

**Foskor Pty Limited
Richards Bay**



**Environmental Authorisation for the construction of
the proposed Rock Phosphate Storage Facility on
portions 55 and 56 of Erf 5333**

Final Basic Assessment Report

***NEAS Reference: DEA/EIA/0001117/2012
DEA Reference: 14/12/16/3/3/1/526***

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environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

(For official use only)

File Reference Number:

Application Number:

Date Received:

Basic assessment report in terms of the Environmental Impact Assessment Regulations, 2010, promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended.

Kindly note that:

1. This **basic assessment report** is a standard report that may be required by a competent authority in terms of the EIA Regulations, 2010 and is meant to streamline applications. Please make sure that it is the report used by the particular competent authority for the activity that is being applied for.
2. This report format is current as of **1 September 2012**. It is the responsibility of the applicant to ascertain whether subsequent versions of the form have been published or produced by the competent authority
3. 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.
4. Where applicable **tick** the boxes that are applicable in the report.
5. An incomplete report may be returned to the applicant for revision.
6. 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.
7. This report must be handed in at offices of the relevant competent authority as determined by each authority.
8. No faxed or e-mailed reports will be accepted.
9. The signature of the EAP on the report must be an original signature.
10. The report must be compiled by an independent environmental assessment practitioner.
11. Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.
12. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.
13. Should a specialist report or report on a specialised process be submitted at any stage for any part of this application, the terms of reference for such report must also be submitted.

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14. Two (2) colour hard copies and one (1) electronic copy of the report must be submitted to the competent authority.
15. Shape files (.shp) for maps must be included on the electronic copy of the report submitted to the competent authority.

SECTION A: ACTIVITY INFORMATION

Has a specialist been consulted to assist with the completion of this section?

YES ✓	NO
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If YES, please complete the form entitled "Details of specialist and declaration of interest" for the specialist appointed and attach in Appendix I.

[Details of specialist and declaration of interest is attached in Appendix I.](#)

1. PROJECT DESCRIPTION

a) Describe the project associated with the listed activities applied for

1.1 Project Description

Foskor (Pty) Ltd (Foskor) currently has a rock phosphate storage facility on their existing industrial site located at 21 John Ross Highway. However, this storage facility is very small and can only house approximately 80 000 tons of rock phosphate. To address storage challenges, supplement their current storage facility and to mitigate the risk of interruptions in the rail delivery of rock phosphate to their industrial complex, Foskor requires approximately 200 000 tons of storage space for the rock phosphate. Foskor is therefore proposing to construct a new additional rock phosphate storage facility on Portions 55 & 56 of Erf 5333 in Richards Bay. The storage facility will be an enclosed bunker type facility to accommodate approximately 200 000 tons of rock phosphate. (The current facility will remain in use for storage, but this use would diversify to other stocks once the new facility is commissioned.)

The storage bunker will be interlinked with the existing Grindrod rail tipping facility and the Foskor Industrial Complex through a system of enclosed pipe conveyors (refer to Section 1.5 below for further information). Note that Foskor advised that the Rock Phosphate Storage facility will only to receiving and dispatching rock phosphate intermittently.

The enclosed bunker will be equipped with a dust control system which consists of dust extraction points at positions where dust is likely to be generated from hoppers and conveyor transfer points.

The proposed site is currently unserviced and Foskor will therefore tie into existing infrastructure servitudes (e.g. water, power and sanitation). Access to the proposed site will be via a small "stub road" which ties in from the West Central Arterial road from the south eastern side of the site.

1.2 About Foskor

Foskor's acid division at Richards Bay undertakes the beneficiation of phosphate rock into either phosphoric acid or phosphate-based granular fertilizers for export.

From phosphate-bearing ores, the operations in Phalaborwa mine processes phosphate rock concentrate, which is crucial for stimulating and raising crop yields. The rock phosphate, is then railed to Richards Bay and off-loaded at the existing Grindrod rail tipping facility, located adjacent to the site. Foskor's Richards Bay industrial complex manufactures sulphuric acid, phosphoric acid and phosphate-based granular fertilisers (MAP and DAP) by using phosphate rock as one of the main raw materials. Rock phosphate made up of foskorite and pyroxenite is an igneous rock which contains the phosphate bearing mineral apatite.

About 84% of Phalaborwa's phosphate rock concentrate is railed to Richards Bay and the rest is sold externally. The Acid Division exports phosphoric acid to India, Japan, Bangladesh, the Netherlands, Mexico and Dubai. Phosphoric acid has agricultural, industrial, medical and retail applications. Products made from phosphoric acid include catalysts, rust proofing materials, chemical reagents, latex, dental cements, tooth whiteners, toothpaste, disinfectants, food supplements, carbonated beverages, waxes, polishes and animal feeds, among others (Foskor, 2012).

1.3 Location of the Study Area

The proposed site (Portions 55 & 56 of Erf 5333) is located within the uMhlathuze Municipal Area within the Richards Bay industrial area for heavy industries. The site is near and to the west of Foskor's existing production facility, at the corner of the John Ross Highway and the West Central Arterial. This is as shown in Map 1 and Map 2 of Appendix A and Figure 1 below. The Port of Richards Bay lies approximately 2 km to the southeast of the site and the Richards Bay Central Business District approximately 2 km to the north of the site

The areas surrounding the site are briefly described as follows:

- North:** The John Ross Highway servitude borders the proposed site. The road is elevated a few meters above the ground level of the site. A storm water channel (ditch) within the road corridor just outside and along the entire northern boundary of the site directs storm water westwards past the site to an open area west of the site. A small wetland described as the 'northern wetland' extends from the proposed site into the mentioned servitude. The Hillside Aluminium industrial complex is located opposite the John Ross Highway.
- East:** An approximately 110 m wide service infrastructure servitude lies between the site and the West Central Arterial road. The Foskor industrial complex is located approximately 320 from the boundary of the site just east of the West Central Arterial. The mentioned servitude houses a conveyor for conveyance of raw materials for Hillside Aluminium from the port of Richards Bay to their facility as well as a municipal sewer pipeline and a power servitude.
- South:** Portion 57 of Erf 5333 to the south of the site is undeveloped and is characterised largely by what is described as the 'southern wetland'. This wetland extends onto the southern part of Portion 55 & 56. All

indications are that authorities consider Portion 57 as a conservation area due to the value of the wetland system and would therefore expect that this wetland be awarded reasonable protection. The Grindrod tipping facility lies to the south of the site. Further south are the Kusasa and Navitrade facilities as well as the Grindrod tipping facility.

West: The area bordering the west of the site is undeveloped and is characterised by a vegetated surface drainage systems with drainage in a southerly direction.

1.4 Site Description and Layout

As mentioned, the site is currently vacant. Although it is undeveloped, the site has clearly been impacted by human activities such as evident by for example a man-made drainage channel.

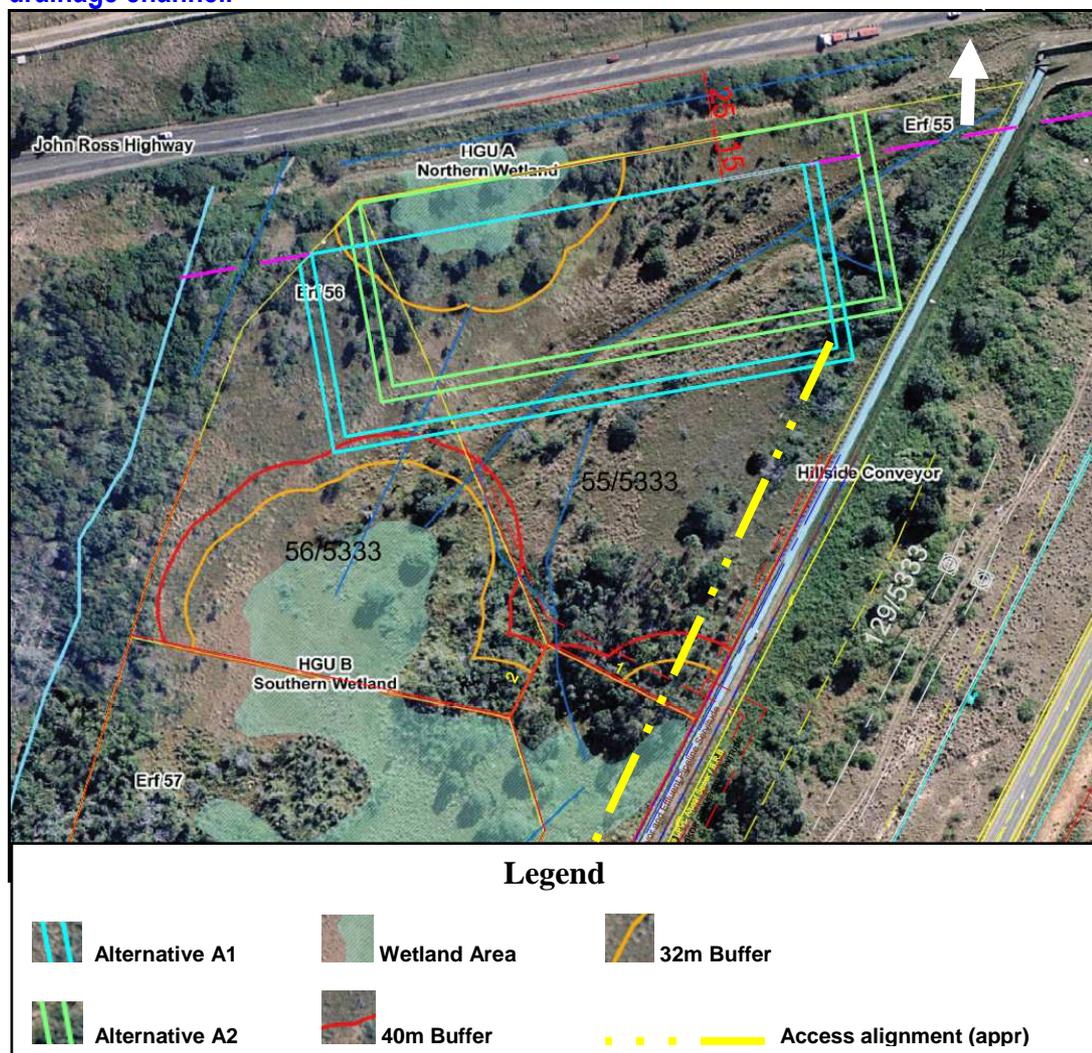


Figure 1: Showing the proposed Site Layout of the proposed Rock Phosphate Storage Facility

As can be seen from Figure 1, the layout of the proposed rock phosphate storage bunker (Alternative 1) will be housed on the more northern portion of the proposed

site (Portions 55 & 56 of Erf 5333). Foskor's design engineers (Bosch Projects) relocated the original bunker (Alternative 2) in the layout in response to a Department of Transport requirement for a 15 m clearance from the road servitude.

A relatively small office, ablutions and workshop building, an electrical transformer, a road for access to the bunker and a parking area will be located on the eastern side of the site just south of the bunker. The proposed pipe conveyor will traverse and link to the bunker from a south south-easterly direction.

A new open storm water drainage channel will be constructed along the eastern boundary of the site to reroute the man-made open storm water drainage channel that is currently traversing the site in a south-westerly direction. The new channel will be provided with storm water energy dissipation measures in accordance with recommendations from the wetland specialist.

In designing the proposed layout of the storage bunker and associated facilities, engineers took the advice from a wetland specialist on minimising the impact on two wetland systems (namely the northern and southern wetland) found on the site into consideration. However, the bunker will still infringe substantially on the small northern wetland and infringe slightly on the 40m buffer zone of the southern wetland. Furthermore, the mentioned road access to the site will cross a small portion of the southern wetland but it will be constructed at the edge of the wetland as close as possible to the eastern boundary of the property. (Refer to Section D Subsection 2.2.3 on consultation with specialists and key authorities on wetland impact and mitigation)

1.5 Rock Phosphate Characteristics

Rock Phosphate, an inert raw material is mined at Foskor's mining operations in Phalaborwa.

According to the National Nuclear Regulator (NNR), all minerals and raw materials of natural origin are referred to as Naturally Occurring Radioactive Materials (NORM) as they contain naturally occurring radionuclides.

Typical activities at facilities handling NORM include actions such as:

- Mining and processing of gold, copper, uranium, heavy minerals and phosphate rock, which in this case is applicable to the Foskor operations.

“Mining and mineral processing facilities handling NORM must comply to the Certificate of Registration (COR) requirements of the NNR. The NNR implements a series of independent safety assurance programmes to verify compliance with regulatory requirements and conditions as specified in the COR. This is done through audits and inspections and where violation to the authorisation is identified, the NNR may initiate appropriate enforcement actions to address the specific conditions and requirements of the COR” (NNR)

Foskor currently operates under their COR and will apply separately to this Basic Assessment for the COR to be amended through an ACR (Authorisation Change Request) to include the proposed new Rock Phosphate Storage Facility.

Note that Foskor Rock Phosphate radiation levels is less than the regulated 0.5 Be/gm, therefore no new license or permit is required from the National Nuclear Regulator. Foskor currently holds a COR from the NNR and the NNR will be consulted with on a regular basis.

1.6 Process Description

Rock Phosphate is railed to Richards Bay and off-loaded to the existing Grindrod rail tipping facility, located adjacent to the site. From the tipping facility delivered, rock will either be conveyed to Foskor's existing store on site or diverted to the proposed storage facility by means of an enclosed above ground pipe conveyor. An enclosed pipe conveyor will also be used to transfer the rock from the proposed store to the existing store on site as needed. The pipe conveyor route is aligned to reasonably minimise transitions points to minimise fugitive dust from the conveyor system.

The process of storage of rock phosphate on Portions 55 & 56 is shown below in a process block diagram.

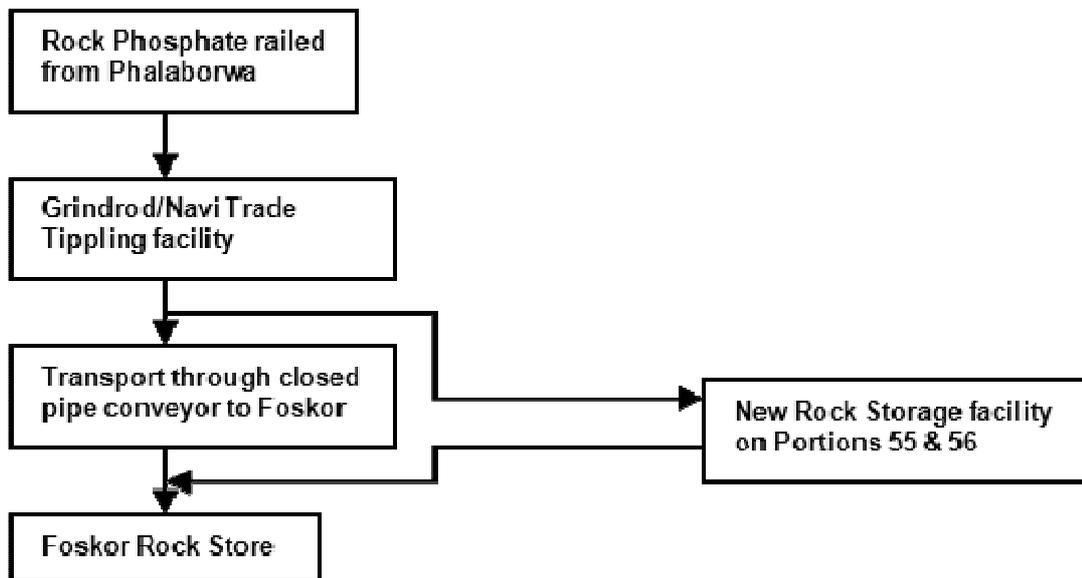


Figure 2: Process Flow Diagram

1.7 Motivation for the Project

The main motivation for the project is to address the storage challenges currently experienced by Foskor by increasing their rock phosphate storage capacity to 200 000 tons. The proposed project will provide a raw material buffer capacity for supply security purposes, in the event that rail delivery is compromised. This will also improve the capital productivity and drive the profitable growth for Foskor.

