THE SPAR GROUP (LTD)

Basic Assessment (BA) for the Proposed Construction of a New SPAR Distribution Centre on Erf 1092 at Redhouse in Port Elizabeth, Eastern Cape Province

Draft Basic Assessment Report

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BASIC ASSESSMENT REPORT

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File Reference Number:	
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Basic assessment report in terms of the Environmental Impact Assessment Regulations, 2014, 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, 2014 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. 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.
3. Where applicable **tick** the boxes that are applicable or **black out** the boxes that are not applicable in the report.
4. An incomplete report may be returned to the applicant for revision.
5. 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.
6. This report must be handed in at offices of the relevant competent authority as determined by each authority.
7. No faxed or e-mailed reports will be accepted.
8. The report must be compiled by an independent environmental assessment practitioner (EAP).

9. 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.

10. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.

THE SPAR GROUP (LTD)

BASIC ASSESSMENT (BA) FOR THE PROPOSED CONSTRUCTION OF A NEW SPAR DISTRIBUTION CENTRE ON ERF 1092 AT REDHOUSE IN PORT ELIZABETH, EASTERN CAPE PROVINCE

DRAFT BASIC ASSESSMENT REPORT

Executive Summary

Project Description

Due to the growing market demands, the SPAR Group (Ltd) (hereafter referred to as 'SPAR') are proposing to construct a new SPAR Distribution Centre on Erf 1092 at Red House in Perseverance, Port Elizabeth, Nelson Mandela Bay Metropolitan Municipality (NMBMM) in the Eastern Cape Province (hereafter referred to as the 'proposed development'). The proposed development will entail the construction of a self-sustainable facility which includes a new Dry Goods Warehouse with an internal Returns Area and Workshop/Charging Bay. In addition, the proposed development will also include the following:

- Conference Facility (including Entrance Foyer, IT Centre, Training Rooms, Bar Facility, Conference Ablutions & Entertainment Area);
- Security Entrance & Staff Ablution;
- Canteen;
- Guardhouse / Entrance Canopy;
- Truck Workshop & Truck Wash;
- Services Room (accommodating electrical, transformer and generator);
- Municipal Sub-station;
- Truck Entrance & Guard House;
- Fire Pump House;
- Main internal storm water drainage (including paved/concrete/reno mattress overland flow routes, catch pits, manholes and pipework up to outside of the buildings);
- Main internal water reticulation up to the outside of the buildings for operational purposes (including supply to the fire tanks, fire hydrants and fire hose reels which will include the municipal water connection to site, bulk water meter, valves, specials, bends, thrust blocks, bulk water meter and strainer chambers);
- Municipal sewer extension, connection to existing municipal system and main internal sewer drainage system up to the outside of the buildings (including gravity sewer lines, manholes, sewer pump station and pumping main including valve and thrust blocks);
- Paved road and parking area (including layer works, kerbs, storm water drainage, road marking and traffic signs);

- Concrete areas for entrance road and external operational area up to the outside of the buildings (including layer works, joints and storm water drainage);
- Bulk storm water system (including grassed storm water detention ponds, overflow structures, concrete lined channels, catch pits, pipework and connection to municipal system);
- Extension to Kohler road (including the layer-works, kerbing, storm water drainage, traffic signs and road marking); and
- Upgrade of the Kohler/Chelsea Roads intersection (including layer works, storm water drainage, procurement of traffic signals and related ducts and manholes, traffic signs and road marking).

It is important to note that the proposed development will be constructed in a phased manner. It was advised that construction of the entire proposed development will ultimately be undertaken in four (4) phases over a period of approximately 20 years. The timing of the subsequent phases (2 to 4) will be determined by market forces, as well as SPAR's business requirements and priorities in the future. This may vary from year to year as SPAR assess their development strategy as the need is required. As such, a detailed programme indicating when the above-mentioned phases will be implemented, is not available. It is envisaged that Phase 1 construction activities will be undertaken in 2017 / 2018, while the construction activities related to Phases 2 to 4 will be undertaken at intervals dependent on the growth of the region. Phase 2 related construction activities are expected to be undertaken in the next 5 to 7 years, Phase 3 related construction activities in 10 to 12 years and the final phase (i.e. Phase 4) in 15 to 20 years' time. These timeframes are however not final and may be subject to change as the project progresses. It should be noted that this Environmental Application for Environmental Authorisation (EA) will however include all four (4) phases of the proposed development and will ultimately cover the activities related to all four (4) phases.

Environmental Application

SiVEST SA (Pty) Ltd (hereafter referred to as SiVEST) has subsequently been appointed as independent Environmental Assessment Practitioner (EAP) by SPAR to undertake the Basic Assessment (BA) process for the proposed development. The proposed development requires Environmental Authorisation (EA) from the Eastern Cape Department of Economic Development, Environmental Affairs and Tourism (DEDEA) and will be carried out under the 2014 Environmental Impact Assessment Regulations which were promulgated in December 2014 (Government Gazette No. 38282 of the 4th of December 2014) embodied by the National Environmental Management Act (NEMA) (Act 107 of 1998) as amended. In terms of these regulations, a Basic Assessment (BA) is required for the proposed development. All relevant legislation and guidelines will be consulted during the BA process and will be complied with at all times. As previously mentioned, the proposed development will be constructed in a phased manner (i.e. Phases 1 to 4) over a period of approximately 20 years. EA will however be sought and obtained for all four (4) phases of the proposed development and will ultimately cover the activities related to all four (4) phases.

As mentioned above, the proposed development involves the construction of a new SPAR Distribution Centre, with the purpose of housing the increase in SPAR's operational demands due to national and regional growth. It should be noted that the new project site makes provision for future expansion according to the SPAR 20 year expansion plan. In addition, the project site is a 146 000m^2 undeveloped erf and is in close proximity to an existing SPAR Distribution Centre on Kohler Road.

The proposed project site currently belongs to the Nelson Mandela Bay Metropolitan Municipality (NMBMM). Ownership of the project site is however in the process of being transferred to SPAR. The drafting of a sale agreement has commenced and will include a number of suspensive conditions, one being Environmental Authorisation (EA). The transfer of ownership of the project site will thus only commence (conveyancing) once the suspensive conditions are met and therefore the property will ultimately belong to SPAR. The proposed project site will be accessed primarily via Kohler Road which will need to be extended as part of the proposed development. Additionally, the proposed development will also include the upgrade of the Kohler/Chelsea Roads intersection.

A Site Layout Map illustrating the infrastructure and internal roads proposed as part of the proposed development is displayed in **Figure i** below.

A long term site plan indicating the different components of the proposed development, as well the phasing for each respective component, is provided in **Figure ii** below.

Please note that the proposed bulk storm water, sewer and water reticulation systems have not been illustrated in **Figure i or **Figure ii** below. Site plans illustrating the bulk storm water, sewer and water reticulation systems being proposed as part of the proposed development have been included in **Appendix C – Facility Illustration(s)**.*

