

ENVIRONMENTAL MANAGEMENT PROGRAMME

Get Alloys Aluminium and Copper Foundry Expansion, Parow



The
Environmental
Practice

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1. INTRODUCTION

GeT Alloys (Pty) Ltd is proposing to expand their existing scrap aluminium foundry. The expansion will entail installing new aluminium furnaces and copper furnaces. The foundry already covers all of industrial-zoned Erf 23631, as well as a portion of Erf 12399, which is situated in Parow in Beaconvale Industrial. The foundry expansion will take place within this developed footprint.

This EMP, compiled in terms of Section 11 of the National Environmental Management Act, 1998 (Act No. 107 of 1998), Section 24N of the National Environmental Management Act, Act No. 107 of 1998 (as amended) (NEMA) and Appendix 4 of the 2014 EIA Regulations, provides a pro-active and practical working mechanism to aid Get Alloys to avoid, minimize and control any possible adverse impacts associated with the development.

2. DETAIL AND EXPERIENCE OF THE EAP WHO PREPARED THE EMPR

The EMPr has been compiled by Colleen McCreadie of The Environmental Practice. Enviroprac is an independent consultancy with no financial interest in operations at the foundry, other than remuneration for work performed in terms of the National Environmental Management Act, Specific Environmental Management Acts and the authorisations issued in terms thereof; and does not have and will not have any vested interest in the outcome of this EMPr.

Colleen has fifteen years' experience in environmental management, including impact assessment and monitoring. Colleen has an Economics Honours degree from the University of Cape Town; is a registered environmental assessment practitioner with EAPASA (Reg. No. 2018/166); and is a member of good standing with the International Association of Impact Assessment, the National Association for Clean Air, and the Institute of Waste Management in Southern Africa.

Please refer to the EAP Curriculum Vitae contained in **Appendix E**.

3. PROJECT DESCRIPTION

The proposal is to expand current operations at the Get Alloys scrap aluminium alloying foundry, to increase the aluminium alloy production capacity. This will also include melting scrap copper for copper alloy production, and improved infrastructure for aluminium dross recovery.

The current foundry has been operating since the 1980s. Currently, the foundry is operating with two furnaces. The upgrade will entail operating with a total of four fuel-oil fired melting furnaces: (one 5-tonne and three 8-tonne in capacity. And: each 8-tonne melting furnace operates in combination with a 10-tonne holding furnace, from which the melt is poured and cast. The alloy is cast into moulds via one of three casting machines, to form ingots.

In addition, one 2.5-tonne or two 1-tonne box type furnaces will be installed to produce copper alloy ingots. The fuel oil fired furnace(s) is charged with copper scrap in a batch process. Copper alloy is tapped and cast into moulds on a carousel system and allowed to cool to form copper ingots. The plant will produce 250 tonnes of copper alloy per month. Both aluminium and copper alloy ingots are packed and dispatched via truck.

For the aluminium alloy production, it is expected that the final output of aluminium will be 1750 tonnes per month, derived from melting about 2100 tonnes of scrap aluminium. For the copper, 300 tonnes of scrap will be melted to produce 250 tonnes of copper per month.

All furnaces are fitted with localised fume extraction to capture emission from the furnace charging (loading), melting and casting processes. Fugitive emissions will furthermore be extracted from the building roof at its apex. Emissions will be discharged to atmosphere via a bag filter.

About 20 tonnes per day of dross from the aluminium furnaces will be tapped or skimmed from the molten material surface and recovered for reuse on site. It is expected that a recovery rate of 10 – 15% can be achieved. The dross recovery plant will be connected to the foundry emission extraction and filtration system.

Bulk engineering services

The foundry is already connected to the municipal bulk engineering services network. The expansion will utilise this municipal services supply.

Site access

The trucks travelling to and from the site will utilise the current site access points in Glenhurst Street and in Selsdon Road.

Water uses

Groundwater is being abstracted from an existing borehole at the rate of $\pm 10\,000$ litres per month and is used for cooling the moulds.