It should be noted that due to limitations of the current rail system operated by Transnet Freight Rail, delivery of the rock phosphate raw material is sometimes inconsistent or interrupted. As a result of this limitation rock phosphate stocks available through existing storage buffer is then occasionally depleted. To mitigate this problem Foskor has even needed to import phosphate material from elsewhere in

the world to take delivery through the Port of Richards Bay to insure that their manufacturing facilities remain operational. This therefore also means that imported raw material is then used instead of the material from the Foskor mines in South Africa. Understandably, this places a financial burden and a high economic risk on Foskor and its clients.

Hence the store will basically serve as an insurance against failures of the supply chain from Phalaborwa.

The new storage facility will assist in getting a better and consistent service from Transnet Freight Rail (TFR). As of now, if Foskor's existing store becomes full due to production limitations, TFR diverts the rolling stock for the time period to other customers. Once the supply chain has been normalised, it's very difficult to normalise rolling stock from TFR. With the construction of the new store, TFR should be able to deliver Foskor rock on a un interrupted basis.

b) Provide a detailed description of the listed activities associated with the project as applied for

In terms of the National Environmental Management Act, 1998 (No.107 of 1998) [NEMA] and associated Environmental Impact Assessment (EIA) Regulations published in August 2010, an Environmental Authorisation must be obtained from the relevant decision-making authority, prior to the commencement of certain listed activities that may result in potential negative impacts on the environment. The proposed project involves, inter alia, the following listed activities, as per Government Notice No. R. 544 and R. 546 of NEMA:

Listed activity as described in GN R.544, 545 and 546	Description of project activity
GN R.544 item 2: The construction of facilities or infrastructure for the storage of ore or coal that requires an atmospheric emissions license in terms of the National Environmental Management: Air Quality Act (Act No. 39 of 2004).	The construction of the Rock Phosphate Storage Facility for the storage of Rock Phosphate triggers the need for an Atmospheric Emissions License (AEL), in terms of National Environmental Management: Air Quality Act (Act No. 39 of 2004), listed activity 14, category 5, subcategory 5.1 for the storage and handling of ore and coal. The AEL application is being undertaken by SRK Consulting (Pty) Ltd.
GN R.544 Item 11: The construction of: (i) Canals (ii) Channels (iii) Bridges (iv) Dams (v) Weirs (vi) Bulk storm water outlet structures (x) Buildings exceeding 50 square metres	According to the definition in GNR. 544 a water course is defined as a "wetland, lake or dam into which or from which water flows". The construction of the rock phosphate storage facility (a building exceeding 50 square metres) and associated infrastructure (Infrastructure or structures covering 50 square metres or more) will have an impact on

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<p>(xi) Infrastructure or structures covering 50 square metres or more.</p> <p>where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.</p> <p>(Note: The EIA Regulations defines a wetland as a watercourse)”</p>	<p>the bed, bank, course and characteristics of the watercourse (portion of the wetland “arm” in the southern wetland system) during the construction and operational phases.</p> <p>The proposed construction of the site access road will also directly impact on a portion of the wetland in the south. This will require a bridge (culvert) to be built which will be within the ‘arm’ of the southern wetland.</p>
<p>GN R.544 Item 18: The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock from</p> <p>(i) a watercourse;</p> <p>but excluding where such infilling, depositing, dredging, excavation, removal or moving</p> <p>(i) is for maintenance purposes undertaken in accordance with a management plan agreed to by the relevant environmental authority; or occurs behind the development setback line.”</p>	<p>According to the definition in GNR. 544 a water course is defined as a “wetland, lake or dam into which or from which water flows”.</p> <p>The proposed construction of the Rock Phosphates storage facility will involve the loss (infilling) of the northern wetland on Portion 55. According to the wetland specialist Mr Greg Mullins, the nature of the development has changed for the positive, compared to other industrial uses that had been previously considered / proposed. The environmental risks associated with the previously proposed landuse are no longer an issue. The new development plan also allows for a more practical and effective method of stormwater management. This includes doing away with the need for formal attenuation ponds.</p> <p>Mr Mullins further explained that while advocating wetland loss is never done easily, when one considers the regional pressures on these systems, the opportunity to have over 3 Ha of near pristine wetland of this type and in this locality protected (as is proposed through the attached Wetland Conservation Management Plan in Appendix D.2) must be given due attention.</p>
<p>GN R.544 Item 28: The expansion of existing facilities for any process or activity where such expansion will result in the need for a new, or amendment of, an existing permit or licence in terms of national or provincial legislation governing the release of emissions or pollution, excluding where the facility, process or activity is included in the list of waste management activities</p>	<p>The expansion of the existing Foskor operations by means of constructing a new Rock Phosphate store require the need for a new Atmospheric Emissions License (AEL) in terms of NEM: AQA, as the following activity is triggered: listed activity 14, category 5, subcategory 5.1.</p>

<p>published in terms of section 19 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) in which case that Act will apply.</p>	
<p>GN R.546, Item 4: The construction of a road wider than 4 metres with a reserve less than 13.5 metres.</p> <p>(a) In Eastern Cape, Free State, KwaZulu-Natal, Limpopo, Mpumalanga and Northern Cape provinces:</p> <p>(iii) In Urban Areas:</p> <p>(aa) Areas zoned for use as public open space;</p> <p>(bb) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority or zoned for a conservation purpose;</p> <p>(cc) Seawards of the development setback line or within urban protected areas.”</p>	<p>The construction of the access road to the Rock Phosphate Storage Facility site will be within an Urban area in KwaZulu-Natal. The road will be approximately 7,0m wide with a length of 130m.</p>

Other Relevant Environmental Legislation

(a) Water Use Licence

The construction of the rock phosphate storage facility and associated infrastructure will have an impact on the bed, bank, course and characteristics of the watercourse (portion of the wetland “arm” in the southern wetland system) during the construction and operational phases and thus requires a Water Use Licence from the Department of Water Affairs (DWA).

In Terms of the National Water Act (Act No 36 of 1998) [NWA], a Water Use License Application (WULA) is required, this is a legislative process governed by DWA for the authorisation of all water uses defined in section 21 of the NWA.

Activity No	Description
Section 21 (c)	Impeding and diverting the flow of water in a watercourse
Section 21 (l)	Altering the bed, bank, course or characteristics of a watercourse

(b) Atmospheric Emissions Licence

The construction of the Rock Phosphate Storage Facility for the storage of Rock Phosphate triggers the need for an Atmospheric Emissions License (AEL), in terms of National Environmental Management: Air Quality Act (Act No. 39 of 2004), listed activity 14, category 5, subcategory 5.1 for the storage and handling of ore and coal. The AEL application will be undertaken by SRK Consulting (Pty) Ltd.

2. FEASIBLE AND REASONABLE ALTERNATIVES

“alternatives”, in relation to a proposed activity, means different means of meeting the general purpose and requirements of the activity, which may include alternatives to—

- (a) the property on which or location where it is proposed to undertake the activity;
- (b) the type of activity to be undertaken;
- (c) the design or layout of the activity;
- (d) the technology to be used in the activity;
- (e) the operational aspects of the activity; and
- (f) the option of not implementing the activity.

Describe alternatives that are considered in this application as required by Regulation 22(2)(h) of GN R.543. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity (NOT PROJECT) could be accomplished in the specific instance taking account of the interest of the applicant in the activity. The no-go alternative must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed.

The determination of whether 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. 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.

The identification of alternatives should be in line with the Integrated Environmental Assessment Guideline Series 11, published by the DEA in 2004. Should the alternatives include different locations and lay-outs, the co-ordinates of the different alternatives must be provided. The co-ordinates should be in degrees, minutes and seconds. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

In terms of the EIA regulations, attention needs be given to all possible alternatives. The assessment of alternatives allows different approaches and ways of meeting the need, purpose and objectives of a proposed activity. Alternatives may include location or site alternatives, design/layout alternatives, activity alternatives and processes or technology alternatives, etc.

The no-go alternative or option also needs to be considered, as it provides the baseline against which the impacts of other alternatives can be compared. The objective of presenting, evaluating and motivating the feasible alternatives, is to identify the preferred option. In the case of the rock phosphate storage facility project, location/site

alternatives, design/layout alternatives, technology alternatives and the no-go option were evaluated and are further detailed below.

a) Site alternatives

Alternative 1 (preferred alternative)		
Description	Lat (DDMMSS)	Long (DDMMSS)
<p><u>Proposed New Rock Phosphate Storage Facility</u></p> <p>Alternative 1 is the preferred site alternative for the proposed rock phosphate storage facility. This site alternative is located on Portions 55 & 56 of Erf 5333 in Richards Bay, near and to the west of Foskor’s existing production facility. It is on the corner of the John Ross Highway (to the North) and the West Central Arterial (to the East). South of the site is the Kusasa and Navitrade facilities. The site is currently undeveloped and vacant, and the site access road will tie into a “stub road” which ties in with the West Central Arterial Road. Foskor owns the proposed site.</p> <p>The main benefits of the proposed site are:</p> <ul style="list-style-type: none"> • The site being of adequate size to house the storage facility • The close proximity of the site to the Foskor Industrial Complex (only 320 m and only separated by the West Central Arterial and a 110-m-wide service infrastructure servitude.) • The site being zoned for general industrial use • The site being vacant and owned by Foskor • Suitable access to the site from the West Central Arterial. <p>The main challenges associated with the proposed site (and which were therefore assessed as part of this Basic Assessment) are:</p> <ul style="list-style-type: none"> • Like much of Richards Bay, the site being located within a relatively sensitive natural environment, particular due to the high water table and associated wetland systems, that characterises the area at large • The proposed activities infringing and 	28°46' 19.64''	32°1' 48.95''

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<p style="color: blue;">impacting on the wetlands found on and near the site</p> <ul style="list-style-type: none"> • Cumulative impacts resulting from the overall urbanisation and industrialisation of the area surrounding the site. 		
Alternative 2		
Description	Lat (DDMMSS)	Long (DDMMSS)
<p style="color: blue;"><u>Existing Rock Phosphate Storage Facility</u></p> <p style="color: blue;">Alternative S2 is the rock phosphate store currently located on the existing Foskor Industrial Complex's footprint. The capacity of this store can only hold about 50 000 tons of rock phosphate and the requirement is to house approximately 200 000 tons of rock phosphate. There is little room to expand the current store and this site therefore proved to be inappropriate to house 200 000 tons of rock phosphate.</p> <p style="color: blue;">Alternative S2 was therefore not further assessed.</p>	<p style="color: blue;">28°46' 34.25''</p>	<p style="color: blue;">32°2' 0.96''</p>
Alternative 3		
Description	Lat (DDMMSS)	Long (DDMMSS)
<p style="color: blue;">N/A</p>		

In the case of linear activities: N/A

Alternative:

Latitude (S):

Longitude (E):

Alternative S1 (preferred)

- Starting point of the activity
- Middle/Additional point of the activity
- End point of the activity

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Alternative S2 (if any)

- Starting point of the activity
- Middle/Additional point of the activity
- End point of the activity

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Alternative S3 (if any)

- Starting point of the activity
- Middle/Additional point of the activity
- End point of the activity

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For route alternatives that are longer than 500m, please provide an addendum with co-ordinates taken every 250 meters along the route for each alternative alignment.

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In the case of an area being under application, please provide the co-ordinates of the corners of the site as indicated on the lay-out map provided in Appendix A.

b) Lay-out alternatives

Alternative 1 (preferred alternative)		
Description	Lat (DDMMSS)	Long (DDMMSS)
<p>The preferred design layout of the rock phosphate storage bunker is shown on Figure 1 in Section 1 above. This preferred layout is located 15m from the John Ross road reserve, a requirement by DOT that was established during the public participation process that formed part of the Basic Assessment.</p>	28°46' 19.64"	32°1' 48.95"
Alternative 2		
Description	Lat (DDMMSS)	Long (DDMMSS)
<p>Originally the proposed rock phosphate storage bunker footprint was located closer to the John Ross Highway as shown in Figure 1 above. However, upon liaison with the Department of Transport (DoT), Mr Roy Ryan stated that no buildings or structures above or below the ground upon which it stands shall be positioned within 15m of the road reserve of Main Road 496 (John Ross Highway). The site layout was therefore adjusted and the storage bunker footprint shifted further south away from the highway to be the preferred option (A1).</p> <p>Alternative A2 is therefore regarded as infeasible and was therefore not further assessed in this Basic Assessment.</p>	28°46' 17.23"	32°1' 51.06"
Alternative 3		
Description	Lat (DDMMSS)	Long (DDMMSS)
N/A		

c) Technology alternatives

Alternative 1 (preferred alternative)
<p>A fully enclosed bunker store with a rectangular footprint is proposed. Fully enclosed pipe conveyors/conventional conveyors will be constructed and used to convey the rock-phosphate to and from the bunker. In fact, following discussions with the EAP, the engineers have adjusted the pipe-conveyor route to minimise transition points and thereby further reduce potential dust pollution. Inside the bunker front end loaders (and/or similar vehicles) will be used as the preferred technology alternative to manage the rock phosphate stocks. These technology alternatives are at this stage considered the most practical and feasible option for the proposed project.</p> <p>Alternative A1 is therefore considered as the preferred option.</p>
Alternative 2
<p>An open storage area is considered infeasible due to the need to keep the raw material dry and also due to the high potential for dust generation.</p>

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Alternative A2 was therefore not further assessed.
Alternative 3
A round bunker and automated reclaimers, which were investigated as part of the engineering design, were found to be both economically and technically infeasible.
Alternative A3 was therefore not further assessed.
Alternative 4
A rectangular bunker with a semi portal reclaimer, which was investigated as part of the engineering design, was found to be both economically and technically infeasible.
Alternative A4 was therefore not further assessed.

- d) Other alternatives (e.g. scheduling, demand, input, scale and design alternatives)
 N/A. No other alternatives were assessed

Alternative 1 (preferred alternative)
N/A
Alternative 2
N/A
Alternative 3
N/A

- e) No-go alternative

<p>Rock phosphate is one of the main raw materials used to manufacture sulphuric acid, phosphoric acid and phosphate-based granular fertilisers (MAP and DAP) which are used in South Africa and abroad. This is also crucial for stimulating and raising crop yields for South Africa. In order to meet the growing demands, Foskor requires additional rock phosphate storage space to accommodate approximately 200 000 tons of rock phosphate.</p> <p>Without an alternative strategy to address the storage challenges currently experienced by Foskor, they will continue to experience disruptions in their production due to the inability of rail to deliver rock phosphate timeously. This will have a significant negative impact on the economic viability of Foskor and the stability of the area and the country as a whole.</p> <p>The “no go option” is therefore not a viable option.</p>
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Paragraphs 3 – 13 below should be completed for each alternative.

3. PHYSICAL SIZE OF THE ACTIVITY

a) Indicate the physical size of the preferred activity/technology as well as alternative activities/technologies (footprints):

Alternative:

Alternative A1¹ (preferred activity alternative)
 Alternative A2 (if any)
 Alternative A3 (if any)

Size of the activity:

16250 m ²
14813 m ²
15353 m ²

or, for linear activities: **N/A**

Alternative:

Alternative A1 (preferred activity alternative)
 Alternative A2 (if any)
 Alternative A3 (if any)

Length of the activity:

N/A m
N/A m
N/A m

b) Indicate the size of the alternative sites or servitudes (within which the above footprints will occur):

Alternative:

Alternative A1 (preferred activity alternative)
 Alternative A2 (if any)
 Alternative A3 (if any)

Size of the site/servitude:

44125 m ²
338708 m ²
N/A m ²

4. SITE ACCESS

Does ready access to the site exist?

YES	NO √
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If NO, what is the distance over which a new access road will be built

130 m

¹ "Alternative A.." refer to activity, process, technology or other alternatives.

Describe the type of access road planned:

Access to the site will be from the existing “stub road” opposite the current Grindrod factory access point. The existing road stub is approximately 7,0m wide and asphalt surfaced. It is proposed to retain this width and roadway type up to a point just before the road enters the hardstand area on Portion 55 & 56. This stub road will therefore continue to connect to the West Central Arterial Road.

Based on advice received from Mr Roy Ryan from the KZN Department of Transport:

- No direct access to the Main Road 496 (John Ross Highway) will be permitted.
- Access from the west Central Arterial road is considered acceptable
- No buildings or structures above or below the ground upon which it stands shall be positioned within 15m of the road reserve of Main Road 496.
- No parking as required in terms of the Town Planning Scheme of the Municipality of service roads may be positioned within 7.5m of the road reserve boundary of main Road 496.
- The disposal of storm water must be indicated on a site layout plan.

