impact Assessment Regulations, 2006
- DFFE Integrated Environmental Management Guideline Series, Guideline 4: Public Participation in support of the Environmental Impact Assessment Regulations, 2006
- DFFE Integrated Environmental Management Guideline Series, Guideline 5: Assessment of Alternatives and Impacts in support of the Environmental Impact Assessment Regulations, 2006
- DFFE Companion to the NEMA EIA Regulations of 2010
- DFFE Integrated Environmental Management Guideline Series, Guideline 5: Companion to the Environmental Impact Assessment Regulations, 2012
- DEA&DP Guideline Document: Guideline on Alternatives, March 2013
- DEA&DP Guideline Document: Guideline on Public Participation, March 2013
- DEA&DP Guideline Document: Guideline on Need and Desirability, March 2013
- DEA&DP Guideline for determining the scope of specialist involvement in the EIA process, June 2005

- DEA&DP Guideline for the review of specialist input in the EIA process, June 2005

6. Protocols

Explain how the proposed activity or development complies with the requirements of the protocols referred to in the NOI and/or application form

The table below indicates the level of sensitivity of each of the themes identified in the National Web-based Screening Tool Report, dated 25th of February 2025, the SSVR goes into further detail regarding the interpretation of each theme and the themes relevant to the proposed development:

Theme	Very High Sensitivity	High Sensitivity	Medium Sensitivity	Low Sensitivity	EAPs Opinion
Agriculture Theme			**X**		**Disagree**
Animal Species Theme			**X**		**Disagree**
Aquatic Biodiversity Theme				**X**	**Disagree**
Archaeological & Cultural Heritage				**X**	**Agree**
Civil Aviation Theme	**X**				**Disagree**
Defense Theme	**X**				**Disagree**
Paleontology Theme				**X**	**Agree**
Plant Species Theme				**X**	**Agree**
Terrestrial Biodiversity Theme	**X**				**Disagree**

Agricultural Theme: the Agricultural Theme has been rated as Medium Sensitivity due to the low to moderate land capability score. However, based on a desktop study, the site and its surroundings have been completely developed with little to no vegetation present. The site and the surrounding properties are zoned for industrial use and is not envisaged for agricultural use. It is the opinion of the EAP that the rating should be considered 'Low' due to the current land uses of the site and the surrounding area, and therefore no agricultural impact assessment will be undertaken.

Animal Species Theme: The animal species theme has been rated as having a 'Medium sensitivity due to invertebrate species listed in the area. Based on a desktop study, the site and its surroundings have been developed with little to no vegetation. The animal species listed consist of beetles. The site and its surroundings have no suitable vegetation to serve as a habitat for these species, and their range extends beyond the Elsies River industrial area. These species can easily migrate to more suitable and unaltered habitats. It is the opinion of the EAP that the animal species rating should be considered 'Low' due to the lack of vegetation on or around the site, and no ecological impact assessment will be undertaken.

Aquatic Biodiversity Theme: The Aquatic Biodiversity Theme has been rated as 'Low' due to the development's distance from watercourses. While the Elsies River is located approximately 150m north of the site, the river is located within a concrete channel, preventing groundwater seepage from impacting on the watercourse. There are no other watercourses around the site. The EAP therefore agrees with the assigned rating, however due to the low sensitivity rating, no aquatic impact assessment will be undertaken.

Archaeological and Cultural Heritage Theme: The Archaeological and Cultural Heritage Theme has been rated as 'Low'. It is not located in close proximity to existing heritage sites, and the site is located in an area identified by the City of Cape Town as Legislated Heritage Exemption Area, The EAP therefore agrees with the assigned rating. A chance finds clause will however be included and if any archaeological or cultural remains are uncovered, the necessary specialists would be contacted to determine the way forward.

Civil Aviation Theme: The Civil Aviation Theme has been rated as 'Very High' due to the site being within proximity of a major civil aviation aerodrome and civil aviation radar (City of Cape Town International Airport). The proposed development activities will have no impact on any surrounding civil aviation activities or infrastructure; it is therefore envisaged that the assigned sensitivity rating should be 'Negligible'.

Defense Theme: The Defense Theme has been rated as 'Very High', due to the site being listed as a Military and Defense Site. Based on the current condition of the site and the proposed development activities, the development will have no

impact on any Defense related infrastructure or activities. It is therefore envisaged that the assigned sensitivity rating should be 'Negligible'.

Paleontology Theme: According to Paleontological Online Map Tool (https://sahris.sahra.org.za/map/palaeo), the farm portion is situated in an area of low paleontological value and advises that no further studies are required. It is therefore envisaged that the general area will have a 'Low' sensitivity theme. As mentioned for Sensitivity Theme 4 (Archaeological and Cultural Heritage Theme) a chance finds clause will be included and if any archaeological or cultural remains are uncovered, the necessary specialists would be contacted to determine the way forward.

Plant Species Theme: The Plant Species theme has been rated as 'Low', based on a desktop study the EAP agrees with this rating due to the lack of Plant Species present on the site and its surroundings. The site is located within an established industrial area, has been fully developed, and is surrounded by other industrial land users with little to no vegetation.

Terrestrial Biodiversity Theme: The Terrestrial Biodiversity Theme has been rated as 'Very High' due to the Critically Endangered Cape Flats Sand Fynbos being listed in the area. As discussed in points 2 and 8, the site and its surroundings have been fully developed with little to no vegetation around the site. Any vegetation present on surrounding properties is not representative of the Cape Flats Sand Fynbos ecosystem. It is therefore the opinion of the EAP that the sensitivity rating be considered 'Low'.

Air Quality Impact Assessment:

An Ambient Air Quality Assessment was conducted. The proposed aluminium recycling facility will have emissions in terms of the exhaust gases form the melting process. 90-95% of the dust will be captured by the electrostatic filters, however it was required to determine the current ambient air quality of the site and its surroundings to adequately consider the impact of the proposed facility on the local air quality.

An Air Quality Impact Assessment was conducted. Impacts of the facility on the air quality of the local area is the most significant impact associated with the proposed development. The assessment will also consider the cumulative impacts on air quality the proposed facility will have on its surroundings considering the existing land uses in the area.

SECTION D: APPLICABLE LISTED ACTIVITIES

List the applicable activities in terms of the NEMA EIA Regulations

Activity No(s):	Provide the relevant **Basic Assessment Activity(ies)** as set out in **Listing Notice 1**	Describe the portion of the proposed development to which the applicable listed activity relates.
N/A		
Activity No(s):	Provide the relevant **Basic Assessment Activity(ies)** as set out in **Listing Notice 3**	Describe the portion of the proposed development to which the applicable listed activity relates.
N/A		

Note:
- The listed activities specified above must reconcile with activities applied for in the application form. The onus is on the Applicant to ensure that all applicable listed activities are included in the application. If a specific listed activity is not included in an Environmental Authorisation, a new application for Environmental Authorisation will have to be submitted.
- Where additional listed activities have been identified, that have not been included in the application form and amended application form must be submitted to the competent authority.

List the applicable waste management listed activities in terms of the NEM:WA

Activity No(s):	Provide the relevant **Basic Assessment Activity(ies)** as set out in **Category A**	Describe the portion of the proposed development to which the applicable listed activity relates.
3	The recycling of general waste at a facility that has an operational area in excess of 500m², excluding the recycling that takes place as an integral part of an internal manufacturing process within the same premises.	This listed activity relates to the portion of the proposed development where general waste aluminium beverage cans are received, stored and processed for recycling, including the receiving/stockpiling of baled cans (feedstock), loading of feedstock into an aluminium furnace, melting and casting operations (furnace, ingot casting conveyor and cooling tower), and the storage/dispatch areas for recycled product (ingots) within the existing warehouse, together comprising an operational area exceeding 500 m² (specifically 517 m²). It also includes the temporary storage and handling of process residues generated by the recycling process, namely aluminium dross and captured exhaust

		dust, which will be stored in a roofed area on site prior to off-site disposal. The roofed storage bay will be located on an impermeable, contained hardstand with stormwater run-off diversion and runoff containment, and filter dust will be stored sealed/labelled pending classification and removal to an appropriately licensed facility.

List the applicable listed activities in terms of the NEM:AQA

Activity No(s):	Provide the relevant **Listed Activity(ies)**	Describe the portion of the proposed development to which the applicable listed activity relates.
4.4	Secondary aluminium production and alloying through the application of heat	The proposed development involves the melting of aluminium soda cans using an electric induction furnace. An atmospheric emissions license is therefore required.
4.21	The recovery of metal from any form of scrap material by the application of heat.	The proposed facility will recover aluminium metal from scrap (primarily baled aluminium beverage cans) by melting the feedstock in an electric induction furnace and casting the molten aluminium into ingots, with emissions routed through the proposed filtration system prior to discharge.

SECTION E: PLANNING CONTEXT AND NEED AND DESIRABILITY

1.	Provide a description of the preferred alternative.

Alvis Creations CC (the applicant) proposed to establish a recycling facility for aluminium soda cans on erven 9874 and 9875, Elsies River, Cape Town.

The aluminium recycling facility proposed by the applicant will include the installation of an aluminium furnace within an existing warehouse on the premises, with a total footprint of 517m².

The proposed development at 14 8th Avenue in Elsies River Industrial is the development of an aluminium recycling facility. The site is located within the urban edge in an area characterised by industrial activities, and the site is zoned for industrial use. The site houses an existing warehouse which will house the furnace and the finished products.

The facility will comprise of the aluminium furnace, an ingot casting conveyor, a cooling tower, and storage areas for feedstock, finished products, and temporary waste storage.

Feedstock (mostly in the form of aluminium beverage cans) will be delivered to the site via road transport. The feedstock will arrive in bales, which will then be loaded into the furnace in 500kg batches. CF10 Coverflux is added to reduce oxidation and aluminium lost to dross. The melting process takes approximately 1 hour and 30 minutes.

Once melted, the aluminium is cast into ingots on a conveyor belt and cooled using a water-cooling tower. The cooling system will have a water recovery system to minimise water usage.

Aluminium ingots will be bundled into 200kg bundles and stored inside the warehouse. The bundles will be loaded onto flatbed trucks or shipping containers for transport to customers.

Exhaust gases will pass through an electrostatic adsorption filter, which will remove between 90 – 95% of dust from the exhaust. It is anticipated that the facility will produce approximately 3.94-6.56m³ of aluminium dross and less than 1m³ of exhaust dust per month. Both the dross and the exhaust dust will be stored outside the warehouse under a roofed area. The roofed dross and filter-dust storage bay will be located on an impermeable hardstand with containment and stormwater run-off diversion, with filter dust kept sealed and removed only to a licensed facility authorised to accept the classified waste stream (facility to be confirmed at application stage). The aluminium dross will be dispatched to customers for further processing, while the exhaust dust will be disposed of at a suitable landfill.

Dross and filter-captured dust storage (roofed area outside warehouse):

Aluminium dross generated during melting or casting and dust captured by the abatement system will be stored in a dedicated covered (roofed) external storage bay outside the warehouse. The storage bay will be located on an impermeable hardstand surface (e.g., concrete slab) to prevent migration of material and contain any contaminated runoff.

Where the existing surface is not demonstrably impermeable, it will be upgraded prior to commissioning. The storage bay will be bunded to prevent migration of solids and to allow containment of any contaminated runoff from the storage area. The

area will be stormwater protected by diverting clean stormwater runoff away from the bay and managing the bay as a controlled area, such that any runoff arising within the bay is contained and prevented from discharging off-site.

Dust generation will be controlled by prevention and containment rather than wet suppression: filter dust will be kept in sealed, labelled containers and dross will be kept under cover with handling controls. Water spraying will not be applied to dross or dust unless a site-specific risk assessment confirms it is safe and appropriate for the waste stream.

Aluminium dross will be characterised and managed in accordance with the National Norms and Standards for the Assessment of Waste for Landfill Disposal (GN 635 of 2013). Where feasible, aluminium dross may be supplied to authorised recyclers as a secondary raw material.

All waste generated at the facility will be stored, transported and disposed of in accordance with the National Environmental Management: Waste Act (Act 59 of 2008) and applicable municipal requirements.
Filter-captured dust (and dross, where managed as a waste stream) will be classified in terms of applicable waste classification requirements prior to routine disposal; until classification results are available, the dust will be handled as potentially hazardous, stored sealed and removed by an appropriately authorised waste contractor. The filter-captured dust will be transported by a registered service provider to a licensed disposal facility authorised to accept the classified waste stream.

2.	Explain how the proposed development is in line with the existing land use rights of the property as you have indicated in the NOI and application form? Include the proof of the existing land use rights granted in Appendix E21.

Erven 9874 and 9875 are currently zoned for industrial use and is therefore appropriately zoned for the proposed activity. No rezoning will be required.

3.	Explain how potential conflict with respect to existing approvals for the proposed site (as indicated in the NOI/and or application form) and the proposed development have been resolved.

N/A

4.	Explain how the proposed development will be in line with the following?
4.1	The Provincial Spatial Development Framework.

The PSDF includes as one of the key goals the inclusion of sustainable development encompassing the integration of social, economic, and ecological factors into planning, decision making, and implementation to ensure that development serves present and future generations.

According to the Western Cape PSDF (2014), the volume of waste generated by the Western Cape increased by approximately 18% per annum, with 70% being generated in the City of Cape Town. This figure exceeds the rate of population and economic growth in the province, and places significant strain on the 193 operational waste management facilities in the country. As the primary waste generator in the Western Cape, the City of Cape Town is the priority area for upscaling of waste recovery and recycling. The PSDF Provincial Spatial Policy R4 further requires mainstreaming recycling and recovery of waste in high waste generation areas to unlock economic opportunities and increase the lifecycle of current waste disposal sites. The proposed aluminium recycling facility needs to reduce waste to landfill by removing aluminium waste (predominantly in the form of aluminium cans) from the waste stream. Aluminium recycling also reduces the need for primary aluminium production from raw aluminium ore, resulting in more processed aluminium available for use in industry in relatively close proximity to potential clients and export facilities.

From a spatial planning perspective, it is intended by the PSDF that the broad spatial planning categories be refined at the detailed level by district and local SDFs which must be consistent with the policies and requirements of the PSDF.

4.2	The Integrated Development Plan of the local municipality.

The proposed development is aligned with the IDP of the City of Cape Town. The area where the site is located is located within the urban edge, has been identified for industrial development and is suitably zoned for the activity. The area surrounding the site has been fully developed and there is little to no natural vegetation around the site. It aligns with the City of Cape Town's waste minimisation and recycling program, as well as the "Think Twice Recycling" initiative.