Figure 1 Site location

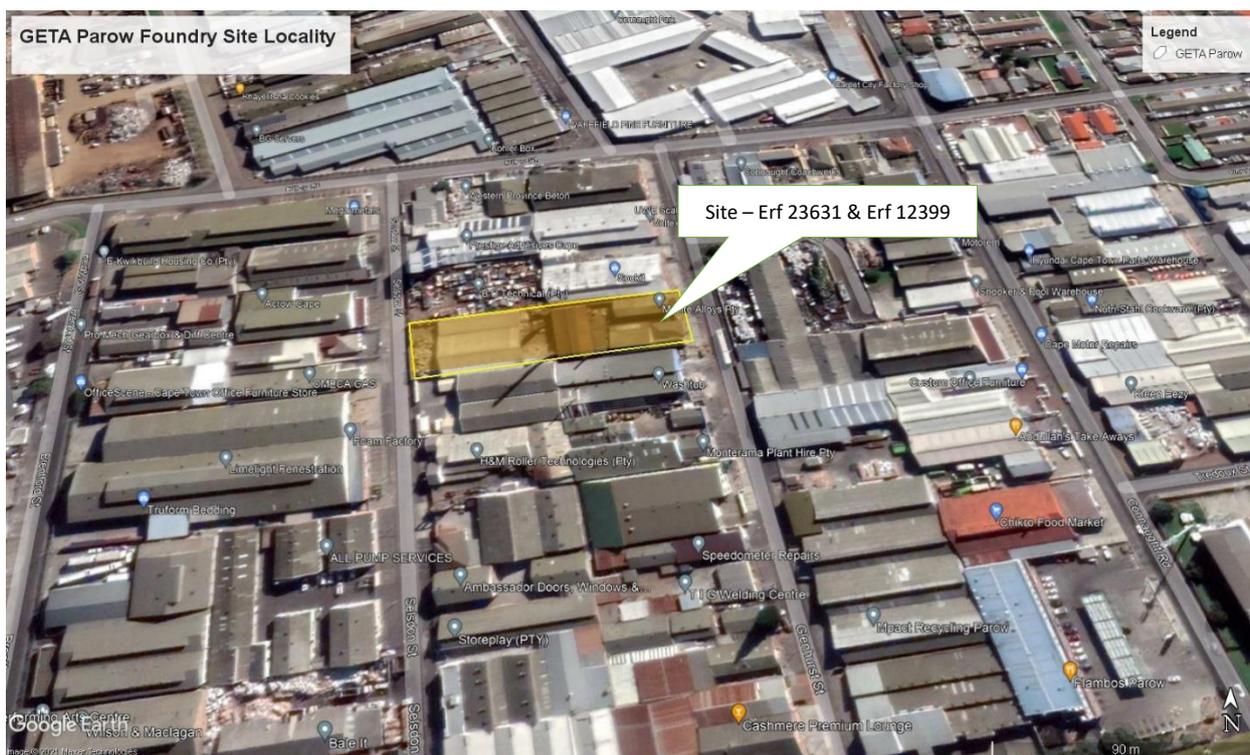


Image courtesy of Google Earth, 2021

4. ASPECTS COVERED BY THIS EMP

The development proposal entails the expansion and operation of an existing scrap aluminium alloying foundry as described above. The potentially significant impacts identified during the EIA process as being associated with the facility are as follows:

Construction and decommissioning phases:

The expansion of the foundry will not entail any construction-type activities which are in any way different from the heavy industrial activities taking place currently on site and on neighbouring sites in the Beaconvale industrial area. The expansion will entail assembling and installing equipment on a fully-developed site.

And, there are no plans to decommission the foundry. However, should the facility be decommissioned in the future, impacts will be very similar to those associated with the operational phase – being noise; dust; waste (rubble and scrap should the buildings be demolished). The management measures applicable to the operational phase (lawful and best practice waste management; dust control; noise abatement as far as possible and necessary given the industrial surrounds) are considered suitable for a possible decommissioning phase.

Operational phase:

4.1. Soil, Groundwater and Freshwater Contamination

Hydrocarbons are toxic to aquatic systems. Contamination of natural resources could occur due to leaks and spills and failure of storage and handling infrastructure. Other aspects are poor on-site stormwater management (clean and dirty pathways), poor containment of dirty stormwater on-site – resulting in contamination of adjacent properties / environments and pollution and contamination of the municipal stormwater system due to poor on-site stormwater management.

4.2. Health and Safety of Employees

The foundry has significant associated risks in terms of health and safety of workers (working with extreme temperature machinery and molten metal; furnace emissions in the workplace; handling hazardous dross (corrosive; skin and lung irritant; potential for harmful and explosive fumes when wet). The facility needs to be designed and operated in such a way as to effectively avoid and manage health and safety risks.

4.3. Waste Impacts

The operation of the foundry will generate only small quantities of general waste such as office and some kitchen waste. This will be disposed of in the municipal waste stream.

The following aspects of the foundry operation are considered to be part of the waste-to-value chain, and to entail waste management activities:

- The activity itself is a general waste (scrap metal) recovery activity. Impacts associated with this waste recovery process have been discussed elsewhere and entail mainly air emissions and health and safety risks. These can be readily minimised by implementing fit-for-purpose emissions abatement and best practice health and safety operating protocols.
- A significant waste stream associated with the recovery of aluminium is a substance called dross. Dross is the unwanted material that forms on the surface of molten metal. Dross is considered hazardous, especially when it is wet as it releases high concentrations of hydrogen and ammonia.

4.4. Potential Noise Impacts

The operation of machinery and vehicular movement associated with the operation of the foundry will result in noise. This noise could potentially impact sensitive receptors in the surrounding receiving environment, although this is not expected, given the location of the concerned property within the Industrial Area of Beaconvale within Parow.

Due to the nature and scale of the proposed foundry expansion, considered in the context of the industrialised surroundings, noise levels are not expected to be “disturbing” as defined in the Western Cape Noise Control Regulations, 2013 (i.e. to exceed ambient noise levels by 7dBA or more).