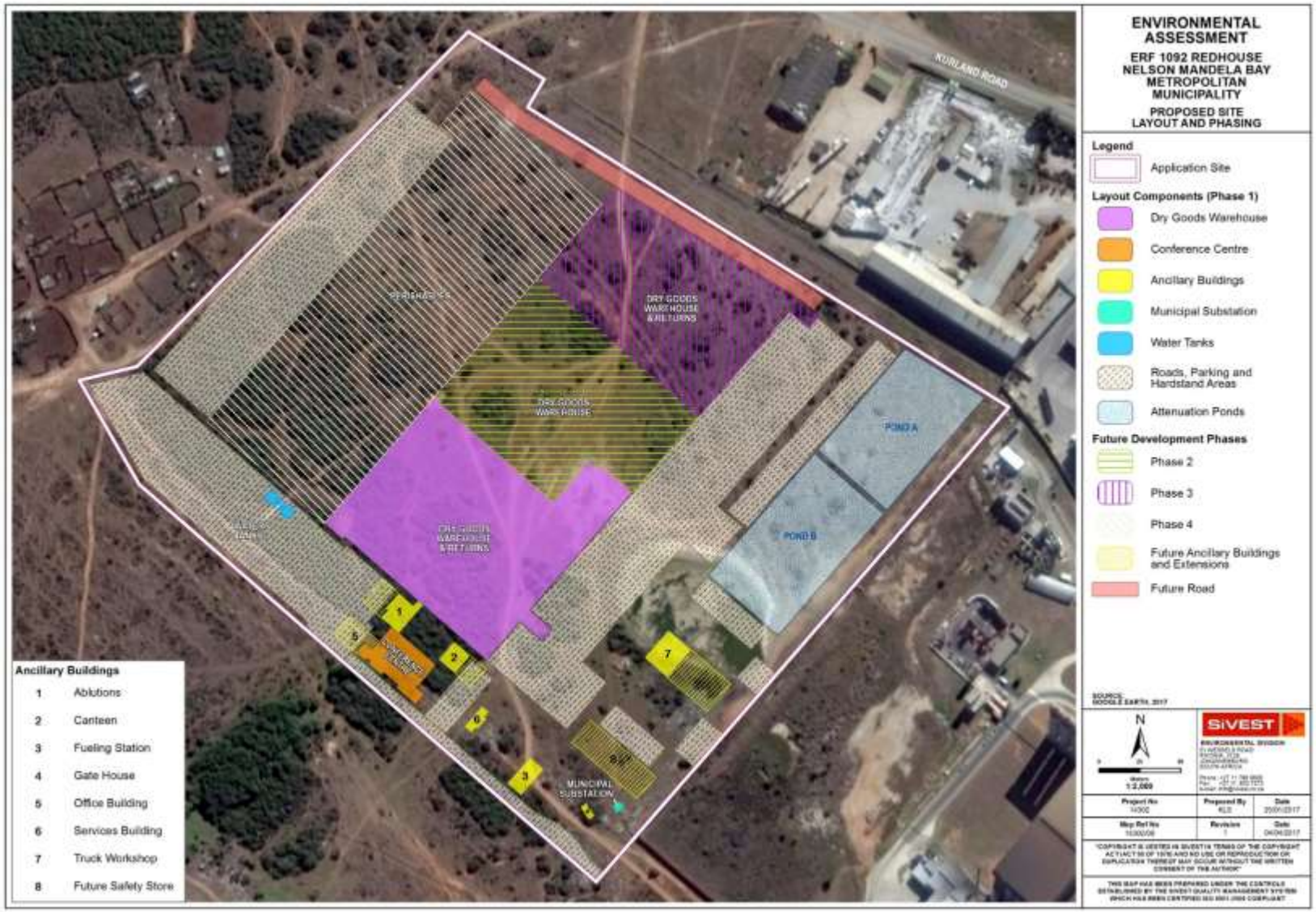

Figure i: Site layout Map illustrating the infrastructure and roads proposed as part of the proposed development

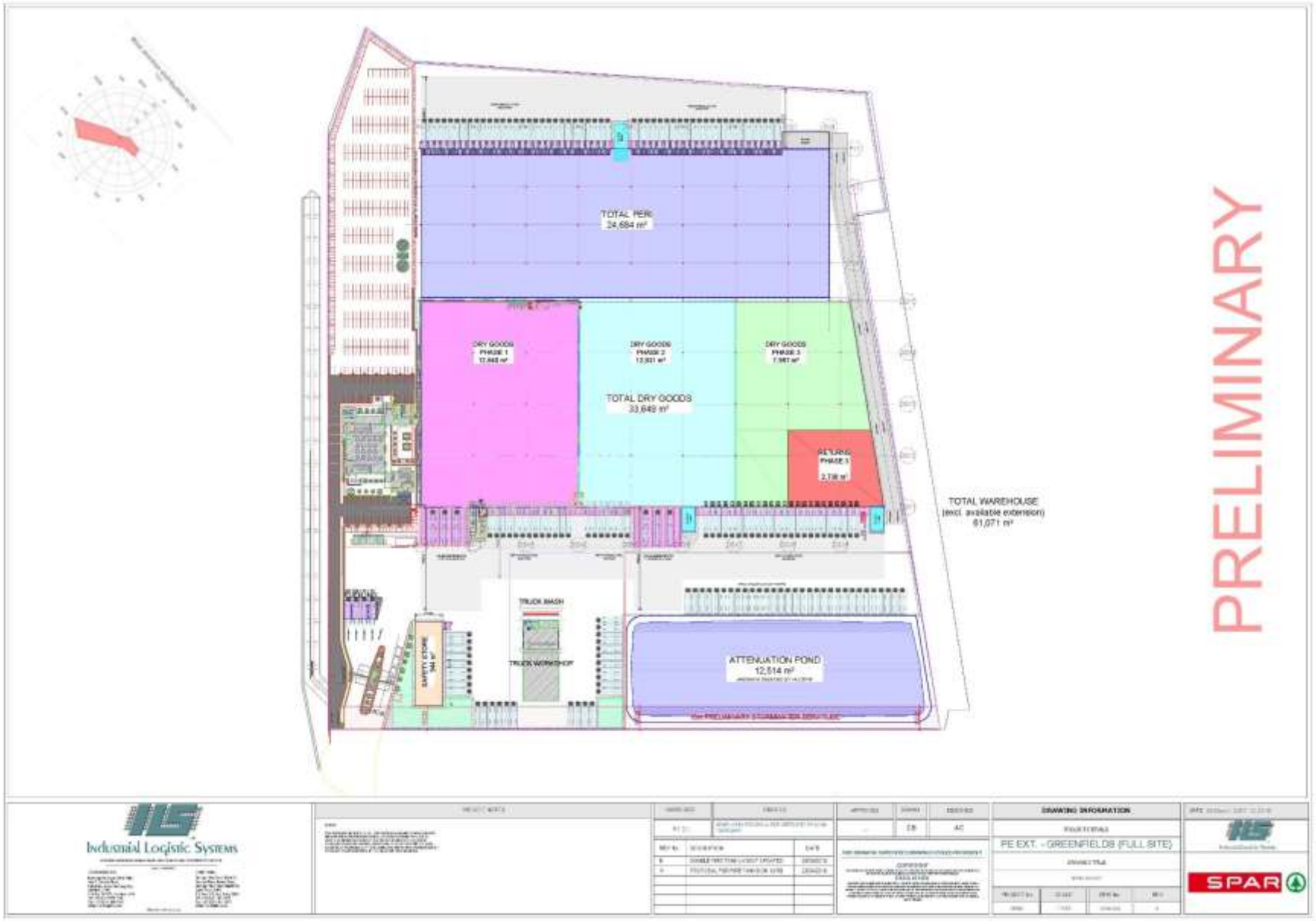

Figure ii: Long Term Site Plan indicating the different components of the proposed development, as well the phasing for each respective component

It should be noted that no layout alternatives are being considered and/or assessed with regards to the proposed construction of the new SPAR Distribution Centre. This is due to the fact that the current proposed layout is planned to be carried out in a phased manner and has been achieved through the extensive organising and planning of the space and facilities required by SPAR. Additionally, SPAR are not looking to purchase any other sites as the chosen property is the only site which is considered to be feasible and viable with regards to the construction of the new SPAR Distribution Centre. Therefore the proposed project site is the only site alternative that is being considered with regards to the proposed development. As such, the current layout maximises the site usage, taking into consideration the phasing of the proposed development. The current proposed layout is also considered to be the most cost effective way to establish a facility in order to meet SPAR's current demands, as the topography of the site would result in large, expensive civil works in order to get phase one complete, and then still take into consideration the future phasing. The site currently only has one means of access to the proposed facility, due to the limitations of local infrastructure and the built environment, and therefore the first phase of the development had to be placed within realistic distances of the provided access point. In addition, the land to the north-west of the site (where phase 4 would happen), could potentially be sold off to another developer, which needed to be considered in the current proposal.

Figure iii below highlights the phasing which is planned to be executed on the site over time and can clearly illustrate why alternative layouts would not be able to accommodate SPAR's programme requirements in the future.