4.3.	The Spatial Development Framework of the local municipality.

The proposed development is aligned with the IDP of the City of Cape Town. The area where the site is located within the urban edge, has been identified for industrial development and is suitably zoned for the activity. The area surrounding the site has been fully developed and there is little to no natural vegetation around the site. It aligns with the City of Cape Town's waste minimisation and recycling program, as well as the "Think Twice Recycling" initiative.

4.4.	The Environmental Management Framework applicable to the area.

N/A

5.	Explain how comments from the relevant authorities and/or specialist(s) with respect to biodiversity have influenced the proposed development.
N/A. This Pre-Application Draft Basic Assessment Report will be distributed for public participation. Once the Pre-Application Draft BAR has been circulated for public participation, all the comments received during the 30-day PPP on the Pre-Application Draft BAR will be summarised and attached to the Post-Application Draft BAR for Review. A Comments and Response Report will be attached to the Post-Application Draft BAR as Appendix F.	
6.	Explain how the Western Cape Biodiversity Spatial Plan (including the guidelines in the handbook) has influenced the proposed development.
N/A. The proposed site is in an existing industrial area and will therefore not impact on biodiversity.	
7.	Explain how the proposed development is in line with the intention/purpose of the relevant zones as defined in the ICMA.
N/A. The proposed development will not intervene with any coastal resources.	
8.	Explain whether the screening report has changed from the one submitted together with the application form. The screening report must be attached as Appendix I.
The screening report and relevant sensitivities has remained unchanged.	
9.	Explain how the proposed development will optimise vacant land available within an urban area.
N/A – the site is located within the urban edge and is already developed.	
10.	Explain how the proposed development will optimise the use of existing resources and infrastructure.
The site is already developed, is zoned for industrial use, and is located within an established industrial area within the urban edge of the City of Cape Town. Little additional construction will be required, and the site is already connected to the required municipal services such as water, sewerage and electricity.	
11.	Explain whether the necessary services are available and whether the local authority has confirmed sufficient, spare, unallocated service capacity. (Confirmation of all services must be included in Appendix E16).
Service confirmations will be attached under Appendix E16.	
12.	In addition to the above, explain the need and desirability of the proposed activity or development in terms of this Department's guideline on Need and Desirability (March 2013) or the DEA's Integrated Environmental Management Guideline on Need and Desirability. This may be attached to this BAR as Appendix K.
The proposed development will meet the following key considerations in terms of Needs and Desirability: 1. Improved aluminium recycling capacity in the City. 2. Reduction in waste disposed of at landfill. 3. The site has already been developed and transformed, with all the required municipal connections already in place. Significant impacts associated with the activity will be limited to air quality. 4. The site is located within an existing industrial area, minimising the public's exposure to the facility. 5. Directly contributes to achieving the goals of the City of Cape Town's Integrated Waste Management Policy 6. Integration of complementary land users. 7. Easy access to main roads for feedstock delivery and product distribution. 8. There is little to no natural vegetation on or around the site, resulting in no impacts on biodiversity. 9. An electrical furnace will be used, which avoids emissions associated with fuel combustion. 10. The facility will provide permanent employment opportunities for approximately 16 people. 11. The aluminium dross produced by the furnace is suitable for use in road construction. An Ambient Air Quality assessment was undertaken to assess the impact of the site on the surrounding air quality. The assessment raised no concerns. The site is located close to main routes to allow for easy feedstock and finished product distribution to and from the facility.	

SECTION F: PUBLIC PARTICIPATION

The Public Participation Process ("PPP") must fulfil the requirements as outlined in the NEMA EIA Regulations and must be attached as Appendix F. Please note that if the NEM: WA and/or the NEM: AQA is applicable to the proposed development, an advertisement must be placed in at least two newspapers.

1. Exclusively for linear activities: Indicate what PPP was agreed to by the competent authority. Include proof of this agreement in Appendix E22.

N/A

2. Confirm that the PPP as indicated in the application form has been complied with. All the PPP must be included in Appendix F.

A Public Participation Process will be conducted notifying Potential and Registered I&APs of the opportunity to (i) register as an I&AP, and (ii) the availability of the Pre-Application DBAR for comment. A comment period of a minimum of 30 days will be given to Potential and Registered I&APs. Comments received during the Pre-Application PPP will be recorded and addressed in a Comments and Response Report. The PPP will be conducted in accordance with the approved PPP and Chapter 6 of the 2014 NEMA EIA Regulations, as amended. All PPP proof will be attached as **Appendix F** in the Draft and Final BAR.

3. Confirm which of the State Departments and Organs of State indicated in the Notice of Intent/application form were consulted with.

NAME OF ORGANIZATION / PARTY REPRESENTED	NAME AND SURNAME	EMAIL ADDRESS
Department of Environmental Affairs and Development Planning: Development Management	Zaahir Toefy	deadpeiaadmin@westerncape.gov.za
Department of Environmental Affairs and Development Planning: (Region 1)	Natasha Bieding	Natasha.Bieding@westerncape.gov.za
Department of Environmental Affairs and Development Planning: Waste Management	Alet van Staden August Hoon Eddie Hanekom	Alet.vanstaden@westerncape.gov.za August.Hoon@westerncape.gov.za eddie.hanekom@westerncape.gov.za
Department of Environmental Affairs and Development Planning: Pollution and Chemicals Management	Wilna Kloppers	wilna.kloppers@westerncape.gov.za
DEA&DP: Air Quality Directorate	Joy Learner	Joy.Leaner@westerncape.gov.za
City of Cape Town – Specialised Environmental Health Services Air Quality Management	Ian Gildenhuys, Rabelani Gundula & Gerswain Manuel Wendy Kloppers	Ian.Gildenhuys@capetown.gov.za Rabelani.Gundula@capetown.gov.za Gerswain.Manuel@capetown.gov.za wendy.kloppers@capetown.gov.za
City of Cape Town – Environmental and Heritage Management Branch - Heritage Section	Maurietta Stewart	Maurietta.stewart@capetown.gov.za
City of Cape Town – Metropolitan Municipality	Lungelo Mbandazayo (Municipal Manager) Maurietta Stewart	lungelo.mbandazayo@capetown.gov.za City.manager@capetown.gov.za maurietta.stewart@capetown.gov.za
City of Cape Town Municipality – Ward Councillor (Ward 25)	Beverly van Reenen	Beverly.vanreenen@capetown.gov.za
City of Cape Town Municipality – Sub-councillor (Sub council 4)	Ardela Van Niekerk	Ardela.vanNiekerk@capetown.gov.za

4. If any of the State Departments and Organs of State were not consulted, indicate which and why.

N/A

5. if any of the State Departments and Organs of State did not respond, indicate which.

N/A. This Pre-Application Draft Basic Assessment Report will be distributed for public participation. Once the Pre-Application Draft BAR has been circulated for public participation, all the comments received during the 30-day PPP on the Pre-Application Draft BAR will be summarised and attached to the Post-Application Draft BAR for Review. A Comments and Response Report will be attached to the Post-Application Draft BAR as Appendix F.

6. Provide a summary of the issues raised by I&APs and an indication of the manner in which the issues were incorporated into the development proposal.

> N/A. This Pre-Application Draft Basic Assessment Report will be distributed for public participation. Once the Pre-Application Draft BAR has been circulated for public participation, all the comments received during the 30-day PPP on the Pre-Application Draft BAR will be summarised and attached to the Post-Application Draft BAR for Review. A Comments and Response Report will be attached to the Post-Application Draft BAR as Appendix F.

Note:

A register of all the I&AP's notified, including the Organs of State, and all the registered I&APs must be included in Appendix F. The register must be maintained and made available to any person requesting access to the register in writing.

The EAP must notify I&AP's that all information submitted by I&AP's becomes public information.

Your attention is drawn to Regulation 40 (3) of the NEMA EIA Regulations which states that *"Potential or registered interested and affected parties, including the competent authority, may be provided with an opportunity to comment on reports and plans contemplated in subregulation (1) prior to submission of an application but **must** be provided with an opportunity to comment on such reports once an application has been submitted to the competent authority."*

All the comments received from I&APs on the pre-application BAR (if applicable and the draft BAR must be recorded, responded to and included in the Comments and Responses Report and must be included in Appendix F.

All information obtained during the PPP (the minutes of any meetings held by the EAP with I&APs and other role players wherein the views of the participants are recorded) and must be included in Appendix F.

Please note that proof of the PPP conducted must be included in Appendix F. In terms of the required "proof" the following is required:

- a site map showing where the site notice was displayed, dated photographs showing the notice displayed on site and a copy of the text displayed on the notice;
- in terms of the written notices given, a copy of the written notice sent, as well as:
  - if registered mail was sent, a list of the registered mail sent (showing the registered mail number, the name of the person the mail was sent to, the address of the person and the date the registered mail was sent);
  - if normal mail was sent, a list of the mail sent (showing the name of the person the mail was sent to, the address of the person, the date the mail was sent, and the signature of the post office worker or the post office stamp indicating that the letter was sent);
  - if a facsimile was sent, a copy of the facsimile Report;
  - if an electronic mail was sent, a copy of the electronic mail sent; and
  - if a "mail drop" was done, a signed register of "mail drops" received (showing the name of the person the notice was handed to, the address of the person, the date, and the signature of the person); and
- a copy of the newspaper advertisement ("newspaper clipping") that was placed, indicating the name of the newspaper and date of publication (of such quality that the wording in the advertisement is legible).

SECTION G: DESCRIPTION OF THE RECEIVING ENVIRONMENT

All specialist studies must be attached as **Appendix G**.

1. Groundwater

1.1.	Was a specialist study conducted?	~~YES~~	NO
1.2.	Provide the name and or company who conducted the specialist study.		
N/A			
1.3.	Indicate above which aquifer your proposed development will be located and explain how this has influenced your proposed development.		
N/A			
1.4.	Indicate the depth of groundwater and explain how the depth of groundwater and type of aquifer (if present) has influenced your proposed development.		
N/A			

2. Surface water

2.1.	Was a specialist study conducted?	~~YES~~	NO
2.2.	Provide the name and/or company who conducted the specialist study.		
N/A			

2.3.	Explain how the presence of watercourse(s) and/or wetlands on the property(ies) has influenced your proposed development.
N/A	

3. Coastal Environment

3.1.	Was a specialist study conducted?	~~YES~~	NO
3.2.	Provide the name and/or company who conducted the specialist study.		
N/A.			
3.3.	Explain how the relevant considerations of Section 63 of the ICMA were taken into account and explain how this influenced your proposed development.		
N/A.			
3.4.	Explain how estuary management plans (if applicable) has influenced the proposed development.		
N/A.			
3.5.	Explain how the modelled coastal risk zones, the coastal protection zone, littoral active zone and estuarine functional zones, have influenced the proposed development.		
N/A.			

4. Biodiversity

4.1.	Were specialist studies conducted?	~~YES~~	NO
4.2.	Provide the name and/or company who conducted the specialist studies.		
N/A.			
4.3.	Explain which systematic conservation planning and other biodiversity informants such as vegetation maps, NFEPA, NSBA etc. have been used and how has this influenced your proposed development.		
N/A.			
4.4.	Explain how the objectives and management guidelines of the Biodiversity Spatial Plan have been used and how has this influenced your proposed development.		
N/A.			
4.5.	Explain what impact the proposed development will have on the site specific features and/or function of the Biodiversity Spatial Plan category and how has this influenced the proposed development.		
N/A.			
4.6.	If your proposed development is located in a protected area, explain how the proposed development is in line with the protected area management plan.		
N/A.			
4.7.	Explain how the presence of fauna on and adjacent to the proposed development has influenced your proposed development.		
N/A.			

5. Geographical Aspects

Explain whether any geographical aspects will be affected and how has this influenced the proposed activity or development.
The site is located within the urban edge, within an existing industrial area, and has already been developed. The proposed development will not have an impact on any geographical aspects.

6. Heritage Resources

6.1.	Was a specialist study conducted?	~~YES~~	NO
6.2.	Provide the name and/or company who conducted the specialist study.		
N/A			

6.3.	Explain how areas that contain sensitive heritage resources have influenced the proposed development.
N/A	

7. Historical and Cultural Aspects

Explain whether there are any culturally or historically significant elements as defined in Section 2 of the NHRA that will be affected and how has this influenced the proposed development.
The site is located in an existing industrial area and has already been developed. The Screening Tool Report the site is of low cultural and heritage sensitivity. The Greater Elsies River Area has been identified as a Legislated Heritage Exemption Area in the Tygerberg District Development Plan and has little to no heritage significance. No excavation activities will be undertaken, and there are no buildings or sites of cultural/heritage significance in the vicinity of the site. The site also does not trigger the requirements of a Heritage Impact Assessment. The proposed development is not expected to impact any heritage resources, however a chance find protocol will be developed in the case anything is discovered.

8. Socio/Economic Aspects

8.1.	Describe the existing social and economic characteristics of the community in the vicinity of the proposed site.

As per the City of Cape Town Socio Economic Profile (Western Cape Government, 2021):

Demographics
- Population: 4 758 433 in 2021, projected to reach 5 133 369 by 2025 (7.9% annual growth).
- Sex Ratio: Slight female majority (50.5% female, 49.5% male).
- Age Structure: Rapid growth in the 65+ cohort (3.6% annual growth); fluctuating dependency ratio.
- Household Size: Stable at 3.2 people per household from 2021 to 2025.
- Population Density: 1 915 people/km², significantly higher than any other district across the Western Cape Province.

Education
- Learner Enrolment: increased by 1.8% from 2019 to 2020.
- Learner-Teacher Ratio: Slightly increased to 31.8.
- Retention Rate: Stable at 67.6% in 2020.
- Schools: 778 public schools, 362 of which are no-fee schools; 569 schools have libraries/media centres (decrease of 3% from 2019).
- Matric Pass Rate: Slight decline from 81.2% (2018) to 79.2% (2019).

Health
- Healthcare Access: 100 clinics (69 fixed, 31 mobile) and 8 district hospital.
- Emergency Services: 4 ambulances per 10,000 people, above district average.
- HIV/TB: 209 279 ART patients (slight decrease from 2019); 18 556 new registered patients (decrease of 23.5% from 2019).
- Child Health: Immunisation at 67.6%; low malnutrition and improved neonatal health indicators.

Economy
- GDP per Capita: R92,000 in 2020, higher than provincial average.
- Income Inequality: Gini coefficient increased to 0.626 in 2020, just above the provincial average.
- Human Development Index: Improved from 0.74 (2014) to 0.78 (2020), tracking with GDP growth.
- Main Sectors: Finance, real estate, insurance and business services trade, wholesale and retail trade, catering and accommodation, and manufacturing lead economic output.
- Employment: 1 516 111 workers (80.1% formal sector); high demand for semi-skilled and skilled labour.
- Unemployment: 22.4%, highest among all Districts.