Extensive mitigation is not applicable in the case of an industrial plant operating in a heavy industrial area. However, the applicant will need to operate within the noise limits set by the Western Cape Noise Control Regulations, 2013 to avoid “disturbing” noise. In addition, Get Alloys needs to ensure that its vehicle fleet is

regularly serviced and maintained to ensure that these vehicles do not operate at elevated noise levels due to lack of maintenance.

4.5. Impact on Ambient Air Quality

Particulate matter, gaseous and vehicle exhaust emissions resulting in potential health and nuisance dust impact. An Atmospheric Impact Report was compiled by Soundscape Consulting (Pty) Ltd to assess the potential impact on air quality as a result of the operation of the proposed expansion of the aluminium foundry on sensitive receptors in the surrounding environs. The conclusion of this impact assessment is summarized as follows:

“Pollutants generated by the melting process and released through the main baghouse stack that are subject to Minim Emission Standards (MES) include particulate matter (PM), combustion gases oxides of nitrogen (NOx), and sulphur dioxide (SO2) as well as ammonia, hydrogen fluoride and volatile organic compounds (VOC). The cold dross recovery process will generate PM emissions will be released to atmosphere via the main baghouse stack and as fugitives from the cooling bays and recovery building.

To determine the potential for air quality related impacts on human health and the environment, a Level 2 assessment, as per the requirements of the 2014 “Regulations Regarding Air Dispersion Modelling”, was conducted.

Through atmospheric dispersion simulations, the GeT Alloys foundry was shown to result in cumulative 1-year and 24-hour average PM10 concentrations which exceed NAAQS off-site. Exceedances are however limited to the immediate vicinity of the property boundary with concentrations at a fraction of NAAQS at nearby residential receptors. Off-site NO2 and SO2 concentrations and dustfall rates are within NAAQS and NDCR off-site. The project will generally contribute less than 10% to NAAQS at surrounding residential receptors...

*The significance air quality impacts associated with the GeT Alloys foundry in Parow was determined by applying the appointed Environmental Impact Assessment Practitioner’s chosen methodology. The impact significance is **Low** with mitigation.*

It is concluded that air quality impacts should have an influence on the environmental authorisation decision and cannot be completely avoided. It is the specialist’s reasoned opinion that the expansion of the foundry may proceed provided that planned air quality management interventions listed in this report are implemented”.

4.6. Traffic Impacts associated with the Foundry Expansion

During the Operational Phase, the expanded foundry will generate traffic in the form of personnel vehicles, as well as a fleet of trucks for delivery of the aluminium and copper scrap and the pickup of the moulded ingots to and from the property.

Given the location of the foundry plant within the Beaconvale industrial area, it is not anticipated that the new plant will add materially to the amount of traffic on the surrounding road network during the operational phase.

In terms of access arrangements, the activity proposal includes access and exit at the current property access from Glenhurst Street and Selsdon Road. No additional access is required for the operation of the expanded aluminium and copper foundry.

4.7. Socio-Economic Impacts (Benefits)

Get Alloys will increase their market share and profitability. There will be knock-on benefits for Get Alloys’ staff in terms of job and income security. The plant will require the employment of four new staff members.

The metal recovery process has significant benefits in terms of the waste-to-value chain and diversion of waste from landfill and avoiding the impacts associated with mining and processing of virgin materials.

It can be argued that successful businesses in the Beaconvale industrial area, could attract additional investment into the area: businesses which provide goods and services to GeT Alloys, the scrap providers (companies and individuals), and construction-related businesses which use GeT Alloys’ aluminium alloy and copper in their manufacturing and construction processes.

In order to minimise any negative impacts associated with the facility, therefore, it is imperative that the lifecycle of the facility, as well as all aspects of the facility’s expansion (infrastructure and buildings) and operation (processing, storage, and handling) are subject the conditions set out in this EMP. The conditions directly address the identified potential impacts, in order to ensure that the health, safety and environmental risks associated with the plant can be avoided or minimised.

5. MAP OF ENVIRONMENTAL SENSITIVITIES

The site where the proposed development is to be situated is a heavily transformed industrial site. The closest residential properties are situated ±300m to the south and ±300m to north east. The Elsieskraal river is located 1km to the north and a small depression wetland is located more than 750m south west of the site.

There are no environmental sensitivities on or nearby the site. Please refer to the site layout plan contained in **Appendix B**.

6. ROLES AND RESPONSIBILITIES

There are various key role players involved in the proposed work – these are outlined below.