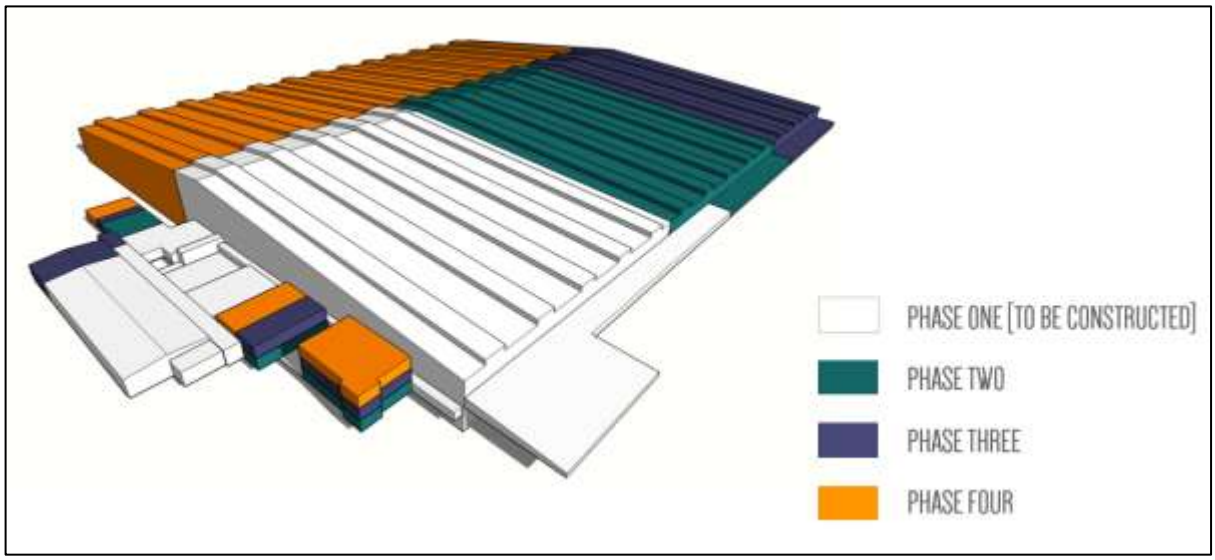

Figure iii: Image illustrating the phasing to be executed on the site over time and why alternative layouts would not be able to accommodate SPAR's programme requirements in the future.

A Site Locality Map for the proposed construction of the new SPAR Distribution Centre has been provided in **Figure iv** below.

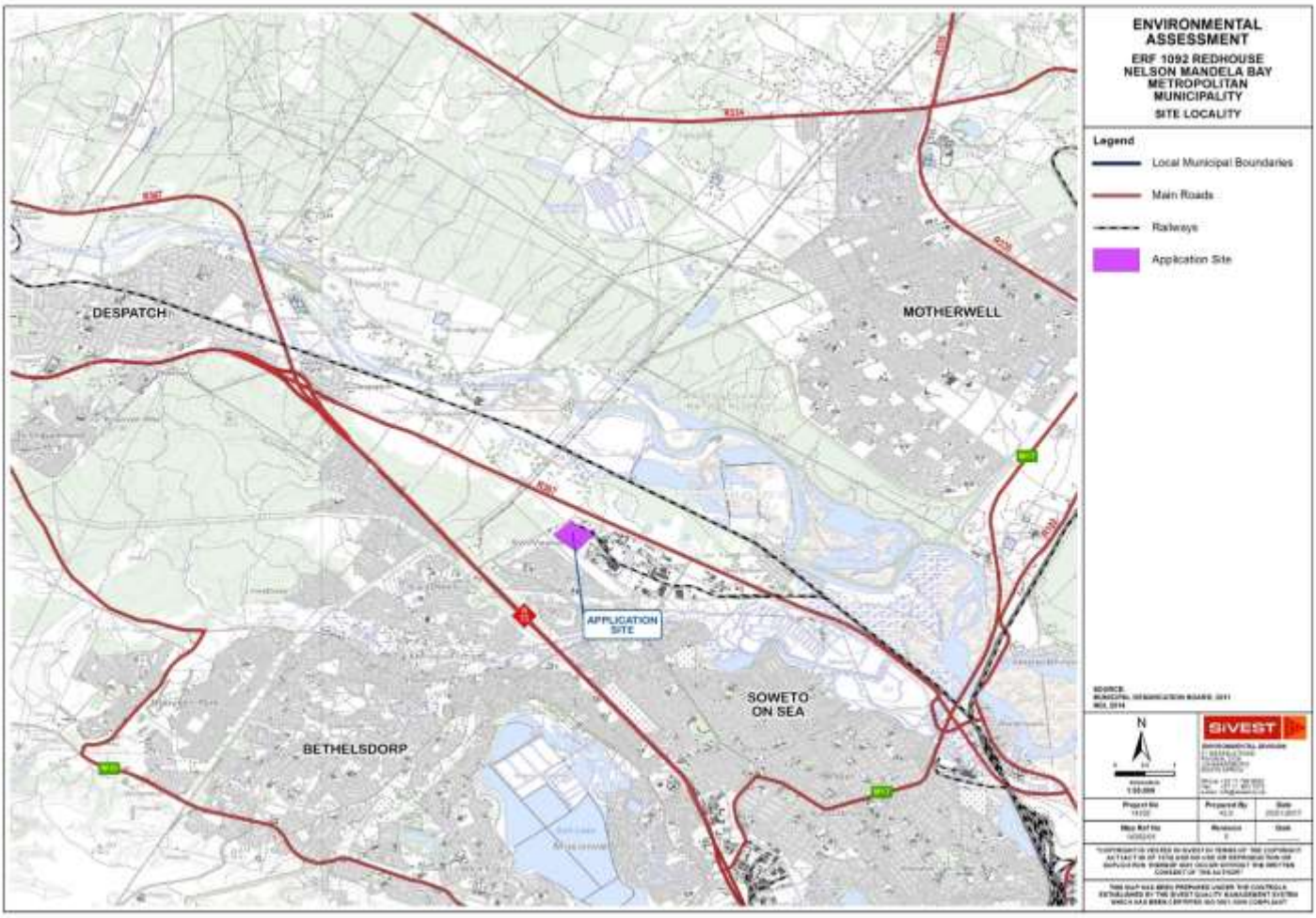

Figure iv: Site Locality Map

Background of Receiving Environment

According to Mucina and Rutherford (2006), the study site for the proposed development falls within the Albany Thicket Biome. Going into finer detail, vegetation units are classified which contain a set of general but more local biophysical characteristics as opposed to the entire Biome. The study site can be found within the Sundays Thicket vegetation unit. Additionally, three (3) habitat units can be found within the boundaries of the proposed project site, namely Degraded Sundays thicket, Transformed habitat and Wetland Habitat. Limited areas of Sundays Thicket remain, and the habitat integrity has been degraded by land uses such as intensive livestock grazing and vegetation clearance. The Wetland habitat unit has been severely degraded by dumping of rubble and discharge from urban storm water runoff. In addition, the Transformed habitat unit has been severely degraded by vegetation clearance, rubble dumping, edge effects associated with industrial activities, alien floral invasion and subsistence agriculture.

As previously mentioned, the proposed project site is not within a Critical Biodiversity Area (CBA), Ecological Support Area (ESA) or riverine process area in terms of the NMBM's Bioregional Plan (2015). The proposed project

site is however located within 5 km of a Formal Protected Area (i.e. the Swartkops Valley Local Authority Nature Reserve). It should also be noted that a surface water feature can be found within the study site. This surface water feature has been identified as a depression wetland. A buffer zone of 30m was implemented for adequate protection of the wetland should the proposed development accommodate a layout that can avoid the wetland and the associated buffer. However, based on the current layout, it is understood that this will not be possible. A buffer zone was implemented nonetheless to complete the assessment based on findings. A locality map indicating the delineated depression wetland found within the proposed project site is provided in **Figure v** below.