Housing and Services
- Households: 1 303 988 in total.
- Formal Housing Access: 77.2%, lowest in the province.
- Informal Housing: 22.8%, highest in the province.
- Basic Services: High access to water (96.4%), sanitation (90.9%), electricity (93.7%), and weekly refuse removal (94%).
- Free Basic Services: decreasing number of indigent households receiving support.

Infrastructure Investment
- Social Infrastructure: R125 million (14% of budget), focused on sport and recreation, social development, health, housing, and community safety.
- Economic Infrastructure: R249 million (28%) for road transport, environmental protection and planning and development.
- Trading Services: R407 million (46% of budget), inclusive of solid and liquid waste management as well as water and electricity.

8.2.	Explain the socio-economic value/contribution of the proposed development.

The site is located within the Elsies River Industrial Area, which forms part of a broader mixed industrial and residential landscape within the northern suburbs of Cape Town. Surrounding land uses consist primarily of industrial and commercial activities, with residential areas such as Leonsdale, Uitsig and Ravensmead located nearby.

The industrial character of the area makes it suitable for the proposed recycling activity while minimising potential land-use conflicts with residential receptors.

Other socio-economic considerations:

Employment and skills development: The construction phase is expected to create temporary employment and skills-development opportunities, and the operational phase is expected to provide 16 permanent job opportunities.

Circular economy and waste minimisation: The facility increases the City Cape Town's aluminium recycling capacity and diverts waste from landfill, strengthening recycling initiatives and supporting resource efficiency.

Local industrial/economic benefit: By producing recycled aluminium ingots locally, the project supports the local manufacturing value chain and is expected to help local aluminium manufacturers reduce input costs and increase production, contributing to broader economic growth.

Reduced reliance on primary extraction: Increased recycled aluminium supply reduces dependence on mining of primary aluminium (and associated upstream impacts), which is a positive economy-wide efficiency benefit.

8.3.	Explain what social initiatives will be implemented by applicant to address the needs of the community and to uplift the area.

Refer to Point 8.2 above.

8.4.	Explain whether the proposed development will impact on people's health and well-being (e.g. in terms of noise, odours, visual character and sense of place etc) and how has this influenced the proposed development.

Negative impacts on human health and wellbeing due to the proposed development is unlikely.

Since the site is already developed, noise, dust and traffic impacts associated with the construction phase will be minimal and contained on-site. During the operational phase impacts associated with the site will be. Nevertheless, these impacts include noise, traffic, and air quality. These impacts have been assessed as part of this Basic Assessment and mitigation measures of these impacts will be addressed by means of the Environmental Management Programme (EMPr.

Potential noise impacts

Due the industrial nature of the proposed development, both the construction and operational impacts will include an increase in ambient noise levels during working hours due to increased vehicle traffic and the noise associated with the operation of the furnace and associated infrastructure.

Traffic, safety and access impacts

Since the site is already developed, increased traffic during the construction phase will be minimal and of short duration. During the operational phase, there will be an increase in vehicle traffic to deliver feedstock and to ship products. Road safety impacts and road condition impacts may also occur.

Dust and air quality

Since the site is already developed, dust and air quality impacts associated with the construction phase will be minimal and largely contained on-site with the exception of the emissions from delivery vehicles.

During the operational phase, emissions will be generated by the furnace. Exhaust gases will consist of fine dust particles, which may impact in human health and the environment if not adequately mitigated.

SECTION H: ALTERNATIVES, METHODOLOGY AND ASSESSMENT OF ALTERNATIVES

1. Details of the alternatives identified and considered

1.1.	Property and site alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts.

Provide a description of the preferred property and site alternative.

The preferred property and site alternative for the proposed development is Erf 9874 and 9875 in Elsies River Industrial, Cape Town. The site is located within the urban edge, within an existing industrial area, is zoned for industrial use, and is surrounded by industrial land users. The site is already developed and is connected to municipal services. The site is also located close to major roadways for easy feedstock finished product delivery.

Provide a description of any other property and site alternatives investigated.

While the proponent has secured only the subject site, alternatives were still investigated to demonstrate that the preferred site class is environmentally preferable:

Industrial brownfield/industrial-zoned sites (preferred): compatible surrounding land uses, existing services, reduced land transformation, and reduced biodiversity impact risk (no greenfield clearance).

Non-industrial or greenfield sites (screened out): would introduce avoidable land transformation and likely increase land-use conflict and sensitivity risk, without improving the project's core purpose.

Outcome: Industrial brownfield siting is retained as the reasonable and feasible site class; the Elsies River Industrial site is preferred within this class because it is already developed and serviced.

Provide a motivation for the preferred property and site alternative including the outcome of the site selecting matrix.

The preferred property (Erven 9874 & 9875, Elsies River Industrial) is selected because it best meets the project's technical and environmental requirements while minimising new disturbance. The site is within the urban edge and is zoned as industrial and situated within an established industrial area. The proposal will be implemented mainly within an existing warehouse footprint (approximately 517 m²) on an already transformed site, reducing construction disturbance and avoiding greenfield areas.

In addition, the preferred site has existing municipal services and established access via 8th Avenue, supporting the logistics associated with the forecast feedstock and product movements and reducing the need for new bulk infrastructure. The Elsies River is indicated at approximately 150 m north (within a concrete channel), reinforcing the need for robust stormwater and pollution prevention controls, but not presenting the same constraint profile typical of greenfield riparian sites.

Provide a full description of the process followed to reach the preferred alternative within the site.

The preferred within-site layout was selected through a structured, auditable process. First, the decision objective and design rules were defined to ensure the layout would achieve the project's purpose while avoiding and minimising the main impact pathways, particularly air-quality and stormwater pollution, as well as ensuring safe circulation and practical, maintainable operations. A constraints-and-opportunities evidence base was then compiled by mapping the site boundaries, existing buildings and yard areas, access points, services, drainage patterns, adjacent land uses and potential receptors, and the operational requirements of the process flow from receipt of scrap through to casting, storage, and dispatch.

With this evidence in place, layout variables were identified that could realistically differ between alternatives, such as the placement of the furnace and casting line, the configuration and routing of extraction and abatement equipment, the stack/discharge position, indoor versus outdoor storage and handling areas, the stormwater management approach, and vehicle and pedestrian movement routes. Several concept layouts were generated to represent credible within-site alternatives, typically ranging from predominantly indoor processing with controlled storage to more yard-based handling configurations. These options were then screened for fatal flaws, removing or redesigning any that could not meet basic safety, environmental, or practical requirements.

The remaining options were compared using a consistent multi-criteria evaluation method, with criteria weighted toward the key risks and supported by operational and compliance considerations such as safety, constructability, maintainability, and adaptability. The leading option was then refined iteratively using an avoidance and minimisation approach, for example by enclosing or covering dust storage, keeping residues dry, shortening duct runs to improve capture efficiency, improving circulation to reduce spill and nuisance risk, and separating clean and dirty areas to protect stormwater.

On the basis of this structured comparison and refinement, the preferred within-site alternative was selected as predominantly indoor processing with contained storage and stormwater-protective yard management, and an audit trail was committed to.

Provide a detailed motivation if no property and site alternatives were considered.

No other properties were explored as the preferred site alternative was the only portion of developable land available to the client.

List the positive and negative impacts that the property and site alternatives will have on the environment.

No site alternatives were considered for this proposed development, as it is the only site available to the applicant for the proposed aluminium recycling facility.

Positive

- The site is Located within the urban edge, is already developed and is close to potential end users.
- The site and the surrounding area has already been developed, with little to no natural vegetation on or around the site. The site and the surrounding area do not have any sensitive biodiversity receptors.
- The site is already connected to all the required municipal services.

Negative

- Regular deliveries of feedstock and collection of finished products could increase vehicle use, leading to noise pollution, air quality deterioration, and greenhouse gas emissions if not well managed.

- Temporary effects during construction, such as dust, noise, and traffic may negatively affect the local environment and surrounding land users.

1.2.	Activity alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts.

Provide a description of the preferred activity alternative.

Recover aluminium metal from scrap by melting in an electric induction furnace and casting ingots (purpose: local beneficiation and diversion from landfill).

Provide a description of any other activity alternatives investigated.

Pre-processing only (no melting on site)

- Description: sorting/handling/baling and storage only; scrap sold or transported to an existing off-site licensed smelter for melting/casting.
- Environmental implications: lower on-site stack emissions risk but higher transport frequency and off-site impacts displaced to another facility; reduces local beneficiation benefit.

Contract melting at an existing licensed facility (off-site beneficiation)

- Description: proponent acts as processor; melting occurs at a third-party facility with established emission controls.
- Environmental implications: similar to pre-processing; avoids local stack emissions but increases haulage and transfers the key impact pathway elsewhere.

Scale/phasing alternative

- Description: commission at a lower throughput initially with explicit triggers for expansion only once compliance monitoring confirms stable emission performance.
- Environmental implications: reduces initial risk profile and allows adaptive management but may reduce early economic benefits.

The preferred alternative provides the greatest alignment with the project need (local recovery/beneficiation capacity and reduced landfill disposal) while remaining feasible on an industrial site, provided that emission capture-at-source, effective abatement and auditable monitoring are implemented).

Provide a motivation for the preferred activity alternative.

No activity alternatives were considered for this proposed development because of the low impact of the activity on the surrounding land users.

Provide a detailed motivation if no activity alternatives exist.

The proposed aluminium recycling facility is justified since the site is appropriately zoned for the activity, is located in an established industrial area and is surrounded by commercial/industrial land users. It will increase the City's capacity for aluminium recycling and divert waste from landfill. The site is already developed, and minimal additional construction will be required to allow the activity to take place.

List the positive and negative impacts that the activity alternatives will have on the environment.

Positive:

1. Increased recycling capacity of the city
2. Increased amount of recycled aluminium in supply chain and reducing dependence on mining
3. Job creation

Negative:

1. Increased traffic to deliver feedstock and collect finished products.
2. Emissions from furnace

1.3.	Design or layout alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts

Provide a description of the preferred design or layout alternative.

The preferred layout is to accommodate all primary processing activities inside the existing warehouse (within the approved operational footprint of ±517 m²), with the electric induction furnace, casting line and ingot handling positioned centrally within the building to maximise separation from site boundaries and reduce off-site nuisance (dust, noise and light). The furnace extraction system is configured for capture-at-source and routed to the installed high-efficiency particulate abatement unit before discharge via a correctly positioned discharge point above roofline, ensuring emissions are controlled prior to release.

In addition to the preferred layout several practical site design and layout alternatives were investigated at a conceptual pre-application level to test whether the same project outcomes could be achieved with lower nuisance and pollution risk:

- **Indoor processing with outdoor feedstock storage (uncovered / minimally covered):** This option retains the furnace, casting and ingot handling inside the warehouse, but places a larger proportion of incoming scrap storage in the external yard area to free indoor space and improve internal circulation. This was screened as less preferable because external storage increases the likelihood of windblown dust, poor yard conditions, and stormwater contact with stored materials, which can elevate pollution risk and increase off-site nuisance, particularly during windy conditions or heavy rainfall events.

- **Furnace line positioned closer to a roller door/external wall (shorter material handling route) compared to centrally located:** An alternative internal arrangement was considered where the furnace and casting line are placed nearer to a door to simplify logistics for charging and maintenance. This was screened as less preferable because it increases proximity to site boundaries and can create a more direct pathway for emissions, noise, light and odours to leave the building when doors are open, particularly during loading/offloading and maintenance activities. Central placement provides a greater buffer within the building envelope and improves enclosure effectiveness.

- **Abatement unit positioned externally compared to internally adjacent to the furnace:** An external placement option can save internal floor space and ease access for certain maintenance activities. This was screened as less preferable as it results in longer ducts, more bends, increased leakage risk, and higher potential for downwash effects depending on discharge location. Locating the abatement system to enable short, direct ducting from the hooding to the filter improves capture efficiency and reduces emission potential.

- **Residue storage in external open skips compared to sealed storage:** Different residue handling layouts were considered, including open skip storage outside versus contained storage (sealed bins) within a defined, controlled area. Open skips were screened as less preferable because they increase dust dispersion risk and stormwater contact. Contained storage reduces these risks and improves compliance and auditability of waste management.

Overall, these alternatives were investigated to test trade-offs between operational convenience, space constraints and environmental risk. The preferred layout was retained because it best limits nuisance and pollution pathways by maximising enclosure of emission-generating activities, enabling effective capture-at-source and filtration, and reducing reliance on outdoor handling and stormwater-exposed storage.

Provide a description of any other design or layout alternatives investigated.

In addition to the preferred site layout (predominantly indoor processing within the existing building envelope with source-capture extraction routed to abatement prior to discharge), other practical design and layout alternatives were investigated at a conceptual pre-application level to test whether the same operational outcomes could be achieved with reduced nuisance and pollution risk.

One alternative considered was to retain the furnace and casting line indoors but shift a larger portion of incoming scrap storage and handling to the external yard to free indoor space and simplify internal circulation. A refinement of this option was also considered in which outdoor feedstock storage would be accommodated under a dedicated covered bay to limit windblown dust and rainfall contact. These "increased outdoor storage" options were screened as less preferable because they elevate reliance on housekeeping and yard management to prevent windblown dust and increase the likelihood of stormwater contact with operational materials, which can increase dirty runoff risk and off-site nuisance potential.

A further internal arrangement alternative was assessed in which the furnace and casting line are positioned closer to the doors or external walls to shorten material handling routes and improve logistics. This was screened as less preferable because it increases the likelihood that emissions, noise and operational disturbance can migrate off-site when doors are open (e.g., during loading/offloading and maintenance), and it reduces the effective "buffer" created by the building envelope. The preferred internal arrangement retains the emission-generating activities deeper within the building footprint where enclosure and capture can be more effective.

Alternatives for placement of extraction and abatement equipment were also considered, including locating the abatement unit externally versus positioning it to enable short, direct ducting from capture points. External placement can be feasible, but it can introduce longer duct runs, additional bends and joints, and increased leakage risk, potentially reducing capture efficiency and increasing fugitive emission risk. The preferred approach retains the abatement configuration that supports the shortest practical ducting and maintenance access.

Lastly, alternatives for storage of residues (e.g., dross and dust) were investigated, including open external skips versus sealed and/or covered storage in a defined controlled area. Open skip storage was screened as less preferable due to increased dust dispersion risk and stormwater contact potential, whereas contained storage supports improved housekeeping, reduced nuisance risk and improved auditability of waste management. These alternatives were considered collectively to inform the preferred layout, which prioritises indoor processing, effective capture-at-source, contained storage of dust residue, and minimised reliance on outdoor handling that could increase off-site nuisance and dirty stormwater risk.

