

Gauteng Department of Agriculture and Rural Development (GDARD)

Basic Assessment Report in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended, and the Environmental Impact Assessment Regulations, 2010 (Version 1)

List of all organs of state and State Departments where the draft report has been submitted, their full contact details and contact person

Kindly note that:

- 1. This **Basic Assessment Report** is the standard report required by GDARD in terms of the EIA Regulations, 2010.
- 2. This application form is current as of 2 August 2010. It is the responsibility of the EAP to ascertain whether subsequent versions of the form have been published or produced by the competent authority.
- 3. A draft Basic Assessment Report must be submitted to all State Departments administering a law relating to a matter likely to be affected by the activity to be undertaken. The draft reports must be submitted to the relevant State Departments and on the same day, two CD's of draft reports must also be submitted to the Competent Authority (GDARD) with a signed proof of such submission of draft report to the relevant State Departments.
- 4. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
- 5. Selected boxes must be indicated by a cross and, when the form is completed electronically, must also be highlighted.
- 6. An incomplete report shall be rejected.
- 7. The use of "not applicable" in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.
- 8. Five (5) copies (3 hard copies and 2 CDs-PDF) of the final report and attachments must be handed in at offices of the relevant competent authority, as detailed below.
- 9. No faxed or e-mailed reports will be accepted. Only hand delivered or posted applications will be accepted.
- 10. Unless protected by law, and clearly indicated as such, all information filled in on this application will become public information on receipt by the competent authority. The applicant/EAP must provide any interested and affected party with the information contained in this application on request, during any stage of the application process.

DEPARTMENTAL DETAILS

Gauteng Department of Agriculture and Rural Development Attention: Administrative Unit of the Sustainable Utilisation of the Environment (SUE) Branch P.O. Box 8769 Johannesburg 2000

Administrative Unit of the Sustainable Utilisation of the Environment (SUE) Branch 18th floor Glen Cairn Building 73 Market Street, Johannesburg

Admin Unit telephone number: (011) 355 1345 Department central telephone number: (011) 355 1900

BASIC ASSESSMENT REPORT [REGULATION 22(1)]

	(For official use on	ly)				
File Reference Number:						
Application Number:						
Date Received:						
 Submission t 	o State Dep	artments	s (Numbe	er 3 abov	ve)	
Has a draft report fo administering a law	r this application be relating to a matter	een submitte likely to be a	d to all State I affected as a i	Departments result of this a	activity?	Yes
Is a list of State Dep report?	artments referred t	o above bee	n attached to	this Apper F-8	ndix	
if no, state reasons	for not attaching the	e list.				
SECTION A: A 1. ACTIVITY DESCRIPT Project title (must be the same nam PROPOSAL TO REVISE THE L PROJECT	CTIVITY	INFOI	RMATI	ON ETALS REFINE	RY EXPANS	SION
Select the appropriate box The application is for an upgrade of an existing development	X The app develop	blication is for ment	a new	Other, specify		
Does the activity also require any	/ authorisation other t	han NEMA EI	A authorisation	? slation		
Department of Labour - Occupa Regulations (GNR. 1097 of 16 Ja Department of Environmental Aff List of Activities that Result in Atr	tional Health and Sa anuary 1998) airs – National Envir nospheric Emissions	afety Act (Act conmental Ma (Government	85 of 1993) , № nagement – A Gazette 33064	lajor Hazard Ins ir Quality Act (, No. 248, 31 M	stallation (Act 39 of 20 larch 2010).	04) ,
If yes, have you applied for the a If yes, have you received approv	uthorisation(s)? al(s)? (attach in appro	opriate append	lix)			NO
Note: The MHI is submitted to Ek Municipality are in close ongoing currently approved MHI remains quarter of 2013.	curhuleni Municipality communication with in place and the rece	for authorisati IPR and joint t ntly revised ve	on. The Emerg raining session rsion (Riscom,	ency Services o s are held from 2012) will be su	of Ekurhuleni time to time. ubmitted in th	The le first
The Department of Labour is not procedure for notifying stakehold	ified of the MHI. Authors	orisation is no	t required. The	MHI must comp	oly with a spe	cified
IPR currently holds 16 Air Emissi currently converting old licenses emission licensing requirements	on Licenses, covering held under the APPA under NEM:AQA.	g each proces to the new air	s that is control emission licen	led by National ses (AELs) requ	legislation. If uired by the a	PR is air

2

2. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

List all legislation, policies and/or guidelines of any sphere of government that are applicable to the application as contemplated in the EIA regulations:

Title of legislation, policy or guideline:	Administering authority:	Promulgation Date:
National Environmental Management Act No. 107 of 1998 as amended.	National & Provincial	27 November 1998
National Environmental Air Quality Act No. 39 of 2004.	National, Provincial and Local	
National Environmental Management Waste Act No. 59 of 2008	National	
Occupational Health and Safety Act, No 85 of 1993, Major Hazard Installation Regulations (GNR 1097 of 16 January 1998)	National	

3. ALTERNATIVES

Describe the proposal and alternatives that are considered in this application. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity could be accomplished. The determination of whether the site or activity (including different processes etc.) or both is appropriate needs to be informed by the specific circumstances of the activity and its environment.

The no-go option must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed. **Do not** include the no go option into the alternative table below.

Note: After receipt of this report the competent authority may also request the applicant to assess additional alternatives that could possibly accomplish the purpose and need of the proposed activity if it is clear that realistic alternatives have not been considered to a reasonable extent. Provide a description of the alternatives considered

No.	Alternative type, either alternative: site on property, properties, activity, design, technology, operational or other(provide details of "other")	Description
1	Proposed Activity (Consolidated PMR): Revised layout of approved PMR Expansion	This consists of the revisions to the layout of the GDARD - approved PMR expansion (Authorisation GDARD Ref 002/06-07/0593). Refer to Appendix G, Section 2 for details.
2	Alternative (Split PMR): Relocation of expansion east of East Geduld Road in the old BMR stores area	This consists of an alternative to the approved expansion on the east side of East Geduld Road. Refer to Appendix G, Section 3 for details.