The design engineers have taken these requirements into consideration and revised site layout design plans accordingly. The position of the access road is indicated on the site plans (Appendix A).

Since the site will be inter connected to the Grindrod tipping facility and the Foskor Industrial Complex by means of a pipe conveyor system, the road traffic to and from the site will be low during normal operation. During construction or major maintenance of the facility traffic would increase. (Refer to Appendix F, Subsection 3.3 for a brief assessment of the traffic impacts.)

Include the position of the access road on the site plan and required map, as well as an indication of the road in relation to the site. (See Figure 1 above in Section A 1(a))

5. LOCALITY MAP

An A3 locality map must be attached to the back of this document, as Appendix A. The scale of the locality map must be relevant to the size of the development (at least 1:50 000. For linear activities of more than 25 kilometres, a smaller scale e.g. 1:250 000 can be used. The scale must be indicated on the map.). The map must indicate the following:

- an accurate indication of the project site position as well as the positions of the alternative sites, if any;
- indication of all the alternatives identified;
- closest town(s);
- road access from all major roads in the area;
- road names or numbers of all major roads as well as the roads that provide access to the site(s);
- all roads within a 1km radius of the site or alternative sites; and
- a north arrow;
- a legend; and

- locality GPS co-ordinates (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 degrees and decimal minutes. The minutes should have at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection).

The Locality Map is attached in Appendix A.

6. LAYOUT/ROUTE PLAN

A detailed site or route 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 property boundaries and numbers of all the properties within 50 metres of the site;
- the current land use as well as the land use zoning of the site;
- the current land use as well as the land use zoning each of the properties adjoining the site or sites;
- the exact position of each listed activity applied for (including alternatives);
- servitude(s) indicating the purpose of the servitude;
- a legend; and
- a north arrow.

The Layout/Route Plan is attached in Appendix A.

7. SENSITIVITY MAP

The layout/route plan as indicated above must be overlain with a sensitivity map that indicates all the sensitive areas associated with the site, including, but not limited to:

- watercourses;
- the 1:100 year flood line (where available or where it is required by DWA);
- ridges;
- cultural and historical features;
- areas with indigenous vegetation (even if it is degraded or infested with alien species); and
- critical biodiversity areas.

The sensitivity map must also cover areas within 100m of the site and must be attached in Appendix A.

The Sensitivity Map is attached in Appendix A.

8. SITE PHOTOGRAPHS

Colour photographs from the centre 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 Appendix B to this report. It must be supplemented with additional photographs of relevant features on the site, if applicable.

Plates / photographs of the proposed site are included in Appendix B. Photo's that were taken from various positions that overlook the site and surrounding areas are included to clearly illustrate the surrounding area. Other plates were included and illustrate the Public Participation Process activities.

9. FACILITY ILLUSTRATION

A detailed illustration of the activity must be provided at a scale of at least 1:200 as Appendix C 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.

The facility illustration(s) are attached in Appendix C.

10. ACTIVITY MOTIVATION

Motivate and explain the need and desirability of the activity (including demand for the activity):

1. Is the activity permitted in terms of the property's existing land use rights?	YES √	NO	Please explain
Yes, the property (portion 55 and 56) is currently zoned "General Industry" and owned by Foskor (Pty) Ltd. The proposed activity will therefore be consistent with the zoning of the property's existing land use rights.			
2. Will the activity be in line with the following?			
(a) Provincial Spatial Development Framework (PSDF)	YES √	NO	Please explain
The activity which is located in Richards Bay, KwaZulu-Natal will be in line with the Provincial Spatial Development Framework as Richards Bay has been identified in the PSDF as a provincial Secondary Node and thus is an urban centre with good existing economic development and the potential for growth and services to the regional economy. The PSDF identifies the general Richards Bay area as an Economic Value Adding Area and therefore the job opportunities and potential economic benefit associated with the Foskor Rock Phosphate Storage Facility are in line with the PSDF.			
(b) Urban edge / Edge of Built environment for the area	YES √	NO	Please explain
The proposed site is zoned 'General Industry' and is surrounded by adjacent industries. The construction of the Rock Phosphate storage facility is therefore within the urban edge.			

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<p>(c) Integrated Development Plan (IDP) and Spatial Development Framework (SDF) of the Local Municipality (e.g. would the approval of this application compromise the integrity of the existing approved and credible municipal IDP and SDF?).</p>	<p>YES ✓</p>	<p>NO</p>	<p>Please explain</p>
<p>The proposed Rock Phosphate Storage Facility site is zoned 'General Industry' and the proposed activities of the project is in line with the current zoning therefore in line with the IDP. It will therefore not compromise the integrity of the uMhlathuze IDP and SDF.</p>			
<p>(d) Approved Structure Plan of the Municipality</p>	<p>YES ✓</p>	<p>NO</p>	<p>Please explain</p>
<p>The proposed Rock Phosphate Storage Facility site is zoned 'General Industry' and the proposed activities and infrastructure plans of the project is in line with the current zoning and that of the Municipality. Proof of correspondence with uMhlathuze Municipality is attached in Appendix E4 and E6 Authority Meeting Minutes.</p>			
<p>(e) An Environmental Management Framework (EMF) adopted by the Department (e.g. Would the approval of this application compromise the integrity of the existing environmental management priorities for the area and if so, can it be justified in terms of sustainability considerations?)</p>	<p>YES ✓</p>	<p>NO</p>	<p>Please explain</p>
<p>The approval of this application would not compromise the integrity of the existing environmental management priorities for the area. The wetlands located on site have been previously impacted on by anthropogenic activities. These systems have formed from storm water which has been redirected from the John Ross Highway. These wetlands also do not form part of any priority or conservational areas of Richards Bay; the zoning of the properties is 'General Industry'. In terms of the Environmental Management Framework for the Richards Bay Port Expansion Area and Industrial Development Zone the site falls within the Coastal Plain Commercial/Industrial Area. The site is classified as having low environmental sensitivity and 0-Low red data importance. The EMF states, –The interests of the industrial and commercial sector must be promoted in this zone because of the strategic location of the port. The reality is that suitable space limits the extent to which this can happen. The limited space in this zone demands that potential for advancing the manufacturing sector in the area will have to be sourced outside this zone. It may also be an option to reserve the available space for the expansion needs of existing developments as this may secure their competitive advantage over time. The proposed development of the Rock Phosphate Storage facility is therefore in line with the EMF.</p>			
<p>(f) Any other Plans (e.g. Guide Plan)</p>	<p>YES</p>	<p>NO ✓</p>	<p>Please explain</p>
<p>None have been identified.</p>			

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<p>3. Is the land use (associated with the activity being applied for) considered within the timeframe intended by the existing approved SDF agreed to by the relevant environmental authority (i.e. is the proposed development in line with the projects and programmes identified as priorities within the credible IDP)?</p>	<p>YES ✓</p>	<p>NO</p>	<p>Please explain</p>
<p>The proposed Rock Phosphate Storage Facility site is zoned 'General Industry' and the proposed activities of the project is in line with the current zoning therefore in line with the projects and programmes identified as priorities within the IDP and SDF.</p>			
<p>4. Does the community/area need the activity and the associated land use concerned (is it a societal priority)? (This refers to the strategic as well as local level (e.g. development is a national priority, but within a specific local context it could be inappropriate.)</p>	<p>YES ✓</p>	<p>NO</p>	<p>Please explain</p>
<p>The proposed activity is not a societal priority, however the fact that the proposed development would address the raw material security for the Foskor Industrial Complex and improve the financial viability of Foskor at large, benefits the securing of current operational jobs at this industry (locally and at the Foskor mines).</p> <p>The construction phase of the project will provide approximately 160 jobs, most of which would benefit the local community and allow for a skills transfer for previously disadvantaged individuals.</p> <p>It should be noted that Foskor, being a parastatal organisation, are obligated though their organisational policies of preferential procurement were preference is given to Historical Disadvantaged Individuals (HDI's) South African citizens. Note that Foskor will largely use existing staff for operating and maintaining the proposed facility.</p>			
<p>5. Are the necessary services with adequate capacity currently available (at the time of application), or must additional capacity be created to cater for the development? (Confirmation by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)</p>	<p>YES ✓</p>	<p>NO</p>	<p>Please explain</p>
<p>During the operational phase, additional capacity will be sought from the existing municipal services; including water (very small amounts as the store would house a dry process), sewage disposal (very small amounts for ablutions of a few operating staff members), electricity (for driving conveyor belts and for lighting) and use of municipal roads (very low traffic requirements).</p> <p>This section can only be fully addressed objectively and accurately upon receipt of formal comments from the uMhlathuze Municipality. Proof of correspondence about the project activities with the uMhlathuze Municipality is included in Appendix E4 and E6.</p>			

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<p>6. Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of services and opportunity costs)? (Comment by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)</p>	<p>YES ✓</p>	<p>NO</p>	<p>Please explain</p>
<p>The development is provided for in the infrastructure planning of the municipality (proof of correspondence attached in Appendix E4 and E6). The proposed Rock Phosphate Storage Facility site is also zoned 'General Industry' and the proposed activities of the project is in line with the current zoning.</p>			
<p>7. Is this project part of a national programme to address an issue of national concern or importance?</p>	<p>YES</p>	<p>NO ✓</p>	<p>Please explain</p>
<p>The project is not part of a national programme however by meeting the growing demands and addressing the rock phosphate storage challenges currently experienced by Foskor, production of sulphuric acid, phosphoric acid and phosphate-based granular fertilisers (MAP and DAP) will help in maintaining its current production levels which is crucial for stimulating and raising crop yields of the country as well as for the economy as a whole particularly when exports increase.</p>			
<p>8. Do location factors favour this land use (associated with the activity applied for) at this place? (This relates to the contextualisation of the proposed land use on this site within its broader context.)</p>	<p>YES ✓</p>	<p>NO</p>	<p>Please explain</p>
<p>Foskor currently has a rock phosphate storage facility on their existing industrial site located at 21 John Ross Highway. However, this storage facility is very small and can only house approximately 80 000 tons of rock phosphate. To address storage challenges, supplement their current storage facility and to mitigate the risk of interruptions in the rail delivery of rock phosphate to their industrial complex, Foskor requires approximately 200 000 tons of storage space for the rock phosphate.</p> <p>Foskor therefore requires the new additional rock phosphate storage facility on Portions 55 & 56 of Erf 5333 in Richards Bay. As noted, Location factors favour this land use as the proposed new site is located adjacent and near to the west of Foskor's existing production facility, at the corner of the John Ross Highway and the West Central Arterial.</p> <p>The proposed Rock Phosphate Storage Facility site is zoned 'General Industry' and the proposed activities of the project is in line with the current zoning. Also the Port of Richards Bay lies approximately 2 km to the southeast of the site and the Richards Bay Central Business District approximately 2 km to the north of the site. The storage bunker will be interlinked with the existing Grindrod rail tipping facility and the Foskor Industrial Complex through a system of enclosed pipe conveyors. Also refer to Section A, Subsection 1 of the Report.</p>			

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<p>9. Is the development the best practicable environmental option for this land/site?</p>	<p>YES √</p>	<p>NO</p>	<p>Please explain</p>
<p>The development is the best practicable option as it is in close proximity to Foskor’s existing production facility and also the land is owned by Foskor and zoned general industry. However the proposed construction of the Rock Phosphates storage facility will involve the loss (infilling) of the northern wetland (poorly functional wetland which formed from the redirection of stormwater from the John Ross highway).</p> <p>According to the wetland specialist Mr Greg Mullins, the nature of the development (of the Rock Phosphate Storage Facility) on this site has changed for the positive, compared to previously proposed / considered land use. The environmental risks associated with the previously proposed landuse are no longer an issue. The new development plan also allows for a more practical and effective method of stormwater management. This includes doing away with the need for formal attenuation ponds. While advocating wetland loss is never done easily, when one considers the regional pressures on these systems. Also given the fact that Foskor plan on conserving and managing the portion 57 wetland in the south, the opportunity to have over 3 Ha of near pristine wetland of this type and in this locality protected must be given due attention.</p>			
<p>10. Will the benefits of the proposed land use/development outweigh the negative impacts of it?</p>	<p>YES √</p>	<p>NO</p>	<p>Please explain</p>
<p>The storage challenges currently experienced by Foskor by increasing their rock phosphate storage capacity to 200 000 tons will be addressed. The proposed project will provide a raw material buffer capacity for supply security purposes, in the event that rail delivery is compromised. This will also improve the capital productivity and drive the profitable growth for Foskor. Hence the store will basically serve as an insurance against failures of the supply chain from Phalaborwa.</p> <p>Also by increasing their rock phosphate storage capacity, production of sulphuric acid, phosphoric acid and phosphate-based granular fertilisers (MAP and DAP) will help in maintaining its current production levels which is crucial for stimulating and raising crop yields of the country as well as for the economy as a whole particularly when exports increase.</p> <p>During the Basic Assessment process all identified negative impacts can be mitigated to a low significance or even lower significance, provided the recommended mitigation measures, as were incorporated into the EMP (Appendix G) are implemented.</p>			
<p>11. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?</p>	<p>YES</p>	<p>NO √</p>	<p>Please explain</p>
<p>The proposed Rock Phosphate Storage Facility site is zoned ‘General Industry’ and the associated activities will be in line with this current zoning.</p>			

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12. Will any person's rights be negatively affected by the proposed activity/ies?	YES	NO ✓	Please explain
<p>The findings of the specialist studies for air quality, wetlands, traffic and heritage did not indicate any fatal flaws or harm to human health. The project activities will operate under the requirements of National, Provincial and Local legislation as well as adopting the project EMP mitigation measures.</p>			
13. Will the proposed activity/ies compromise the "urban edge" as defined by the local municipality?	YES	NO ✓	Please explain
<p>The proposed activity is located within an area zoned 'General Industry'. Adjacent properties are also zoned general industry, therefore the "urban edge" will not be compromised in any way.</p>			
14. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPS)?	YES ✓	NO	Please explain
<p>The proposed expansion may increase the amount of fertilizer available to local farmers for agricultural production by having a constant supply of rock phosphate (a raw material in fertilisers). This will indirectly contribute to SIP 11 – Agri-logistics and Rural Infrastructure as it will provide local farmers with a local supply of fertiliser thereby encouraging agricultural practice.</p>			
15. What will the benefits be to society in general and to the local communities?			Please explain
<p>The rock phosphate storage challenges currently experienced by Foskor, production of sulphuric acid, phosphoric acid and phosphate-based granular fertilisers (MAP and DAP) will help in maintaining its current production levels which is crucial for stimulating and raising crop yields of the country as well as for the economy as a whole particularly when exports increase.</p> <p>The construction phase of the project will provide approximately 160 jobs, most of which would benefit the local community and allow for a skills transfer for previously disadvantaged individuals. It should be noted that Foskor, being a parastatal organisation, are obligated though their organisational policies of preferential procurement where preference is given to Historical Disadvantaged Individuals (HDI's) South African citizens. Note that Foskor will largely use existing staff for operating and maintaining the proposed facility.</p>			

<p>16. Any other need and desirability considerations related to the proposed activity?</p>	<p>Please explain</p>
<p>The main need for the project is to address the storage challenges currently experienced by Foskor by increasing their rock phosphate storage capacity to 200 000 tons. The proposed project will provide a raw material buffer capacity for supply security purposes, in the event that rail delivery is compromised. This will also improve the capital productivity and drive the profitable growth for Foskor.</p> <p>It should be noted that due to limitations of the current rail system operated by Transnet Freight Rail, delivery of the rock phosphate raw material is sometimes inconsistent or interrupted. As a result of this limitation rock phosphate stocks available through existing storage buffer is then occasionally depleted.</p> <p>To mitigate this problem Foskor has even needed to import phosphate material from elsewhere in the world to take delivery through the Port of Richards Bay to insure that their manufacturing facilities remain operational. This therefore also means that imported raw material is then used instead of the material from the Foskor mines in South Africa. Understandably, this places a financial burden and a high economic risk on Foskor and its clients.</p> <p>Hence the store will basically serve as an insurance against failures of the supply chain from Phalaborwa.</p>	
<p>17. How does the project fit into the National Development Plan for 2030?</p>	<p>Please explain</p>
<p>The project will fit into the National Development Plan for 2030 by contributing in the following ways:</p> <ul style="list-style-type: none"> • The project will create approximately 160 jobs and R30, 000, 000 value in employment opportunities during the construction phase which are in line with Government's growth strategy • The project will contribute to the country's Gross Domestic Product (GDP) • The project will assist in supplying the local market with locally manufactured fertiliser, thereby eliminating the need for importing fertiliser from other countries. 	

18. Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA have been taken into account.

In the beginning stages of the Basic Assessment process potential impacts (environmental, socio economic and heritage impacts) of the proposed rock phosphate storage facility were identified by GIBB and Foskor, namely;

- Impacts on fauna and flora
- Wetland impacts
- Air quality impacts
- Noise impacts
- Traffic impacts
- Construction related impacts (noise, dust, visual and aesthetic)
- Job creation, capacity building & skills transfer.

Following on from this, key stakeholders and authorities were identified and consulted with in order to ensure all potential impacts of the proposed project were identified and discussed with the relevant authorities. This allowed GIBB and Foskor to also identify risks and consequences or any fatal flaws, socio-economic conditions of the study area and any cultural heritage aspects of concern. Together with Foskor, GIBB was also able to identify site, layout and technology alternatives and options, which are discussed in detail in Section A, Subsection 2.

Interested and Affected Parties (I&APs) were notified of the project through various means (i.e. site notices, media advertisements, circulation of the BID and Draft BAR and a public meeting etc. – refer to Appendix E). I&APs were asked to provide input into the process to further ensure all potential impacts were identified. After the identification of the potential impacts, various specialists were appointed to assess the significance of the impacts and provide mitigation measures where required. These included; a wetland, heritage, air quality and traffic study all of which are further detailed in Appendix D. The assessment and mitigation measures provided by the specialists have been added to the EMPr (Appendix G) and the Impact Assessment (Appendix F).

From the above it is evident that the Basic Assessment process undertaken to date has achieved the following in terms of incorporating the objectives of IEM into the process (as set out in Section 23 of NEMA):

- Ensuring the identification, prediction and evaluation the actual and potential impact on the environment, socio-economic conditions and cultural heritage, the risks and consequences and alternatives and options for mitigation of activities, with a view to minimising negative impacts, maximising benefits, and promoting compliance with the principles of environmental management set out in Section 2
- Ensuring that the impacts of activities on the environment receive adequate consideration before actions are taken in connection with them
- Ensuring adequate and appropriate opportunity for public participation in decisions that may affect the environment
- Ensuring the consideration of environmental attributes in management and decision-making which may have a significant effect on the environment
- Identify and employ the modes of environmental management best suited to ensuring that a particular activity is pursued in accordance with the principles of environmental management set out in section 2.

19. Please describe how the principles of environmental management as set out in section 2 of NEMA have been taken into account.

The proposed development involves the construction of a rock phosphate storage facility on portions 55 and 56 of Erf 5333 which is owned by Foskor.

The following points demonstrate how the principles in Section 2 of NEMA have been applied:

- The development proposal presented will still involve the loss of the northern wetland on Portion 55, as per the proposal assessed as part of the original studies on the site. However, the nature of the development has changed for the positive. The environmental risks associated with the original land use are no longer an issue. The new development plan also allows for a more practical and effective method of stormwater management. This includes doing away with the need for formal attenuation ponds. While advocating wetland loss is never done easily, when one considers the regional pressures on these systems, the opportunity to have over 3 Ha of near pristine wetland of this type and in this locality protected must be given due attention.
- The potential pollution or degradation to the environment has been minimised through the proposed mitigation measures detailed in the EMPr and Appendix F.
- The site is already somewhat disturbed by anthropogenic influences and no cultural or heritage resources are on the site.
- The waste generated from the development will be disposed of at the relevant registered waste facilities.
- The potential risks to human health have been considered and included in the assessment of impacts.
- The new facility to be constructed will be in accordance with all applicable environmental and international legislation/standards and any other applicable legislation or standards.
- The proposed project will provide both temporary and some permanent job opportunities for the local communities.
- Throughout the Basic Assessment process information has been made freely available to any Interested and Affected Party requesting information ensuring transparency in the process.

11. 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, if applicable:

Title of legislation, policy or guideline	Applicability to the project	Administering authority	Date
<p>The Constitution of the Republic of South Africa, Section 24 (Environmental Right)</p>	<p>1) Everyone has the right</p> <p>a) to an environment that is not harmful to their health or well-being; and</p> <p>b) to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that:</p> <p>i) prevent pollution and ecological degradation;</p> <p>ii) promote conservation; and</p> <p>iii) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.”</p>	<p>National Government</p>	<p>1996</p>
<p>National Environmental Management Act 107 of 1998 (NEMA)</p>	<p>In terms of NEMA and associated Environmental Impact Assessment (EIA) Regulations published in August 2010, an Environmental Authorisation (Basic Assessment) must be obtained from the relevant decision-making authority, prior to the commencement of certain listed activities that may result in potential negative impacts on the environment.</p> <p>The environmental principals and requirements of NEMA were considered during the assessment of impacts and development of mitigation measures and</p>	<p>Department of Environmental Affairs</p>	<p>1998</p>

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	in turn the EMP.		
National Water Act 36 of 1998 (NWA)	In Terms of NWA a Water Use License Application (WULA) is required, this is a legislative process governed by DWA for the authorisation of all water uses defined in section 21 of the NWA.	Department of Water Affairs	1998
National Environmental Management: Air Quality Act 39 of 2004	The construction of the Rock Phosphate Storage Facility for the storage of Rock Phosphate triggers the need for an Atmospheric Emissions License (AEL), in terms of National Environmental Management: Air Quality Act (Act No. 39 of 2004), listed activity 14, category 5, subcategory 5.1 for the storage and handling of ore and coal. The AEL application will be undertaken by SRK Consulting (Pty) Ltd.	Department of Environmental Affairs	2004
National Environmental Management: Waste Act 59 of 2008	Handling and disposal of general and hazardous waste during the construction and operational phases (where applicable)	Department of Environmental Affairs	2008
National Environmental Management: Biodiversity Act 10 of 2004	The potential for disruptions to any fauna located on site.	Department of Environmental Affairs	2004
National Heritage Resources Act 25 of 1999	An heritage specialist has considered the potential of heritage resources on site and concluded that it is unlikely that any important resources exist at the site .	South African Heritage Resources Agency (SAHRA)	1999
Occupational Health and Safety Act 85 of 1993	A number of OHSA requirements are also relevant to environmental control and were as such considered in the identified mitigation and the EMP (e.g. bunding for flammable substances, Material Safety Data Sheets).	Department of Labour	1993
Hazardous Substances Act 15 of 1973	Use and or handling of any hazardous substances.	Department of Environmental Affairs	1973

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<p>National Road Traffic Act 93 of 1996</p>	<p>Access road to tie into the West Central Arterial.</p> <p>All traffic regulations are to be complied with during all phases of the project, most notably regarding transportation of hazardous substances.</p>	<p>Department of Transport</p>	<p>1996</p>
<p>All relevant Provincial regulations and Municipal bylaws</p>	<p>The facility is situated in the uMhlatuze Municipality and has to abide with the Municipality Environmental Health Bylaws and Scheduled Trade Bylaws</p>	<p>uMhlatuze Municipality</p>	<p>As updated</p>

12. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

a) 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?

<p>YES √</p>	<p>NO</p>
<p>Unknown</p>	

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

The site is currently vacant and there are therefore no man-made structures to be demolished and disposed.

The construction is essentially for buildings (bunker and office/workshop building), road access, parking area, a conveyor system and water and sewage connections. As such the waste generated will result from what can be considered as 'normal' construction activities. Most of this waste will likely fall in the category of 'general waste' but small quantities of 'hazardous waste' (e.g. oil rags; residues from use of paints, sealants, fuels and lubricating oil; contaminated soil from accidental spills) will also be generated. Foskor will ensure that the Environmental Management Programme (EMP) form part of the contractual agreement with all the contractors appointed to undertake the construction activities. The EMP will include mitigatory specifications as derived in Appendix F, Subsection 3.5. These include *inter alia*:

- Segregation of general and hazardous waste at the construction site.
- Availing of dedicated and clearly marked waste bins or skips, located in strategic and convenient places at the construction camp for disposal of general waste. These bins or skips will be collected/emptied regularly for disposal at licenced municipal landfill sites.
- Availing of dedicated and clearly marked hazardous waste bins as well as appropriately banded hazardous waste storage areas for temporary storage of such wastes. Hazardous waste will be collected and removed from the site regularly and disposed to an appropriately licensed landfill site.

Procedures to segregate recyclable material where reasonably feasible will be required. Segregated recyclables will be availed to suitably licensed recyclers for collection.

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

A suitably registered/licensed municipal, privately owned disposal or recycling facility of the appointed contractor's choice.

Will the activity produce solid waste during its operational phase?

YES √	NO
Unknown	

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

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

Since the proposed storage facility will be merely used for intermediate storage of dry rock phosphate raw material, there will be no mechanical or chemical processing of the rock on site, other than loading and offloading of thereof inside the bunker. For this reason there will be no wastes associated with the storage of the rock itself. During normal operations, only very small quantities of waste will be generated on site such as typically associated with the day-to-day activities of the small office and some routine maintenance activities.

Solid general waste produced during the operational phase will be placed in dedicated waste bins and skips located at convenient places in and around the proposed rock phosphate storage facility. These bins or skips will be stored securely and safely on site and clearly labelled for the correct disposal of waste types. These bins or skips will be collected for disposal by the appointed waste contractor and disposed of at registered municipal landfill sites. Small quantities of hazardous waste may arise, which will be segregated from the general waste and disposed of at an appropriately licensed disposal facility. This will be specified as such in the EMP and it is recommended that it be incorporated as part of the Foskor standard operating procedures for the site.

If the solid waste will be disposed of into a municipal waste stream, indicate which registered landfill site will be used.

A suitably registered/licenced municipal or privately owned disposal facility. Any Hazardous Waste (only small amounts) will be disposed of at the Shongweni Landfill and possibly the new H:h KwaDukuza Landfill. General waste will be disposed of to the nearest general waste landfill (Empangeni or KwaDukuza).

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

N/A

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, then 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 NEM:WA?
(Only very small quantities)

YES	NO ✓
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If YES, inform the competent authority and request a change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

N/A

Is the activity that is being applied for a solid waste handling or treatment facility?

YES	NO ✓
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If YES, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application. N/A

b) Liquid effluent

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

YES	NO ✓
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If YES, what estimated quantity will be produced per month? **N/A**

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

m ³	
YES	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. **N/A***

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

YES	NO ✓
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If YES, provide the particulars of the facility: **N/A**

Facility name:			
Contact person:			
Postal address:			
Postal code:			
Telephone:	Cell:		
E-mail:	Fax:		

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

While wastewater reuse and recycling is considered non-applicable, the following key points are noted in terms of waste water management and protection of water resources from contaminants:

- Since the rock phosphate will be stored and transported in dry form, no process effluent will be generated on site
- The electrical transformer will be located in an appropriately banded area, to prevent any accidental spillage of transformer oil into the environment
- Since the bunker and pipe conveyors will be fully enclosed, this will mitigate against dust fall-out from the facility and therefore protect against contamination of storm water.
- A sump will be constructed at the outlet from the storm water system of the on-site parking area, to capture and contain any potential accidental spillage. Any spillage will be manually removed and either disposed via the Foskor wastewater treatment facility or to an appropriately licensed disposal facility.
- Any portable toilets used during construction will be regularly cleaned out and disposed to the municipal sewage system. For the operational phase the ablution facilities of the site will be connected to the local municipal sewer system.

c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere other than exhaust emissions and dust associated with construction phase activities?

YES √	NO
YES √	NO

If YES, is it controlled by any legislation of any sphere of government?

If YES, the applicant must consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA. **N/A**

If NO, describe the emissions in terms of type and concentration: **(see below)**

Construction Phase:

During the construction phase, there will be dust and vehicle emissions as a result of trucks transporting construction material and other earth moving machinery. The emissions will however have short term impacts on the immediate surrounding areas and thus the authorisation of such emissions will not be required.

Operational Phase:

The proposed activity triggers the need for an Air Emission License in terms of the National Environmental Management: Air Quality Act (No 39 of 2004). This is since the activity is considered as being listed under listed activity 14, category 5, subcategory 5.1, which requires an application for an Atmospheric Emissions License (AEL) for the proposed facility or an amendment to Foskor's existing AEL. Category 5 is for "Mineral Processing, Storage and Handling", while Subcategory 5.1 on "Storage and handling of ore and coal" describes the following as a listed activity: "Storage and handling of ore and coal not situated on the premises of a mine or works as defined in the Mines Health and Safety Act 29/1996". This is applicable to "Locations designed to hold more than 100,000 tons", and therefore applies to the proposed facility.

Foskor has appointed by SRK Consulting (Pty) Ltd to conduct the AEL application with the assistance of an air quality specialist (Airshed Planning Professionals). This application process is in progress and will be submitted to the uThungulu District Municipality for consideration.

Note: Listing Notice 2 (Notice No. 545) of 2010 published under sections 24(2) and 24D of the National Environmental Management Act, 1998 (Act No. 107 of 1998) lists the Activity No. 5 as requiring a 'full' Scoping and EIA Process to be followed: "The construction of facilities or infrastructure for any process or activity which requires a permit or license in terms of national or provincial legislation governing the generation or release of emissions, pollution or effluent and which is not identified in Notice No. 544 of 2010 or". However, since Listing Notice 2 (Notice No. 544) most notably Activity No. 2 is applicable to the proposed facility (refer to Section 1 (a) and (b)) it is understood that a Basic Assessment is required in this case.

Nevertheless, the following key points are noted in terms of air quality management and protection:

- Since no chemical processing of the rock phosphate will take place at the proposed storage facility, there will be no stack (point source) emissions
- Any air emission issues and mitigation would therefore be associated with fugitive dust emissions
- However, since the proposed rock phosphate storage facility will be enclosed in a roofed bunker, and transported in enclosed conveyor pipes, emissions into the atmosphere will be very limited and of low significance.
- The preliminary design provides for a dust control system which consists of dust extraction points, where dust is likely to be generated (from hoppers and conveyor transfer points). Dust can be minimised by slowly traversing the shuttle conveyor as it stacks to the pile such that the Rock Phosphate falls for as short a distance as possible.
- The preliminary design provides for a conveyor route that minimises the number of transition points, which further reduces potential fugitive dust emissions.

d) Waste permit

Will any aspect of the activity produce waste that will require a waste permit in terms of the NEM:WA?

YES	NO ✓
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If YES, please submit evidence that an application for a waste permit has been submitted to the competent authority

e) Generation of noise

Will the activity generate noise?

YES ✓	NO
YES	NO ✓

If YES, is it controlled by any legislation of any sphere of government?

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. **N/A**

If NO, describe the noise in terms of type and level:

Given that the proposed site lies within an area zoned for industrial use in close proximity of heavy industries, is located adjacent to the John Ross Highway and with no community facilities or residential areas nearby; noise from site activities is considered of low significance. While noise resulting from explosions could startle drivers on the roads, which may in turn result in traffic accidents, there is however no indication that explosives would be needed during construction. Also, the rock phosphate to be stored at site once in operation is non-explosive.

Construction Phase:
Construction noise will result from the movement of construction vehicles, trucks and other associated construction noises. However the noise associated with construction activities will be of short term, localised and will only last during the construction activities/phase of the project.

Operational Phase:
During the operation phase, operating noise will result from *inter alia* the following:

- Front end loaders in the building
- Conveyor belts
- Transformer switching
- Vehicle traffic to and from the site

It is considered unlikely that these noises would exceed the current background noises. Noise mitigation would be in the form of normal equipment maintenance.

Any public noise complaints would be dealt with through the Mhlathuze Health procedures.

13. WATER USE

Please indicate the source(s) of water that will be used for the activity by ticking the appropriate box(es):

Municipal ✓	water board	groundwater	river, stream, dam or lake	other	the activity will not use water
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If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate the volume that will be extracted per month: **N/A**

Does the activity require a water use authorisation (general authorisation or water use license) from the Department of Water Affairs?

N/A	
YES ✓	NO

If YES, please provide proof that the application has been submitted to the Department of Water Affairs.