Provide a motivation for the preferred design or layout alternative.

The preferred layout is motivated as the most practicable means of avoiding and minimising the dominant impact pathway for this activity, namely air quality and nuisance associated with furnace operation, while maintaining operational feasibility within an already-developed industrial site. By accommodating the furnace, casting line and ingot handling inside the existing warehouse footprint and positioning these activities centrally within the building, the design increases the physical buffer

between the emission-generating process and the property boundaries, which reduces the potential for off-site nuisance effects (dust, noise and light) especially during material handling and routine operations. The indoor arrangement also improves the effectiveness of engineering controls by enabling capture-at-source ducting and routing emissions through the installed abatement system before discharge above roofline, thereby reducing the probability and magnitude of uncontrolled fugitive emissions compared to layouts that increase outdoor handling or place the process closer to boundaries.

In addition, the preferred layout supports pollution prevention and auditability by enabling better housekeeping and containment within the building envelope, while the waste/residue handling areas can be managed to reduce dust and stormwater contact risk through the proposed approach of storing dross and filter dust under a roofed area (with appropriate containment and management measures specified in the EMPr). The preferred layout therefore represents the best practicable on-site configuration because it maximises avoidance through the use of an existing developed footprint and maximises minimisation through engineered emission control and controlled storage arrangements. Although dross and filter dust will be stored outside the warehouse, this will be an uncontrolled yard or site.: the preferred layout incorporates a dedicated roofed storage bay on an impermeable hardstand with containment (bunding) and stormwater run-off diversion, with filter dust stored sealed and removed by authorised service providers. This layout retains the operational benefits of external storage while avoiding key pollution pathways (windblown dust and contaminated runoff).

This motivation relies on the abatement system being installed, operated and maintained as designed and on dust being managed in covered areas so that windblown dust do not leave the site.

Provide a detailed motivation if no design or layout alternatives exist.

No reasonable or feasible design/layout alternatives exist at this pre-application stage because the proposed facility is constrained to an existing industrial warehouse footprint (±517 m²) and the process and pollution-control logic require that the key emission generating activities remain enclosed and integrated with the extraction and abatement system. The preferred design places all primary processing activities inside the existing warehouse, with the furnace handling positioned centrally to maximise separation from site boundaries and reduce off-site nuisance pathways (dust, noise and light). Emissions are controlled through capture-at-source ducting routed to a high-efficiency particulate abatement unit prior to discharge above roofline and is the primary determinant of nuisance risk rather than minor internal rearrangements.

The site is already developed with no vegetation, meaning that alternative internal arrangements would not change biophysical footprint impacts; the layout decision is therefore dominated by operational nuisance and pollution prevention, best addressed by maximising enclosure and maintaining the engineered emission control configuration described above. Should the final detailed design introduce any new structures, substantially expand outdoor storage areas, or change access/circulation such that nuisance pathways could change, the within-site layout alternatives will be revisited and documented at application stage using updated site plans and specialist input.

List the positive and negative impacts that the design alternatives will have on the environment.

Design / layout alternative (within site)	Positive impacts	Negative impacts
Preferred - Predominantly indoor processing: furnace inside building; effective source-capture to abatement; controlled/covered residue storage	Reduced off-site air quality and nuisance risk due to enclosure and improved capture efficiency; reduced windblown dust; reduced stormwater contamination risk because less material is exposed to rain; reduced noise spill; improved housekeeping and auditability.	Increased reliance on effective internal ventilation maintenance (poor maintenance can increase emissions indoors and at openings); potential for higher energy demand for ventilation.
Alternative - Indoor processing with increased outdoor feedstock storage (open yard)	Operationally may improve internal space and circulation (indirectly reduces internal spills).	Increased windblown dust and visual clutter; increased stormwater contact with materials (dirty runoff risk); greater reliance on housekeeping to prevent off-site impacts; higher likelihood of nuisance complaints.
Alternative - Outdoor feedstock storage under covered bay/canopy with windbreaks	Reduces dust and stormwater exposure; windbreaks reduce dispersal); may be feasible where indoor space is constrained.	Residual nuisance risk remains higher due to continued outdoor handling; effectiveness depends on canopy/windbreak design and ongoing housekeeping; stormwater management is more complex.
Alternative - Furnace/casting positioned near doors/external wall (vs centrally located)	Shorter internal material movement may reduce handling time and internal spill risk (indirect environmental benefit).	Increased likelihood of emissions, noise and light leaving the building when doors are open; reduced building buffering; higher boundaries facing nuisance potential.
Alternative - Abatement unit externally located (yard-/roof-mounted) vs positioned to enable shortest duct runs	Frees internal space may improve certain maintenance access; can reduce congestion around process area.	Longer ducting and more joints can increase leakage risk and reduce capture efficiency if not well designed; external fans can increase outdoor noise and visual clutter; potential stormwater

		contamination risk if external dust cleaning is not controlled.
Alternative - dust storage in open external skips vs sealed/covered storage (indoors or enclosed/roofed bay)	Sealed/covered storage reduces dust dispersion and stormwater contact; improves containment and compliance auditability	Open skips increase dust dispersion and stormwater contamination risk; greater risk of material loss and tracking; higher likelihood of dirty yard conditions; sealed/covered storage may require more disciplined logistics and dedicated space

1.4.	Technology alternatives (e.g., to reduce resource demand and increase resource use efficiency) to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts.

Provide a description of the preferred technology alternative:

The preferred technology alternative for the proposed facility is an electrically powered aluminium smelting and casting process using an electric induction furnace supported by closed-loop/recirculating water cooling and a high-efficiency particulate emission control system. In practice, baled aluminium beverage can feedstock is delivered to site and processed in batch melts (noted as 500 kg batches), with the melting cycle taking approximately 1 hour and 30 minutes per batch. A cover flux is added to reduce oxidation and minimise aluminium losses to dross, which improves resource use efficiency by increasing metal recovery from the same input material.

Once molten, aluminium is cast into ingots via an ingot casting conveyor and cooled using a water-cooling tower. The cooling system includes a water recovery system to minimise overall water consumption and reduce demand on municipal supply, improving resource efficiency compared to once-through cooling arrangements.
To avoid and mitigate air quality and nuisance impacts, the furnace is fitted with an extraction system (hooding/ducting) designed for capture-at-source and routed to the facility's particulate abatement/filtration system prior to discharge (with discharge via a point above roofline as described for the preferred layout).

Electrostatic adsorption filters will be used as the preferred dust control measure for dust removal which will form part of the preferred technology package to reduce particulate emissions and associated nuisance effects.

Provide a description of any other technology alternatives investigated.

1. Gas-fired furnace
    - Gas-fired furnaces are commonly used in large-scale aluminium recycling operations and were considered as a potential alternative.

2. Emission Abatement Technology Alternatives/ Alternative Dust Capture Efficiencies:
    - Cyclone separators
    - Wet scrubbers
    - Fabric filter baghouses

Provide a motivation for the preferred technology alternative.

The preferred technology alternative is motivated as the best practicable environmental option for the nature and scale of the proposed secondary aluminium recovery activity and the receiving environment, because it provides the most benefit and least damage overall at acceptable cost, consistent with the NEMA definition of "best practicable environmental option".

The preferred technology directly targets the key negative impact pathway (air quality and nuisance associated with furnace operation) through a combination of non-combustion heating and engineered particulate control prior to discharge.

An electric induction furnace is preferred over the investigated gas-fired furnace alternative because it avoids on-site fuel combustion and associated fuel storage risks, enabling controlled, on-demand heating for melt cycles and reducing the project's direct combustion-related emission profile at source. The water-cooling system with water recovery is preferred because it improves resource use efficiency by reducing water usage. For air emissions control (the dominant risk pathway), the preferred option includes an electrostatic adsorption filter as the primary particulate abatement measure.

On this basis, the preferred technology package is motivated as the most environmentally appropriate because it prioritises avoidance at source (no on-site fuel combustion) and minimisation through engineered controls (particulate abatement without creating a wastewater stream), while remaining feasible and auditable.

Provide a detailed motivation if no alternatives exist.

No further feasible and reasonable technology alternatives exist at this stage because the proposed activity, secondary aluminium recovery through melting and casting, has a limited set of technologies that can achieve the project purpose at the proposed scale while meeting the site's infrastructure constraints and the project's key environmental risk controls. The selected technology package (electric induction melting with capture-at-source extraction routed to particulate abatement, and recirculating water cooling with water recovery) represents the minimum practicable technology set required to undertake the

activity responsibly and to manage the dominant impact pathway identified for the project, namely air quality and nuisance associated with furnace operations.

At a functional level, there is no "technology-free" way to melt and cast aluminium on site; the process requires (i) a furnace with controlled heating capacity, (ii) engineered dust capture and abatement prior to discharge, and (iii) cooling systems for product handling and quality control. Within this limited technology envelope, materially different alternatives (such as a gas-fired furnace instead of electric induction, or wet scrubbing as a primary abatement method) were screened as not reasonable because they either increase direct combustion-related emissions and fuel handling risks (gas-fired option) or introduce additional secondary pollution pathways and operational complexity (wet scrubber wastewater generation and management).

The preferred technology is therefore motivated as the best practicable environmental option because it achieves the project purpose while offering the most effective avoidance/minimisation of impacts at acceptable cost, consistent with the concept of selecting the option that provides the most benefit or causes the least damage overall (best practicable environmental option).

Any further "technology alternatives" at this scale would be limited to marginal changes (e.g., brand/model choices or minor configuration differences) that do not materially change environmental outcomes provided that the core commitments remain in place (effective capture-at-source, verified abatement performance, and water recycling). For this reason, and because this is a pre-application assessment, additional technology arrangements beyond the preferred package are not considered meaningfully different for impact assessment purposes. The technology selection will, however, be verified and finalised at application stage through supplier specifications and performance guarantees for the furnace and abatement equipment, and the EMPr will include operational and maintenance requirements to ensure the stated control performance is achieved in practice.

List the positive and negative impacts that the technology alternatives will have on the environment.

1. **Gas-Fired Furnace:**
    - Positives: Lower dependence on the electricity grid, potentially lower indirect greenhouse gas emissions, Stable and predictable energy supply, Potential for future low-carbon fuel substitution
    - Negatives: Higher emission profile, Direct fossil fuel combustion results in higher greenhouse gas emissions, which is inconsistent with climate mitigation principles under NEMA and the Western Cape Climate Change Response Framework, Additional risks related to gas storage, pressure systems, and explosion potential, particularly in an urban industrial area, Gas-fired furnaces typically trigger **more stringent AEL conditions** due to the wider range of regulated pollutants.

2. **Emission Abatement Technology Alternatives/ Alternative Dust Capture Efficiencies:**

    - **Cyclone separators**
        - Positives: Low energy consumption and no water use or liquid effluent generation.
        - Negatives: Low capture efficiency for fine particulates, limited effectiveness in controlling process-related emissions from aluminium smelting and could result in higher ambient particulate concentrations which would increase nuisance and health risks.

    - **Wet scrubbers**
        - Positives: Effective removal of fine particulates and certain gaseous pollutants and it can reduce both dust and acid gas emissions in a single system.
        - Negatives: Generation of contaminated wastewater, increased water consumption, risk of secondary pollution if wastewater is not properly managed and a higher operational complexity increases the likelihood of environmental non-compliance.

    - **Fabric filter baghouses**
        - Positives: High dust capture efficiency and it can achieve ambient air quality compliance.
        - Negatives: Fire and explosion risk and generation of solid waste in the form of used filter bags.

1.5.	Operational alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts.

Provide a description of the preferred operational alternative.

The preferred operational alternative is to operate the aluminium recycling facility as a controlled, daytime, indoor-based industrial operation in which key impact pathways (air emissions/nuisance, dust, traffic, wastes/residues, and stormwater pollution) are managed through engineered controls, auditable operating rules, and strict implementation of the EMPr and Atmospheric Emissions Licence (AEL) requirements. Operations will be undertaken during standard working hours to limit nuisance risk, with all plant and vehicles maintained in accordance with manufacturer specifications to avoid unnecessary noise and prevent avoidable emissions associated with poor maintenance.

Air quality and dust impacts (the key operational risk pathway) will be managed by ensuring that furnace emissions are continuously routed through the installed abatement system, with ongoing maintenance of the filter and operation in

compliance with AEL conditions and applicable dust requirements, supported by a complaints register to log, investigate and respond to any dust-related complaints received by the site.

Traffic-related nuisance will be reduced by scheduling deliveries of feedstock and collection of finished products outside peak traffic times, and by implementing controlled material handling and housekeeping measures to prevent spills, litter and dust generation during loading/offloading and storage activities.

Solid waste and residues will be managed through traceable, compliant handling: general solid waste collected by the local municipality; implementation of an Integrated Waste Management approach as required by the EMPr; and controlled storage of process residues such as aluminium dross and filter dust under a roofed area, with filter dust removed by a licensed waste removal service provider for disposal at an appropriate landfill site.

Dross and filter-captured dust storage (roofed area outside warehouse):
Aluminium dross generated during melting or casting and dust captured by the abatement system will be stored in a dedicated covered (roofed) external storage bay outside the warehouse. The storage bay will be located on an impermeable hardstand surface (e.g., concrete slab) to prevent migration of material and contain any contaminated runoff.

Where the existing surface is not demonstrably impermeable, it will be upgraded prior to commissioning. The storage bay will be bunded to prevent migration of solids and to allow containment of any contaminated runoff from the storage area. The area will be stormwater protected by diverting clean stormwater runoff away from the bay and managing the bay as a controlled area, such that any runoff arising within the bay is contained and prevented from discharging off-site.

Dust generation will be controlled by prevention and containment rather than wet suppression: filter dust will be kept in sealed, labelled containers and dross will be kept under cover with handling controls. Water spraying will not be applied to dross or dust unless a site-specific risk assessment confirms it is safe and appropriate for the waste stream.

Aluminium dross will be characterised and managed in accordance with the National Norms and Standards for the Assessment of Waste for Landfill Disposal (GN 635 of 2013). Where feasible, aluminium dross may be supplied to authorised recyclers as a secondary raw material. All waste generated at the facility will be stored, transported and disposed of in accordance with the National Environmental Management: Waste Act (Act 59 of 2008) and applicable municipal requirements. Filter-captured dust (and dross, where managed as a waste stream) will be classified in terms of applicable waste classification requirements prior to routine disposal; until classification results are available, the dust will be handled as potentially hazardous, stored sealed and removed by an appropriately authorised waste contractor. The filter-captured dust will be transported by a registered service provider to a licensed disposal facility authorised to accept the classified waste stream.