In the event that no alternative(s) has/have been provided, a motivation must be included in the table below.

NOTE: The numbering in the above table must be consistently applied throughout the application report and process

4. PHYSICAL SIZE OF THE ACTIVITY

Indicate the total physical size (footprint) of the proposal as well as alternatives. Footprints are to include all new infrastructure (roads, services etc), impermeable surfaces and landscaped areas:

1. Proposed activity

Size of the activity:
Refer to Appendix A, Figure A-1

5. SITE ACCESS

Proposal Does ready access to the site exist, or is access directly from an existing road? If NO, what is the distance over which a new access road will be built

Describe the type of access road planned:

YES	
N/A	

Refer to Appendix A, Figure A-2 regarding access requirements during construction and operation. Refer to Appendix G, Section 5 for a discussion around the impact of construction and operational access

Include the position of the access road on the site plan.

6. SITE OR ROUTE PLAN

Refer to Appendix A, Figures A-3 and A-4. There are no wetlands, watercourses, sensitive cultural or historic features, natural indigenous vegetation or ridges within 100m of the site. Figure A-4 shows the location of the nearest wetlands and watercourse, which is along the Cowles Stream some 800m to the north of the PMR.

A detailed site plan(s) must be prepared for each alternative site or alternative activity. It must be attached as Appendix A to this document. The site or route plans must indicate the following:

- the scale of the plan, which must be at least a scale of 1:2000 (scale can not be larger than 1:2000 i.e. scale can not be 1:2500 but could where applicable be 1:1500)
- the property boundaries and numbers of all the properties within 50m of the site;
- > the current land use as well as the land use zoning of each of the properties adjoining the site or sites;
- > the exact position of each element of the application as well as any other structures on the site;
- the position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, street lights, sewage pipelines, septic tanks, storm water infrastructure and telecommunication infrastructure;
- > walls and fencing including details of the height and construction material;
- servitudes indicating the purpose of the servitude;
- sensitive environmental elements on and within 100m of the site or sites including (but not limited thereto):
 - Rivers and wetlands;
 - the 1:100 and 1:50 year flood line;
 - ridges;
 - cultural and historical features;
 - areas with indigenous vegetation (even if it is degraded or infested with alien species);
- for gentle slopes the 1m contour intervals must be indicated on the plan and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the plan; and
- the positions from where photographs of the site were taken.
- Where a watercourse is located on the site at least one cross section of the water course must be included (to allow the 32m position from the bank to be clearly indicated)

7. SITE PHOTOGRAPHS

Colour photographs from the center of the site must be taken in at least the eight major compass directions with a description of each photograph. Photographs must be attached under the appropriate Appendix. It should be supplemented with additional photographs of relevant features on the site, where applicable.

Refer to the eight compass-direction Photographs B-1 to B-8 in Appendix B. Also refer to photographs and visual simulations in the Visual Impact Assessment specialist study (Appendix H-3).

8. FACILITY ILLUSTRATION

A detailed illustration of the activity must be provided at a scale of 1:200 for activities that include structures. The illustrations must be to scale and must represent a realistic image of the planned activity. The illustration must give a representative view of the activity. To be attached in the appropriate Appendix.

Refer to Figures C-1 to C-4 in Appendix C. Refer also to the illustrations in Section 5 of Appendix G.

SECTION B: DESCRIPTION OF RECEIVING ENVIRONMENT

Note: Complete Section B for the proposal and alternative(s) (if necessary)

Further:

Instructions for completion of Section B for linear activities

- 1) For linear activities (pipelines etc) it may be necessary to complete Section B for each section of the site that has a significantly different environment.
- 2) Indicate on a plan(s) the different environments identified
- 3) Complete Section B for each of the above areas identified
- 4) Attach to this form in a chronological order
- 5) Each copy of Section B must clearly indicate the corresponding sections of the route at the top of the next page.

Section B has been duplicated for sections of the route

"insert No. of duplicates" times

Instructions for completion of Section B for location/route alternatives

- 1) For each location/route alternative identified the entire Section B needs to be completed
- Each alterative location/route needs to be clearly indicated at the top of the next page
- 3) Attach the above documents in a chronological order

Section B has been duplicated for location alternatives (complete only when appropriate)

Instructions for completion of Section B when both location/route alternatives and linear activities are applicable for the application

Section B is to be completed and attachments order in the following way

- All significantly different environments identified for Alternative 1 is to be completed and attached in a chronological order; then
- All significantly different environments identified for Alternative 2 is to be completed and attached chronological order, etc.

Section B - Location

X

(complete only when appropriate for above)

1. PROPERTY DESCRIPTION

Property description:

Refer to Appendix D, Figure D-1.

The properties that are relevant for the current application consist of the following:

- Portion 135 of the farm Geduld No. 123 IR (TRO1R0000000012300135). Zoned Industrial 1.
 - Portion 233 (a portion of portion 135) of the farm Geduld No. 123 IR (TRO1R0000000012300233). Zoned Private Open Space.
 - Erf 274 of East Geduld Township (TOIR02010000027400000). Zoned
 Industrial 1.
 - Erf 278 of East Geduld Township (TOIR02010000027800000). Zoned Industrial 1.
 - Erven 92 98, 167, 168. Recently consolidated and rezoning under way to Industrial 1.

Note: Portion 233 of the farm Geduld 123 - IR is the old East Geduld Club. A portion of this area is proposed for use as a laydown area during construction.