Figure v: Locality map indicating the delineated depression wetland found within the proposed project site

It is understood that due to limited space (based on the entire project and additional future phases to be constructed), the current layout and project components cannot be altered to avoid the identified depression wetland. As a result, the proposed development will need to involve the infill of the wetland in order to facilitate construction of the proposed development. Ultimately, the wetland will need to be destroyed. In light of the above, the only way to permit the loss of the depression wetland is to compile and implement a suitable wetland offset plan that is acceptable and authorised by the Department of Water and Sanitation (DWS) and DEDEA. The wetland

offset plan will need to be such that a new wetland can be constructed of equal or better functionality, or to rehabilitate one or a number of other wetlands to the equivalent extent of wetland being lost to the desired standards in order to offset the loss of the depression wetland on the study site. As such, a wetland offset plan will be compiled and submitted as part of the environmental and water use license application processes to facilitate the current layout and offset the proposed loss of the depression wetland.

Based on correspondence from the Eastern Cape Department of Economic Development and Environmental Affairs (i.e. DEDEA), following an environmental pre-application meeting held on the 23rd of March 2017, it has been confirmed that DEDEA are favourable to the process of issuing an EA (pending satisfactory assessment of the application) with conditional approval such that the EA conditions can be assessed by DWS in the processing of the Water Use License (WUL) application. The wetland offset process and plan will be undertaken in the next two (2) months of which meetings will be undertaken involving all relevant stakeholders (including DWS, DEDEA and any other relevant stakeholders) in order to discuss the various wetland offset options and to provide the way forward in compiling the wetland offset plan. As such, the proposed wetland offset plan will be undertaken as part of the water use license application (WULA) process and will only be submitted at a later stage. The wetland offset strategy will therefore not accompany the Basic Assessment Report (BAR). Provisional authorisation will rather be obtained for the proposed development and will depend on the findings of the wetland offset strategy.

Locality maps indicating the sensitive and protected areas identified within close proximity to the proposed project site have been provided in **Figure vi** and **Figure vii** below.

Figure vi: Locality map indicating the sensitive areas identified within close proximity to the proposed project site

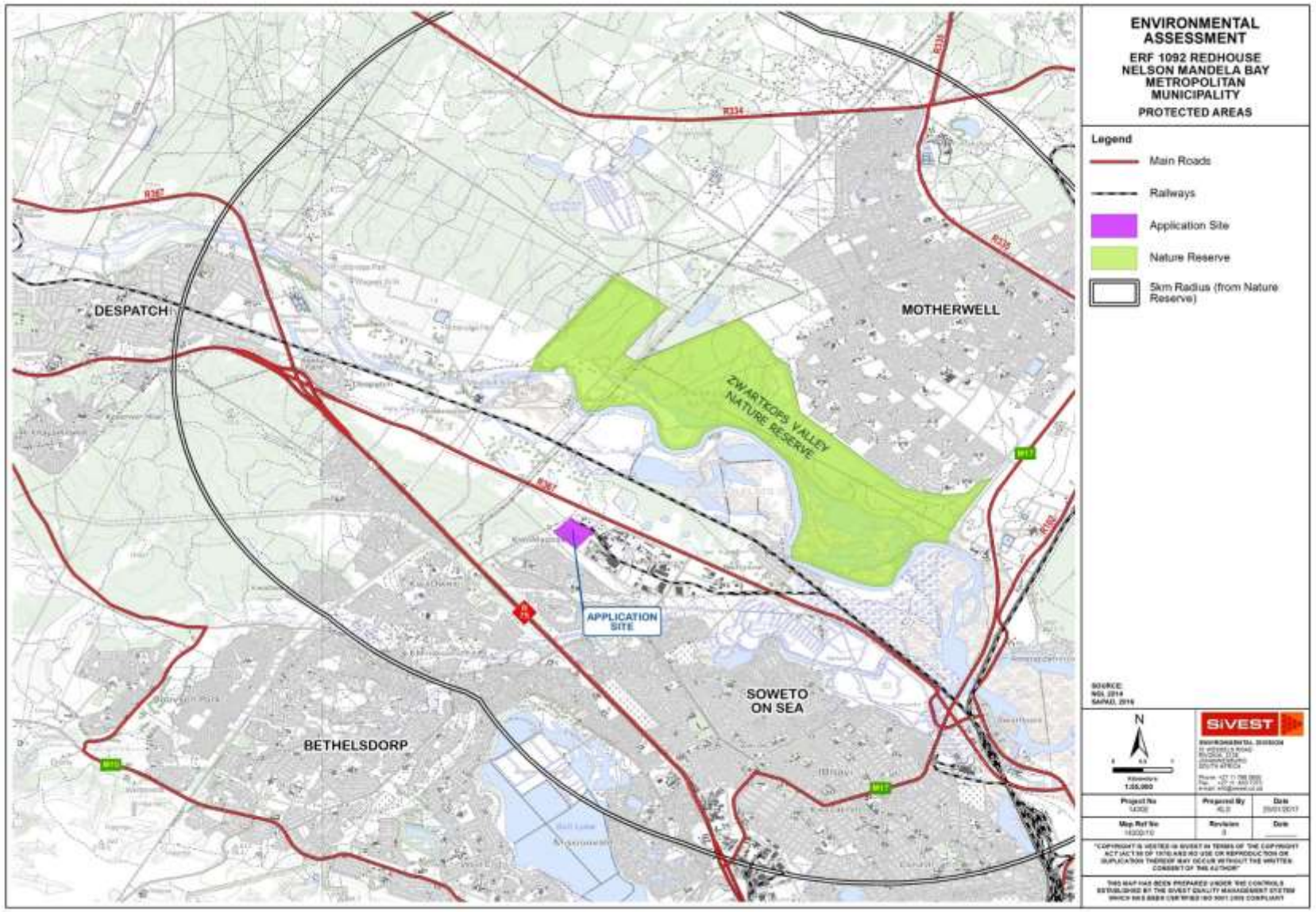

Figure vii: Locality map indicating the protected areas identified within close proximity to the proposed project site

The study site is located on Erf 1092 at Redhouse in Perseverance, Port Elizabeth, Nelson Mandela Bay Metropolitan Municipality in the Eastern Cape Province (GPS Co-ordinate: 33° 50' 3.960" S; 25° 32' 15.737" E). The study site is a 146 000m² undeveloped erf situated approximately 15km north-west of the city of Port Elizabeth and roughly 7 km south-east of the town of Despatch. The study site is however located within an industrial area. As previously mentioned, the proposed project site is in close proximity to an existing SPAR Distribution Centre and makes provision for future expansion according to the SPAR 20 year expansion plan. In addition, the proposed project site will be accessed primarily via Kohler Road which will need to be extended as part of the proposed development.

Only one (1) Basic Assessment (BA) application will be made for the required activities related to the proposed development of the new SPAR Distribution Centre. The BA studies will identify the impacts associated with the proposed development. It should however be noted that a preferred site selection process has not been undertaken as no layout alternatives are being considered and/or assessed with regards to the propped development.

Specialist Findings

Several specialist studies were conducted during the BA process to identify issues or legislative implications associated with the proposed development. These include:

- Biodiversity Impact Assessment
- Surface Water Delineation and Impact Assessment;
- Heritage Impact Assessment (including desktop Palaeontological Impact Assessment); and
- EIA level Palaeontological Impact Assessment.

A summary of the specialist findings has been provided in **Table ii** below.