All operational controls will be implemented under the EMPr's management system, which allocates responsibilities, sets site rules for storage/handling and access routes, and includes compliance monitoring and independent auditing to verify that mitigation measures are implemented and effective, and to ensure corrective actions are taken where non-compliance or incidents occur.

Provide a description of any other operational alternatives investigated.

In addition to the preferred operational approach (daytime operation, EMPr implementation, and AEL-aligned operation and maintenance of emission control measures), the following operational alternatives were investigated to determine whether the same project purpose could be achieved with lower nuisance and pollution risk:

1. **Extended operating hours (including evenings/nights) vs daytime-only operation.**

   An alternative operating regime allowing extended hours was considered to increase throughput flexibility. This was screened as less preferable because extended hours increase the likelihood of nuisance impacts (noise, light spill, traffic disturbance and perceived disturbance) and reduce the effectiveness of community complaint management because impacts may occur outside normal response hours. Daytime operation was therefore retained as the more defensible option for minimising nuisance risk in practice

2. **Commissioning alternative vs immediate full-rate operation.**

   A phased commissioning option was considered where initial operations commence at a reduced throughput (pilot period), with expansion only once maintenance routines, housekeeping and emissions control performance are demonstrated as stable (and verified through monitoring and complaint records). This alternative reduces early-stage risk while operational controls are optimised but may delay full economic benefits; it remains a feasible operational variant if required by licensing.

3. **Delivery/dispatch scheduling alternative (off-peak logistics) vs unstructured arrivals.**

   An operational alternative was evaluated in which deliveries and dispatch are strictly scheduled (including avoiding peak traffic periods) versus an ad hoc approach. The scheduled approach is preferred because it reduces traffic-related nuisance and improves orderly loading/offloading, reducing spills and fugitive dust generation during handling.

4. **Housekeeping/dust management alternative vs low-frequency sweeping and open handling.**

   Two operational housekeeping regimes were considered: (i) a high-frequency, preventative approach (routine

vacuuming/collection of fines, immediate cleanup of spills, controlled tipping/transfer, minimised door-open time) versus (ii) periodic sweeping and reactive cleanup. The proactive regime is preferred because it reduces dust generation and tracking, thereby reducing nuisance and stormwater contamination risk.

5. **Residue and waste handling frequency alternative vs longer on-site accumulation.**

   Alternatives were considered for how often dross and filter dust are removed and how they are stored. More frequent removal with sealed storage was screened as preferable because it reduces the volume of potentially dusty material on-site at any time and reduces dispersion risk. Filter dust will be removed by a waste service provider, and dross and dust are stored under a roofed area; these commitments support the preferred operational approach and differentiate it from longer accumulation/open handling options.

6. **Compliance and response alternative (active monitoring + complaints management + corrective action) vs passive response.**

   An alternative operational approach was considered in which monitoring, recordkeeping, and complaint response are minimal versus an active system incorporating a complaints register, investigation, and corrective actions linked to maintenance of the emissions control equipment and housekeeping practices. The active system is preferred and is consistent with AEL compliance and a complaints register to manage nuisance risk.

7. **Load-shedding alternative vs backup generation.**

   Two operational responses were considered for electricity supply interruptions: (i) scheduling melt cycles during reliable supply windows (preferred where feasible), versus (ii) installing backup generation. Backup generation was treated as less preferable operationally because it can introduce additional air/noise impacts and compliance considerations; if pursued, it would require separate assessment and licensing considerations.

Provide a motivation for the preferred operational alternative.

The preferred operational alternative is motivated as the most practicable means of avoiding and minimising the project's key operational impact pathways, notably dust emissions and nuisance, noise, traffic-related disturbance, and waste/residue related pollution risk, while enabling the facility to operate within an established industrial area under enforceable, auditable controls. It is recognised that atmospheric emissions from the aluminium furnace are inherent to the activity and that the consequence is potential nuisance impacts to surrounding land users; the preferred operational approach therefore prioritises continuous and reliable emission control through the installation and ongoing maintenance of the electrostatic adsorption filter and operation in compliance with the Atmospheric Emissions Licence (AEL) conditions, which reduces residual impacts to low-level localised air quality effects when correctly implemented.

The preferred operational regime also minimises nuisance risk by restricting work hours thereby limiting the timing of noise-generating activities to normal daytime periods, and by requiring that site machinery and vehicles are maintained to prevent avoidable noise and emissions associated with poor maintenance. In addition, the preferred operation includes an auditable nuisance-response mechanism through the requirement for a Complaints Register for dust complaints to be available for inspection, which supports early detection of operational issues and corrective action where required.

Traffic-related impacts are managed under the preferred operational alternative by scheduling deliveries of feedstock and collection of finished products outside peak traffic times, reducing traffic congestion and associated disturbance to surrounding land users. Waste and residue risks are addressed through a traceable operational arrangement: general waste collection, implementation of an integrated waste management approach, and controlled storage of process residues (e.g., aluminium dross and filter dust) under a roofed area, with filter dust removed by a licensed waste removal company for disposal at an appropriate facility, thereby reducing dust dispersion and stormwater contact risk and improving compliance auditability.

Provide a detailed motivation if no alternatives exist.

No additional feasible and reasonable operational alternatives exist at this stage because the proposed operation is inherently defined by the nature of secondary aluminium smelting and the minimum operational controls required to keep the dominant impact pathways within acceptable limits. The impact assessment identifies the key operational impact pathway as air quality and nuisance associated with furnace emissions, noting that emissions are inherent to normal operation and therefore cannot be eliminated through "alternative operation" without ceasing the activity altogether (which is addressed separately by the No-Go alternative). The only meaningful operational differentiation available to the proponent is therefore not whether emissions occur, but whether they are continuously captured, treated and managed through enforceable operating rules and maintenance regimes, as already embedded in the proposal through the requirement for installation and ongoing maintenance of the electrostatic adsorption filter and operation in compliance with Atmospheric Emissions Licence conditions.

Operational alternatives that would materially differ from the preferred operational approach (for example, relaxed maintenance/housekeeping, unstructured deliveries, or extended operating hours) are not considered reasonable because they would increase the probability and intensity of nuisance conditions and pollution risk without improving the environmental outcome. The preferred operational approach is therefore the minimum practicable operational configuration to manage impacts: it limits work hours to reduce the likelihood of noise and disturbance outside normal daytime periods; requires

maintenance of machinery or vehicles to avoid noise; requires dust control such that exhaust dust is removed by the stated filtration system and that dust levels are managed (including a Complaints Register available for inspection); and requires traffic controls such as scheduling deliveries and collections outside peak traffic periods to reduce traffic-related nuisance and knock on dust or spill risks during loading and offloading.

Similarly, waste and residue management is operationally constrained to controlled, traceable practices to prevent dispersion and stormwater contact. The preferred operational approach includes measures such as storing aluminium dross under a roofed warehouse for dispatch and storing filter dust under a roofed area with disposal via a licensed waste removal company, which reduces dust dispersion and pollution risk; operational "alternatives" that involve open storage, prolonged accumulation, or non-traceable disposal are not reasonable because they increase dust and contamination pathways and weaken compliance defensibility.

Dross and filter-captured dust storage (roofed area outside warehouse):

Aluminium dross generated during melting or casting and dust captured by the abatement system will be stored in a dedicated covered (roofed) external storage bay outside the warehouse. The storage bay will be located on an impermeable hardstand surface (e.g., concrete slab) to prevent migration of material and contain any contaminated runoff.

Where the existing surface is not demonstrably impermeable, it will be upgraded prior to commissioning. The storage bay will be bunded to prevent migration of solids and to allow containment of any contaminated runoff from the storage area. The area will be stormwater protected by diverting clean stormwater runoff away from the bay and managing the bay as a controlled area, such that any runoff arising within the bay is contained and prevented from discharging off-site.

Dust generation will be controlled by prevention and containment rather than wet suppression: filter dust will be kept in sealed, labelled containers and dross will be kept under cover with handling controls. Water spraying will not be applied to dross or dust unless a site-specific risk assessment confirms it is safe and appropriate for the waste stream.

Aluminium dross will be characterised and managed in accordance with the National Norms and Standards for the Assessment of Waste for Landfill Disposal (GN 635 of 2013). Where feasible, aluminium dross may be supplied to authorised recyclers as a secondary raw material. All waste generated at the facility will be stored, transported and disposed of in accordance with the National Environmental Management: Waste Act (Act 59 of 2008) and applicable municipal requirements.

Filter-captured dust (and dross, where managed as a waste stream) will be classified in terms of applicable waste classification requirements prior to routine disposal; until classification results are available, the dust will be handled as potentially hazardous, stored sealed and removed by an appropriately authorised waste contractor. The filter-captured dust will be transported by a registered service provider to a licensed disposal facility authorised to accept the classified waste stream.

Finally, the proposal is explicitly bound to the EMPr/EMP framework, which sets site rules and responsibilities and includes compliance monitoring and independent auditing to verify that impact management outcomes are achieved. Because the EMPr establishes the enforceable operational rules that make the activity acceptable in principle, there is no additional "alternative" operational scenario that remains both feasible and environmentally preferable, only stricter or weaker compliance with the same required controls. The preferred operational alternative is therefore retained as the only reasonable operational option at pre-application stage because it is the option that demonstrably manages the key impacts through enforceable operating rules, monitoring, and auditing mechanisms rather than relying on unmanaged operational discretion.

List the positive and negative impacts that the operational alternatives will have on the environment.

The preferred operational alternative is to operate the facility as a controlled daytime operation with strict implementation of the EMPr and compliance with AEL-related operating and maintenance requirements, including continuous routing of furnace emissions through the abatement system, preventative maintenance of vehicles, structured housekeeping, and an auditable complaint-response system. This approach has positive environmental implications because it limits the timing of noise, lighting and traffic disturbance to daytime hours, improves the reliability of emission control performance through maintenance and operating discipline, and strengthens compliance auditability through recordkeeping, independent auditing and a complaints register. The main negative implication is that the environmental performance is implementation dependent: if maintenance, housekeeping, recordkeeping or complaint response is not consistently applied, nuisance and dust impacts can increase rapidly even without any physical change to the facility.

Extended operating hours (night) versus daytime-only operation.

This alternative was considered to improve throughput flexibility. The limited positive environmental implication is that it may reduce daytime congestion if some activities are shifted outside peak periods. However, the negative implications are typically more significant: extended hours increase the likelihood of nuisance impacts (noise, lighting and traffic disturbance) outside normal hours, increase complaint likelihood, and reduce the practicality of rapid corrective response after hours. For this reason, extended hours are environmentally less preferable than daytime operation.

Phased commissioning (lower initial throughput) versus immediate full-rate operation.

This alternative reduces early operational risk by allowing tuning of abatement performance, housekeeping and material handling practices before full production is reached. The positive implication is reduced probability of "teething problem" nuisance events (dust, odour perception, handling spills). Potential negative implications are that commissioning may extend over a longer period and may require more frequent logistics movements over time depending on supply arrangements. This option is environmentally beneficial during start-up and remains a feasible conditional variant if required by licensing conditions or risk management.

Scheduled deliveries outside peak periods versus unstructured arrivals.

This alternative has clear positive environmental implications: it reduces traffic disturbance, queuing and congestion, improves safe and orderly loading/offloading, and reduces the chance of spills and dust generation during handling. The negative implication is mainly operational, discipline is required from suppliers if scheduling fails, impacts revert to peak-time congestion and increased nuisance potential.

Proactive high-frequency housekeeping versus low-frequency cleanup.

The positive implications are reduced dust generation and tracking, reduced dirty-yard conditions, reduced risk of fines entering stormwater pathways, and improved visual cleanliness. The negative implication is that it requires consistent supervision and resources; poorly executed sweeping can also cause short-term dust peaks.

Frequent waste removal and covered storage versus longer accumulation on site.

The positive implication is reduced on-site volumes of potentially dusty residues at any time, reducing dispersion potential and stormwater contact risk, while improving traceability and compliance auditability. The negative implication is a potential marginal increase in collection traffic frequency.

Active compliance system versus passive response.

The positive implications are earlier detection of problems and shorter duration of unmanaged impacts, improved defensibility, and a clearer feedback loop between complaints, maintenance and corrective action. The negative implication is administrative burden as it provides limited real environmental benefit.

Load-shedding resilience by batch scheduling around stable supply windows versus backup generator operation.

Batch scheduling has the positive implication of avoiding a new combustion emission and noise source. Backup generation has negative implications including additional air emissions, noise and fuel handling risks, and may require separate compliance assessment depending on scale and operating hours. If backup generation is proposed later, it must be assessed as a change that can alter the impact profile.

1.6.	The option of not implementing the activity (the 'No-Go' Option).

Provide an explanation as to why the 'No-Go' Option is not preferred.

The No-Go option entails the maintaining of the status quo of the site. in this case, the No-Go option would mean that the development will not take place. Consequently, the aluminium recycling capacity of the City will remain the same, and no additional waste will be diverted from landfill for recycling. There will also be no change in the amount of recycled aluminium in the supply chain, and the associated job opportunities will not be created. The No-Go alternative fails to address the need for improved waste management in the city. The site will remain vacant and unutilised. The proposal increases recycling capacity, diverts waste from landfill, and would generate approximately 16 permanent job opportunities, with the key operational risk pathway (air emissions/nuisance) being controllable through emission controls, licensing and auditable operating rules. For these reasons, the No-Go option is not preferred because it delivers only the benefit of "no new impacts", but it foregoes material public and socio-economic benefits (additional recycling capacity, landfill diversion, and employment).

1.7.	Provide and explanation as to whether any other alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts, or detailed motivation if no reasonable or feasible alternatives exist.

In addition to the proposed site, activity, layout, technology, operational and No-Go alternatives assessed in Sections 1.1–1.6, a set of impact avoidance and impact management alternatives were investigated at a practical pre-application level and incorporated into the preferred alternative. These alternatives focus on the project's main risk pathways (air quality/nuisance, traffic, waste/residues and pollution prevention) and are implemented through enforceable design commitments and EMPr requirements.

Air quality management alternatives (avoid/minimise):

Alternative approaches were considered for how dust and furnace exhaust emissions are managed, ranging from passive control operation to active engineered controls with auditable response systems. The preferred approach is the engineered control and governance option, which includes the use of an electrostatic adsorption filter for removal of dust from exhaust gases, ensuring that dust levels do not exceed the National Dust Control Regulations, and maintaining an auditable Complaints Register for dust complaints available for inspection by the competent authority. This alternative is preferred because it directly targets the dominant risk pathway through measurable, enforceable controls rather than relying on informal housekeeping alone.