2. ACTIVITY POSITION

Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in decimal degrees. The degrees should have at least six decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

Refer to Figure D-1. The coordinates of the area used and proposed for 'Industrial 1' are shown in the margins of the figure.

Latitude (S):	Longitude (E):
S 26,225000	E 28,438300

3. GRADIENT OF THE SITE

Indicate the general gradient of the site

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5

Note: Average slope: 1:50 (refer to Appendix A, Figure A-4).

4. LOCATION IN LANDSCAPE

Indicate the landform(s) that best describes the site.

Ridgeline	Plateau	Side slope of hill/ridge	Valley	Plain	Undulating plain/low hills	River front
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5. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

a) Is the site located on any of the following?

Shallow water table (less than 1.5m deep) Dolomite, sinkhole or doline areas

Seasonally wet soils (often close to water bodies)

	NO
YES	
	NO

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Unstable rocky slopes or steep slopes with loose soil	NO
Dispersive soils (soils that dissolve in water)	NO
Soils with high clay content (clay fraction more than 40%)	NO
Any other unstable soil or geological feature	NO
An area sensitive to erosion	NO

NOTE: The soil profile comprises medium dense and loose collapsible aeolian sands below an upper layer of sandy topsoil and fill. The sands lie in direct contact with very dense ferricrete and hardpan ferricrete which tends to very soft rock. Below the ferricrete / hardpan ferricrete layer is dense residual siltstone from the Karoo Sequence, which becomes very dense with depth. The Karoo sequence overlies dolomite bedrock, which is estimated to be at 15m depth on average (Jones & Wagener, 2012).

(Information in respect of the above will often be available at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by Geological Survey may also be used).

c) are any caves located within a 300m radius of the site(s)	
d) are any sinkholes located within a 300m radius of the site(s)	

If any of the answers to the above are "YES" or "unsure", specialist input may be requested by the Department

6. AGRICULTURE

b) are any caves located on the site(s)

Does the site have high potential agriculture as contemplated in the Gauteng Agricultural Potential Atlas (GAPA 3)?

Please note: The Department may request specialist input/studies in respect of the above.

7. GROUNDCOVER

To be noted that the location of all identified rare or endangered species or other elements should be accurately indicated on the site plan(s).

Indicate the types of groundcover present on the site and include the estimated percentage found on site

Natural veld - good	Natural veld with	Natural veld with	Veld dominated by	Landscaped
condition	scattered aliens	heavy alien infestation	alien species	(vegetation)
% =	% =	% =	% =	% =
Sport field % =	Cultivated land % =	Paved surface (hard landscaping) % =	Building or other structure % =	Bare soil 100%

Please note: The Department may request specialist input/studies depending on the nature of the groundcover and potential impact(s) of the proposed activity/ies.

Are there any rare or endangered flora or fauna species (including red list species) present on the site	NO
Are there any rare or endangered flora or fauna species (including red list species) present within a 200m (if within urban area as defined in the Regulations) or within 600m (if outside the urban area as defined in the Regulations) radius of the site.	NO
Are there any special or sensitive habitats or other natural features present on the site?	NO
Was a specialist consulted to assist with completing this section	NO

NO
NO
NO

NC)
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8. LAND USE CHARACTER OF SURROUNDING AREA

Using the associated number of the relevant current land use or prominent feature from the table below, fill in the position of these land-uses in the vacant blocks below which represent a 500m radius around the site

1. Vacant land	2. River, stream, wetland	3. Nature conservation area	4. Public open space	5. Koppie or ridge
6. Dam or reservoir	7. Agriculture	 Low density residential 	 Medium to high density residential 	10. Informal residential
11. Old age home	12. Retail	13. Offices	14. Commercial & warehousing	15. Light industrial
16. Heavy industrial ^{AN}	17. Hospitality facility	18. Church	19. Education facilities	20. Sport facilities
21. Golf course/polo fields	22. Airport ^N	23. Train station or shunting yard ^N	24. Railway line ^N	25. Major road (4 lanes or more) ^N
26. Sewage treatment plant ^A	27. Landfill or waste treatment site ^A	28. Historical building	29. Graveyard	30. Archeological site
31. Open cast mine	32. Underground mine	33.Spoil heap or slimes dam ^A	34. Small Holdings	
Other land uses (describe):				

NOTE: Each block represents an area of 250m X250m



Note: More than one (1) Land-use may be indicated in a block

Refer to Appendix E Figure E-1 for detail

Please note: The Department may request specialist input/studies depending on the nature of the land use character of the area and potential impact(s) of the proposed activity/ies. Specialist reports that look at health & air quality and noise impacts may be required for any feature above and in particular those features marked with an "^{Au} and with an "^N respectively.

Have specialist reports been attached	YES	
If yes indicate the type of reports below		
Air Quality Impact Assessment (Airshed Planning Professionals Pty Ltd.). Refer to Appendix	H-1.	
Noise Impact Assessment (Francois Malherbe Acoustic Consultant). Refer to Appendix H-2.		
Visual impact assessment (Cave Klapwijk and Associates). Refer to Appendix H-3.		
Quantitative Risk Assessment (Riscom), Refer to Appendix H-4.		

9. SOCIO-ECONOMIC CONTEXT

Describe the existing social and economic characteristics of the area and the community condition as baseline information to assess the potential social, economic and community impacts.

The environment around the PMR is fully urbanised. Situated in the suburb of East Geduld, with other nearby suburbs of Rowhill and Petersfield, the PMR is bounded by the arterial roads of Cowles Street and East Geduld Road along its northern and eastern sides. On the western and southern boundary are suburban homes. Houses in this neighbourhood are generally single story on ¼ acre erven.

Refer to Appendix G, Section 4.2.2.5 for more detail.