Position	Responsibilities	Company	Representative	Contact Details
Client	1) For the lifecycle of the facility, appoint: <ul style="list-style-type: none"> a. A Project Manager b. A Main Contractor c. An Independent ECO 2) Include implementation of EMP in all contract documentation 3) Overall responsibility for implementation of EMP and for any rehabilitation	GeT Alloys (Pty) Ltd	Wikus Du Plessis	082 907 9407 021 879 3367 wikus@getalloys.co.za

Position	Responsibilities	Company	Representative	Contact Details
	<p>4) All on-going environmental monitoring, health and safety training, and other on-going management measures contained in the EMP, should be reported on to the DEA&DP and the City by the Client during the operational phase, at the frequency determined by the licensing authority.</p> <p>5) Reporting operational-phase emergency incidences in terms of NEMA Section 30 to the relevant authorities.</p>			
Council Representative (environmental officer)	1) Monitor compliance of this EMP by the client through the ECO	City of Cape Town Municipality		
Project Manager	<p>2) Appoint Contractor</p> <p>3) Include implementation of EMP in all contract documentation</p>			
Main Contractor	<p>1) Implement EMP</p> <p>2) Appoint on-site ESO</p> <p>3) Appoint HSE representative</p>			
Contractor's Site Environmental Officer	<p>1) Daily monitoring of EMP implementation</p> <p>2) Recommending corrective action to Contractor</p> <p>3) On-going staff environmental awareness training</p> <p>4) Reporting to ECO on compliance with EMP and of environmental incidences requiring correction.</p> <p>5) Reporting emergency incidences in terms of NEMA Section 30 to the ECO and to the relevant authorities.</p>			
Contractor's HSE Representative	1) Oversight of implementation of OHS Act			
Independent Environmental	1) Weekly reporting to Client, Project Manager			

Position	Responsibilities	Company	Representative	Contact Details
Compliance Officer (ECO)	<p>and Contractor on compliance with EMP and of environmental incidences requiring correction during construction and decommission phases (if applicable).</p> <p>2) Monthly reporting on compliance to the relevant authorities during construction and decommissioning phases (if applicable).</p> <p>a. Reports must contain monitoring laboratory results, chain-of-custody receipts to show safe disposal of hazardous waste, incident reports from the environmental register, etc</p> <p>3) Issue a cease works order to Contractor's staff in the event of imminent environmental risk / incident.</p> <p>4) Ongoing assessment of the efficacy of the EMP to achieve environmental management objectives.</p> <p>5) Recommend amendment of EMP to Client as required in order to achieve environmental management objectives.</p>			

7. LEGISLATIVE FRAMEWORK AND OBLIGATIONS

This Environmental Management Programme (EMP) should adhere to the national laws and local authority by-law requirements as well as any other obligatory environmental and other legal requirements (such as those listed in the table below).

Changes to this EMP can only be made in accordance with the procedures outlined in Chapter 5, Parts 3 and 4 of the 2014 NEMA EIA Regulations (as amended).

It is the full responsibility of GeT Alloys (Pty) Ltd or any future development entity (where transfer of ownership occurs) to ensure that this EMP and its requirements including any environmental rehabilitation is adhered to and implemented. This is a requirement as per Section 28 (Duty of Care and Remediation of Damage) of the National Environmental Management Act, (Act No. 107 of 1998), as amended.

The applicant should adhere to any statutory requirements which may be relevant to the lifecycle of the scrap aluminium alloy facility. Laws applicable to this EMP are outlined in the table below.

Acts, Laws and By-Laws	Regulations, Norms and Standards
The National Environmental Management Act, Act 107 of 1998, as amended (NEMA)	Waste Classification and Management Regulations, August 2013
National Water Act, Act 36 of 1998, as amended	National Norms and Standards for the Assessment of Waste for Landfill Disposal, August 2013
National Environmental Management Waste Act, Act 59 of 2008	National Norms and Standards for the Storage of Waste, November 2013
All relevant by laws and building regulations of City of Cape Town	National Norm and Standards for the Sorting, Shredding, Grinding, Crushing, Screening or Baling of General Waste, October 2017
The Operational Health and Safety Act, Act 85 of 1993	Relevant SANS codes
The National Environmental Management Air Quality Act, Act No. 39 of 2004	

8. IMPACT MANAGEMENT OUTCOMES, TARGETS AND MEASURES

A variety of potential impacts are associated with the expansion and operation of the scrap aluminium alloy facility. Reference is made to the EIA Report and appended specialist studies, which form part of the submission made to the DEA&DP. This information will form the basis of the DEA&DP's decision on whether to grant authorisation for proposed foundry expansion.

A number of mitigatory measures are proposed to minimise impacts during the operational phase.

It is understood that the applicant, GeT Alloys (Pty) Ltd, is responsible for the implementation of the recommended impact management measures throughout the lifecycle of the development; as well as being responsible for any environmental rehabilitation as identified.

8.1. OPERATIONAL PHASE MITIGATION MEASURES

The measures for minimising health, safety and environmental risk associated with operations at the expanded foundry, will need to be implemented on an on-going basis throughout the operational lifespan of the development.