Traffic and logistics management alternatives (avoid/minimise):

Different logistics approaches were considered, including unstructured deliveries versus scheduled logistics to reduce congestion and disturbance. The preferred option is to schedule deliveries of feedstock and collection of finished products outside of peak traffic times to reduce traffic-related nuisance and secondary dust risk during loading/offloading.

Waste and residue handling alternatives:

Alternatives were considered for waste handling that range from open controlled storage and ad hoc disposal to covered storage and licensed removal with traceability. The preferred option is a controlled waste management approach that includes municipal collection of general waste, implementation of an Integrated Waste Management Plan as stipulated in the EMPr, storing aluminium dross under a roofed area for dispatch, and temporarily storing filter dust under a roofed area for disposal at a suitable landfill by a licensed waste removal company.

Resource-efficiency alternatives:

Operational alternatives to reduce resource demand were considered. The preferred option includes a water-cooling system and is aligned to reducing water demand through recycling and recovery measures as described in the sections above.

EMPr governance and compliance alternatives:

Alternatives were also considered for how mitigation is assured in practice, ranging from informal compliance to a binding EMPr system with monitoring and corrective actions. The preferred approach is that the EMPr forms part of contractual obligations and is implemented through defined responsibilities and monitoring to prevent avoidable damage and minimise unavoidable impacts across phases.

Beyond these measures, no additional reasonable or feasible "other alternatives" exist at pre-application stage because any materially different option that would further reduce impacts would involve (i) changing the core technology approach, (ii) changing the operational regime, or (iii) changing the on-site layout. The remaining environmental risk profile is therefore primarily a function of how strictly the above avoidance or minimisation alternatives are implemented and audited through the EMPr and licence-aligned operational controls. Should the detailed design, operating hours, throughput, residue handling method, or emission control configuration change materially, this "other alternatives" section will be revisited because the impact pathways and mitigation effectiveness could change.

1.8.	Provide a concluding statement indicating the preferred alternatives, including the preferred location of the activity.

The proposed aluminium recycling facility on Erf 9874 and 9875 in Elsies River Industrial will be able to recycle approximately 126 tons of scrap aluminium per month. The site is located within the urban edge in an established industrial area, is zoned for industrial land use, is surrounded by commercial/industrial land users, and is already developed with connections to municipal services. The site is suitably zoned for the proposed activity and little additional construction will be required. It is located close to major roadways for easy transport of feedstock and finished products.

No technological alternatives were considered due to the low impact of the proposed alternative (reduced emissions, no fuel storage requirements, water cooling system that recycles water).

The No-Go alternative would result in the status quo, with no change in the recycling capacity of the City or the amount of recycled aluminium in the supply chain. The associated job opportunities will also not be created. The environmental impacts of the proposed project will be managed through mitigation measures outlined in the EMPr.

2. "No-Go" areas

Explain what "no-go" area(s) have been identified during identification of the alternatives and provide the co-ordinates of the "no-go" area(s).

The site has already been fully developed with no vegetation or sensitive receptors on or around the site. No No-Go areas have been identified.

3. Methodology to determine the significance ratings of the potential environmental impacts and risks associated with the alternatives.

Describe the methodology to be used in determining and ranking the nature, significance, consequences, extent, duration of the potential environmental impacts and risks associated with the proposed activity or development and alternatives, the degree to which the impact or risk can be reversed and the degree to which the impact and risk may cause irreplaceable loss of resources.

This Basic Assessment was undertaken in accordance with the principles of Integrated Environmental Management as detailed in Section 23 of NEMA and in the NEMA EIA Regulations.

The impact assessment is aimed at determining the likely significance of any impacts (positive or negative) associated with the development. The significance of the impacts is determined by investigating certain key aspects, or parameters, of the potential impact, which are determined by the nature of the activity, as well as the nature of the receiving environment. Aspects investigated include the extent, duration and timing, and magnitude of the impact.

Table 2 below provides an explanation of the parameters used to determine the significance of an impact, as well as what "significance" means in the context of this impact assessment.

Other factors which are also considered in the assessment of impacts include whether the impact is direct, indirect or cumulative. A direct impact can be explained as being a direct result of activities associated with the development.

An indirect impact would be a secondary or "knock-on" impact resulting from an impact directly associated with the development.

A cumulative impact would be an impact which already occurs in the receiving environment associated with other activities taking place in proximity to the development.

Other factors considered include whether the impact is reversible; and whether the impact could cause an irreplaceable loss of resources.

The impact assessment methodology used has been closely guided by the DEAT EIA Guideline Document 5, on the assessment of impacts and alternatives (DEAT 2006); as well as reference to the description of the criteria used for the assessment of impacts as contained in the DEA&DP Specialist Guidelines Series (2005).

The assessment of the potential impacts has been based on SEC's extensive experience related to environmental impact assessment as well as specialist assessment and input, where applicable.

The impact assessment has also been informed by input and comment from stakeholders. The potential impacts have been assessed after review by the professional team, including specialists, and on the basis of professional judgement.

It must be noted that determining the significance of impacts, although carefully and systematically considered, still remains a subjective judgement, as there are no truly objective measures that can be used to judge significance

Practicable mitigation measures (where warranted) have been identified to minimize the potential impacts associated with the proposed facility. The significance of any potential impact before and after mitigation is also provided to give an indication of the efficacy of the proposed mitigation measures.

Table 1: Parameters used to Establish Impact Significance

ITEM	DEFINITION
EXTENT	
Local	Extending only as far as the boundaries of the activity, limited to the site and its immediate surroundings
Regional	Impact on the broader region
National	Will have an impact on a national scale or across international borders
DURATION	
Short-term	0-5 years
Medium-Term	5-15 years
Long-Term	>15 years, where the impact will cease after the operational life of the activity
Permanent	Where mitigation, either by natural process or human intervention, will not occur in such a way or in such a time span that the impact can be considered transient.
MAGNITUDE OR INTENSITY	
Low	Where the receiving natural, cultural or social function/environment is negligibly affected or where the impact is so low that remedial action is not required.
Medium	Where the affected environment is altered, but not severely and the impact can be mitigated successfully and natural, cultural or social functions and processes can continue, albeit in a modified way.
High	Where natural, cultural or social functions or processes are substantially altered to a very large degree. If a negative impact then this could lead to unacceptable consequences for the cultural and/or social functions and/or irreplaceable loss of biodiversity to the extent that natural, cultural or social functions could temporarily or permanently cease.
PROBABILITY	
Improbable	Where the possibility of the impact materialising is very low, either because of design or historic experience
Probable	Where there is a distinct possibility that the impact will occur
Highly Probable	Where it is most likely that the impact will occur
Definite	Where the impact will undoubtedly occur, regardless of any prevention measures
SIGNIFICANCE	
Low	Where a potential impact will have a negligible effect on natural, cultural or social environments and the effect on the decision is negligible. This will not require special design considerations for the project
Medium	Where it would have, or there would be a moderate risk to natural, cultural or social environments and should influence the decision. The project will require modification or mitigation measures to be included in the design
High	Where it would have, or there would be a high risk to natural, cultural or social environments. These impacts should have a major influence on decision making.
Very High	Where it would have, or there would be a high risk of, an irreversible negative impact on biodiversity and irreplaceable loss of natural capital that could result in the project being environmentally unacceptable, even with mitigation. Alternatively, it could lead to a major positive effect. Impacts of this nature must be a central factor in decision making.
STATUS OF IMPACT	
Whether the impact is positive (a benefit), negative (a cost) or neutral (status quo maintained)	
DEGREE OF CONFIDENCE IN PREDICTIONS	

	The degree of confidence in the predictions is based on the availability of information and specialist knowledge (e.g. low, medium or high)
	MITIGATION
	Mechanisms used to control, minimise and or eliminate negative impacts on the environment and to enhance project benefits. Mitigation measures should be considered in terms of the following hierarchy: (1) avoidance, (2) minimisation, (3) restoration and (4) off-sets.

4. Assessment of each impact and risk identified for each alternative

Note: The following table serves as a guide for summarising each alternative. The table should be repeated for each alternative to ensure a comparative assessment. The EAP may decide to include this section as Appendix J to this BAR.

CONSTRUCTION PHASE	
Potential impact and risk:	**Noise:** The potential noise impacts associated with the nature of activities of a construction site require that noise impact mitigation measures are considered and implemented where required.
Nature of impact:	Negative
Extent and duration of impact:	Site Specific: Short Term
Consequence of impact or risk:	Nuisance to surrounding land users
Probability of occurrence:	Probable
Degree to which the impact may cause irreplaceable loss of resources:	No loss of resource
Degree to which the impact can be reversed:	Completely reversible
Indirect impacts:	Nuisance impacts to surrounding neighbours
Cumulative impact prior to mitigation:	Negligible
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low to Medium
Degree to which the impact can be avoided:	Can be avoided
Degree to which the impact can be managed:	Can be managed
Degree to which the impact can be mitigated:	Can be mitigated
Proposed mitigation:	<u>Noise Mitigation:</u> • A complaints register must be opened. • Vehicles and equipment should be kept in good working condition. If deemed necessary, machinery and equipment should be fitted with mufflers/ exhaust silencers. No unnecessary disturbances should be allowed to emanate from the construction site. • Noise levels must comply with the relevant health & safety regulations and SANS codes and should be monitored by the Health & Safety Officer as necessary and appropriate. • The appointed ECO must undertake regular site inspections for the duration of the construction phase, and produce regular ECO monitoring audit reports, auditing the compliance of the property developer with the conditions of the Environmental Authorisation and the approved EMP.
Residual impacts:	None
Cumulative impact post mitigation:	Negligible
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Potential impact and risk:	**Dust:** The potential dust impacts associated with the nature of activities of a construction site require that dust impact mitigation measures are considered and implemented where required.
Nature of impact:	Negative
Extent and duration of impact:	Site Specific: Short Term
Consequence of impact or risk:	Nuisance to surrounding residence
Probability of occurrence:	Probable
Degree to which the impact may cause irreplaceable loss of resources:	No loss of resource
Degree to which the impact can be reversed:	Completely reversible
Indirect impacts:	Nuisance impacts to surrounding neighbours
Cumulative impact prior to mitigation:	Negligible

Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low to Medium
Degree to which the impact can be avoided:	Can be avoided
Degree to which the impact can be managed:	Can be managed
Degree to which the impact can be mitigated:	Can be mitigated
Proposed mitigation:	**Dust Mitigation:** • Fine materials stockpiles must be covered with shade cloth or stored indoors. • All vehicles transporting sand/waste need to have tarpaulins covering their loads which will assist in any windblown sand occurring off the trucks. • Dust levels specified in the National Dust Control Regulations (GN 827 of November 2013) may not be exceeded. • A Complaints Register must be available at the site office for inspection by the ECO of dust complaints that may have been received. • The appointed ECO must undertake regular site inspections for the duration of the construction phase, and to produce regular ECO monitoring reports, auditing on the compliance with the conditions of the Environmental Authorisation and the approved EMP.
Residual impacts:	None
Cumulative impact post mitigation:	Negligible
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Potential impact and risk:	**Odours & Emissions:** Construction related odours/emissions may cause a nuisance or health impacts to adjacent residents, staff on site.
Nature of impact:	Negative
Extent and duration of impact:	Site Specific, Long-Term
Consequence of impact or risk:	Odour/Emissions nuisance to the adjacent residents and inhalation of construction related emissions could cause health impacts to those exposed to the fumes.
Probability of occurrence:	Improbable
Degree to which the impact may cause irreplaceable loss of resources:	No loss of resource
Degree to which the impact can be reversed:	Reversible
Indirect impacts:	Odour/Emissions nuisance to the adjacent land users and health impacts due to inhalation to those exposed to the construction related emissions.
Cumulative impact prior to mitigation:	Low
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	Avoidable
Degree to which the impact can be managed:	Can be managed
Degree to which the impact can be mitigated:	Can be partially mitigated
Proposed mitigation:	Odour/Emissions: • Awareness training of personnel at the site and for vehicle operators on site will be conducted. • Contractors and Principal Agent/s shall at all times comply with the relevant statutory requirements including the Occupational Health and Safety Act, Act 85 of 1993. • The development of site-specific protocols with regard to delivery and use of products and use of the relevant SANS procedures.
Residual impacts:	Health impacts
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low to Medium

Potential impact and risk:	**Solid Waste:** The potential solid waste impacts associated with the nature of activities of a construction site require that solid waste impact mitigation measures are considered and implemented where required.
Nature of impact:	Negative
Extent and duration of impact:	Site Specific, Short-Term
Consequence of impact or risk:	Waste generated on site, pollutant if not correctly managed
Probability of occurrence:	Probable
Degree to which the impact may cause irreplaceable loss of resources:	No loss of resources
Degree to which the impact can be reversed:	Reversible
Indirect impacts:	Pollution of the surrounding environment if solid waste isn't correctly managed.
Cumulative impact prior to mitigation:	Low
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	Can be avoided
Degree to which the impact can be managed:	Can be managed
Degree to which the impact can be mitigated:	Can be mitigated
Proposed mitigation:	<u>Solid waste management:</u> • All waste generated during the construction activity will be stored on site in a covered waste containers and emptied regularly by a private waste contractor. • The Contractor will be bound by relevant mitigation measures as detailed in the Construction EMP. • Separate waste containers must be put in place for hazardous waste, general waste, and recyclable waste.
Residual impacts:	None
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Potential impact and risk:	**Hazardous Waste:** The potentially hazardous waste impacts associated with the nature of activities of a construction site require that hazardous waste impact mitigation measures are considered and implemented where required.
Nature of impact:	Negative
Extent and duration of impact:	Site Specific, Short-Term
Consequence of impact or risk:	Hazardous waste spills can negatively affect the surrounding environment (ground contamination). Fuel, oil, lubricants and other pollutants may leak from vehicles/ machinery and contaminate the soil.
Probability of occurrence:	Improbable
Degree to which the impact may cause irreplaceable loss of resources:	No loss of resources
Degree to which the impact can be reversed:	Reversible
Indirect impacts:	Soil and groundwater contamination could result in human health impacts if humans are exposed to the soil or contaminated groundwater by dermal contact (touching the soil or drinking the groundwater)
Cumulative impact prior to mitigation:	Low
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	Can be avoided
Degree to which the impact can be managed:	Can be managed
Degree to which the impact can be mitigated:	Can be mitigated
Proposed mitigation:	**<u>Hazardous waste management:</u>** • The Contractor will be bound by relevant mitigation measures as detailed in the EMPr. • Drip trays will be available for any vehicles that may be potentially leaking. • Emergency spill kits will be kept on site.