A Water Use Licence will be required for impeding and diverting the watercourses (wetlands) during the construction of the rock phosphate storage facility. The Department of Water Affairs (DWA), namely Ms Colleen Moonsamy, has been consulted with in a meeting and through email liaison, however the consultation with the DWA authorities will continue throughout the project process and a Water Use Licence Application (WULA) will be also be submitted to DWA in the KZN Region for approval prior to the construction phase of the project.

14. ENERGY EFFICIENCY

Describe the design measures, if any, that have been taken to ensure that the activity is energy efficient:

<p>Construction Phase: A specification will be included in the EMP which will require the contractor(s) to provide a method statement on steps they would take for efficient use of energy.</p> <p>Operational Phase: Design measures that benefit energy efficiency include inter alia the following:</p> <ul style="list-style-type: none"> • Providing a sustainable raw material buffer capacity at the site would effectively also increase the energy efficiency of the Foskor Industrial Complex, as the more consistent flow of material would allow for better optimisation of the process • Availing a buffer capacity for storage of locally mined rock will eliminate the need for importing phosphate at a much higher energy requirement associated with the shipping thereof • Use of a electricity driven conveyor system is significantly more energy efficient than use of fuel driven trucks • The close proximity of the proposed site to the Foskor Industrial Complex minimises the energy required for conveyance • Electricity efficient fittings and bulbs will be used for illumination • Variable speed drive will be used on some of the conveyors to conserve energy.
--

BASIC ASSESSMENT REPORT

Describe how alternative energy sources have been taken into account or been built into the design of the activity, if any:

There is no practical alternative energy source for this operation however there is a very small portion of the work that efficiency relates to.

Regarding motors:

- **VSD's on some motors**
- **Energy efficient light fittings**
- **All large motors will be manufactured to the IE2 standard (high efficiency motors)**

SECTION B: SITE/AREA/PROPERTY DESCRIPTION

Important notes:

1. For linear activities (pipelines, etc) as well as activities that cover very large sites, it may be necessary to complete this section for each part of the site that has a significantly different environment. In such cases please complete copies of Section B and indicate the area, which is covered by each copy No. on the Site Plan. **N/A**

Section B Copy No. (e.g. A): A

2. Paragraphs 1 - 6 below must be completed for each alternative.

3. Has a specialist been consulted to assist with the completion of this section?

YES √	NO
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If YES, please complete the form entitled “Details of specialist and declaration of interest” for each specialist thus appointed and attach it in Appendix I. All specialist reports must be contained in Appendix D.

Details of specialist and declaration of interest is attached in Appendix I

All Specialist Reports are attached in Appendix D. The specialists that were consulted with for the Rock Phosphate Storage Facility Project are as follows:

- **Wetlands - SiVest**
- **Air Quality - Airshed Planning Professionals**
- **Heritage - Ethembeni Cultural Heritage**
- **Traffic – GIBB Traffic and Transportation**

Property description/physical address:

Province	KwaZulu-Natal
District Municipality	uThungulu District Municipality
Local Municipality	uMhlatuze Local Municipality
Ward Number(s)	4
Farm name and number	Erf 5333 of Richards Bay
Portion number	55 and 56
SG Code	N0GV04210000533300055
	N0GV04210000533300056

Where a large number of properties are involved (e.g. linear activities), please attach a full list to this application including the same information as indicated above. **N/A**

Current land-use zoning as per local municipality IDP/records:

General Industry

In instances where there is more than one current land-use zoning, please attach a list of current land use zonings that also indicate which portions each use pertains to, to this application. **N/A**

BASIC ASSESSMENT REPORT

Is a change of land-use or a consent use application required?

YES ✓	NO
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The land is already zoned for General Industry use

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1:

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
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Alternative S2 (if any):

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
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Alternative S3 (if any): N/A

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
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2. LOCATION IN LANDSCAPE

Indicate the landform(s) that best describes the site: (includes alternative S1 and S2)

2.1 Ridgeline	<input type="checkbox"/>	2.4 Closed valley	<input type="checkbox"/>	2.7 Undulating plain / low hills	<input checked="" type="checkbox"/>
2.2 Plateau	<input type="checkbox"/>	2.5 Open valley	<input type="checkbox"/>	2.8 Dune	<input type="checkbox"/>
2.3 Side slope of hill/mountain	<input type="checkbox"/>	2.6 Plain	<input checked="" type="checkbox"/>	2.9 Seafront	<input type="checkbox"/>

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

Is the site(s) located on any of the following?

	Alternative S1:		Alternative S2 (if any):		Alternative S3 (if any): N/A	
Shallow water table (less than 1.5m deep)	YES ✓	NO	YES	NO ✓	YES	NO
Dolomite, sinkhole or doline areas	YES	NO ✓	YES	NO ✓	YES	NO
Seasonally wet soils (often close to water bodies)	YES ✓	NO	YES	NO ✓	YES	NO
Unstable rocky slopes or steep slopes with loose soil	YES	NO ✓	YES	NO ✓	YES	NO
Dispersive soils (soils that dissolve in water)	YES	NO ✓	YES	NO ✓	YES	NO
Soils with high clay content (clay fraction more than 40%)	YES	NO ✓	YES	NO ✓	YES	NO
Any other unstable soil or geological feature	YES	NO ✓	YES	NO ✓	YES	NO

BASIC ASSESSMENT REPORT

An area sensitive to erosion

YES ✓	NO
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YES	NO ✓
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YES	NO
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If you are unsure about any of the above or if you are concerned that any of the above aspects may be an issue of concern in the application, an appropriate specialist should be appointed to assist in the completion of this section. Information in respect of the above will often be available as part of the project information or at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by the Council for Geo Science may also be consulted.

4. GROUND COVER

Indicate the types of groundcover present on the site. The location of all identified rare or endangered species or other elements should be accurately indicated on the site plan(s).

Alternative S1

Natural veld - good condition ^E	Natural veld with scattered aliens ^E	Natural veld with heavy alien infestation ^E	Veld dominated by alien species ^E	Gardens
Sport field	Cultivated land	Paved surface	Building or other structure	Bare soil

Alternative S2

Natural veld - good condition ^E	Natural veld with scattered aliens ^E	Natural veld with heavy alien infestation ^E	Veld dominated by alien species ^E	Gardens
Sport field	Cultivated land	Paved surface	Building or other structure	Bare soil

If any of the boxes marked with an “E” is ticked, please consult an appropriate specialist to assist in the completion of this section if the environmental assessment practitioner doesn’t have the necessary expertise. **(Note: A wetland specialist was consulted – refer to Appendix D1)**

5. SURFACE WATER

Indicate the surface water present on and or adjacent to the site and alternative sites?

Perennial River	YES ✓	NO	UNSURE
Non-Perennial River	YES	NO ✓	UNSURE
Permanent Wetland	YES ✓	NO	UNSURE
Seasonal Wetland	YES ✓	NO	UNSURE

BASIC ASSESSMENT REPORT

Artificial Wetland	YES	NO √	UNSURE
Estuarine / Lagoonal wetland	YES	NO √	UNSURE

If any of the boxes marked YES or UNSURE is ticked, please provide a description of the relevant watercourse.

<p><u>Perennial River:</u></p> <p>To the west and adjacent to the site is a Perennial River. This is a small, incised stream that flows from the Hillside Aluminium site. Soil testing found evidence of the wetland extending to the west of the property, to the river. However, as a result of the incision of the stream bed, it is likely that significant draw-down is now occurring adjacent to the river as a result of the lowered base-level and hydraulic conductivity of the sandy soils. Clear evidence was noted on site of a shift from wetland riparian habitat to a terrestrial plant assemblage. This needs to be monitored as further erosion of the stream will result in a widening of this desiccated zone.</p>
<p><u>Permanent Wetland:</u></p> <p>To the south of the site is the portion 57 wetland. This wetland is the northern extent of a much larger wetland occupying much of the property directly south of the site (Portion 57). This system has experienced minor disturbance and still maintains a higher functionality than the northern wetland.</p>
<p><u>Seasonal Wetland:</u></p> <p>A large wetland occupies the majority of the site. The system has been calculated at approximately 3.2 Ha. The wetland is characterised by a very dense Fern / Cyperus community. Dominant species include <i>Thelypteris interrupta</i>, <i>Cyperus latifolius</i>, <i>Cyperus prolifer</i>, <i>Cyperus longus</i>, <i>Cyperus sphaerospermus</i>, <i>Leersia hexandra</i>, <i>Ischaemum fasciculatum</i>, <i>Imperata cylindrica</i>, <i>Ludwigia octovalvis</i> and <i>Dissotis canescens</i>. Much of this system appears to be seasonal to semi permanent wetland.</p>

6. LAND USE CHARACTER OF SURROUNDING AREA

Indicate land uses and/or prominent features that currently occur within a 500m radius of the site and give description of how this influences the application or may be impacted upon by the application:

(Includes alternative S1 and S2)

Natural area √	Dam or reservoir	Polo fields
Low density residential	Hospital/medical centre	Filling station ^H
Medium density residential	School	Landfill or waste treatment site
High density residential	Tertiary education facility	Plantation
Informal residential ^A	Church	Agriculture
Retail commercial & warehousing	Old age home	River, stream or wetland √

BASIC ASSESSMENT REPORT

Light industrial	Sewage treatment plant ^A	Nature conservation area ✓
Medium industrial ^{AN} ✓	Train station or shunting yard ^N	Mountain, koppie or ridge
Heavy industrial ^{AN} ✓	Railway line ^N ✓	Museum
Power station	Major road (4 lanes or more) ^N ✓	Historical building
Office/consulting room ✓	Airport ^N	Protected Area
Military or police base/station/compound	Harbour	Graveyard
Spoil heap or slimes dam ^A ✓	Sport facilities	Archaeological site
Quarry, sand or borrow pit	Golf course	Other land uses (describe)

If any of the boxes marked with an "N" are ticked, how will this impact / be impacted upon by the proposed activity?

Railway line N - The railway line will not impact on or be impacted upon by the proposed project activity. The proposed activity is however dependant on the railway line for the delivery of the rock phosphate from the Foskor Phalaborwa Mine.

Major road (4 lanes or more) N - The John Ross Highway will not impact on or be impacted on by the proposed project activity. This was reiterated by Mr Roy Ryan from DOT who specified that no direct access to Main Road 496 (John Ross Highway) will be permitted. He also stated that no buildings or structures above or below the ground upon which it stands shall be positioned within 15m of the road reserve of Main Road 496 and no parking as required in terms of the Town Planning Scheme of the Municipality of service roads may be positioned within 7,5m of the road reserve boundary of Main Road 496.

If any of the boxes marked with an "An" are ticked, how will this impact / be impacted upon by the proposed activity? Specify and explain:

Medium Industrial^{AN} and Heavy Industrial^{AN} - The proposed site/s are located within 500m of medium and heavy industries e.g. the BHP Billiton Hillside aluminium smelter, Grindrod Navitrade bulk storage facility and Mondi SilvaCell woodchip plant. Apart from the Foskor industry itself, these industries will not be impacted on in any way by the proposed activity. However these industries have been notified about the proposed project.

If any of the boxes marked with an "H" are ticked, how will this impact / be impacted upon by the proposed activity? Specify and explain:

N/A

Does the proposed site (including any alternative sites) fall within any of the following:

Critical Biodiversity Area (as per provincial conservation plan)	YES	NO ✓
Core area of a protected area?	YES	NO ✓
Buffer area of a protected area?	YES	NO

BASIC ASSESSMENT REPORT

	YES	✓ NO
Planned expansion area of an existing protected area?	YES	✓ NO
Existing offset area associated with a previous Environmental Authorisation?	YES	✓ NO
Buffer area of the SKA?	YES	✓ NO

If the answer to any of these questions was YES, a map indicating the affected area must be included in Appendix A. **N/A**

7. CULTURAL/HISTORICAL FEATURES

Are there any signs of culturally or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including Archaeological or paleontological sites, on or close (within 20m) to the site? If YES, explain:	YES	NO ✓
	Uncertain	

N/A

If uncertain, conduct a specialist investigation by a recognised specialist in the field (archaeology or palaeontology) to establish whether there is such a feature(s) present on or close to the site. Briefly explain the findings of the specialist:

Mr Len van Schalkwyk and Ms Beth Wahl heritage specialist from Ethembeni Cultural Heritage advised as follows: "Given the nature of the disturbance to the proposed development site, including major earthworks caused by the construction of the John Ross Highway and the West Central Arterial, as well as the fact that the area comprises former swampland, we believe that there is no need for an HIA for this project. Accordingly, we propose to submit an application for exemption from an HIA for the project to Amafa."

Will any building or structure older than 60 years be affected in any way? (The site is currently vacant and there are therefore no buildings or structures)	YES	NO ✓
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Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?	YES	NO ✓
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If YES, please provide proof that this permit application has been submitted to SAHRA or the relevant provincial authority. **N/A**

8. SOCIO-ECONOMIC CHARACTER

a) Local Municipality

Please provide details on the socio-economic character of the local municipality in which the proposed site(s) are situated.

Level of unemployment:

The following is taken from the uMhlathuze Local Municipality Integrated Development Plan (IDP) 2012-2017:

In South Africa, where the unemployment rate is sitting at 25%, provincial figure sits at 22.6% and the Umhlatuze district is estimated at 40%. Even though the economic performance of the local area is good, it is noted that unemployment remains high. The unemployment problem in uMhlathuze is compounded by the lack of skills in individuals.

Economic profile of local municipality:

The following is taken from the uMhlathuze Local Municipality IDP 2012-2017:

Richards Bay falls within the fastest growing provincial economies at an average rate of 4,3% per annum. The Port of Richards Bay is one of the two largest and busiest Ports in Africa creating a drive for the area to be one of the major industrial investment opportunities. The Port plays an important economic role not only for this province but for the whole of South Africa (SA). Whilst the municipality is presently export oriented, the potential for import prospects are being contemplated. The City also functions as a district node and a dominant commercial centre in the uThungulu District providing greater economic opportunities for the town and hinterland. The key feature of uMhlathuze Municipality is the N2 Development Corridor, eThekweni-Ilembe-uMhlathuze Corridor. The Dube Trade Port, (King Shaka Airport), is approximately 145km away from the City which again makes it an added advantage to the area in terms of investment attraction. The area is the third most important in KZN in terms of economic production, contributing 16.7% to national Gross Domestic Product (GDP) whilst also the third most important primary manufacturing area in KwaZulu-Natal (KZN) in terms of economic production. Manufacturing is highly specialised export orientated, largely concentrated on basic iron and steel, paper and printing as well as food and beverages. The sector characterized by highly sophisticated manufacturing processes. The large scale industrial strengths of the uMhlathuze centre comprise of a varied industrial base of coal terminals and aluminium smelters, coupled with an impressive number of industries including mining companies and paper mills, forestry, production of materials handling equipment, as well as fertiliser and special chemicals production.

The City of uMhlathuze is rich in mineral resources. The mining of these minerals meets all of South Africa's demand for titanium dioxide, zircon and almost all of the country's pig iron requirements. Most of the industrial and commercial activities are vested in Richards Bay, Empangeni and Felixton (specifically the industrial development nodes of the City of uMhlathuze). The manufacturing sector employs the majority of population. Manufacturing contributes 29% of the national GDP. The advent of the Richards Bay Industrial Development Zone (RBIDZ) within the vicinity of Richards Bay harbour serves to boost economic activity and to attract international investors wishing to take advantage of the advantage on offer. Other natural advantages are the diverse and intensifying agriculture production, including the rich land of sugarcane and forestry. The cane and forestry sectors have been at the forefront of assisting emerging farmers. The agricultural sector is a dual economy,

consisting of commercial agriculture on one hand and traditional agriculture on the other. Agricultural activity is more concentrated in the former Lower Umfolozi magisterial area. Traditional agriculture is practiced on most of the Traditional Council lands in the district. The development of this sector is hindered by a low skills base and a lack of organised bodies to provide financial assistance; access to markets and market channels. An Agricultural Development Plan has been prepared for the uThungulu District Municipality. This plan identifies specific programmes and projects to address rural poverty. The City of uMhlathuze meanwhile participating in this initiative, has concurrently been implementing its Local Economic Development Strategy 2007-2011. This programme has assisted many community members with programmes such as agricultural support, community skills development, and informal trading administration tourism development. The City is still to develop its LED Strategy for the years 2012-2017.