8.1.1. Potential for Soil and Freshwater Contamination

SOIL AND GROUNDWATER CONTAMINATION AND FRESHWATER CONTAMINATION			
Objective(s)	<p>To minimise risk of contamination</p> <p>To ensure that any spills or leaks at the site from an incident or from day-to-day product storage and handling activities, are not able to reach any soil or groundwater or freshwater ecosystems nearby, or reach the municipal storm water system. And in the event of an incident, that prompt action is taken to remedy the cause of the spill or leak and to address any potential contamination.</p>		
Management Strategy	<p>To comply with the s best practice operating procedures and various authority requirements with respect to prevention of soil and freshwater (stormwater, groundwater, surface water) resources.</p>		
		Responsibility	Timing
Control(s)	<ol style="list-style-type: none"> 1) The storage and handling of fuel will be done on an impermeable surface (area for fuel storage is bunded). This inherently reduces the risk of soil and ground water contamination. However, the on-site management of clean and dirty stormwater must be effectively managed to ensure that the potential risk of contamination of the municipal system is prevent and mitigated effectively when necessary. 2) Ensure that fuel storage tanks are adequately bunded and the installation complies with SANS 10131: Above-ground storage tanks for petroleum products. 3) Designated refuelling areas and procedures to reduce spills, leaks, infrastructure failure. Educate employees in correct handling and refuelling procedures. 4) A spill response kit appropriate to hydrocarbons will be available on site. Hydrocarbon contaminated material will be disposed of as hazardous waste 5) A Preventative Maintenance Plan for the infrastructure relating to Hazchem storage and handling; for the boilers and grit arrestors; and for the grain conveyors to ensure ongoing noise reduction, must be compiled. 	<p>The applicant or representative</p>	<p>For the duration of the operational phase</p>

SOIL AND GROUNDWATER CONTAMINATION AND FRESHWATER CONTAMINATION

	<p>6) Staff must be trained in preventative maintenance, with records of staff training retained for external auditing purposes.</p> <p>7) An Environmental Register must be kept on site. The Incident and Accident Registers may be kept in the Environmental Register. Details of any incidences which may occur, as well as details on how the incident was rectified and / or remediated, must be included in the register. The register should also include chain-of custody receipts from disposal of hazardous waste; copies of any Section 30 Incident Form which may need to be sent to the authorities in the event of an incident; results of on-going emission monitoring; details of complaints from neighbouring parties with respect to nuisance impacts such as noise or odours; etc. The Environmental Register should be kept updated by the designated site Safety Officer. All recognized natural habitats and protected areas in the immediate vicinity of the activity will not be damaged or exploited.</p>		
Performance Indicator(s)	<p>1) Little to no incidents reported in the Environmental Register.</p> <p>2) Equipment failure avoided.</p>		
Monitoring	<p>1) Monitor equipment and processes according to requirements of SOP's and Maintenance Plans</p>	The applicant or representative	Bi-annually during operational phase
Reporting	<p>1) Internal audits of the operation against the SOP to be conducted with records retained for external auditing purposes.</p> <p>2) Internal audits of the operation against the Preventative Maintenance Plan to be conducted with records retained for external auditing purposes.</p> <p>3) Any incident that results in ingress of product into the soil must be reported to all relevant authorities, including the DEA&DP's Pollution Management Directorate, within 14 days. Containment, clean-up and remediation must commence immediately.</p>	The applicant or representative	Bi-annually / when an incident occurs
Corrective Action(s)	In the event of a spill or leak, the Spill Response Procedure contained in Appendix C must be implemented.	The applicant or representative	Immediately upon detection of problem

8.1.2. Atmospheric Emissions

MANAGEMENT OF ATMOSPHERIC EMISSIONS			
Objective(s)	To avoid health and nuisance/lifestyle impacts associated with atmospheric emissions from operational activities		
Management Strategy	To comply with the ambient air quality standards for criteria pollutants and the National Dust Control Regulations for dustfall and Minimum Emission Standards for Listed activities under Subcategory 4.2: Combustion installations and Subcategory 4.4: Secondary aluminium production published in terms of Section 21 of NEM:AQA.		
		Responsibility	Timing
Control(s)	<ol style="list-style-type: none"> 1) As per the planned Turnkey Modular air pollution control system design, all furnaces must be fitted with fume extraction, both from the furnaces itself and via hoods to capture fumes during charging and/or tapping. Fugitive emissions must furthermore be extracted from the foundry building roof at its apex as well as the dross recovery plant. The system design must ensure the PM concentration in the plume exiting the 30 m stack meets the MES of 30 mg/Nm³. 2) Fugitive PM emissions should be minimised to avoid off-site exceedances of NAAQS. See Fugitive Emissions Management Plan appended to Basic Assessment Report. 3) Good housekeeping, e.g., avoiding and cleaning up spillages of fine materials such as baghouse dust and dross. 4) Keep vehicle driveways clean and free of dust to avoid entrainment. 5) Avoid unnecessary handling of dry fine materials such as dross as it is removed from the foundry to the cooling bay to the recovery plant. 6) Ensure cooling dross stockpiles are not exposed to wind to avoid windblown dust. 7) Fugitive ammonia emissions must be avoided by keeping dross dry i.e., covered within the cooling bay dross recovery building. 8) To reduce vehicle exhaust emissions, avoid unnecessary idling of vehicles on-site. 9) In terms of compliance monitoring, the periodic compliance emissions monitoring will be required from GeT Alloys under section 21(1)(b) of NEMAQA. The requirements for periodic emissions monitoring are as follows: <ul style="list-style-type: none"> – The averaging period shall be expressed on an hourly average basis or as prescribed in the AEL. 	The applicant or representative	During operational phase