	• The maintenance must comply with local authority bylaws and all procedures and equipment used must be in accordance with the Occupational Health & Safety Act (No. 85 of 1993). • If an "incident" takes place on site, the main contractor must within 14 days of the incident, report to the Director General, the provincial head of department and the municipality such information as is available to enable an initial evaluation of the incident, including: a) the nature of the incident. b) the substances involved and an estimation of the quantity released and their possible acute effect on persons and the environment and data needed to assess these effects. c) initial measures are taken to minimise impacts. d) causes of the incident, whether direct or indirect, including equipment, technology, system or management failure. e) measures taken and to be taken to avoid a recurrence of such incident.
Residual impacts:	None
Cumulative impact post mitigation:	Negligible
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low to Medium

OPERATIONAL PHASE	
Potential impact and risk:	**Noise:** The potential noise impacts associated with the nature of activities for the proposed development are anticipated to be limited and of a cumulative negative effect.
Nature of impact:	Negative
Extent and duration of impact:	Site-Specific, Long-Term
Consequence of impact or risk:	Nuisance to surrounding land users
Probability of occurrence:	Improbable
Degree to which the impact may cause irreplaceable loss of resources:	No loss of resource
Degree to which the impact can be reversed:	Completely reversible
Indirect impacts:	Nuisance impacts to surrounding land users
Cumulative impact prior to mitigation:	Negligible
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	Can be avoided
Degree to which the impact can be managed:	Can be managed
Degree to which the impact can be mitigated:	Can be mitigated
Proposed mitigation:	<u>Noise:</u> • Work hours will be limited to 8:00 – 17:00. • Site machinery and vehicles must be maintained as per the manufacturer's instructions to avoid unnecessary noise. • Noise levels must comply with the relevant health & safety regulations and SANS codes and should be monitored by the Health & Safety Officer as necessary and appropriate.
Residual impacts:	None
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Potential impact and risk:	**Dust and emissions:** The potential dust and emission impacts associated with the aluminium furnace are anticipated to be limited and of a cumulative negative effect.
Nature of impact:	Negative
Extent and duration of impact:	Site-Specific, Long-Term
Consequence of impact or risk:	Nuisance to surrounding land users
Probability of occurrence:	Improbable
Degree to which the impact may cause irreplaceable loss of resources:	No loss of resource
Degree to which the impact can be reversed:	Completely reversible
Indirect impacts:	Nuisance impacts to surrounding land users
Cumulative impact prior to mitigation:	Negligible

Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	Can be avoided
Degree to which the impact can be managed:	Can be managed
Degree to which the impact can be mitigated:	Can be mitigated
Proposed mitigation:	Dust: • Dust from the exhaust gases must be removed by means of an electrostatic adsorption filter. • Dust levels specified in the National Dust Control Regulations (GN 827 of November 2013) may not be exceeded. • A Complaints Register must be available at the site office for inspection by the competent authority of dust complaints that may have been received.
Residual impacts:	None
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Potential impact and risk:	**Traffic:** The facility could have an impact on traffic in the surrounding area.
Nature of impact:	Negative
Extent and duration of impact:	Site-Specific, Long-Term
Consequence of impact or risk:	Surrounding land users are negatively impacted by the influx of delivery trucks and vehicles.
Probability of occurrence:	Probable
Degree to which the impact may cause irreplaceable loss of resources:	No loss of resource
Degree to which the impact can be reversed:	Can be reversed
Indirect impacts:	Increase in traffic pressure due to the addition of delivery trucks and vehicles
Cumulative impact prior to mitigation:	Negligible
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	Can be partially avoided
Degree to which the impact can be managed:	Can be partially managed
Degree to which the impact can be mitigated:	Can be partially mitigated
Proposed mitigation:	Traffic mitigation: • Schedule deliveries of feedstock and collection of finished products outside of peak traffic times.
Residual impacts:	None
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Potential impact and risk:	**Solid Waste:** The potential solid waste impacts associated with the nature of activities for the proposed development require that solid waste impact mitigation measures are considered and implemented where required.
Nature of impact:	Negative
Extent and duration of impact:	Site-specific, Long-Term
Consequence of impact or risk:	The improper management of solid waste, resulting in the pollution and overall negative impact on the surrounding environment.
Probability of occurrence:	Improbable
Degree to which the impact may cause irreplaceable loss of resources:	No loss of resources
Degree to which the impact can be reversed:	Can be reversed
Indirect impacts:	Pollution of the surrounding environment
Cumulative impact prior to mitigation:	Negligible
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	Can be avoided
Degree to which the impact can be managed:	Can be managed
Degree to which the impact can be mitigated:	Can be mitigated
Proposed mitigation:	Solid Waste Management: • All solid waste generated on site will be collected by the local municipality.

	• Further, the Applicant will implement an Integrated Waste Management Plan as approved by the DEA&DP (stipulated in the EMPr, Appendix H) and this may include the principles of re-use and recycling of waste. • The Applicant will be bound by relevant mitigation measures as detailed in the EMPr. • Dross and filter-captured dust will be stored only within a designated covered (roofed) external storage bay on an impermeable hardstand (upgrade prior to commissioning if impermeability cannot be demonstrated). The bay will be bunded or contained to prevent migration of solids and to contain any contaminated runoff; the area will be managed as a dirty area with clean stormwater run-off diversion and no uncontrolled discharge from the storage area. Filter dust will be stored in sealed, labelled containers; dry housekeeping will be implemented to prevent dust tracking. Filter dust (and dross, where applicable) will be classified prior to disposal and removed by an authorised service provider to a licensed facility authorised to accept the classified waste stream.
Residual impacts:	None
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Potential impact and risk:	**Domestic Effluent:** No industrial or domestic effluent other than sewage will be generated during the operational phase of the proposed activity.
Nature of impact:	Negative
Extent and duration of impact:	Site-specific, Long-Term
Consequence of impact or risk:	The improper management of domestic effluent, resulting in the pollution and overall negative impact on the surrounding environment.
Probability of occurrence:	Improbable
Degree to which the impact may cause irreplaceable loss of resources:	No loss of resources
Degree to which the impact can be reversed:	Can be reversed
Indirect impacts:	Pollution of the surrounding environment
Cumulative impact prior to mitigation:	Negligible
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	Can be avoided
Degree to which the impact can be managed:	Can be managed
Degree to which the impact can be mitigated:	Can be mitigated
Proposed mitigation:	<u>Solid Waste Management:</u> • Sewage effluent will be disposed of through the Municipal Sewage system. • The Applicant will be bound by relevant mitigation measures as detailed in the EMPr (Appendix H).
Residual impacts:	None
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Potential impact and risk:	Air Quality Impact: The potential impacts on air quality associated with the aluminium furnace are anticipated to be limited and of a cumulative negative effect.
Nature of impact:	Negative
Extent and duration of impact:	Site specific, long -term
Consequence of impact or risk:	Potential nuisance impacts to surrounding land users and communities due to atmospheric emissions; no significant health risks anticipated.
Probability of occurrence:	Probable (emissions will occur during normal operation).
Degree to which the impact may cause irreplaceable loss of resources:	No loss of irreplaceable resources.
Degree to which the impact can be reversed:	Reversible
Indirect impacts:	Nuisance impacts to surrounding land users
Cumulative impact prior to mitigation:	Low - Medium
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be avoided:	Not avoidable (emissions are inherent to the activity).

Degree to which the impact can be managed:	Can be managed.
Degree to which the impact can be mitigated:	Can be mitigated.
Proposed mitigation:	Installation and ongoing maintenance of an electrostatic adsorption filter on the aluminium furnace, and operation in compliance with the Atmospheric Emissions Licence conditions.
Residual impacts:	Low-level, localised air quality impacts.
Cumulative impact post mitigation:	Low.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low.

SECTION I: FINDINGS, IMPACT MANAGEMENT AND MITIGATION MEASURES

1.	Provide a summary of the findings and impact management measures identified by all Specialist and an indication of how these findings and recommendations have influenced the proposed development.

The proposed development entails the installation of an aluminium furnace, a conveyor for ingot casting, and a water-cooling system.

The potential air quality impacts associated with the proposed aluminium recycling facility were assessed through a specialist Atmospheric Impact Report (AIR) compiled by Yellow Tree in accordance with the National Environmental Management: Air Quality Act (Act No. 39 of 2004), the Regulations Prescribing the Format of an Atmospheric Impact Report (GNR 747 of 2013), and the Regulations Regarding Air Dispersion Modelling (GNR 533 of 2014).

The proposed activity constitutes a listed activity in terms of Subcategory 4.4 (Secondary Aluminium Production) of GN 893 of 2013 and will require an Atmospheric Emissions Licence. A Level 2 air dispersion modelling assessment was undertaken using AERMOD to predict ground-level concentrations of key pollutants under normal operating conditions.

Predicted concentrations were assessed against the National Ambient Air Quality Standards (NAAQS) and relevant international guideline values. Baseline ambient air quality data from the surrounding areas were incorporated to assess cumulative impacts. A summary of the key findings and compliance ratios is provided in the table below.

Table: Summary of Atmospheric Impact Findings and Compliance Ratios

Pollutant	Assessment Basis	Assessment Type	Applicable Standard / Guideline	Modelled Maximum Ground-Level Concentration	Ratio to Standard
Particulate Matter (PM – stack emissions)	Minimum Emission Standard (MES) for Subcategory 4.4	Emission limit compliance	30 mg/Nm³	Emissions modelled at MES concentration (0.0644 g/s)	1.0 (100%)
PM_{10} (24-hour average)	National Ambient Air Quality Standard (NAAQS)	Cumulative (baseline + project)	75 µg/m³	Approximately 73–74 µg/m³ (maximum cumulative at site boundary)	±0.98
$PM_{2.5}$ (24-hour average)	National Ambient Air Quality Standard (NAAQS)	Cumulative (baseline + project)	40 µg/m³	Approximately 43 µg/m³ (maximum cumulative)	±1.07
Hydrogen Fluoride (HF – hourly)	International health-based guideline	Facility-only	4.9 µg/m³	Approximately 0.68 µg/m³	±0.14
Hydrogen Fluoride (HF – daily)	International guideline	Facility-only	0.85 µg/m³	Approximately 0.22 µg/m³	±0.26
Ammonia (NH_3 – hourly)	International guideline	Facility-only	170 µg/m³	Approximately 21 µg/m³	±0.12
Ammonia (NH_3 – daily)	International guideline	Facility-only	100 µg/m³	Approximately 6–7 µg/m³	±0.07
Volatile Organic Compounds (VOCs – benzene proxy)	National Ambient Air Quality Standard (benzene)	Cumulative	SA NAAQS for benzene	Below applicable standard	<1.0
Sensitive receptors (schools, hospitals, residential areas)	National Ambient Air Quality Standards	Cumulative	NAAQS	No new exceedances attributable to project	N/A

The results indicate that emissions from the proposed facility, assessed at conservative Minimum Emission Standard–based emission rates, are not expected to result in new exceedances of the applicable ambient air quality standards.

Modelled particulate matter (PM_{10} and $PM_{2.5}$), hydrogen fluoride, ammonia and volatile organic compound concentrations attributable to the facility alone are low and localised, with the highest predicted concentrations occurring at or near the site boundary and rapidly decreasing with distance.

A cumulative exceedance of the 24-hour $PM_{2.5}$ standard was identified; however, this exceedance is attributable to existing baseline ambient air quality conditions within the receiving environment and is not materially worsened by the proposed development. The proposed activity therefore does not alter the compliance status of the receiving environment. With the implementation of the proposed electrostatic adsorption filter on the aluminium furnace, the overall air quality impact of the proposed development is assessed as acceptable within an established industrial area.

The air dispersion modelling undertaken in the Atmospheric Impact Assessment by Yellow Tree showed that the proposed aluminium recycling facility will have a limited impact on NAAQS compliance in the immediate vicinity of the facility, and no exceedances of air quality parameters are predicted. To ensure that the site is compliant with the minimum emissions standards, it is recommended that the proposed electrostatic adsorption filter be installed on the furnace.

2.	List the impact management measures that were identified by all Specialist that will be included in the EMPr

An electrostatic adsorption filter will be installed on the furnace and operation in compliance with the Atmospheric Emissions Licence (AEL).

3.	List the specialist investigations and the impact management measures that will **not** be implemented and provide an explanation as to why these measures will not be implemented.

N/A

4.	Explain how the proposed development will impact the surrounding communities.

The proposed aluminium recycling facility is located within an established industrial area in Elsies River, Cape Town, with surrounding land uses comprising industrial properties and nearby residential areas. The potential impacts on surrounding communities are primarily associated with air quality and general nuisance effects during the operational phase.

The Atmospheric Impact Report indicates that emissions from the proposed facility, assessed conservatively at Minimum Emission Standard–based emission rates, are expected to result in low and localised impacts on ambient air quality. Dispersion modelling shows that predicted ground-level concentrations of particulate matter, hydrogen fluoride, ammonia and volatile organic compounds decrease rapidly with distance from the site, with the highest concentrations occurring at or near the site boundary. No new exceedances of the National Ambient Air Quality Standards are predicted as a result of the proposed development.

A cumulative exceedance of the 24-hour $PM_{2.5}$ standard was identified; however, this exceedance is attributable to existing baseline ambient air quality conditions within the receiving environment and is not materially worsened by the proposed activity. As such, the proposed development is not expected to change the compliance status of the surrounding communities with respect to ambient air quality.

With the installation and proper operation of the proposed electrostatic adsorption filter on the aluminium furnace, potential air quality–related nuisance impacts to surrounding communities are expected to be limited and acceptable within the context of an established industrial area. No significant health risks to surrounding communities are anticipated.

In addition to environmental considerations, the proposed development is expected to have positive socio-economic effects, including the creation of employment opportunities and contribution to waste minimisation through aluminium recycling, which aligns with municipal recycling initiatives.

Overall, the proposed development is expected to have a low negative environmental impact on surrounding communities, with potential socio-economic benefits, provided that all recommended mitigation measures and licence conditions are implemented and adhered to.

5.	Explain how the risk of climate change may influence the proposed activity or development and how has the potential impacts of climate change been considered and addressed.

Climate change can lead to increased temperatures, more intense storms, flooding, and changes in precipitation patterns, which may affect the development's long-term sustainability and safety. For instance, higher temperatures can put strain on energy systems, while severe weather events like heavy rainfall or floods could overwhelm drainage systems and damage infrastructure.

To address these potential impacts, the development can incorporate climate resilience measures. This could include designing buildings with energy-efficient materials to reduce heat absorption, installing sustainable drainage systems to manage stormwater, and choosing flood-resistant construction techniques. Planning for climate resilience through thoughtful design, investment in sustainable infrastructure, and community engagement can help reduce risks and ensure the development remains safe and liveable in the face of climate change.