Level of education:

The following is taken from the uMhlathuze Local Municipality IDP 2012-2017:

The following is a reflection of the number of individuals that participated in the education system: Most pupils reached secondary schooling. There is then a drop in the system of people that complete Grade 12. It is after Grade 12 that the community is unable to continue with their studies. The percentage of the population that was older than 20 with higher education was 8.45%. The above could be attributed to immigration of skilled workers into the area. The percentage of people with a level of education less than Grade 12 was very high at 52.4%. Education levels have shown a decrease while demand for skills has increased. Provincial government has budgeted R3 billion for equalisation of subsidies to no fee schools and for the expansion of access to Grade R. In order for the City to develop we should make education one of the most far-reaching requirements for development, alleviating poverty, improving health outcomes and quality of life, reducing gender and social disparities, and enhancing economic productivity. Education is a contributor to economic growth and societal stability through developing individuals equipped with cognitive and life skills necessary for sustaining the livelihood, and contributing to the productive sector. We have to ensure that suitable infrastructure services are provided to the schools for future capacity building and empowerment of our younger generation. The municipality has recently signed a Memorandum of Agreement between uMhlathuze Municipality and Umfolozi FET College. It is intended to give the youth opportunities through skills acquisition to provide training and job opportunities to the youth. Through this partnership, 150 learners will be trained in various skills through internship programmes wherein they will be mentored by qualified expert in engineering and other technical fields. This is intended to reduce skills shortage and contribute to a skilled workforce in accordance with the 12 government outcomes.

b) Socio-economic value of the activity

What is the expected capital value of the activity on completion?	R 350, 000, 000	
What is the expected yearly income that will be generated by or as a result of the activity?	NIL	
Will the activity contribute to service infrastructure?	YES	NO √
Is the activity a public amenity?	YES	NO √
How many new employment opportunities will be created in the development and construction phase of the activity/ies?	±160 jobs	
What is the expected value of the employment opportunities during the development and construction phase?	R30,000,000	
What percentage of this will accrue to previously disadvantaged individuals?	± 80 %	
How many permanent new employment opportunities will be created during the operational phase of the activity?	NIL	
Note: Existing Foskop staff will operate the new facility.		
What is the expected current value of the employment opportunities during the first 10 years?	R0	
What percentage of this will accrue to previously disadvantaged individuals?	N/A	

9. BIODIVERSITY

Please note: The Department may request specialist input/studies depending on the nature of the biodiversity occurring on the site and potential impact(s) of the proposed activity/ies. To assist with the identification of the biodiversity occurring on site and the ecosystem status consult <http://bgis.sanbi.org> or BGIShelp@sanbi.org. Information is also available on compact disc (cd) from the Biodiversity-GIS Unit, Ph (021) 799 8698. This information may be updated from time to time and it is the applicant/ EAP's responsibility to ensure that the latest version is used. A map of the relevant biodiversity information (including an indication of the habitat conditions as per (b) below) and must be provided as an overlay map to the property/site plan as Appendix D to this report.

a) Indicate the applicable biodiversity planning categories of all areas on site and indicate the reason(s) provided in the biodiversity plan for the selection of the specific area as part of the specific category)

Systematic Biodiversity Planning Category				If CBA or ESA, indicate the reason(s) for its selection in biodiversity plan
Critical Biodiversity Area (CBA)	Ecological Support Area (ESA) √	Other Natural Area (ONA) √	No Natural Area Remaining (NNR)	Other Natural Area, which has been transformed over time through poor management
				The wetland area and associated riparian vegetation is deemed to be an Ecological Support Area, as it provides habitat and has significance in terms of delivering ecological goods and services.

b) Indicate and describe the habitat condition on site

Habitat Condition	Percentage of habitat condition class (adding up to 100%)	Description and additional Comments and Observations (including additional insight into condition, e.g. poor land management practises, presence of quarries, grazing, harvesting regimes etc).
Natural	0%	The habitat condition on site is not natural ad channels traverse the site which reportedly had been excavated as part of the prior road construction activities to redirect storm water away from the neighbouring John Ross highway. Plants have overgrown these manmade channels, which benefit the recharge of groundwater from the diverted storm water from the John Ross Highway.
Near Natural (includes areas with low to moderate level of alien invasive plants)	90%	The system maintains a moderate species diversity but has been drained and inflow to the system notably altered. Inputs to the system have been altered artificially directed storm flows but no artificial drainage has occurred. Vegetation is predominantly hygrophilous, with limited alien encroachment.
Degraded (includes areas heavily invaded by alien plants)	0%	The site is not heavily invaded by alien plants.
Transformed (includes cultivation, dams, urban, plantation, roads, etc)	10%	The system has been moderately disturbed and features a series of drains and channels cut to remove water from the vicinity of the freeway. This system has a moderate species diversity but it has been drained and inflow to the system altered. The system has therefore lost much of its functionality.

*Note the above was taken from the Specialist Wetland Report and discussed with the wetland specialist (Mr. Greg Mullins) in a phone call on the 10/08/2012.

c) Complete the table to indicate:

- (i) the type of vegetation, including its ecosystem status, present on the site; and
- (ii) whether an aquatic ecosystem is present on site.

Terrestrial Ecosystems		Aquatic Ecosystems						
Ecosystem threat status as per the National Environmental Management: Biodiversity Act (Act No. 10 of 2004)	Critical	Wetland (including rivers, depressions, channelled and unchannelled wetlands, flats, seeps pans, and artificial wetlands)			Estuary		Coastline	
	Endangered							
	Vulnerable ✓							
	Least Threatened	YES ✓	NO	UNSURE	YES	NO ✓	YES	NO ✓

d) Please provide a description of the vegetation type and/or aquatic ecosystem present on site, including any important biodiversity features/information identified on site (e.g. threatened species and special habitats)

The grassland on site is considered to be of the northern coastal grassland variety, however, we would not suggest that it is Kwambonambi Grassland. Further there is some riparian vegetation on site, mainly associated with the central drainage channel. The following species which are protected have been encountered on site, *Ficus trichopoda*, *Barringtonia racemosa*. The central drainage channel is dominated by smaller individuals of the above mentioned species as well as a mix of species such as *Bridelia micrantha* *Brachylaena discolor*. It is therefore our interpretation that the system has not been in existence for a long period of time or has undergone significant disturbance in the recent past which has transformed the vegetation community.

Dominant species of the aquatic ecosystems include; *Thelypteris interrupta*, *Cyperus latifolius*, *Cyperus prolifer*, *Cyperus longus*, *Cyperus sphaerospermus*, *Leersia hexandra*, *Ischaemum fasciculatum*, *Imperata cylindrica*, *Ludwigia octovalvis* and *Dissotis canescens*. Much of this system appears to be seasonal to semi permanent wetland.

*Note the above was taken from the Specialist Wetland Reports and discussed with the Vegetation specialist (Mr. Richard Kinvig) in a phone call on the 15/08/2012 as well as email liaison.

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT AND NOTICE

Publication name	Zululand Observer and Umlozi Wezindaba	
Date published	16 and 19 April 2012 (Zululand Observer), 18 April 2012 (Umlozi Wezindaba)	
Site notice position	Latitude	Longitude
	28° 46' 14.27"	32° 2' 14.71"
	28° 46' 36.94"	32° 1' 51.63"
	28° 46' 15.87"	32° 1' 57.61"
Date placed	5 April 2012	

Include proof of the placement of the relevant advertisements and notices in Appendix E1.

Proof of the placement of the Media and Site Notices is attached in Appendix E1

2. DETERMINATION OF APPROPRIATE MEASURES

Provide details of the measures taken to include all potential I&APs as required by Regulation 54(2)(e) and 54(7) of GN R.543.

Considering the industrial and urban nature of the area, it was assumed that most I&APs would be able to read and understand the public participation communications that were used. There was no indication during the consultation processes that additional requirements were needed.

Key stakeholders (other than organs of state) identified in terms of Regulation 54(2)(b) of GN R.543:

****Note Foskor own and are in control of the land**

Title, Name and Surname	Affiliation/ key stakeholder status	Contact details (tel number or e-mail address)
Mrs Sandy Camminga	RB Clean Air Association / uMhlathuze Ratepayers and Residents Association	camminga@iafrica.com
Mrs Carolyn Schwegman	WESSA and Coastwatch	afromatz@telkomsa.net
Mrs Bianca Mckelvey Morgan	WESSA and Coastwatch	conservation@wessakzn.org.za
Mr Alen Viljoen	Councillor (Ward 4)	alenviljoen@mweb.co.za
Corrie Lots	Grindrod Terminals	corriel@grindrod.co.za
Raymond Van Rooyen	Transnet Port Terminals	Raymond.vanrooyen@transnet.net

See proof of registered Key stakeholders in Appendix E.5

Include proof that the key stakeholder received written notification of the proposed activities as Appendix E2. This proof may include any of the following:

- e-mail delivery reports;
- registered mail receipts;
- courier waybills;
- signed acknowledgements of receipt; and/or
- or any other proof as agreed upon by the competent authority.

3. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summary of main issues raised by I&APs	Summary of response from EAP
<p>1. Wetland and Water Quality Impacts</p>	<p>Note * The bunker storage facility will be located outside the 20 meter buffer zone of the southern wetland.</p> <p>The wetland and water quality impacts are captured and addressed through the mitigation measures in Appendix F, Subsection 2.1, 2.2, 2.3 and 2.6.</p> <p>Also refer to the EMP in Appendix G.</p>
<p>2. Cumulative Impacts on the Wetland Systems in Richards Bay</p>	<ul style="list-style-type: none"> • Cumulative impacts on the wetland systems of Richards Bay particularly the portion 57 wetland are addressed in Appendix F, Subsection 2.1 and 2.2, through the mitigation measures. Also refer to the EMP in Appendix G and the wetland conservation management plan in Appendix D.
<p>3. Air Quality Impacts</p>	<p>The following key points are noted in terms of air quality management and protection:</p> <ul style="list-style-type: none"> • Since no chemical processing of the rock phosphate will take place at the proposed storage facility, there will be no stack (point source) emissions • Any air emission issues and mitigation would therefore be associated with fugitive dust emissions • However, since the proposed rock phosphate storage facility will be enclosed in a roofed bunker, and transported in enclosed conveyor pipes, emissions into the atmosphere will be very limited and of low significance. • The preliminary design of the rock phosphate storage bunker provides for forced draught ventilation with air filters

	<p>to effectively contain dust from being emitted from the storage facility. This would therefore further prevent dust-fallout.</p> <ul style="list-style-type: none"> The preliminary design provides for a conveyor route that minimises the number of transition points, which further reduces potential fugitive dust emissions. <p>Refer to SECTION A, Subsection 12 (c) and Appendix F, Subsection 3.2 where this issue is captured and addressed through the mitigation measures.</p>
<p>Traffic impacts: Road Access and DOT requirements requesting that;</p> <ul style="list-style-type: none"> No direct access to Main Road 496 (John Ross Highway) will be permitted. Access is to be obtained from the west Central Arterial road. No buildings or structures above or below the ground upon which it stands shall be positioned within 15m of the road reserve of Main Road 496. No parking as required in terms of the Town Planning Scheme of the Municipality of service roads may be positioned within 7,5m of the road reserve boundary of main Road 496. On the plan, the disposal of storm water must be indicated. 	<p>No direct access will be obtained from The John Ross Highway. Access will be obtained from the West Central Arterial road. Refer to Section A, Subsection 5 Site Access to clarify this.</p> <p>The site layout footprint was adjusted accordingly to adhere to the requirement that no buildings or structures above or below the ground upon which it stands shall be positioned within 15m of the road reserve of Main Road 496. The storage bunker footprint therefore shifted further south away from the Main Road 496 highway to be the preferred option (A1).</p> <p>No Parking will be positioned within 7.5m of the road reserve boundary of the Main Road 496.</p> <p>Refer to Appendix C – Facility Illustration for detailed storm water designs</p>
<p>4. Traffic Impacts: alternate transportation of the Rock Phosphate in case of conveyor belts failure.</p>	<p>Due to the availability of a storage facility for rock phosphate on the existing Foskor site, it is unlikely that trucks will be used to transport rock phosphate in the event that there is conveyor belt failure. However in the unlikely event of a prolonged failure and if the internal store is only empty, then only trucks might be used for a limited period of time till the problem is rectified.</p> <p>Also refer to Appendix F – Impact</p>

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	<p>Assessment, Subsection 3.3 (c) of the BAR where this concern is noted and the mitigation measures are given to address this concern.</p>
<p>5. Development Footprint Impacts: Any changes or new pipes which could increase the development footprint outside Ptns 55 and 56</p>	<p>The conveyors required to transport the rock phosphate will increase the development footprint outside of Ptn 55 and 56. The conveyors will subsequently traverse the servitudes owned by Hillside Smelters and the uMhlatuze Municipality as well as the public road (West Central Arterial). There will however be no disruptions to traffic or operations of the servitudes owners. Foskor has been provisionally granted a municipal conveyor servitude located to the east of the hillside conveyor and the municipal sewer line.</p> <p>The relevant servitude stakeholders have also been notified and consulted with regarding this development and the placement of the conveyors.</p>
<p>6. Solid and Hazardous waste management</p>	<p>This issue is covered in APPENDIX F, Subsection 2.1. (c) & 2.2 (c), and also in Appendix G – EMP.</p>
<p>7. Storm water management</p>	<p>Storm water management and associated mitigation measures is covered under Appendix F, Subsection 2.1 and 2.2 and also in Appendix G – EMP.</p>
<p>8. Pollution impacts and mitigation measures for water resources</p>	<p>Pollution impacts and mitigation measures are covered in Appendix F of this Report. Refer to Subsection 2.2. (c), where this issue is captured and addressed through the mitigation measures.</p>
<p>9. Sewage treatment and disposal</p>	<p>This issue is captured in SECTION A, Subsection 12 (a) and (b).</p>
<p>10. Radioactivity of Rock Phosphate</p>	<p>This is discussed under Section A Subsection 1 (a) and will be addressed through the application for amendments for on Foskor's current Certificates of Registration from the National Nuclear Regulator.</p>

4. COMMENTS AND RESPONSE REPORT

The practitioner must record all comments received from I&APs and respond to each comment before the Draft BAR is submitted. The comments and responses must be captured in a comments and response report as prescribed in the EIA regulations and be attached to the Final BAR as Appendix E3.

All comments received from I&APs during the PPP for the proposed Rock Phosphate Storage Facility and associated GIBB or client responses are incorporated in the Comments and Response Register (Appendix E3) and summarised below.