MANAGEMENT OF ATMOSPHERIC EMISSIONS

	<ul style="list-style-type: none"> – Emission measurement must be conducted in accordance with the methods listed in Annexure A of section 21(1)(b) of NEMAQA. – Measurements shall take place on, at least, an annual basis unless otherwise prescribed in the AEL. – Sampling will take place under normal operating conditions using the permitted feed-stock or raw material. – All tests will be conducted by South African National Accreditation System (SANAS) accredited laboratories or laboratories accredited by similar foreign authorities. 		
Performance Indicator(s)	<p>No complaints from neighbours.</p> <p>Any required monitoring shows pollutant concentrations within the statutory limits.</p>		
Monitoring	<p>According to SOPs and Preventative Maintenance Plans.</p> <p>Annual stack emissions testing in terms of the Minimum Emissions Standards.</p> <p>Dustfall sampling in accordance with the NDCR.</p>	The applicant or representative	Annually during the operational phase
Reporting	<p>Internal audits of the operation against the Preventative Maintenance Plan must be conducted with records retained for external auditing purposes.</p>	The applicant or representative	Bi-annually during the operational phase
Corrective Action(s)	<p>Faulty infrastructure to be serviced and /or replaced to specification.</p>	The applicant or representative	Immediately upon detection of the problem – the construction phase

GENERAL SAFETY OF WORKERS AND STAFF ON SITE			
	7) Staff must be trained in the SOP, with records of staff training retained for external auditing purposes. 8) Bi-annual internal audits of the operation against the SOP must be conducted with records retained for external auditing purposes. 9) Staff must be trained in preventative maintenance, with records of staff training retained for external auditing purposes.		
Performance Indicator(s)	1) Presence of fire fighting equipment on site. 2) No incidence of fires on site. 3) No major injuries of staff are reported.		
Monitoring	According to the requirement of the SOPs for Dross handling According to the requirement of the SOPs for Hydrocarbon handling.	The applicant or representative	Daily during the operational phase
Reporting	Incident reports of all injuries occurring on site. Reports are to be sent to the DEA&DP, at the frequency determined by the licensing authority.	The applicant or representative	Monthly during the operational phase
Corrective Action(s)	Investigate and review the cause of the accident and/or exposure and/or fire incident. Ensure that appropriate controls are in place to prevent a similar event from occurring.	The applicant or representative	Immediately on detection of the problem.

8.1.4. Noise Impacts

NOISE MANAGEMENT			
Objective(s)	To avoid “disturbing” noise impacts on neighbouring facilities.		
Management Strategy	To ensure that noise levels at the facility do not exceed ambient noise levels by 7dBA or more, in compliance with the Western Cape Noise Control Regulations, 2013.		
		Responsibility	Timing
Control(s)	<ol style="list-style-type: none"> 1) Developing a mechanism to record and respond to complaints 2) In the event of a complaint being lodged, investigate through specialist site visit and noise monitoring to determine cause, and implement any recommended remedial measures to resolve complaint. 3) Avoid unnecessary revving of engines and switch off equipment/vehicles/trucks when not required. 4) Managing the impact of reverse warning signals by removing the need for reversing by using drive through pathways. 5) Maintain internal road surfaces and avoid steep road gradients. 6) Avoid excessive use of exhaust brakes. 7) Maintain machinery and equipment to minimise noise. 	The applicant or representative	Daily
Performance Indicator(s)	<ol style="list-style-type: none"> 1) No complaints from adjacent facilities. 		
Monitoring	Visual and auditory site inspection.	The applicant or representative	Continuously throughout the operational phase
Reporting	Report incident and remedial measures after noise complaints. Reports are to be sent to the DEA&DP, at the frequency determined by the licensing authority.	The applicant or representative	If and when required during the operational phase

NOISE MANAGEMENT

Corrective Action(s)	<ol style="list-style-type: none">1) Investigate the cause of excessive noise.2) Shut down extraordinarily loud machinery or vehicles immediately and use properly serviced equipment instead.3) Shut off amplified music or PA system.4) Issue workers with hearing protectors.	The applicant or representative	Immediately upon detection of the problem
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8.1.5. Traffic Impacts

TRAFFIC IMPACT MANAGEMENT			
Objective(s)	To avoid deterioration of road infrastructure and adverse impacts on road safety.		
Management Strategy	To comply with traffic engineer recommendations.		
		Responsibility	Timing
Control(s)	<ol style="list-style-type: none"> 1) The best practice for alleviating congestion is to schedule loading and offloading times to avoid excessive trucks waiting to be loaded or offloaded. 2) The shortest and safest routes are to be followed at all times to and from the facility and only during standard operational times where feasible 	The applicant or representative	Daily
Performance Indicator(s)	<ol style="list-style-type: none"> 1) No complaints from other road users. 2) No accidents involving Get Alloys' trucks on the surrounding road network of Atlantis. 3) No damage to road infrastructure (such as traffic lights and signposts) 		
Monitoring	Monitor truck journeys via GPS where feasible.	The applicant or representative	Continuously throughout the operational phase
Reporting	Report incident and remedial measures after traffic incident or damage to infrastructure, to the City of Cape Town's engineering services department.	The applicant or representative	If and when required during the operational phase
Corrective Action(s)	<ol style="list-style-type: none"> 1) Investigate traffic complaints, incidences or damage. 2) Reinforce correct routes with drivers. 3) Enforce penalties or similar punitive action with drivers using incorrect routes, as required and at the discretion of the applicant. 	The applicant or representative	Immediately upon detection of the problem