10. CULTURAL/HISTORICAL FEATURES

Please be advised that if section 38 of the National Heritage Resources Act 25 of 1999 is applicable to your proposal or alterantives, then you are requested to furnish this Department with written comment from the South African Heritage Resource Agency (SAHRA) – Attach comment in appropriate annexure

38. (1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorised as-

- (a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;
- (b) the construction of a bridge or similar structure exceeding 50m in length;
- (c) any development or other activity which will change the character of a site-
 - (i) exceeding 5 000 m2 in extent; or
 - (ii) involving three or more existing erven or subdivisions thereof; or
 - (iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or
 (iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;
- (d) the re-zoning of a site exceeding 10 000 m2 in extent; or
- (e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority, must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.

Are there any signs of culturally (aesthetic, social, spiritual, environmental) or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including archaeological or palaeontological sites, on or close (within 20m) to the site?

Briefly explain the findings of the specialist if one was already appointed:

Refer to letter from a heritage specialist, Mr J. Kaplan, in Appendix I. No cultural heritage elements that could be affected by the proposed expansion are affected.

Will any building or structure older than 60 years be affected in any way?

Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?

NO
NO

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT

The Environmental Assessment Practitioner must follow any relevant guidelines adopted by the competent authority in respect of public participation and must at least –

- 1(a) Fix a site notice at a conspicuous place, on the boundary of a property where it is intended to undertake the activity which states that an application will be submitted to the competent authority in terms of these regulations and which provides information on the proposed nature and location of the activity, where further information on the proposed activity can be obtained and the manner in which representations on the application may be made;
- 1(b) inform landowners and occupiers of adjacent land of the applicant's intention to submit an application to the competent authority;
- 1(c) inform landowners and occupiers of land within 100 metres of the boundary of the property where it is proposed to undertake the activity and whom may be directly affected by the proposed activity of the applicant's intention to submit an application to the competent authority;
- 1(d) inform the ward councillor and any organisation that represents the community in the area of the applicant's intention to submit an application to the competent authority;
- 1(e) inform the municipality which has jurisdiction over the area in which the proposed activity will be undertaken of the applicant's intention to submit an application to the competent authority; and
- 1(f) inform any organ of state that may have jurisdiction over any aspect of the activity of the applicant's intention to submit an application to the competent authority; and
- 1(g) place an advertisement in one local newspaper and any *Gazette* that is published specifically for the purpose of providing notice to the public of applications made in terms of these regulations.

2. LOCAL AUTHORITY PARTICIPATION

Local authorities are key interested and affected parties in each application and no decision on any application will be made before the relevant local authority is provided with the opportunity to give input. The planning and the environmental sections of the local authority must be informed of the application at least thirty (30) calendar days before the submission of the application to the competent authority (GDARD).

Has any comment been received from the local authority?

YES

If "YES", briefly describe the comment below (also attach any correspondence to and from the local authority to this application):

Authority's issues from authority meeting mainly about the following:

- Traffic in residential streets
- Risks and hazards
- Effluent treatment and discharges to sewer (other than domestic)

Refer to Appendix F5 containing the minutes of the initial Authority meeting and Appendix F6, Comment and Response Report.

3. CONSULTATION WITH OTHER STAKEHOLDERS

Any stakeholder that has a direct interest in the activity, site or property, such as servitude holders and service providers, should be informed of the application at least thirty (30) calendar days before the submission of the application and be provided with the opportunity to comment.

Has any comment been received from stakeholders?

YES	

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If "YES", briefly describe the feedback below (also attach copies of any correspondence to and from the stakeholders to this application):

Surrounding residents concerned (mainly Mey Street and Greig Street) about the following:

- Air quality
- Noise
- Security during construction
- Risks and hazards
- Loss of sense of place in the neighbourhood
- Traffic nuisance in neighbourhood, particularly as a result of access to the construction laydown yard
- Loss of property value

Refer to Appendix F5 containing the record of the Public focus group meeting and Appendix F6 Comment and Response report.

4. GENERAL PUBLIC PARTICIPATION REQUIREMENTS

The Environmental Assessment Practitioner must ensure that the public participation is adequate and must determine whether a public meeting or any other additional measure is appropriate or not based on the particular nature of each case. Special attention should be given to the involvement of local community structures such as Ward Committees and ratepayers associations. Please note that public concerns that emerge at a later stage that should have been addressed may cause the competent authority to withdraw any authorisation it may have issued if it becomes apparent that the public participation process was inadequate.

The practitioner must record all comments and respond to each comment of the public / interested and affected party before the application is submitted. The comments and responses must be captured in a Comments and Responses Report as prescribed in the regulations and be attached to this application.

5. APPENDICES FOR PUBLIC PARTICIPATION

Refer to Appendices F1 to F11

All public participation information is to be attached in the appropriate Appendix. The information in this Appendix is to be ordered as detailed below

Appendix F-1 – Proof of site notice

Appendix F-2 - Written notices issued to those persons detailed in 1(b) to 1(f) above

Appendix F-3 – Proof of newspaper advertisements

Appendix F-4 –Communications to and from persons detailed in Point 2 and 3 above

Appendix F-5 – Minutes of any public and/or stakeholder meetings

Appendix F-6 - Comments and Responses Report

Appendix F-7 - Copy of the register of I&APs

Appendix F-8 - Other

SECTION D: RESOURCE USE AND PROCESS DETAILS

Note: Section D is to be completed for the proposal and alternative(s) (if necessary)

Instructions for completion of Section D for alternatives

- 1) For each alternative under investigation, where such alternatives will have different resource and process details (e.g. technology alternative), the entire Section D needs to be completed
- 4) Each alterative needs to be clearly indicated in the box below
- 5) Attach the above documents in a chronological order

Section D has been duplicated for alternatives	0	times
(complete only when appropriate)		

Section D Alternative No.