Feedback was obtained from the following Stakeholders:	
<u>Stakeholder</u>	<u>Summary of Comment</u>
Amafa KwaZulu Natali	Required a hard copy of the BID and for GIBB to complete and submit a Need and Desirability Form for the project.
KwaZulu-Natal Department of Transport (DOT)	<p>No Objections to the project</p> <p>DOT requires four (4) copies of a detailed development plan and a covering letter to be submitted for assessment and comment.</p> <p>The site development plan must adhere to the following conditions:</p> <ul style="list-style-type: none"> • No direct access to Main Road 496 (John Ross Highway) is permitted. • Access is to be obtained from the west Central Arterial road. • No buildings or structures above or below the ground within 15m of the road reserve of Main Road 496. • No parking as required in terms of the Town Planning Scheme of the Municipality of service roads may be positioned within 7,5m of the road reserve boundary of main Road 496. • Disposal of storm water must be indicated.
City of Mhlataze	Required an electronic copy of the BID to log in their system.
Umhlataze Water	Concerned about alternate transportation of the rock phosphate, should the conveyers fail for some reason. Transportation of rock phosphate by trucks will disrupt their operations (effluent pipeline servitude situated underground and passing the Grindrods facility).
WESSA	<p>Required that GIBB register WESSA and Coastwatch as I&APs.</p> <p>WESSA indicated concern that Portion 57 of Erf 5333 is likely to be affected by the project activities, being the receiving environment for storm water runoff thus being at risk of contamination. They requested that studies need to be undertaken to include the impact on Portion 57.</p> <ul style="list-style-type: none"> • The cumulative impact of the proposed activities on the wetland systems of Richards Bay is of interest. Ezemvelo Kwazulu-Natal wildlife in respect of other developments has raised this as a concern. • Air quality impacts - the studies should consider what the impact of the settling and accumulation of particulate matter on

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	<p>vegetation and wetlands habitat will have</p> <p>Enclosed pipe conveyor. An existing conveyor depicted as the hillside conveyor is show on the aerial photograph. Is this an existing conveyor? Will any changes or new pipes be required which could increase the development footprint outside Portions 55 & 56?</p>
<p>Richards Bay Clean Air Association (RBCAA)</p>	<p>Required that GIBB register RBCAA as an I&AP.</p>
<p>Ezemvelo KZN Wildlife</p>	<p>“As discussed at the meeting of 30 May 2012 Ezemvelo KZN Wildlife's comments/ concerns with regards to the proposed storage facility on Portions 55 & 56 are as follows:</p> <ul style="list-style-type: none"> • Management of storm water to ensure that no impacts arise to the wetland on Portion 57 and the drainage line to the west of the site which flows into swamp forest as well as the Manzanyama system and Richards Bay Harbour, both of which supports critically important biodiversity. • The storm water management plan must be undertaken in conjunction with the wetland specialist and should be included in the BAR. • The functionality of the smaller northern wetland must not be lost to the system and must be replaced, particularly the purification and sediment settling functions. • The redirecting of storm water from the John Ross must not result in negative impacts to the Portion 57 wetland and must ensure that all portions of this wetland are maintained and preferably improved. • A conservation management plan for the Portion 57 wetland and a plan on how to secure the protection of the wetland should be included in the BAR.”
<p>Department of Water Affairs</p>	<p>“This Department has the following comments:</p> <ul style="list-style-type: none"> • Management of solid waste (construction and post construction). • Management of any hazardous waste material. • Identification of any environmental sensitive areas and water resources such as wetlands, rivers, groundwater etc. as well as possible pollution impacts and mitigation measures of such water resources. • Storm water management plan/system including the prevention of erosion and sedimentation. • Sewage treatment and disposal i.e. wastewater management (including type of toilet facilities to be provided for construction workers). • Information regarding the 1: 50 and 1:100 year floodlines. This must be clearly demarcated on a map. • Spill contingency plans • Geotechnical investigation • Environmental Management Plan

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	<p>In addition the following points need to be taken into consideration:</p> <ul style="list-style-type: none"> • Mr Norman Ward from the Water Resources Management Section of this Department must be contacted, should there be any alteration to the bed, banks, course or characteristics of a watercourse or any impedance or diversion of flow of a water course as well as any abstraction and/or storage of water. • The removal of any indigenous trees may need to be authorised by this Department's Forestry section. • All wetlands on site must be delineated according to this Department's guideline entitled "A practical field procedure for identification and delineation of wetlands and riparian areas." (DWAF, 2005). • There must be a 20 meter buffer from the edge of the temporary wet zone of the wetland to the edge of any structural development. Visible markings showing/demarcating the 20m buffer must be provided on site during the construction phase. • If the applicant wishes to develop (structures, roads and other infrastructure) on the wetland/riparian zone or within the prescribed buffer as well as to rehabilitate any wetlands/riparian zone on the said property, an authorisation in terms of section 21 of the National Water Act may be required. <p>The responsibility rests with the applicant to identify any sources of pollution from his undertaking and to take appropriate measures to prevent any pollution of the environment.</p>
Transnet Port Terminals	<p>I see that no mention is made of the fact that Rock Phosphate is radioactive. ? Your storm water plan will have to take this into consideration. Please also indicate the export route of the cargo, how will it be moved from the shed?</p> <p>Waste management is sketchy, it is known how much dust and spillage occurs in other rock phosphate premises around the country, so this can be included. What you might also want to include is what landfill sites are registered to accept radioactive waste or mixed waste or this hazardous rating.</p> <p>I see many comments regarding the capacity and logistics for freight rail. I assume there is a statement from TFR regarding the authenticity of the statements, together with information relating to the capacity of TFR to service the line in the future, is there a signed agreement? If so this needs to be referenced to add value.</p>
uThungulu Municipality District	<p>uThungulu District Municipality has reviewed the application for the above mentioned Development. uThungulu District has no objection to the proposed development. However, the following must be noted:</p> <ul style="list-style-type: none"> • If the development will extend into the wetland or within the prescribed buffer, an authorization in terms of the section 21 of

	<p>the National Water Act (no. 36 of 1998) may be required. The Department of Water Affairs must be contracted with regards to this matter.</p> <p>Should you have any further queries, please contact the Environmental Officer miss Nkosingphile Khuluse, at Tel: 035-7992684 or 0822660178 during office hours.</p>
<p>WESSA and Coastwatch</p>	<p>Thanks for the offer of sending the appendices separately. I found the BAR very comprehensive and the information well presented hence no need for the specialist studies. Please see our comment attached.”</p> <p><u>Cumulative Impacts – Loss of Wetland</u></p> <p>WESSA’s main area of concern pertains to the acknowledged contribution the proposed development of a rock phosphate storage facility will make to, in particular, the loss of wetland habitat and cumulative impacts on the wetland ecosystems in Richards Bay. Mitigation is proposed to reduce the impacts of development on the remaining area of wetland, on and off the site, however the loss of the system (and habitat) albeit considered small, has not been taken into consideration.</p> <p>While the City of uMhlatuze has adopted an Environmental Services Management Plan WESSA is not confident that the ecosystems which provide the goods and services are secured and there is apparent ongoing infringement into, and impacts on, the ‘service providers.</p> <p><u>Impacts on Wetlands</u></p> <p>WESSA will support Ezemvelo KwaZulu-Natal Wildlife in its requirements for the development of Portions 55 and 56 of Erf 5333 and we trust that the revised designs aimed at reducing the impacts on the southern wetland system which forms part of a much larger system flowing into swamp forest and the Manzanyama system, and Richards Bay Harbour, both of which support critically important biodiversity, are acceptable to the organisation. The revised design features discussed at the meeting held between stakeholders on 4 June 2012 which aim to minimize the potential impacts on hydrology, drainage and the wetland systems are supported by WESSA, the revised design being as follows –</p> <ul style="list-style-type: none"> • The bunker will be constructed on concrete pilons driven or poured into the ground, which will therefore not restrict the underground movement of water, • The new eastern drainage channel will be provided with a permeable floor, energy dissipating features along the route of the channel and an energy dissipating structure at the inlet to the southern wetland, • The storm water culvert under the road will be a box culvert type provided with a permeable floor,

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	<ul style="list-style-type: none"> • The base of the access road that traverses a small portion of the southern wetland will be broken rock rather than soil infill to allow water to permeate more freely · The roof of the bunker will not be provided with gutter, but rainwater will fall off the roof into a trench filled with rock surrounding the building. This is to allow the water to recharge the groundwater and wetlands. This return of water into the local water table will in turn feed the southern system via indirect inputs, • A 'first flush catch pit' will be provided at the outlet of the storm water system for the parking area to contain sediments and contaminants and prevent these from spilling into the southern wetland, • Where feasible, the designs would also include more natural free runoff, particularly from areas that will remain undeveloped. <p>The additional storm water management recommendations and mitigation measures to prevent erosion and sedimentation of the systems, as advised by Mullins (2010), are set down as requirements in the environmental management programme. We trust that the road infringing the southern wetland will incorporate specific design features to reduce its impact.</p> <p><u>Air Quality</u></p> <ul style="list-style-type: none"> • A dust control system aimed at reducing fugitive dust emissions is proposed and WESSA supports the regular monitoring of the rock phosphate facility with audits to identify and address trends which may have a negative contribution to ambient conditions.
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5. AUTHORITY PARTICIPATION

Authorities and organs of state identified as key stakeholders:

Authority/Organ of State	Contact person (Title, Name and Surname)	Tel No	Fax No	e-mail	Postal address
Department of Environmental Affairs	Ms Nyiko Nkosi	012 395 1694	012 320 7539	nnkosi@environment.gov.za	Private Bag x447 Pretoria 0001
AMAFA KwaZulu-Natali	Ms Bernadet Pawandiwa	033 394 6543	033 342 6097	bernadetp@amafapmb.co.za	PO Box 2685 Pietermaritzburg 3201
Department of Water Affairs	Ms Colleen Moonsamy	031 336 3739	031 305 9915	moonsamyc@dwa.gov.za	PO Box 1018 Durban 4000
KwaZulu-Natal	Mr Roy Ryan	033 355	033 355	roy.ryan@kzntransport.gov.z	Private Bag X9043

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Department of Transport		8860	8092	a	Pietermaritzburg 3201
Ezemvelo KZN Wildlife	Ms Felicity Elliott	033 845 1437	033 845 1499	elliottf@kznwildlife.com	PO Box 13053 Cascades 3202
Department of Agriculture, Forestry and Fisheries - Food Safety & Quality Assurance Section	Mr Thobani Vetsheza	033 392 7761	086 5160896	ThobaniV@nda.agric.za	P/Bag x 9029 Pietermaritzburg 3200
DAEA	Mr Muzi Mdamba	035 792 1624	035 792 1620	muzi.mdamba@kzndae.gov.za	Private Bag X1048 Richards Bay 3900
Mhlathuze Water	Ms Nokuthula Mthembu	035 902 1099	035 902 1103	nmthembu@mhlathuze.co.za	PO Box 1264 Richards Bay 3900
Umhlathuze Municipality: Senior Town Planner: Environment	Ms Sharin Govender	035 907 5174	035 907 5426	GovendS@richemp.org.za	P.O. Box 115 Empangeni 3830
uMhlathuze Municipality	Ms Gugu Gazu	035 907 5252	035 907 5277	Gugu.gazu@richemp.org.za	P.O. Box 115 Empangeni 3830
Mbonambi Municipality	Mr Thula Biyela	035 580 4963	035 580 1496	biyelat@mbonambi.co.za	PO Box 96 Kwambonambi 3915
uThungulu District Municipality: Air Quality Officer	Ms Nozipho Khathi	035 799 2689		Khathin@uthungulu.co.za	Private Bag X1025 Richards Bay 3900
uThungulu District Municipality: Environmental Officer	Ms Nkosingiphile Khuluse	035 799 2500	035 789 1406	khulusek@uthungulu.co.za	Private Bag X1025 Richards Bay 3900

See proof of registered Authorities in Appendix E.5

Include proof that the Authorities and Organs of State received written notification of the proposed activities as appendix E4.

Proof is attached in Appendix E4

In the case of renewable energy projects, Eskom and the SKA Project Office must be included in the list of Organs of State. [N/A](#)

6. CONSULTATION WITH OTHER STAKEHOLDERS

Note that, for any activities (linear or other) where deviation from the public participation requirements may be appropriate, the person conducting the public participation process may deviate from the requirements of that sub-regulation to the extent and in the manner as may be agreed to by the competent authority.

Proof of any such agreement must be provided, where applicable. Application for any deviation from the regulations relating to the public participation process must be submitted prior to the commencement of the public participation process.

A list of registered I&APs must be included as appendix E5.

[A list of registered I&APs is included in Appendix E5.](#)

Copies of any correspondence and minutes of any meetings held must be included in Appendix E6.

[Copies of correspondence and minutes of meetings is included in Appendix E6.](#)

SECTION D: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2010, 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.

1. IMPACTS THAT MAY RESULT FROM THE PLANNING AND DESIGN, CONSTRUCTION, OPERATIONAL, DECOMMISSIONING AND CLOSURE PHASES AS WELL AS PROPOSED MANAGEMENT OF IDENTIFIED IMPACTS AND PROPOSED MITIGATION MEASURES

Provide a summary and anticipated significance of the potential direct, indirect and cumulative impacts that are likely to occur as a result of the planning and design phase, construction phase, operational phase, decommissioning and closure phase, including impacts relating to the choice of site/activity/technology alternatives as well as the mitigation measures that may eliminate or reduce the potential impacts listed. This impact assessment must be applied to all the identified alternatives to the activities identified in Section A(2) of this report.

NOTES:

- Direct, indirect and cumulative impacts are listed in the tables below for the various project phases. References are provided to subsections below which provide a more detailed environmental description, assessment and mitigation thereof.
- Only the preferred alternative site, layout and technology were assessed in detail since all the other alternatives were eliminated as infeasible during the early stages of project planning, design and/or the Basic Assessment process. However, the No-Go alternative was also briefly assessed.

Please refer to a detailed Impact Assessment in Appendix F.

PLANNING AND DESIGN PHASE IMPACTS

Activity	Impact summary	Significance	Proposed mitigation
Alternative 1 (preferred alternative)			
Planning and Design Phase	Direct impacts: <ul style="list-style-type: none"> • None, apart from insignificant impacts associated with site survey and geotechnical investigations. 	Insignificant	Following due process in accordance with the requirements of the NEMA EIA Regulations, as is done with this Basic Assessment Process.
	Indirect impacts: <ul style="list-style-type: none"> • Undertaking the Basic Assessment and associated PPP for the proposed rock phosphate storage 	Very Low	Following due process in accordance with the requirements of the NEMA EIA Regulations, as is done with this Basic Assessment

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Activity	Impact summary	Significance	Proposed mitigation
	facility may potentially raise expectations amongst the community to receive social benefit (employment opportunities) from the proposed project.		Process. Particularly following due course of the public participation process to inform interested and affected parties of all benefits and the need for the project etc.
	Cumulative impacts: None		
Alternative 2			
	Direct impacts: Same as Alternative 1 above		
	Indirect impacts: Same as Alternative 1 above		
	Cumulative impacts: Same as Alternative 1 above		
Alternative 3 N/A			
	Direct impacts:		
	Indirect impacts:		
	Cumulative impacts:		
No-go option			
	Direct impacts: None		
	Indirect impacts: None		
	Cumulative impacts: None		

CONSTRUCTION PHASE IMPACTS

Activity	Impact summary	Significance (before mitigation)	Proposed mitigation
Alternative 1 (preferred alternative)			
Construction	<p><i>Direct impacts:</i></p> <ul style="list-style-type: none"> • Sourcing and use of construction material, e.g. including soils, sand, aggregate, concrete, pipe etc. • The proposed project will directly affect drainage lines and infringe on the site wetlands, which will result in a loss of small portions of wetland area • Loss of vegetated areas as a result of the development footprint • Loss of habitat for smaller animal species • Use of water in relatively small quantities • Job creation approximately 160 people • Emissions from construction vehicles and equipment • Impact on local traffic • Visual and aesthetic impact • Noise from construction activities 	<p>Very Low</p> <p>Moderate</p> <p>Moderate</p> <p>Moderate</p> <p>Low</p> <p>Moderate</p> <p>Low</p> <p>Low</p> <p>Moderate</p> <p>Low</p>	<ul style="list-style-type: none"> • Refer to Appendix F Subsection 2.1 (c) • Refer to Appendix F, Subsection 2.3 (c) • Refer to Appendix F, Subsection 2.4 (c) • Refer to Appendix F, Subsection 2.5 (c) • Refer to Appendix F, Subsection 2.6 (c) • Refer to Appendix F, Subsection 3.6 (c) • Refer to Appendix F, Subsection 3.2 (c) • Refer to Appendix F, Subsection 3.3 (c) • Refer to Appendix F, Subsection 3.4 (c) • Refer to Appendix F, Subsection 3.5 (c)
	<p><i>Indirect impacts:</i></p> <ul style="list-style-type: none"> • Potential enhancement of erosion due to exposure of soil through earth grading for site preparation and 	<p>Low</p>	<ul style="list-style-type: none"> • Refer to Appendix F, Subsection 2.1 (c)

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Activity	Impact summary	Significance (before mitigation)	Proposed mitigation
	<p>clearing of vegetation and associated siltation and sedimentation of downstream wetlands</p> <ul style="list-style-type: none"> • Potential for rain and wind to dislodge soil particles from open stockpiles which can be carried away and deposited in wetlands and streams • Potential spillage of hazardous materials such as oil, fuel, cement, sewage which may contaminate soil and water resources including wetlands • Potential construction litter and poor management of construction waste • Potential increase in the storm water runoff rates due to removal of vegetation and increase in hardsurfaced areas may cause unnaturally high flush contributions the wetland systems • Potential establishment of alien vegetation due to exposure of soil through clearing of vegetation within the project footprint • Potential smoke emissions and veldfires from construction activities. • Potential loss of groundwater recharge may impact aquatic systems in terms of their natural hydrological flow regimes. • Potential windblown dust generation from exposed soil, soil and material stockpiles and construction vehicle trafficking • Potential impact on community relationships as a result of influx of 	<p>Low</p> <p>Low</p> <p>Low</p> <p>Low to moderate</p> <p>Low</p> <p>Low to Moderate</p> <p>Moderate</p> <p>Moderate</p> <p>Moderate</p>	<ul style="list-style-type: none"> • Refer to Appendix F, Subsection 2.1 (c) • Refer to Appendix F, Subsection 2.2 (c) • Refer to Appendix F, Subsection 2.2 (c) • Refer to Appendix F, Subsection 2.2 and 2.3 (c) • Refer to Appendix F, Subsection 2.4 (c) • Refer to Appendix F, Subsection 3.2 (c) • Refer to Appendix F, Subsection 2.3 (c) • Refer to Appendix F, Subsection 3.2 (c) • Refer to Appendix F, Subsection 3.6 (c)