8.1.6. Waste Management

WASTE MANAGEMENT			
Objective(s)	To minimise possible environmental damage through inappropriate waste management on-site or related to the site.		
Management Strategy	To ensure that the handling of waste is in accordance with the statutory requirements of the local authority by-laws and the National Environmental Management Waste Act, Act 59 of 2008.		
		Responsibility	Timing
Control(s)	<ol style="list-style-type: none"> 1) Impacts associated with this waste recovery process have been discussed elsewhere and entail mainly air emissions and health and safety risks. These can be readily minimised by implementing fit-for-purpose emissions abatement and best practice health and safety operating protocols. 2) Weatherproofing of the dross and best practice health and safety operating protocols are essential for minimizing the impacts associated with this waste management activity. 3) The applicant should compile a dross management procedure and train staff accordingly. See Fugitive Emissions Management Plan appended to the Basic Assessment Report 	The applicant or representative	Continuously throughout the operational phase
Performance Indicator(s)	<ol style="list-style-type: none"> 1) See Fugitive Emissions Management Plan appended to the Basic Assessment Report 		
Monitoring	<ol style="list-style-type: none"> 1) Visual inspection of waste and dross storage areas. 2) According to the requirement of the SOPs for Dross and Waste handling. 3) See Fugitive Emissions Management Plan appended to the Basic Assessment Report 	The applicant or representative	Continuously throughout the operational phase
Reporting	<ol style="list-style-type: none"> 1) Internal audits of the operation against the SOP to be conducted with records retained for external auditing purposes. 	The applicant or representative	Weekly & monthly – construction phase
Corrective Action(s)	<ol style="list-style-type: none"> 1) See Fugitive Emissions Management Plan appended to the Basic Assessment Report 	The applicant or representative	Immediately upon detection of problems.

9. IMPLEMENTATION OF THE EMPR

9.1. Monitoring, Auditing and Reporting

DOCUMENTATION AND RECORD KEEPING			
Documentation Required	Description	Responsibility	Timing
Environmental Register	<p>Must be kept at the site. The environmental register should be used to record any relevant daily information related to the operations and current status of the site. Documents needed in the Register includes:</p> <ul style="list-style-type: none"> • This EMP; • An accident and incident register; • Complaints register; • Preventative Maintenance Plans and Standard Operating Procedures aimed at impact minimisation • Environmental Authorisation • Emergency Procedures • Site evacuation plan/maps; • Method statements; • Details of audits and inspections carried out by the ECO and follow-ups; • Instances of non-conformances, the date of their occurrence, date of corrective action, and date of completion of preventive action; • Details of chain of custody documentation; and • Any other relevant/ pertinent daily events 	Client	Operational phase
Accident and Incident Register	<p>An accident and incident register must be kept and should include the following information:</p> <ul style="list-style-type: none"> • Time, date and place of the accident and/or incident; • Who and what was involved; and • A detailed description of the accident or incident. 	Client	Operational phase
Complaints register	<p>A complaints register must be kept for the recording of all complaints lodged regarding the waste management facility. It is important that the complainant feels that their concerns have been</p>	Client	Operational phase

DOCUMENTATION AND RECORD KEEPING

listened to and that appropriate action (within reason) has been taken to address these.

The complaints register must include:

- Detail of the complaint in clear, well-structured language;
- Time and date of complaint and details of complainant for follow-up purposes;
- Name of the person who received the complaint; and
- Description of action that was taken to address the complaint, including date and time of action.

For noise complaints, the register must include:

- the name, contact and affiliation details of the complainant
- the date of the complaint as well as the date and time of the disturbing event
- the location where the event was observed, and
- a detailed description of the event including details such as noise character, impulsiveness, and tonality.

9.2. Environmental Awareness and Training

ENVIRONMENTAL AWARENESS AND TRAINING

Phase	Description	Responsibility	Timing
Operations	All employees and sub-contractors should be fully aware of the operational procedures that must be followed in order to minimise health, safety and environmental risks associated with operations at the facility.	Applicant or representative	For the duration of the operations

9.3. Addressing Non-Conformances on Site

NON-CONFORMANCE ON SITE			
<p>Non-conformances would occur when there are deviations from any of the requirements of this EMP. In addition, the client, project manager, main contractor, subcontractor and employees are bound by Section 28, Duty of Care, and Section 24(H), Offences and Penalties, of the NEMA.</p>			
Phase	Description	Responsibility	Timing
Operational phase	Appoint an independent ECO to audit the site in terms of the conditions of the authorisation.	Client	For the duration of the operations, at the frequency stipulated in the environmental authorisation
	Submit the audit report to the DEA&DP and include any incidences of non-conformance and recommendations for any corrective action required.	Independent ECO	At the frequency stipulated in the environmental authorisation