"insert alternative number" (complete only when appropriate for above)

1. WASTE, EFFLUENT, AND EMISSION MANAGEMENT

Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase? If yes, what estimated quantity will be produced per month?

YES	
5 tonnes	/month

How will the construction solid waste be disposed of (describe)?

Construction waste will be typical of a large civil construction works. This will include packaging (plastic, cardboard, timber), waste paper, metal scrap, electrical scrap, waste paint and thinners, waste concrete. Vehicles and equipment will be serviced off-site at specialist service agents. The waste will be separated and temporarily stored within the PMR precinct (within the walled PMR area but outside of the high security area) at a location allocated in the construction yard. The area will be bunded and covered to prevent rainwater ingress. The waste will be applied. The contractor will be required to manage waste in accordance with an existing IPR procedure designed for this purpose. From records kept during the previous IPR expansion projects, construction waste is not expected to exceed 5 tonnes per month.

Where will the construction solid waste be disposed of (describe)?

All waste that cannot be recycled will be disposed of by Enviroserv at a domestic waste disposal facility. If any small quantities of hazardous waste are generated (eg: empty paint tins, empty thinners bottles), these will be temporarily stored in skips and disposed of at the Enviroserv Holfontein hazardous waste disposal facility.

 Will the activity produce solid waste during its operational phase?
 YES

 If yes, what estimated quantity will be produced per month?
 Refer below

Less than 1 tonne/month.

How will the solid waste be disposed of (describe)?

The existing procedure for waste disposal at the PMR will be followed. Any small quantities of additional waste will be stored in skips within the PMR precinct before being removed by Enviroserv, following the same procedure that already exists. The operational waste from the refinery is generally non-hazardous, but due to the small quantities and the possibility of some contamination from process - related activities, Impala designates it all as hazardous. Office waste paper is removed and recycled separately. The new processes are expected to generate less than 1 tonne/month of additional waste.

An EIA in terms of the National Environmental Management: Waste Act is currently being undertaken to license these activities (DEA Reference number 12/9/11/L1050/3). This EIA includes provision for the additional waste that will be generated by the PMR expansion.

Has the municipality or relevant service provider confirmed that sufficient air space exists for treating/disposing of the solid waste to be generated by this activity?

N/A

Where will the solid waste be disposed if it does not feed into a municipal waste stream (describe)?

Ekurhuleni does not remove solid waste from the PMR. All solid waste removed is done by a private company, Enviroserv Pty Ltd. Enviroserv has confirmed that is has capacity at its existing sites to handle all of IPR's solid waste requirements during construction and operation of the PMR Expansion.

Note: If the solid waste (construction or operational phases) will not be disposed of in a registered landfill site or be taken up in a municipal waste stream, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Can any part of the solid waste be classified as hazardous in terms of the relevant legislation? If yes, inform the competent authority and request a change to an application for scoping and EIA.

No additional hazardous waste over and above that generated by the approved 3,2 mill oz. expansion will be generated. Waste will be generated from slightly different areas of the plant due to the changes in the footprint.

An EIA in terms of the National Environmental Management: Waste Act is currently being undertaken to license these activities (DEA Reference number 12/9/11/L1050/3). This EIA includes provision for the additional waste that will be generated by the PMR expansion.

Is the activity that is being applied for a solid waste handling or treatment facility? NO If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Describe the measures, if any, that will be taken to ensure the optimal reuse or recycling of materials:

An EIA in terms of the National Environmental Management: Waste Act is currently being undertaken to license these activities (DEA Reference number 12/9/11/L1050/3). This EIA includes provision for the additional waste that will be generated by the PMR expansion. Measures to comply with DEA policies concerning the waste hierarchy are being considered in this EIA.

Liquid effluent (other than domestic sewage)

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?

If yes, what estimated quantity will be produced per month?

If yes, has the municipality confirmed that sufficient capacity exist for treating / disposing of the liquid effluent to be generated by this activity (ies)?

Will the activity produce any effluent that will be treated and/or disposed of on site?

If yes, what estimated quantity will be produced per month?

If yes describe the nature of the effluent and how it will be disposed.

** Note: IPR is an operating refinery with a formal agreement with Ekurhuleni Municipality to discharge effluent to sewer. In terms of this agreement, IPR currently disposes of around 8500 m³/month of effluent to municipal sewer, subject to specified quality assurances. IPR intends, over a period of time, to reduce dependence on the Municipality as the water treatment capacity at the refinery is increased. The PMR capacity increase to 3.2 million ounces of platinum has already been approved and no further demands on municipal treatment capacity are expected as a result of this expansion. The current application, which involves an assessment of the impact of reorganising the layout of the approved facilities, does not involve further effluent generation.

Contact person at the Ekurhuleni Municipality is:

Ms Annamarie Maurizi PO Box 45 Springs 1860 Tel: +27 (82) 453-2945

PMR effluent consists of various liquid waste streams that are delivered by pipeline to the PMR ponds, which consist of 4 double lined effluent ponds, located in the BMR precinct, with a total capacity of 100,000m³. This effluent is retained in these ponds before being routed directly to the PMR crystallisers for treatment. Current throughput is around 6,000 m³/month. The crystallisers produce a fine crystallised powder, which is hazardous, and is removed to Holfontein by Enviroserv; and water, which is recycled back into the water supply system of the plant. An EIA for the licensing of all existing and future effluent streams from the PMR, that are already licensed under existing environmental authorisations, together with the associated treatment infrastructure, is being prepared at present under the NEM:WA regulations (DEA reference number 12/9/11/L1050/3).

Will the activity produce effluent that will be treated and/or disposed of at another facility?