6.	Explain whether there are any conflicting recommendations between the specialists. If so, explain how these have been addressed and resolved.

Although only one specialist study (air quality) has been undertaken for the project at this pre-application stage, the recommendations in that specialist report have been reviewed for consistency with the project description, listed-activity screening and proposed mitigation. No conflicts exist in respect of impact findings or mitigation measures: both this Pre-App BAR and the Atmospheric Impact Report identify air quality as the

key potential risk pathway and confirm that emissions must be controlled through the installation and compliant operation and maintenance of the proposed abatement system (electrostatic adsorption filtration) and compliance with the requirements of the Atmospheric Emissions Licence.

A potential inconsistency was identified in the procedural interpretation recorded in the Atmospheric Impact Report's executive summary, which states that the requirement for an AEL triggers Activity 6 of Listing Notice 2 and therefore necessitates a full Scoping and EIR process. The Pre-App BAR's screening, however, confirms that the proposed facility constitutes a listed waste management activity (Category A Activity 3) due to the recycling of general waste at an operational area exceeding 500 m² (517 m²), and Listing Notice 2 contains an explicit exclusion for activities included in the waste management activity list published in terms of section 19 of NEM:WA, in which case the Waste Act applies. This procedural discrepancy has been addressed by treating the AIR's S&EIR statement as an initial assumption for licensing pathway purposes, and by aligning the BAR's authorisation narrative with the applicable legislative routing (NEM:WA Category A Basic Assessment/WML process, with the AEL to be applied for and complied with in parallel). Should the competent authority require confirmation of the preferred regulatory pathway, written confirmation will be requested and appended to the BAR record.

7.	Explain how the findings and recommendations of the different specialist studies have been integrated to inform the most appropriate mitigation measures that should be implemented to manage the potential impacts of the proposed activity or development.

The specialist concluded that the proposed activity is unlikely to result in any NAAQS compliance in the immediate vicinity of the site. To ensure that the site is compliant with the minimum emissions standards, it is recommended that the proposed electrostatic adsorption filter be installed on the furnace.

8.	Explain how the mitigation hierarchy has been applied to arrive at the best practicable environmental option.

The mitigation hierarchy was applied during the alternatives and design process to identify the best practicable environmental option with the lowest reasonably achievable residual impact, considering technical feasibility, cost, and compliance requirements.

Avoid:

Impacts were avoided at source by selecting a previously transformed, industrial-zoned site and accommodating the activity largely within an existing warehouse, thereby avoiding greenfield land use, vegetation clearance, and new bulk infrastructure. The preferred layout keeps operations within the existing developed footprint and avoids unnecessary expansion, reducing the likelihood of direct impacts on biodiversity features and limiting the spatial extent of construction-related disturbance. The No-Go alternative was considered as the baseline (no new impacts, but foregoes recycling and socio-economic benefits), and the preferred site alternative was selected because it avoids higher sensitivity and land-use conflict risks associated with non-industrial/greenfield locations.

Minimise:

Where impacts cannot be fully avoided, particularly air emissions, nuisance impacts, waste residues, and pollution risks, the proposal is designed to minimise impacts through engineering controls and operational management. Key measures include: capture-at-source for furnace emissions, installation and correct operation/maintenance of the proposed filtration/abatement system, compliant storage of dusty materials and residues (e.g., roofed/contained storage), strict housekeeping, spill prevention, and stormwater containment to prevent contaminated runoff leaving the site. Operational minimisation also includes controlled material handling methods, complaint-response procedures, and compliance with any applicable authorisation requirements supported by auditable monitoring and recordkeeping.

Rehabilitate/restore:

Temporary construction and installation disturbances are addressed through a method statement that limits disturbance to essential areas, protects existing infrastructure, and requires reinstatement of any disturbed surfaces, clean-up of laydown areas, and proper disposal of wastes. Any accidental contamination is addressed through immediate clean-up and disposal via appropriately authorised facilities, with corrective actions to prevent recurrence.

Offset:

Offsets are not proposed because the preferred alternative avoids significant residual biodiversity loss by using an already transformed industrial site and focusing impacts within an existing footprint. Should future verification identify any unforeseen significant residual impacts that cannot be avoided or reduced to acceptable levels, the mitigation strategy would be revisited, and offsets would only be considered where required by the competent authority and supported by an appropriate offset assessment.

Applying the hierarchy resulted in a preferred option that maximises avoidance through footprint containment, and minimises the key operational risks through enforceable measures, leaving only low, manageable residual impacts under licence conditions and the EMPr, thereby representing the best practicable environmental option at pre-application stage.To ensure that the site is compliant with the minimum emissions standards, it is recommended that the proposed electrostatic adsorption filter be installed on the furnace.

SECTION J: GENERAL

1. Environmental Impact Statement

1.1.	Provide a summary of the key findings of the EIA.

The assessment indicates that the key potential negative impact pathway is air quality and nuisance associated with furnace operation. Dispersion modelling results presented, indicate no new exceedances of applicable ambient standards are predicted due to the project, and that any identified exceedance (e.g., 24-hour $PM_{2.5}$) is attributable to baseline conditions and is not materially worsened by the proposal, provided the electrostatic adsorption filter is installed and operated/maintained correctly and the operation complies with AEL requirements

The proposed development includes the installation of an electrical aluminium furnace, an ingot casting conveyor belt, and a water-cooling system. The site will produce approximately 120 tons of aluminium per month. Finished products will be stored within the existing warehouse prior to dispatch to customers. Aluminium dross and filter-captured dust will be stored in a dedicated roofed area outside the warehouse, on an impermeable, contained hardstand with stormwater run-off diversion and control, with filter dust stored sealed and labelled and disposed of only at a licensed facility authorised to accept the classified waste (to be confirmed at application stage). The dross will be dispatched to customers for further processing, while the dust will be collected by a registered service provider for disposal at a suitable landfill site.

Only an atmospheric impact assessment was undertaken for the project. The study found that the proposed activity is predicted to have a limited impact on the NAAQS compliance in the immediate vicinity of the site or any sensitive receptors.

The development is expected to have a low impact on the environment and local air quality. The only mitigation measure recommended by the specialist is for the installation of electrostatic adsorption filters to the furnace, which already forms part of the proposal. The proposed aluminium recycling facility is anticipated to positively impact the surrounding communities by diverting waste away from landfill, providing job opportunities, and by increasing the amount of recycled aluminium in the local supply chain. It makes use of existing infrastructure and services, increasing the efficiency of land use in the area.

Based on the findings, the development is recommended for approval.

1.2.	Provide a map that superimposes the preferred activity and its associated structures and infrastructure on the environmental sensitivities of the preferred site indicating any areas that should be avoided, including buffers. (Attach map to this BAR as Appendix B2)

SDP attached as **Appendix B1**. There are no environmentally sensitive areas on site.

1.3.	Provide a summary of the positive and negative impacts and risks that the proposed activity or development and alternatives will have on the environment and community.

Positive

1. Reduction in waste to landfill.
2. Employment opportunities.
3. Increased recycled aluminium in the supply chain
4. The site is already developed and connected to municipal services.
5. There are no sensitive receptors on the site or adjacent properties, and there will be no impacts on biodiversity.
6. The site is located within an established industrial area, reducing the impacts of noise and visual intrusion.

Negative

1. Impact on air quality from furnace and vehicle emissions
2. Increased traffic in the vicinity of the site.

7. Recommendation of the Environmental Assessment Practitioner ("EAP")

2.1.	Provide Impact management outcomes (based on the assessment and where applicable, specialist assessments) for the proposed activity or development for inclusion in the EMPr

The general pre-construction, construction, and close-out phase as well as site management measures to minimise health, safety and environmental risk associated with the development, which are contained in the EMPr in **Appendix H**, should be adhered to. Impact management, mitigation, and monitoring measures are captured in the impact assessment and significance rating, as well as in the Environmental Management Plan/Programme (EMPr) attached as **Appendix H**.

The EMPr forms part of the contractual obligations to which all persons including but not limited to, contractors/sub-contractors or employees involved in the proposed development works, must be committed. It also serves as a baseline information document for the project applicant and any entity working on behalf of the applicant, during the various phases of the proposed activity. The EMPr aims to comply with Section 24N of the National Environmental Management Act No. 107 of 1998, as amended (NEMA), as well as any additional specific information requested by any government department, including the regulating authority for this specific project, the DEA&DP. The overall objective of the EMPr is to direct and guide all responsible parties, binding all contractors, sub-contractors, and all other persons working on the site to adhere to the terms and conditions of the

EMPr during the pre-construction, construction and close-out phases of the project. The overall outcome of the EMPr is to prevent avoidable damage and/or minimize or mitigate unavoidable environmental damage associated with the pre-construction, construction and close-out phases of the proposed project. The specific outcomes of the EMPr will be achieved by ensuring that the mitigation and management measures detailed in the EMPr are implemented and adhered to throughout the project duration. Compliance monitoring and independent assessment/auditing allow the verification of achievement of the EMPr outcomes and ultimately, fulfilment of the EMPr objectives.

The EMPr:

- identifies project activities that could cause actual environmental damage (or potential environmental risks) and provides a summary of actions required;
- identifies persons responsible for ensuring compliance with the EMPr;
- provides standard procedures to avoid and/or minimize the identified negative environmental impacts and to enhance the positive impact of the project on the environment;
- provides the site and project-specific rules and actions required, including a site plan/s showing:
- areas where construction, maintenance, or demolition work may be carried out;
- areas where any material or waste may be stored;
- allowed access routes, parking, and turning areas for construction or construction-related vehicles;
- forms a written record of procedures, responsibilities, requirements, and rules for contractor/s, their staff, and any other person who must comply with the EMPr;
- provides a monitoring and auditing program to track and record compliance and identify and respond to any potential or actual negative environmental impacts; and
- provides a monitoring program to record any mitigation measures that are implemented

2.2.	Provide a description of any aspects that were conditional to the findings of the assessment either by the EAP or specialist that must be included as conditions of the authorisation.

N/A

2.3.	Provide a reasoned opinion as to whether the proposed activity or development should or should not be authorised, and if the opinion is that it should be authorised, any conditions that should be included in the authorisation.

The proposed development can be authorised, provided it is implemented on the preferred, existing industrial warehouse footprint and subject to strict, enforceable conditions that ensure air-emissions control and compliance, lawful and traceable waste management and pollution prevention and nuisance management. The primary reason for supporting authorisation is that the proposal is located in an existing, transformed industrial area, uses existing infrastructure, and its key potentially significant impact pathway (air emissions and nuisance) is controllable at source through engineered abatement, licensing, monitoring and auditable operating rules.

Approval should also be granted due to the proposed developments overall positive impact on the city and surrounding community and minimal environmental concerns. The site is already connected to all the required municipal services. There are no sensitive environmental receptors around the site, and the closest residential property is located 190m southwest of the site.

The development will increase the aluminium recycling capacity of the city and divert waste from landfill. It complements the recycling initiatives of the City of Cape Town. It will generate approximately 16 new permanent job opportunities and will contribute to economic growth.

Given the low environmental impact, the current state of the site, and the benefits associated with the proposed facility, **it is recommended that this application be authorised with the necessary conditions of approval as described throughout the BAR and the EMPr (Appendix H).**

2.4.	Provide a description of any assumptions, uncertainties and gaps in knowledge that relate to the assessment and mitigation measures proposed.

Assumptions

It is assumed that all information presented in this report is accurate and valid. The impacts discussed may change once the project is underway, due to unforeseen real-world events. The identified impacts and proposed mitigation measures are based on the current information. It is also assumed that the mitigation measures outlined in this report and the EMPr (Appendix H) will be implemented and followed. The impact assessment and recommended mitigations were informed by site-specific ecological observations from the site visit, as well as the assessor's expertise and experience with similar projects.

Uncertainties

It is assumed that management will responsibly address incidents as they arise, investigating their causes and taking corrective actions where necessary. An HSE consultant will be appointed to assist management in ensuring compliance with the Occupational Health & Safety Act. It is also assumed that the available data, including Topocadastral maps, vegetation and water resource maps, orthophotographs, geological maps, and information from the DWS national groundwater database, are reasonably accurate. Additionally, it is assumed that all specialist input and information extracted from specialist reports are correct.

Gaps in Knowledge

There are no significant gaps in knowledge for the proposed project.

2.5.	The period for which the EA is required, the date the activity will be concluded and when the post construction monitoring requirements should be finalised.	
	I. The period in which commencement must occur;	5 years
	II. The period for which the environmental authorization is granted and the date on which the development proposal will have been concluded, where the environmental authorization does not include operational aspects;	TBC
	III. The period for which the portion of the environmental authorization that deals with non-operational aspects is granted; and	5 years
	IV. The period for which the portion of the environmental authorization that deals with operational aspects is granted.	The operational phase is permanent

8. Water

Since the Western Cape is a water scarce area explain what measures will be implemented to avoid the use of potable water during the development and operational phase and what measures will be implemented to reduce your water demand, save water and measures to reuse or recycle water.
Non-potable water will be used, where possible, for all construction and mitigation activities on site. Potable water will only be used as drinking water on site. During operation, water for the water-cooling system will be sourced from groundwater. The water-cooling system will recycle the process water to reduce consumption. Water will be abstracted at a rate of 0.6-1.2m^3 per month.

9. Waste

Explain what measures have been taken to reduce, reuse or recycle waste.
All waste generated on-site (general and hazardous), must be collected, consolidated in dedicated bins, removed, and disposed of at registered disposal facilities (registered landfill sites). Any hazardous waste discovered will also be disposed of according to the applicable and appropriate measures. Waste must be separated into recyclable and non-recyclable material and disposed of at a dedicated recycling point (where applicable). Waste receipts are required as proof of safe disposal. The convention of separate waste containment and removal of recyclable waste is envisaged during the operational phase.

10. Energy Efficiency

8.1.	Explain what design measures have been taken to ensure that the development proposal will be energy efficient.
	Technology: The preferred process is an electric induction aluminium furnace (as opposed to a gas-fired furnace), which avoids on-site fuel combustion and enables controlled, on-demand heating for the melt cycles. This choice was explicitly identified as the preferred technology for the facility. **Cooling system:** The ingot cooling is via a water-cooling tower, and the design includes a water recovery system to minimise water usage, which reduces make-up water demand and associated pumping/handling demands over the operating life. **Use of existing built infrastructure:** The facility is accommodated within an existing warehouse on an already developed industrial site, which avoids the energy and material demand of constructing new building civil works and keeps the footprint contained.