EMP ANNEXURE A

POSSIBLE METHOD STATEMENT TEMPLATE

	The Environmental Practice METHOD STATEMENT	Ref	
		Rev	0
		Date	

Site:	Risk Assessment No:
Activity:	
Plant & equipment:	

Activity	Responsibility
▪	
▪	
▪	
▪	
▪	
▪	

Signed by:

.....
Contractor

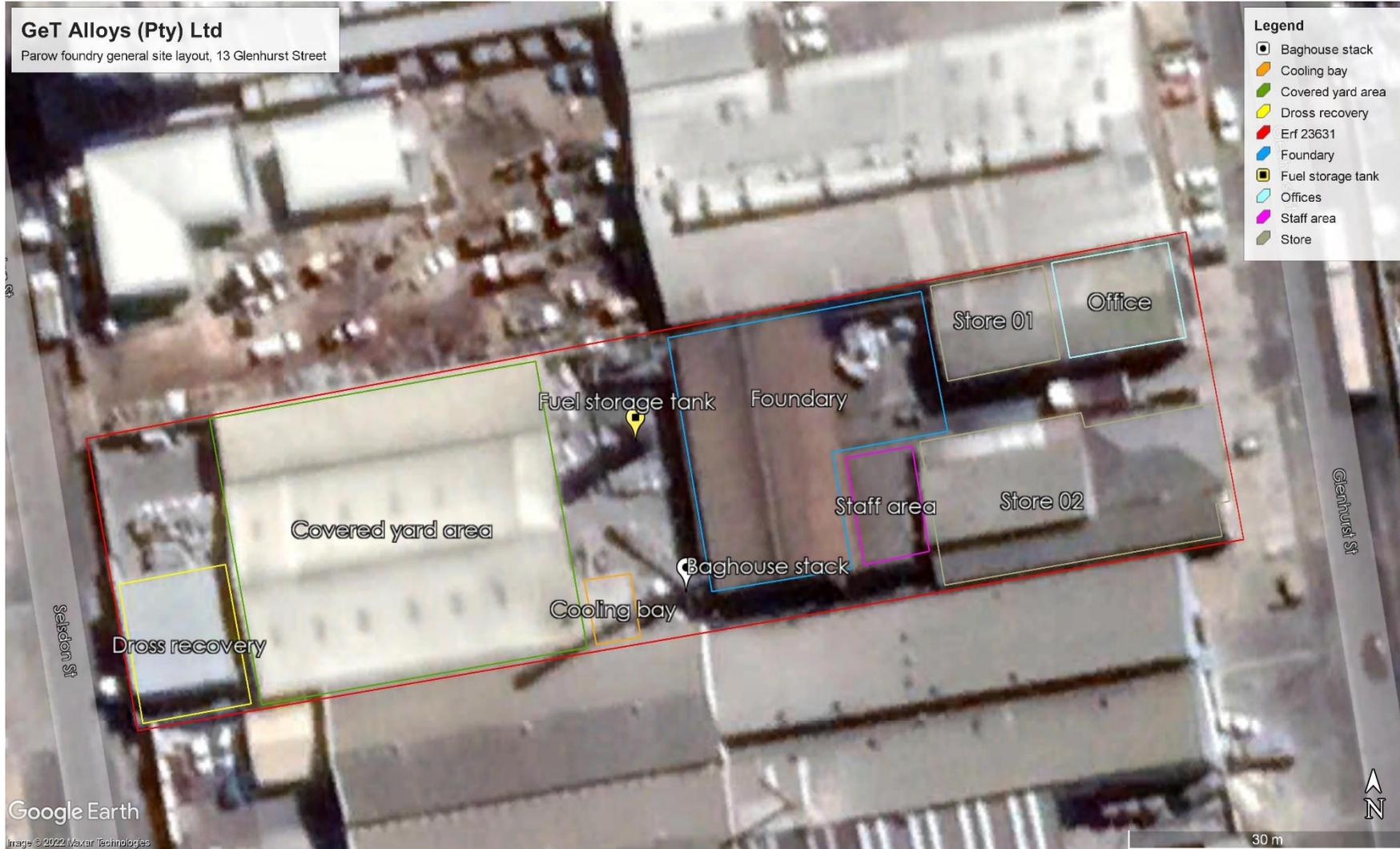
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Date

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ECO

.....
Date

EMP ANNEXURE B

1) SITE LAYOUT PLAN



MP ANNEXURE C

STANDARD OPERATING PROCEDURES AND PREVENTATIVE MAINTENANCE PLANS:

1) CLIENT TO POPULATE

***EMP ANNEXURE D
INCIDENT REGISTER AND BASIC ACCIDENT
REGISTER TEMPLATES***

EMP ANNEXURE E

EAP CURRICULUM VITAE'S

EMP ANNEXURE G

***MATERIAL SAFETY DATA SHEETS FOR DANGEROUS GOODS STORED &
HANDLED ON SITE (CLIENT TO POPULATE)***