Table ii: Specialist Findings Summary Table

Environmental Parameter	Summary of Major Findings	Recommendations
Biodiversity	**Floral Scan:** • During the field assessment, three habitat units were observed within the boundaries of the study area, namely Degraded Sundays Thicket, Transformed habitat and Wetland habitat. Limited areas of Sundays Thicket remain, and the habitat integrity has been degraded by land uses such as intensive livestock grazing and subsistence agriculture. The Wetland habitat unit has been severely degraded by dumping of rubble and discharge from urban storm water runoff. The Transformed habitat unit has been severely degraded by vegetation	• It is recommended that any infrastructure is planned away from the wetland. Some of the rescued species could be planted in the wetland buffer zone to re-establish Sundays Thicket as a further trade-off for development in the remaining Degraded Sundays Thicket. Rehabilitation and clean-up of the wetland can also be considered; • If the Sundays Thicket habitat unit is to be developed, a suitable trade-off would be to conserve and rehabilitate a portion of the remaining habitat on

Environmental Parameter	Summary of Major Findings	Recommendations
	clearance, rubble dumping, edge effects associated with industrial activities, alien floral invasion and subsistence agriculture; • The Probability of Occurrence (POC) of all South African National Biodiversity Institute (SANBI) floral SCC, as well as relevant provincial and national lists were assessed and calculated, and none are likely to occur; • One floral SCC, namely *Sideroxylon inerme* (milkwood) was observed during the site assessment. This species is protected under the National Forest Act (1998). In terms of this act, protected tree species may not be cut, disturbed, damaged or destroyed and their products may not be possessed, collected, removed, transported, exported, donated, purchased or sold - except under licence granted by the Department of Water Affairs (DWA) (or a delegated authority); and • As the majority of the trees are relatively small and easy to transplant because the soil is sandy, it is recommended that the trees are incorporated as part of the landscaping of the proposed development, after obtaining the relevant permits. No other floral SCC were observed. **<u>Faunal Scan:</u>** • The species observed comprised mainly of common faunal species, particularly those that are adept at living and inhabiting areas in close proximity to human developments. Species encountered during the field assessment included *Telophorus zeylonus* (Bokmakierie), *Numida meleagris* (Helmeted Guineafowl) and *Rattus rattus* (Common Rat). During the site investigation, no faunal SCC were observed.	site. Furthermore, the majority of the genera occurring naturally (*Crassula, Portulacaria*, *Carissa, Euphorbia*, *Aloe*, *Schotia* etc.) are excellent waterwise landscaping plants. Thus, plants sourced from the disturbance footprint can be used for landscaping purposes and the local floral genetic diversity can be conserved in-situ; • Upon completion of construction activities, it must be ensured that no bare areas outside the development footprint remain and that indigenous grassland species endemic to the area are reintroduced as part of landscaping activities; • *Sideroxylon inerme* (milkwood) was observed during the site assessment. This species is protected under the National Forest Act (1998). In terms of this act, protected tree species may not be cut, disturbed, damaged or destroyed and their products may not be possessed, collected, removed, transported, exported, donated, purchased or sold - except under licence granted by the Department of Water and Sanitation (DWS) (or a delegated authority). As the majority of the trees are relatively small and easy to transplant because the soil is sandy, it is recommended that the trees are incorporated as part of the landscaping of the proposed development, after obtaining the relevant permits; • It is recommended that a rescue and relocation operation is implemented for *Chersina angulata* (Angulate

Environmental Parameter	Summary of Major Findings	Recommendations
	• Furthermore, due to the degraded nature of the study area, specialized habitat requirements of most faunal SCC, distribution ranges and high levels of anthropogenic activity, it is deemed unlikely that any SCC will occur within the study area at present; • The proposed development is thus deemed unlikely to pose a conservation threat to sensitive faunal habitat and faunal SCC in the region; • During the palaeontological site assessment, *Chersina angulata* (Angulate Tortoise), was encountered. This species is listed as Least Concern by the IUCN and is not threatened. It is however listed Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) which regulates the trade of this species. However, rescue and relocation of this species will not require any permits; **<u>Terrestrial Impact Assessment:</u>** Prior to mitigation, the impacts on floral and faunal SCC are low significance impacts. If effective mitigation takes place, all impacts may be reduced to very-low significance impacts. **<u>Sensitivity:</u>** The wetland identified on site and the associated biodiversity was found to have moderate sensitivity, while the Degraded Sundays Thicket habitat unit was found to have an intermediate sensitivity. In addition, the transformed areas on site were deemed to have a low sensitivity. Based on the findings of the ecological assessment, it is the opinion of the ecologists that the proposed project be considered	Tortoise) prior to any site clearing activities taking place and that all tortoises be relocated to the nearby Zwartkops Valley Nature Reserve; • Should any other floral or faunal SCC be encountered within the development footprint during the construction or operational phase, the following should be ensured: o Effective conservation/relocation of individuals to suitable similar habitat in the vicinity of the area from where they have been removed must be ensured; and o All rescue and relocation plans should be overseen by a suitably qualified specialist. • No trapping or hunting of any faunal species is to take place; • Prohibit the collection of any plant material for firewood or medicinal purposes; • Informal fires by construction personnel should be prohibited; • Keep the proposed development footprint as small as possible, managed all edge effects so as to not impact upon the surrounding more sensitive areas; • Construction vehicles should be restricted to travelling on designated roadways only to limit the ecological footprint of the proposed development activities; • Edge effect control needs to be implemented within construction areas, with specific consideration to

Environmental Parameter	Summary of Major Findings	Recommendations
	favorably. However, all mitigation measures and recommendations presented in this report should be adhered to as to ensure the ecology within the proposed disturbance areas as well as surrounding zone of influence is protected or adequately rehabilitated in order to minimize the deviations from the Present Ecological State.	erosion control and alien floral species management; • Establishment of reintroduced vegetation must be monitored during the operational phase; • Alien vegetation as listed in Appendix F must be removed from the footprint area during the construction phase, with specific mention of Category 1b species in line with the NEMBA Alien and Invasive Species Regulations (2016); and • Should maintenance or further infrastructure expansion activities be required during the operational phase, it should be ensured that these activities are kept strictly within the development footprint.
Surface Water	At a broad level, the study area is situated within the Swarkops Primary Catchment within quaternary catchment M10D. The study site falls within the Fish to Tsitsikamma Water Management Area (WMA). Ultimately, it was found that there is one depression wetland on the study site. Following the delineation process, the depression wetland measured to be 1.1 hectares in extent, with a perimeter of 482m. The wetland is considered ecological important at a desktop level due to the classification as a Wetland FEPA. The PES of the wetland was assessed to be a Class D (Largely Modified). Factors identified contributing to the degraded hydrological status included increased surface run-off from the surrounding catchment (most notably storm water outlets from the Kwamagxaki residential area to the south). Additionally, changes to the water distribution and retention of the wetland	The proposed development will need to involve the infill of the wetland in order to facilitate construction of various components. Ultimately, the wetland will need to be destroyed. With this in mind, the only way to permit the loss of the depression wetland is to compile and implement a suitable wetland offset plan that is acceptable and approved by the DWS and DEDEAT. The wetland offset plan will need to be such that a new wetland can be constructed of equal or better functionality, or to rehabilitate one or a number of other wetlands to the equivalent extent of wetland being lost to the desired standards in order to offset the loss of the depression wetland on the study site. As such, it is recommended that a wetland offset plan is compiled and submitted as part of the environmental and water use license application processes to

Environmental Parameter	Summary of Major Findings	Recommendations
	were noted due to changes in surface roughness (including removal of vegetation, establishment of dirt roads and overgrazing) and dumping alters the distribution of flows to the wetland. Furthermore, excavation of furrows to divert water out of the wetland were also identified to reduce the retention ability of the wetland. From a vegetation perspective, contributing factors affecting the ecological state included the influx of sediment from the storm water outlets, infilling of rubble material, deposition of litter and other substances in the wetland, as well as overgrazing from cattle due to subsistence agriculture in the area. The wetland ecosystem services was assessed and provided for the depression wetland. With regards to the potential wetland ecosystems services provided, the depression wetland scored highest in terms of sediment trapping and toxicant removal followed closely by phosphate trapping and nitrate removal. Other potential wetland ecosystem services which could potentially be provided which scored to a lesser degree included (in descending order) water supply for human use, erosion control, flood attenuation, streamflow regulation, maintenance of biodiversity and, tourism and recreation. The ecosystem services did not score very high as the wetland system is relatively degraded and limited in extent. The EISC for the depression wetland was determined. The results showed that the depression wetland was categorised as a Class C (Moderate). It was noted that during the site visit, the only faunal activity observed included small rodents on the study site. However, whilst little to no activity was observed at the time that	facilitate the current layout and offset the proposed loss of the depression wetland.