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Activity	Impact summary	Significance (before mitigation)	Proposed mitigation
	<p>temporary construction workers</p> <ul style="list-style-type: none"> • Potential uncovering and impact on heritage artefacts, archaeological finds and/or human graves. 	<p>Insignificant to Low</p>	<ul style="list-style-type: none"> • Refer to Appendix F, Subsection 3.7 (c)
	<p>Cumulative impacts:</p> <ul style="list-style-type: none"> • Soil erosion removes nutrient rich topsoil first and once depleted few plants will grow. • The contribution of additional quantities of surface runoff over a period of time exacerbates the issues attributed to physical damage to aquatic ecosystems, i.e. increased erosion, sedimentation and damage to vegetation. • The loss of wetland, albeit small, still contributes to the overall cumulative impact from extensive developments that had occurred in Richards Bay within or close to wetlands • Emissions from construction vehicles and equipment • Use of relative small quantities of water for construction purposes • Use of relatively small quantities of energy sources, mostly fuel for construction vehicles and equipment • Generation of a relatively small quantity of construction waste. 	<p>Low</p> <p>Moderate</p> <p>Moderate</p> <p>Low</p> <p>Low</p> <p>Low</p> <p>Low</p>	<ul style="list-style-type: none"> • Refer to Appendix F, Subsection 2.1 (c) • Refer to Appendix F, Subsection 2.1,2.2 and 2.3 (c) • Refer to Appendix F, Subsection 2.3 (c) • Refer to Appendix F, Subsection 3.2 (c) • Refer to Appendix F, Subsection 2.6 (c) • Refer to Appendix F, Subsection 2.1 (c) • Refer to Appendix F, Subsection 2.2 (c)
Alternative 2			
	Direct impacts:		

BASIC ASSESSMENT REPORT

Activity	Impact summary	Significance (before mitigation)	Proposed mitigation
	Same as Alternative 1		
	<i>Indirect impacts:</i> Same as Alternative 1		
	<i>Cumulative impacts:</i> Same as Alternative 1		
Alternative 3 N/A			
	<i>Direct impacts:</i>		
	<i>Indirect impacts:</i>		
	<i>Cumulative impacts:</i>		
No-go option			
	<i>Direct impacts:</i> <ul style="list-style-type: none"> Lack of job creation approximately 160 people during construction 	High -ve	Refer to Appendix F, Subsection 3.6
	<i>Indirect impacts:</i> <ul style="list-style-type: none"> Potential loss of incentive for Foskor to assist with the rehabilitation of the southern wetland on Portion 57 	High -ve	Refer to Appendix F, Subsection 2.3
	<i>Cumulative impacts:</i> None		

OPERATION PHASE IMPACTS

Activity	Impact summary	Significance (before mitigation)	Proposed mitigation
Alternative 1 (preferred alternative)			
	<i>Direct impacts:</i> <ul style="list-style-type: none"> Use of water in relatively small quantities Emissions from operational vehicles and equipment Impact on local traffic 	Low Low Low	<ul style="list-style-type: none"> Refer to Appendix F, Subsection 2.6 (c) Refer to Appendix F, Subsection 3.2 (c) Refer to Appendix F, Subsection 3.3 (c)

BASIC ASSESSMENT REPORT

Activity	Impact summary	Significance (before mitigation)	Proposed mitigation
	<ul style="list-style-type: none"> • Visual and aesthetic impact • Noise from operational activities 	<p>Moderate</p> <p>Low</p>	<ul style="list-style-type: none"> • Refer to Appendix F, Subsection 3.4 (c) • Refer to Appendix F, Subsection 3.5 (c)
	<p><i>Indirect impacts:</i></p> <ul style="list-style-type: none"> • Potential spillage of hazardous materials such as oil, fuel, cement, sewage which may contaminate soil and water resources including wetlands • Potential litter and poor management of operational waste • Potential loss of groundwater recharge may impact aquatic systems in terms of their natural hydrological flow regimes. • Potential fugitive dust emissions from the bunker and conveyors 	<p>Low</p> <p>Low</p> <p>Moderate</p> <p>Moderate</p>	<ul style="list-style-type: none"> • Refer to Appendix F, Subsection 2.2 (c) • Refer to Appendix F Subsection 2.2 (c) • Refer to Appendix F, Subsection 2.3 (c) • Refer to Appendix F, Subsection 3.2 (c)
	<p><i>Cumulative impacts:</i></p> <ul style="list-style-type: none"> • The contribution of additional quantities of surface runoff over a period of time exacerbates the issues attributed to physical damage to aquatic ecosystems, i.e. increased erosion, sedimentation and damage to vegetation. • The loss of wetland, albeit small, still contributes to the overall cumulative impact from extensive developments that had occurred in Richards Bay within or close to wetlands 	<p>Moderate</p> <p>Moderate</p>	<ul style="list-style-type: none"> • Refer to Appendix F, Subsection 2.1,2.2 and 2.3 (c) • Refer to Appendix F, Subsection 2.3 (c)

BASIC ASSESSMENT REPORT

Activity	Impact summary	Significance (before mitigation)	Proposed mitigation
Alternative 2			
	Direct impacts: Same as Alternative 1		
	Indirect impacts: Same as Alternative 1		
	Cumulative impacts: Same as Alternative 1		
Alternative 3 N/A			
	Direct impacts:		
	Indirect impacts:		
	Cumulative impacts:		
No-go option			
	Direct impacts: <ul style="list-style-type: none"> • Continued limitation on rock phosphate storage capacity at the Foskor Industrial Complex • Continued lack of rock phosphate raw material supply security to the Foskor Industrial Complex caused by the limitations of the available rail system • Economic loss resulting from the challenges to optimise the raw material flow and the need to import phosphate from international sources via the Port of Richards Bay 	<p>High -ve</p> <p>High -ve</p> <p>High -ve</p>	<ul style="list-style-type: none"> • Refer to Appendix F, Subsection 3.1 • Refer to Appendix F, Subsection 3.1 • Refer to Appendix F, Subsection 3.1
	Indirect impacts: <ul style="list-style-type: none"> • Potential loss of economic sustainability of Foskor • Potential loss of job security 	<p>High -ve</p> <p>High -ve</p>	<ul style="list-style-type: none"> • Refer to Appendix F, Subsection 3.1 • Refer to Appendix F, Subsection 3.6

BASIC ASSESSMENT REPORT

Activity	Impact summary	Significance (before mitigation)	Proposed mitigation
	<ul style="list-style-type: none"> Potential loss of revenue for South Africa 	High -ve	<ul style="list-style-type: none"> Refer to Appendix F, Subsection 3.1
	<p>Cumulative impacts:</p> <ul style="list-style-type: none"> Increase unemployment Reduced socio-economic sustainability 	<p>High -ve</p> <p>High -ve</p>	<ul style="list-style-type: none"> Refer to Appendix F, Subsection 3.1 Refer to Appendix F, Subsection 3.1

DECOMMISSIONING PHASE IMPACTS

Activity	Impact summary	Significance (before mitigation)	Proposed mitigation
Alternative 1 (preferred alternative)			
	<p>Direct impacts:</p> <ul style="list-style-type: none"> Sourcing and use of construction material, e.g. including soils, sand, aggregate, concrete, pipe etc. Use of water in relatively small quantities Job creation for the demolition period Emissions from use of vehicles and equipment as part of demolition activities Impact on local traffic Visual and aesthetic impact Noise from demolition activities 	<p>Very Low</p> <p>Low</p> <p>High +ve</p> <p>Low</p> <p>Low</p> <p>Moderate</p> <p>Low</p>	<ul style="list-style-type: none"> Refer to Appendix F Subsection 2.1 (c) Refer to Appendix F, Subsection 2.6 (c) Refer to Appendix F, Subsection 3.1 and 3.6 (c) Refer to Appendix F Subsection 3.2 (c) Refer to Appendix F, Subsection 3.3 (c) Refer to Appendix F, Subsection 3.4 (c) Refer to Appendix F, Subsection 3.5 (c)
	<p>Indirect impacts:</p> <ul style="list-style-type: none"> Potential enhancement of erosion due to exposure of soil through earth grading for site remediation of vegetation and associated 	Low	<ul style="list-style-type: none"> Refer to Subsection 2.1 of Appendix F

BASIC ASSESSMENT REPORT

Activity	Impact summary	Significance (before mitigation)	Proposed mitigation
	<p style="text-align: center;">siltation and sedimentation of downstream wetlands</p> <ul style="list-style-type: none"> • Potential for rain and wind to dislodge soil particles from open stockpiles which can be carried away and deposited in wetlands and streams • Potential spillage of hazardous materials such as oil, fuel, sewage which may contaminate soil and water resources including wetlands • Potential litter and poor management of demolition waste • Potential windblown dust generation from exposed soil, soil and material stockpiles and vehicle trafficking • Potential impact on community relationships as a result of influx of temporary demolition workers 	<p style="text-align: center;">Low</p> <p style="text-align: center;">Low</p> <p style="text-align: center;">Low</p> <p style="text-align: center;">Moderate</p> <p style="text-align: center;">Moderate</p>	<ul style="list-style-type: none"> • Refer to Subsection 2.1 of Appendix F • Refer to Subsection 2.2 of Appendix F • Refer to Appendix F Subsection 2.2 (c) • Refer to Appendix F Subsection 3.2 (c) • Refer to Appendix F, Subsection 3.6 (c)
	<p>Cumulative impacts:</p> <ul style="list-style-type: none"> • Soil erosion removes nutrient rich topsoil first and once depleted few plants will grow. • The contribution of additional quantities of surface runoff over a period of time exacerbates the issues attributed to physical damage to aquatic ecosystems, i.e. increased erosion, sedimentation and damage to vegetation. 	<p style="text-align: center;">Low</p> <p style="text-align: center;">Moderate</p>	<ul style="list-style-type: none"> • Refer to Appendix F, Subsection 2.1 (c) • Refer to Appendix F, Subsection 2.1,2.2 and 2.3 (c)
Alternative 2			

BASIC ASSESSMENT REPORT

Activity	Impact summary	Significance (before mitigation)	Proposed mitigation
	Direct impacts: Same as Alternative 1		
	Indirect impacts: Same as Alternative 1		
	Cumulative impacts: Same as Alternative 1		
Alternative 3 N/A			
	Direct impacts:		
	Indirect impacts:		
	Cumulative impacts:		
No-go option			
	Direct impacts: None		
	Indirect impacts: None		
	Cumulative impacts: None		

A complete impact assessment in terms of Regulation 22(2)(i) of GN R.543 must be included as Appendix F.

2. ENVIRONMENTAL IMPACT STATEMENT

Taking the assessment of potential impacts into account, please provide an environmental impact statement that summarises the impact that the proposed activity 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.

It is evident from this document that a major concern with regards to the existing operations of Foskor is the impact on their operations when the rail delivery of rock phosphate is compromised. It was determined that the best possible means of managing this is to have an alternative storage facility for approximately 200 000 tons of rock phosphate.

This assessment illustrates that there are various potential negative and positive impacts that may result from the proposed rock phosphate storage facility and associated infrastructure. From an environmental perspective and with the consideration of the potential impacts detailed above, we are of the view that the preferred alternative A will result in low impacts with suitable mitigation. The Impact Summary Report in Table 1 below indicates that with mitigation all impacts will be of low significance to the receiving environment.

However, given the sensitive environment and close proximity to wetlands, care should still be taken to ascertain that the impacts identified (even though they range from moderate to low), do not become increased in significance due to contractor's or operational non-conformance to the recommended mitigation measures contained in this Basic Assessment report and associated Environmental Management Programme.

Several mitigation measures have been proposed to minimise the anticipated environmental impacts together with an environmental management programme report to monitor the effectiveness of these mitigation measures.

Table 1: Potential Impact Summary Report

ALTERNATIVES	A1 (Preferred Alternative)		No-Go	
	Without mitigation	With mitigation	Without mitigation	With mitigation
CONSTRUCTION PHASE IMPACTS				
POTENTIAL IMPACT	Without mitigation	With mitigation	Without mitigation	With mitigation
Soil Erosion and Sedimentation	Moderate (-)	Low (-)	-	-
Soil and Water Resource Contamination	Low (-)	Low (-)	-	-
Hydrology, Drainage and Wetlands	Moderate (-)	Low (-)	-	-
Flora	Moderate (-)	Low (-)	-	-
Fauna	Moderate (-)	Low (-)	-	-
Water Use	Moderate (-)	Low (-)	-	-
Air Quality	Moderate (-)	Low (-)	-	-
Traffic and Right of Way	Low (-)	Low (-)	-	-

BASIC ASSESSMENT REPORT

Visual and Aesthetics	Moderate (-)	Low (-)	-	-
Noise	Low (-)	Low (-)	-	-
Community Relationship	Moderate (-)	Low (-)	-	-
Heritage	Low (-)	Low (-)		
OPERATIONAL PHASE IMPACTS				
POTENTIAL IMPACT	Without mitigation/ enhancement	With mitigation/ enhancement	Without mitigation	With mitigation
Soil Erosion and Sedimentation	Moderate (-)	Low (-)	-	-
Soil and Water Resource Contamination	Moderate (-)	Low (-)		
Hydrology, Drainage and Wetlands	Moderate (-)	Low (-)	-	-
Flora	Low (-)	Low (-)	-	-
Fauna	Moderate (-)	Low (-)		
Water Use	Moderate (-)	Low (-)	-	-
Economy	Low (+)	High (+)	-	-
Air Quality	Low (-)	Low (-)	-	-
Traffic and Right of Way	Low (-)	Low (-)	-	-
Visual and Aesthetics	Low (-)	Low (-)		
Noise	Low (-)	Low (-)	-	-
Community Relationship	N/A		-	-
Heritage	N/A			

Key:

	High negative impact	(-)	Negative Impact
	Moderate negative impact	(+)	Positive Impact
	Low		
	Moderate positive impact		
	High positive impact		

Alternative A (preferred alternative)

On the basis of the findings in this report, it is suggested that Alternative A be approved for the construction of the rock phosphate storage facility, (Figure 1).

Alternative B

N/A

Alternative C

N/A

No-go alternative (compulsory)

The “No-Go” alternative was briefly assessed and compared as shown in Section D, Subsection 2 for the various phases of the project.

The limitations in the local rail infrastructure capacity results in inconsistent supply of rock phosphate to the Foskor Industrial Complex, which in turn compromises the Foskor operation and sustainability. In the case that the project does not take place and no rock phosphate storage facility is constructed Foskor’s operations will continue to be compromised by the lack of additional buffer capacity needed to ensure continuous flow of raw material to its Richards Bay Industrial Complex.

SECTION E. 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 √	NO
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If "NO", indicate the aspects that should be assessed further as part of a Scoping and EIA process before a decision can be made (list the aspects that require further assessment).

N/A

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.

Refer to Appendix F attached and to the EMP attached in Appendix G
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Is an EMPr attached?

YES √	NO
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The EMPr must be attached as Appendix G.

The details of the EAP who compiled the BAR and the expertise of the EAP to perform the Basic Assessment process must be included as Appendix H.

If any specialist reports were used during the compilation of this BAR, please attach the declaration of interest for each specialist in Appendix I.

Any other information relevant to this application and not previously included must be attached in Appendix J.

NAME OF EAP

SIGNATURE OF EAP

DATE

SECTION F: APPENDIXES

The following appendixes must be attached:

Appendix A: Maps

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports (including terms of reference)

Appendix E: Public Participation

Appendix F: Impact Assessment

Appendix G: Environmental Management Programme (EMPr)

Appendix H: Details of EAP and expertise

Appendix I: Specialist's declaration of interest

Appendix J: Additional Information