NO

Describe the measures that will be taken to ensure the optimal reuse or recycling of waste water, if any:

YES	
8500 m ³ /m	ionth**
YES	
YES	
100 m ³	

YES



3. POWER SUPPLY

Please indicate the source of power supply eg. Municipality / Eskom / Renewable energy source Eskom existing supply. No upgrade required

4. ENERGY EFFICIENCY

Describe the design measures, if any, that have been taken to ensure that the activity is energy efficient: N/A. This BA relates to an approved expansion, and only involves re-location of approved facilities within the PMR precinct. Describe how alternative energy sources have been taken into account or been built into the design of the activity, if any: N/A

SECTION E: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2006, and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts.

ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES 1.

Summarise the issues raised by interested and affected parties.

The following concerns are raised:

- Visual impact of the new buildings 1.
- Noise impact of the buildings 2.
- Potential impact on sense of place in the neighbourhood 3.
- Security risks during construction 4.
- 5.
- Impacts on property values Air quality and resulting health impacts 6

Summary of response from the practitioner to the issues raised by the interested and affected parties (A full response must be provided in the Comments and Response Report that must be attached to this report): Responses are included in the Assessment of Impact in Appendix G. Summary of responses is provided in the Comment and Response Report in Appendix F-6

2. IMPACTS THAT MAY RESULT FROM THE CONSTRUCTION AND OPERATIONAL PHASE

Briefly describe the methodology utilised in the rating of significance of impacts

The impact assessment criteria used	in this assessment are defined as follows:					
Spatial Scale:	Impact may be at the spatial scale of the site (restricted to the site), local (the					
	site and surrounds), regional (surrounding districts), or national (Mozambique).					
Direction:	Impact may be positive or negative.					
Duration:	Impact may be short-term (up to 1 year or completion of 1 phase of					
	construction), medium-term (1 year to 2 years), long-term (life cycle of the					
	project which is approximately 20 years) or permanent.					
Intensity:	The intensity or magnitude of the impact is described as low, medium-low,					
	medium-high or high. The rationale for this is described in the written					
	evaluation of the impact.					
Cumulative effects:	The degree to which an impact may combine with other project related (or					
	other unrelated) environmental impacts, increasing the overall impact. The					
	cumulative effect is described as not applicable, low, medium or high.					
Probability of occurrence:	The likelihood of the impact occurring. It is described as unlikely, possible,					
-	probable, highly probable or definite.					
Significance (without mitigation):	Based on a synthesis of the information contained above, an evaluation of the					
	significance of the impact is undertaken in terms of the following significance					
	criteria:					
	No significance - requires no further investigation and no mitigation or					
	management;					
	Low significance - an impact which has little importance and is not					
	sufficient to warrant further reduction if this involves unreasonable cost;					
	Medium significance - an impact which requires mitigation and					
	management to reduce it to acceptable levels;					
	High significance - an impact which requires extensive mitigation and					
	management to reduce impacts to acceptable levels.					
Negative impacts with high significance that cannot be mitigated would typically be regarded as potentially fatal flaws						
for a project.						

Briefly describe and compare the potential impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the construction phase for the various alternatives of the proposed development. This must include an assessment of the significance of all impacts.

List any specialist reports that were used to fill in the above tables. Such reports are to be attached in the appropriate Appendix.

Refer to the Assessment of Impacts in Appendix G. Specialist reports are included in Appendix H-1 to H-4.

3. IMPACTS THAT MAY RESULT FROM THE DECOMISSIONING AND CLOSURE PHASE

Briefly describe and compare the potential impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the decommissioning and closure phase for the various alternatives of the proposed development. This must include an assessment of the significance of all impacts.

Proposal

Potential impacts:	Significance rating of impacts:	Proposed mitigation:	Significance rating of impacts after mitigation:	
Residual pollution	Medium - High	Full assessment of residual contamination and clean up prior to rehabilitation	Low	
Nuisance (during demolition)	Medium - high	Limitation of working hours to daylight and weekdays. Control of access into and out of demolition site off main roads (Cowles Street / East Geduld Road). Involvement of specialists during de-commissioning to monitor nuisance impacts	Low	
NOTE: Decommissioning and closure of the IPR refinery will involve a full EIA at an appropriate time before closure				

List any specialist reports that were used to fill in the above tables. Such reports are to be attached in the appropriate Appendix.

Airshed (2013): Air Quality Impact of the Proposed Changes in Footprint of the Approved PMR Expansion FMAC (2013): Noise Impact of the Proposed Changes in Footprint of the Approved PMR Expansion CKA (2013): Visual Assessment of the Proposed Changes in Footprint of the Approved PMR Expansion Riscom (2012): Summary Risk Assessment of the Proposed Changes in Footprint of the Approved PMR Expansion

4. CUMULATIVE IMPACTS

Describe potential impacts that, on their own may not be significant, but is significant when added to the impact of other activities or existing impacts in the environment. Substantiate response:

The cumulative effect of visual impact, noise, perceptions about air quality and other potentially negative effects are likely to have a cumulative effect on property values in the immediate vicinity of the refinery, particularly on those properties in the potentially 'high impact zone' designated by the Visual Impact Assessment. Mitigation relating to each of for these impacts has been set out in the specialist studies, but, in addition, it is considered necessary to develop a mechanism in which residents in close proximity to the refinery can sell their properties to IPR at market related agreed prices, should they wish to do so. This mitigation measure is intended to ensure that any residual impacts that cannot reasonably be managed can be resolved through market mechanisms – if IPR buys the property of an adjacent landowner for an agreed sum which is a fair price for the property inclusive of improvements (valued in the absence of impact from the refinery); and then sells the property to a willing buyer, the negotiations for which will take into consideration the buyer's view of the impacts of the refinery on the property – any loss incurred by IPR (the difference between the sale and the purchase price) will be the perceived environmental cost of visual impacts, noise, air quality issues and other nuisance factors. Refer to Appendix G for details.