Environmental Parameter	Summary of Major Findings	Recommendations
	the fieldwork was undertaken, avi-faunal and amphibian species may well frequent the wetland at various stages of the day, and later (seasonally) in the year. A buffer zone of 30m was implemented for adequate protection of the wetland should the proposed development accommodate a layout that can avoid the wetland and the associated buffer. However, based on the current layout, it is understood that this will not be possible. A buffer zone was implemented nonetheless to complete the assessment based on findings. In terms of potentially applicable environmental and water related legislation, several listed activities and water uses have been identified that are likely to be applicable to the proposed development. Accordingly, in terms of NEMA (1998) and the EIA Regulations (2014), Activities 12 and 19 of Government Notice 983, have been identified as being applicable. With respect to the NWA (1998), water uses (c) and (i) are also applicable. The aforementioned identified activities and water uses should however be confirmed with the relevant government departments. It is understood that due to limited space (based on the entire project and additional future phases to be constructed), the current layout and project components cannot be altered such that the Dry Goods Warehouse, Truck Workshop and Truck Wash can avoid the wetland. As a result, the proposed development will need to involve the infill of the wetland in order to facilitate construction of these components. Ultimately, the wetland will need to be destroyed.	

Environmental Parameter	Summary of Major Findings	Recommendations
Heritage (including desktop Palaeontological Impact Assessment)	The archival research undertaken for the project indicated that there was not expected to be any significant archaeological or historical resources present on the study area. However, the desktop PIA has indicated that the development footprint of the study area is underlain by the Cretaceous aged Sundays River and Kirkwood Formations of the Uitenhage Group. The Palaeontological sensitivity of these areas is rated as very high. The subsequent field work completed for the HIA component in January 2017, has confirmed that two heritage sites / find spots were identified within the project study area. No alternative layouts or sites for the proposed warehouse have been provided. Therefore, the only alternative to the proposed development is the "no-go" option. Since only two archaeological resources of low significance were identified, while palaeontological resources of very high significance underlie most of the proposed development site; a comparative assessment of the "no-go" option with respect to the "construction" option has shown that the No-Go alternative will have no impact on heritage resources and the current status quo will be kept.	The following mitigation measures are required: **<u>Pre-Construction / Archaeology:</u>** Since only two isolated archaeological findspots were recorded, which are considered to be of low to negligible significance, no mitigation measures will be required. **<u>Palaeontology:</u>** 1. The development area is completely underlain by sediments of the Algoa Basin, Sundays River and Kirkwood Formation of the Uitenhage Group. The Palaeontological sensitivity of these areas is rated as very high. 2. It is thus recommended that a full EIA level palaeontology report be conducted to assess the value and prominence of fossils in the development area and the effect of the proposed development on the palaeontological heritage. 3. Depending on the results of the full PIA, it may be recommended that a Palaeontologist should apply for a SAHRA permit and field work would entail surveying, recording and describing fossil heritage, and obtaining relevant data concerning the surrounding sedimentary matrix) and the well preserved fossils must be excavated and sent to a permitted institution. All of the information regarding the process followed must be compiled into a report after fossils have been excavated.

Environmental Parameter	Summary of Major Findings	Recommendations
Palaeontology (full EIA level Palaeontological Impact Assessment)	This full EIA level Palaeontological Impact Assessment was recommended following a Desktop Palaeontological Impact Assessment that indicated the requirement of a Phase 1 site visit. As such, this Palaeontological Assessment forms part of the Heritage Impact Assessment (HIA) and complies with the requirements of the South African National Heritage Resource Act No 25 of 1999. The study area for the proposed SPAR Perseverance Warehouse Development north of Port Elizabeth in the Nelson Mandela Metropolitan Municipality, Eastern Cape Province, is mainly underlain by Cretaceous aged sedimentary rocks of the Sundays River Formation, Uitenhage Group and Tertiary to Quaternary aged Intermediate and Low Level Fluvial Gravel of the Swartkops River. These Cretaceous to Quaternary aged sedimentary rocks weather into very clay rich soils that characterize the study area, with very high groundwater levels in the gravel beds. Several possible mineralized (expected to be "fossilized") bones occur with hundreds of clearly defined much younger bones in the study site that seems to be used as a dumping site by local inhabitants of the area. A Very High Palaeontological sensitivity is allocated to areas underlain by the Fossiliferous Cretaceous aged marine deposits of the Sundays River Formation and a High Palaeontological sensitivity to areas underlain Low Level Gravels of Tertiary to Quaternary age.	• The ECO and EOs must be informed of the fact that a Very High Palaeontological sensitivity was allocated to the areas of the development underlain by rocks of the Uitenhage Group and a High Palaeontological sensitivity is allocated to areas underlain by rocks of the Low Level fluvial gravels on site. Although suspiciously fossilsiferous, bone material found associated with Tertiary aged gravels might be related to recent (1968-69 flooding in the area and the HIA will take note of this fact. • A protocol for the chance find of fossils must be compiled and forms part of an Addendum to this Phase 1 PIA study. This report must be discussed with the ECO on site as soon as clearing of topsoil starts for this project. • These recommendations as well as the recommended actions mentioned in the "Chance Find Protocol" must be included in the EMPr of this project.

An impact assessment was conducted in order to ascertain the level of each identified impact, rate the significance of these impacts and to determine mitigation measures which may be required. The potential positive and negative impacts associated within these specialist studies have been evaluated and rated accordingly. The results of the

respective specialist studies / assessments have indicated that no fatal flaws exist as a result of the proposed development. The impact assessment for the Biodiversity specialist study revealed that the identified impacts were rated as having low to very low significance after the implementation of mitigation measures. In addition, the Heritage specialist study revealed that majority of the identified impacts were rated as having low negative significance after the implementation of mitigation measures. It should however be noted that the cumulative impact on Palaeontological Resources was rated as having a medium to low negative significance after the implementation of mitigation measures. The impact assessment for the EIA level PIA alternatively revealed that the impact on Palaeontological Heritage was rated as having a high positive significance after the implementation of mitigation measures. With regards to the Surface Water specialist study, the impact assessment revealed that majority of the identified impacts were rated as having low negative significance after the implementation of mitigation measures. However, it is important to note that the impacts associated with the degradation and loss of wetland habitat and functionality during the construction phase were found to have a very high negative significance rating after the implementation of mitigation measures. As such, the impacts associated with the degradation and loss of wetland habitat and functionality during the construction phase would be the greatest anticipated impacts from a surface water perspective.

No fatal flaws have been identified with regards to biodiversity. However, one (1) floral Species of Conservation Concern (SCC), namely *Sideroxylon inerme* (milkwood), was observed during the site assessment. This species is protected under the National Forest Act (1998). In terms of this act, protected tree species may not be cut, disturbed, damaged or destroyed and their products may not be possessed, collected, removed, transported, exported, donated, purchased or sold - except under licence granted by the DWS (or a delegated authority). As the majority of the trees are relatively small and easy to transplant because the soil is sandy, it is recommended that the trees are incorporated as part of the landscaping of the proposed development, after obtaining the relevant permits. During the paleontological site assessment, *Chersina angulata* (Angulate Tortoise) was encountered. This species is listed as Least Concern by the IUCN and is not threatened. It is however listed Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) which regulates the trade of this species. However, rescue and relocation of this species will not require any permits. It was subsequently recommended that a rescue and relocation operation is implemented for *Chersina angulata* (Angulate Tortoise) prior to any site clearing activities taking place and that all tortoises be relocated to the nearby Zwartkops Valley Nature Reserve. Despite the fact that no fatal flaws have been identified, some minor legislative implications are anticipated. As such, all specialist recommendations should be strictly adhered to in order to ensure that the proposed development does not result in significant biodiversity related impacts.

Due to the fact that the two identified (2) heritage sites / find spots are considered to be of low to negligible significance and no mitigation measures will be required, no fatal flaws have been identified from a heritage perspective. No significant legislative implications are therefore anticipated. In addition, no environmentally sensitive areas have been identified with regards to heritage. The proposed development will however be registered with the South African Heritage Resources Agency (SAHRA) and the HIA Report will be submitted to the South African Heritage Resources Information System (SAHRIS) website. This will allow SAHRA to provide comments and recommendations with regards to possible heritage implications. It should be noted that a desktop PIA was undertaken as part of the HIA. The desktop PIA subsequently indicated that the development footprint of the study area is underlain by the Cretaceous aged Sundays River and Kirkwood Formations of the Uitenhage Group. The

Palaeontological sensitivity of these areas is rated as very high. It was thus recommended that a full EIA level PIA be conducted in order to assess the value and prominence of fossils in the development area and the effect of the proposed development on the palaeontological heritage. In light of the above, a full EIA level PIA was subsequently undertaken. The EIA level PIA forms part of the HIA and complies with the requirements of the South African National Heritage Resource Act No 25 of 1999.

The EIA level PIA found that several possible mineralized (expected to be "fossilized") bones occur with hundreds of clearly defined much younger bones in the study site that seems to be used as a dumping site by local inhabitants of the area. In addition, a Very High Palaeontological sensitivity is allocated to areas underlain by the Fossiliferous Cretaceous aged marine deposits of the Sundays River Formation and a High Palaeontological sensitivity to areas underlain Low Level Gravels of Tertiary to Quaternary age. Although suspiciously fossilsiferous, bone material found associated with Tertiary aged gravels might be related to recent (1968-69) flooding in the area and the HIA will take note of this fact. A "Chance Find Protocol" report for the chance find of fossils has also been compiled and forms part of the EIA level PIA study. Despite the presence of the above-mentioned paleontologically sensitive areas, no fatal flaws have been identified from a palaeontology perspective and no significant legislative implications are therefore anticipated. Similarly to the HIA, the proposed development will be registered with SAHRA and the EIA level PIA Report will also be submitted to the SAHRIS website. This will allow SAHRA to provide comments and recommendations with regards to possible palaeontological implications.

According to the Surface Water Assessment, one (1) depression wetland can be found within the study site. A buffer zone of 30m was implemented for adequate protection of the wetland should the proposed development accommodate a layout that can avoid the wetland and the associated buffer. However, based on the current layout, it is understood that this will not be possible. A buffer zone was implemented nonetheless to complete the assessment based on findings. In terms of potentially applicable environmental and water related legislation, several listed activities and water uses have been identified that are likely to be applicable to the proposed development. Accordingly, in terms of NEMA (1998) and the EIA Regulations (2014), Activities 12 and 19 of Government Notice 983, have been identified as being applicable. With respect to the NWA (1998), water uses (c) and (i) are also applicable. The aforementioned identified activities and water uses should however be confirmed with the relevant government departments. As previously mentioned, the identified depression wetland will need to be infilled in order to facilitate construction of the proposed development. This is due to the fact that the current layout and project components cannot be altered to avoid the identified depression wetland. As such, a suitable wetland offset plan that is acceptable and approved by DWS and DEDEA will be compiled and implemented. The wetland offset plan will be compiled and submitted as part of the environmental and water use license application processes in order to facilitate the current layout and offset the proposed loss of the depression wetland.

Consultation

As previously mentioned, based on correspondence from DEDEA, following an environmental pre-application meeting held on the 23rd of March 2017, it has been confirmed that DEDEA are favourable to the process of issuing an EA (pending satisfactory assessment of the application) with conditional approval such that the conditions can be assessed by DWS in the processing of the WUL application. The proposed wetland offset plan will therefore be undertaken as part of the WULA process and will only be submitted at a later stage. The wetland offset strategy will

not accompany the Basic Assessment Report (BAR). Provisional authorisation will rather be obtained for the proposed development and will depend on the findings of the wetland offset strategy.

It should be noted that SiVEST submitted a BA Application Form for the proposed development to DEDEA on the 18th of April 2017. DEDEA sent SiVEST an email on the 20th of April 2017 in order to confirm receipt of the above-mentioned application form, as well as to inform SiVEST of the subsequent amendments to the 2014 EIA Regulations. This email mainly served to advise SiVEST to scrutinise the application form which was submitted in order to determine whether the amendments would result in any changes to the content of the application form and to inform the Department accordingly. A reference number for the proposed development has however not yet been allocated by DEDEA. Copies of the BA Application Form which was submitted to DEDEA, as well as the email sent to SiVEST in order to confirm receipt of the application form and to inform of the subsequent amendments to the 2014 EIA Regulations, are provided in **Appendix G6** respectively.

A thorough public participation process (PPP) will be undertaken as part of the BA process and will be initiated once the Draft Basic Assessment Report (DBAR) and Application Form have been submitted to DEDEA. During this process on-going consultation will take place with various key stakeholders and organs of state, which will include provincial, district and local authorities, relevant government departments, parastatals and NGO's.

EAP Recommendation

Through the findings of the BA process, it is the opinion of the Environmental Assessment Practitioner (EAP) that the proposed development should be allowed to proceed provided that the recommended mitigation measures are implemented, and provided the following conditions are adhered to:

- All mitigation measures recommended by the various specialists should be strictly implemented.
- Final EMPr should be approved by DEDEA prior to construction.
- The "Chance Find Protocol" which forms part of the EIA level Palaeontological Impact Assessment needs to be included in the EMPr and a reasonable budget need to be allocated in order to ensure compliance with the legal responsibility of the developer in terms of the proper conservation of and storage of palaeontological heritage.
- A suitable wetland offset plan that is acceptable and authorised by the Department of Water and Sanitation (DWS) must be compiled and submitted as part of the environmental and water use license application processes in order to facilitate the current layout and offset the proposed loss of the depression wetland.
- Environmental Authorisation (EA) will be issued (pending satisfactory assessment of the application) with conditional approval such that the EA conditions can be assessed by DWS in the processing of the WUL application. Provisional EA will thus be obtained for the proposed development and will depend on the findings of the wetland offset strategy.

It is SiVEST's opinion that the impacts associated with the proposed development are not significant enough to prevent the project from proceeding and that an EA should be granted. In addition, the respective impact assessments revealed that majority of the anticipated impacts of the proposed development are rated as being negative and low. The impact assessment for the EIA level PIA however revealed that the impact on Palaeontological Heritage was rated as having a high positive significance after to the implementation of mitigation

measures. In addition, the impacts associated with the degradation and loss of wetland habitat and functionality during the construction phase were found to have a very high negative significance rating after the implementation of mitigation measures from a surface water perspective. Despite this, no fatal flaws exist as a result of the proposed development. SiVEST is therefore of the opinion that the impacts associated with the construction and operation phases can be mitigated to acceptable levels provided the recommended mitigation measures and specialist recommendations are implemented.

THE SPAR GROUP (LTD)

BASIC ASSESSMENT (BA) FOR THE PROPOSED CONSTRUCTION OF A NEW SPAR DISTRIBUTION CENTRE ON ERF 1902 AT REDHOUSE IN PORT ELIZABETH, EASTERN CAPE PROVINCE

DRAFT BASIC ASSESSMENT REPORT

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Appendix G5: Consultation / correspondence undertaken with DWS

Appendix G6: BA Application Form submitted to DEDEA, as well as email sent to SiVEST in order to confirm receipt of application form and to inform of the subsequent amendments to 2014 EIA Regulations

Appendix G7: Proof of the site notice which was erected near the proposed project site

Appendix G8: Proof of the advert which was placed in a local newspaper in order to advertise the proposed development

Appendix G9: Draft Scoping Document compiled for technical aspects of proposed development

Appendix G10: Background Information Document (BID) and BID Registration and Comment Form which were left at prominent positions at the Kwamagxaki Public Library in Ibhayi

List of Abbreviations

BA	Basic Assessment
BAR	Basic Assessment Report
CARA	Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983)
C&RR	Comments and Response Report
DBAR	Draft Basic Assessment Report
DEDEA	Eastern Cape Department of Economic Development, Environmental Affairs & Tourism
DEA	Department of Environmental Affairs
DWS	Department of Water & Sanitation
EA	Environmental Authorisation
EAP	Environmental Assessment Practitioner
EIA	Environmental Impact Assessment
EMF	Environmental Management Framework
EMPr	Environmental Management Programme
FBAR	Final Basic Assessment Report
GIS	Geographic Information System
GN	Government Notice
HIA	Heritage Impact Assessment
I&AP	Interested and/or Affected Party
PIA	Palaeontological Impact Assessment
NEMA	National Environmental Management Act, 1998 (Act No.107 of 1998)
NEMBA	National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)
NHRA	National Heritage Resources Act, 1999 (Act No. 25 of 1999)
NMBMM	Nelson Mandela Bay Metropolitan Municipality
NWA	National Water Act, 1998 (Act No. 36 of 1998)
PPP	Public Participation Process
SAHRA	South African Heritage Resources Agency
SANBI	South African National Biodiversity Institute
SANRAL	South African National Roads Agency SOC Limited
SG	Surveyor General
SMME	Small, Medium and Micro Enterprise
SWMP	Storm Water Management Plan