5. ENVIRONMENTAL IMPACT STATEMENT

Taking the assessment of potential impacts into account, please provide an environmental impact statement that sums up the impact that the proposal and its alternatives may have on the environment after the management and mitigation of impacts have been taken into account with specific reference to types of impact, duration of impacts, likelihood of potential impacts actually occurring and the significance of impacts.

Proposal

This report considers the impact of the proposed changes to the layout of an approved PMR expansion at Impala Platinum Refineries in Springs. The application seeks to amend the GDARD 002/06-07/0593 authorisation in which an expansion of the PMR was authorised.

The changes in layout have been considered from the point of view of a number of potential impacts. These include air quality, noise, visual aesthetics, community health and safety risk and cumulative impact on property values around the refinery. The study concludes:

With regard to **air quality impact**: the use of scrubbers on the key stacks is expected to result in the current emissions of PM₁₀, SO₂, NO₂ and HCL all <u>reducing</u>, notwithstanding future increases in production. Impacts will therefore be

positive, particularly with regards to particulates. The change in position of stacks in the PMR will not materially alter the impacts, which will be positive.

With regard to **noise impact**: construction noise will be a potentially significant impact in the absence of comprehensive mitigation. The use of the eastern end of the old East Geduld Club for a lay down area during construction will introduce heavy vehicle noise into a previously quiet area. Construction of the refinery will take more than 5 years and the construction noise associated with general building construction activities will be within 20 m of residential neighbourhoods to the west and south. Unmitigated noise levels will exceed the SANS 10103 guideline. However, it is concluded that the construction noise impact can be reduced to tolerable levels in surrounding communities subject to stringent compliance with a number of requirements. These include strict adherence to controls over the periods during which construction may take place (no construction outside of daylight hours or construction over weekends or public holidays), training of vehicle and equipment operators to ensure considerate usage of noise generating equipment, training of site staff to minimise shouting, unnecessary banging and other behaviour that would cause a noise nuisance, the use of concrete batching trucks in preference to a batching plant, restrictions on access of construction vehicles to the site (no access to the site except in emergencies via roads other than Cowles Street, East Geduld Road and Jackson Street), checks of noise baffling on vehicles and equipment and various other control measures. Construction noise impact will need to be carefully managed and independently monitored. Community complaints must be logged and acted upon.

Operational noise impact will also be potentially significant, although the implementation of appropriate design and operating measures should reduce this to acceptable levels. Recommended measures to minimise process noise include the inclusion of an acoustics consultant in the design team to ensure that fans and other noise generating equipment are selected with noise control in mind, that their orientation is such that directional noise impact is minimised and that where necessary, designs include for noise muffling.

The small volumes of additional traffic caused by the PMR expansion will have a negligible impact on existing noise levels on Cowles Street and East Geduld Road. There will be light vehicle traffic on Greig Street twice a day when shifts at the refinery change. This traffic will consist of around 80 light vehicles per shift change (all delivery vehicles will access the site via Cowles Street). While refinery access via Greig Street will result in vehicle traffic noise on Greig and van den Bosch streets, twice a day, it is a lower impact proposal than the arrangement that has existed until recently, which provided vehicle access to the IPR human resource and security department via this street and involved a larger number of vehicles (including delivery vehicles) than will be the case for the proposed PMR expansion. Consequently, the overall impact of the PMR expansion on traffic noise in Greig Street will be positive, by comparison with the previous situation.

With regard to visual impact: In the absence of mitigation, the visual impact of the refinery expansion is expected to be of high significance for residential properties in the immediate vicinity of the southern and western boundaries of the PMR. The changes to the proposed layout of the approved expansion will exacerbate the local visual impact by bringing the main building structures closer to residents in Mey Street. This is as a result of expanding into the proposed landscaped buffer area on Mey Street that was authorised as a part of the 2007 PMR expansion application. The current proposals also include the use of a portion of the East Geduld Club for laydown during construction, which while screened by a boundary wall will change the sense of place of the surrounding area and could last for a period of up to 7 years.

A range of mitigation measures will assist in reducing the impact of the expansion. Since these involve landscaping, none of them will be effective immediately, but will become more effective with time. Careful maintenance and monitoring will be required. Measures include screen planting of trees along IPR's boundary with Mey Street, setback of the laydown area so as to allow landscaping along Greig Street and Stobart Street in the vicinity of the laydown area, committing to a pavement tree planting programme to beautify the neighbourhood and various measures regarding colours schemes and roof design to minimise the impact of the buildings. With time, these measures should reduce the visual impact of the expansion to low levels of significance in properties that are not in close proximity to the refinery. For the properties considered to be in the high impact zone the proposed mitigation will not be sufficient to reduce impacts to low levels of significance and property value impacts can be expected.

With regard to **property value impact**: the expansion is expected to result in a risk of property value loss at properties nearest to the refinery along the eastern and southern boundaries, as a result of the cumulative impacts of all of the activities associated with construction and operation of the project, over an extended period of time. Mitigation for this impact is proposed by creating a mechanism for potentially affected property owners to sell their properties to IPR at market related prices. While this cannot compensate a family for the loss of a valued home, it should make adequate provision to ensure that affected families suffer no financial losses as a result of residual impacts.

With regard to **traffic impact:** During construction, this impact is expected to be of low significance as long as access to the PMR is limited to Cowles Street, East Geduld Road and Jackson Street. The current proposal to use Greig Street for construction 'on occasions', when access via the refinery is hampered by construction activities, is insufficient guarantee that the road will not be used. The road is not designed for heavy load vehicles. Construction access to the laydown area from Greig Street should be in emergencies only.

During operations, the access for PMR personnel to the Final Metals Project parking area, via Greig Street, is acceptable, subject to this remaining for personnel use only, and not for deliveries. The proposed access will be an improvement on the pre-existing situation, which until recently included access for light and delivery vehicles to the IPR HR and Security departments, and resulted in a greater number of daily vehicle trips along Greig and van den Bosch Streets.

With regard to **health and safety hazards:** The risk of community health and safety hazards caused by the PMR expansion is not expected to increase, due to the absence of any increased inventory of hazardous materials as a result of the expansion. Risks of explosions, toxic plumes or other health hazards are expected to remain within acceptable limits, as set out by international guidelines for the management of public risk.

With regards to **local and regional economic benefit:** Economic benefits are expected to be highly significant, particularly in respect of multipliers caused by the plant's monthly operating expenditure. The proposed changes to the layout of the approved expansion will not alter these benefits and they have not been further assessed in the current

BA but are described in the economic specialist study accompanying the environmental assessment for the 2007 expansion.

Tables 1 and 2 provide a summary of the impact ranking for the revised expansion proposals during the construction and operational phases.

Impact Category	Spatial Scale	Direction	Duration	Intensity	Cumulative effects	Probability of occurrence	Significance (without mitigation)	Significance (with mitigation / enhancement)
Solid Waste	Local	Negative	Short – Medium term	Medium	Medium	Possible	Medium	Low
Noise	Local	Negative	Short – Medium term	Medium	Medium- High	Definite	Medium- High	Low - Medium
Visual	Local	Negative	Short – Medium term	Medium	Medium- High	Definite	High	Low - Medium
Socio- economics	Regional	Positive	Short – Medium term	Medium	High	Definite	Medium	Medium
Traffic	Local	Negative	Long-term	Low	Low	Definite	Low	Low

TABLE 1: Ranking of Construction Impacts of the Revised Layout of the Approved PMR Expansion

TABLE 2: Ranking of Operational Impacts of the Revised Layout of the Approved PMR Expansion

Impact Category	Spatial Scale	Direction	Duration	Intensity	Cumulative effects	Probability of occurrence	Significance (without mitigation)	Significance (with mitigation / enhancement)
Air quality	Local	Positive	Long- term	Low to Medium (1)	Medium	Definite	High	Low
Surface and Groundwater	Local	Negative	Long- term	Low	Low	Unlikely	Low	Low
Solid Waste	Local	Negative	Long- term	Medium	Low	Possible	Medium	Low
Noise	Local	Negative	Long- term	Low – Medium (2)	Medium	Definite	Medium	Low – Medium (2)
Visual	Local	Negative	Long- term	Medium	Medium	Definite	High	Low – Medium (2)
Property Value	Local	Negative	Long- term	Low to Medium (2)	Medium	Probable	Low – Medium (2)	Low
Health and Safety Risks	Local	Negative	Long term	Low - Medium (2)	Low	Highly unlikely	Medium	Low
Socio- economics	Regional	Positive	Long- term	Medium	Medium	Definite	Medium-high	High
Traffic	Local	Negative	Long- term	Low	Low	Definite	Low	Low

(1) for PM_{10}

(2) assumes managed impacts based on current performance

Grey shaded impacts are those not affected by the revised footprint – in these cases, the impacts remain the same as assessed in the previous environmental assessment (Golder, 2007)

No-go (compulsory)

The negative impacts that have been identified in this report and which will affect the community surrounding the PMR (in particular, the houses immediately adjacent to the PMR to the east and south), will not be experienced in the event of the no go alternative. It is noted that most of these impacts can be reduced to low levels of significance with appropriate mitigation, with the exception of visual impact and noise for those properties in the zone defined as 'high impact' in the visual assessment. It is possible that these properties will experience a loss in property value. Property value impact can be resolved through a mechanism in which IPR offers to purchase the stands for a reasonable agreed price, which takes into consideration the un-impacted value of the property, with improvements, combined with a nuisance and relocation allowance.

Significant economic benefits will be foregone in the event that the no go alternative is implemented, both in the short term as a result of construction expenditure, and as a result of downstream multipliers during operation. These benefits have been quantified in an economic assessment prepared by Conningarth (2007). This study identifies expenditure by IPR as a more efficient deployment of capital than the average for South Africa.

6. IMPACT SUMMARY OF THE PROPOSAL OR PREFERRED ALTERNATIVE

For proposal: Refer to Appendix G

For alternative: N/A

Having assessed the significance of impacts of the proposal and alternative(s), please provide an overall summary and reasons for selecting the proposal or preferred alternative.

Refer to Appendix G.

7. RECOMMENDATION OF PRACTITIONER

Is the information contained in this report and the documentation attached hereto sufficient to make a decision in respect of the activity applied for (in the view of the Environmental Assessment Practitioner).

YES

If "NO", indicate the aspects that require further assessment before a decision can be made (list the aspects that require further assessment):

If "YES", please list any recommended conditions, including mitigation measures that should be considered for inclusion in any authorisation that may be granted by the competent authority in respect of the application:

Please refer to Appendix G, section 6

8. ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPr)

If the EAP answers yes to Point 7 above then an EMP is to be attached to this report as an Appendix

EMPR attached

YES

SECTION F: APPENDIXES

The following appendixes must be attached as appropriate:

It is required that if more than one item is enclosed that a table of contents is included in the appendix

Appendix A:	Site plan(s)
Appendix B:	Photographs
Appendix C:	Facility illustration(s)
Appendix D:	Property Description
Appendix E:	Surrounding Land Use Character
Appendix F:	Public Participation
Appendix G:	Mark Wood Consultants, Basic Assessment Report
Appendix H:	Specialist Studies
Appendix I:	Heritage
Appendix J:	Environmental Management Plans

CHECKLIST

To ensure that all information that the Department needs to be able to process this application, please check that:

- Where requested, supporting documentation has been attached; All relevant sections of the form have been completed. ≻
- ۶