THE SPAR GROUP (LTD)

BASIC ASSESSMENT (BA) FOR THE PROPOSED CONSTRUCTION OF A NEW SPAR DISTRIBUTION CENTRE ON ERF 1092 AT REDHOUSE IN PORT ELIZABETH, EASTERN CAPE PROVINCE

DRAFT BASIC ASSESSMENT REPORT

1. INTRODUCTION

Due to the growing market demands, the SPAR Group (Ltd) (hereafter referred to as 'SPAR') are proposing to construct a new SPAR Distribution Centre on Erf 1092 of the Property Red House, at Perseverance in Port Elizabeth, Nelson Mandela Bay Metropolitan Municipality in the Eastern Cape Province (hereafter referred to as the 'proposed development'). It is important to note that the construction of the entire proposed development will ultimately be undertaken in four (4) phases over a period of approximately 20 years. At this stage, it is envisaged that Phase 1 construction activities will be undertaken in 2017 / 2018, while Phase 2 related construction activities are expected to be undertaken in the next 5 to 7 years, Phase 3 related construction activities in 10 to 12 years and the final phase (i.e. Phase 4) in 15 to 20 years' time. These timeframes are however not final and may be subject to change as the project progresses.

SiVEST SA (Pty) Ltd (hereafter referred to as SiVEST) has subsequently been appointed as independent Environmental Assessment Practitioner (EAP) by SPAR to undertake the Basic Assessment (BA) process for the proposed development. The proposed development requires Environmental Authorisation (EA) from the Eastern Cape Department of Economic Development, Environmental Affairs and Tourism (DEDEA) and will be carried out under the 2014 Environmental Impact Assessment (EIA) Regulations which were promulgated in December 2014 (Government Gazette No. 38282 of the 4th of December 2014) embodied by the National Environmental Management Act (NEMA) (Act 107 of 1998) as amended. In terms of these regulations, a Basic Assessment (BA) is required for the proposed development. All relevant legislation and guidelines will be consulted during the BA process and will be complied with at all times. As mentioned above, the proposed development will be constructed in a phased manner (i.e. Phases 1 to 4) over a period of approximately 20 years. EA will however be sought and obtained for all four (4) phases of the proposed development and will ultimately cover the activities related to all four (4) phases.

As previously mentioned, the proposed development involves the construction of a new SPAR Distribution Centre, with the purpose of housing the increase in SPAR's operational demands due to national and regional growth. It should be noted that the new project site makes provision for future expansion according to the SPAR 20 year expansion plan. In addition, the project site is in close proximity to an existing SPAR Distribution Centre on Kohler Road. The proposed project site will be accessed primarily via Kohler Road which will need to be extended as part

of the proposed development. Additionally, the proposed development will also include the upgrade of the Kohler/Chelsea Roads intersection.

1.1 Project Background

The proposed development involves the construction of a new SPAR Distribution Centre, with the purpose of housing the increase in SPAR's operational demands due to national and regional growth. The proposed development will entail the construction of a self-sustainable facility which includes a new Dry Goods Warehouse with an internal Returns Area and Workshop/Charging Bay. In addition, the proposed development will also include the following:

- Conference Facility (including Entrance Foyer, IT Centre, Training Rooms, Bar Facility, Conference Ablutions & Entertainment Area);
- Security Entrance & Staff Ablution;
- Canteen;
- Guardhouse / Entrance Canopy;
- Truck Workshop & Truck Wash;
- Services Room (accommodating electrical, transformer and generator);
- Municipal Sub-station;
- Truck Entrance & Guard House;
- Fire Pump House;
- Main internal storm water drainage (including paved/concrete/reno mattress overland flow routes, catch pits, manholes and pipework up to outside of the buildings);
- Main internal water reticulation up to the outside of the buildings for operational purposes (including supply to the fire tanks, fire hydrants and fire hose reels which will include the municipal water connection to site, bulk water meter, valves, specials, bends, thrust blocks, bulk water meter and strainer chambers);
- Municipal sewer extension, connection to existing municipal system and main internal sewer drainage system up to the outside of the buildings (including gravity sewer lines, manholes, sewer pump station and pumping main including valve and thrust blocks);
- Paved road and parking area (including layer works, kerbs, storm water drainage, road marking and traffic signs);
- Concrete areas for entrance road and external operational area up to the outside of the buildings (including layer works, joints and storm water drainage);
- Bulk storm water system (including grassed storm water detention ponds, overflow structures, concrete lined channels, catch pits, pipework and connection to municipal system);
- Extension to Kohler road (including the layer-works, kerbing, storm water drainage, traffic signs and road marking); and
- Upgrade of the Kohler/Chelsea Roads intersection (including layer works, storm water drainage, procurement of traffic signals and related ducts and manholes, traffic signs and road marking).

The following information should also be noted:

- The site is undeveloped but is located within an industrial area;
- The site does not fall within any National Threatened Ecosystems;
- The site is within 5 km of a Formal Protected Area – i.e. the Swartkops Valley Local Authority Nature Reserve;
- The site is not within a CBA, ESA or riverine process area in terms of the NMBM's Bioregional Plan (2015);
- Pre-transformation vegetation types mapped on the site are Motherwell Karroid Thicket and Sundays Doringveld Thicket (NMBM Bioregional Plan, 2015); and
- The Ecosystem Status of the site is rated as 'endangered' on a metropolitan scape (NMBM Bioregional Plan, 2015).

It is important to note that the proposed development will be constructed in a phased manner. It was advised that construction of the entire proposed development will ultimately be undertaken in four (4) phases over a period of approximately 20 years. The timing of the subsequent phases (2 to 4) will be determined by market forces, as well as SPAR's business requirements and priorities in the future. This may vary from year to year as SPAR assess their development strategy as the need is required. As such, a detailed programme indicating when the above-mentioned phases will be implemented, is not available. It is envisaged that Phase 1 construction activities will be undertaken in 2017 / 2018, while the construction activities related to Phases 2 to 4 will be undertaken at intervals dependent on the growth of the region. Phase 2 related construction activities are expected to be undertaken in the next 5 to 7 years, Phase 3 related construction activities in 10 to 12 years and the final phase (i.e. Phase 4) in 15 to 20 years' time. These timeframes are however not final and may be subject to change as the project progresses. It should be noted that EA will however be obtained for all four (4) phases of the proposed development and will ultimately cover the activities related to all four (4) phases.

The new project site makes provision for future expansion according to the SPAR 20 year expansion plan and is located in close proximity to an existing SPAR Distribution Centre. The proposed project site will be accessed primarily via Kohler Road which will need to be extended as part of the proposed development. Additionally, the proposed development will also include the upgrade of the Kohler/Chelsea Roads intersection. It is important to note that the proposed project site currently belongs to the Nelson Mandela Bay Metropolitan Municipality (NMBMM). Ownership of the project site is however in the process of being transferred to SPAR. The drafting of a sale agreement has commenced and will include a number of suspensive conditions, one being EA. The transfer of ownership of the project site will thus only commence (conveyancing) once the suspensive conditions are met and therefore the property will ultimately belong to SPAR.

A Site Layout Map for the proposed development has been provided in Figure 1 below.

A long term site plan indicating the different components of the proposed development, as well the phasing for each respective component, is provided in Figure 2 below.

Please note that the proposed bulk storm water, sewer and water reticulation systems have not been illustrated in **Figure ii below. Site plans illustrating the bulk storm water, sewer and water reticulation systems being proposed as part of the proposed development have been included in **Appendix C – Facility Illustration(s)**.*

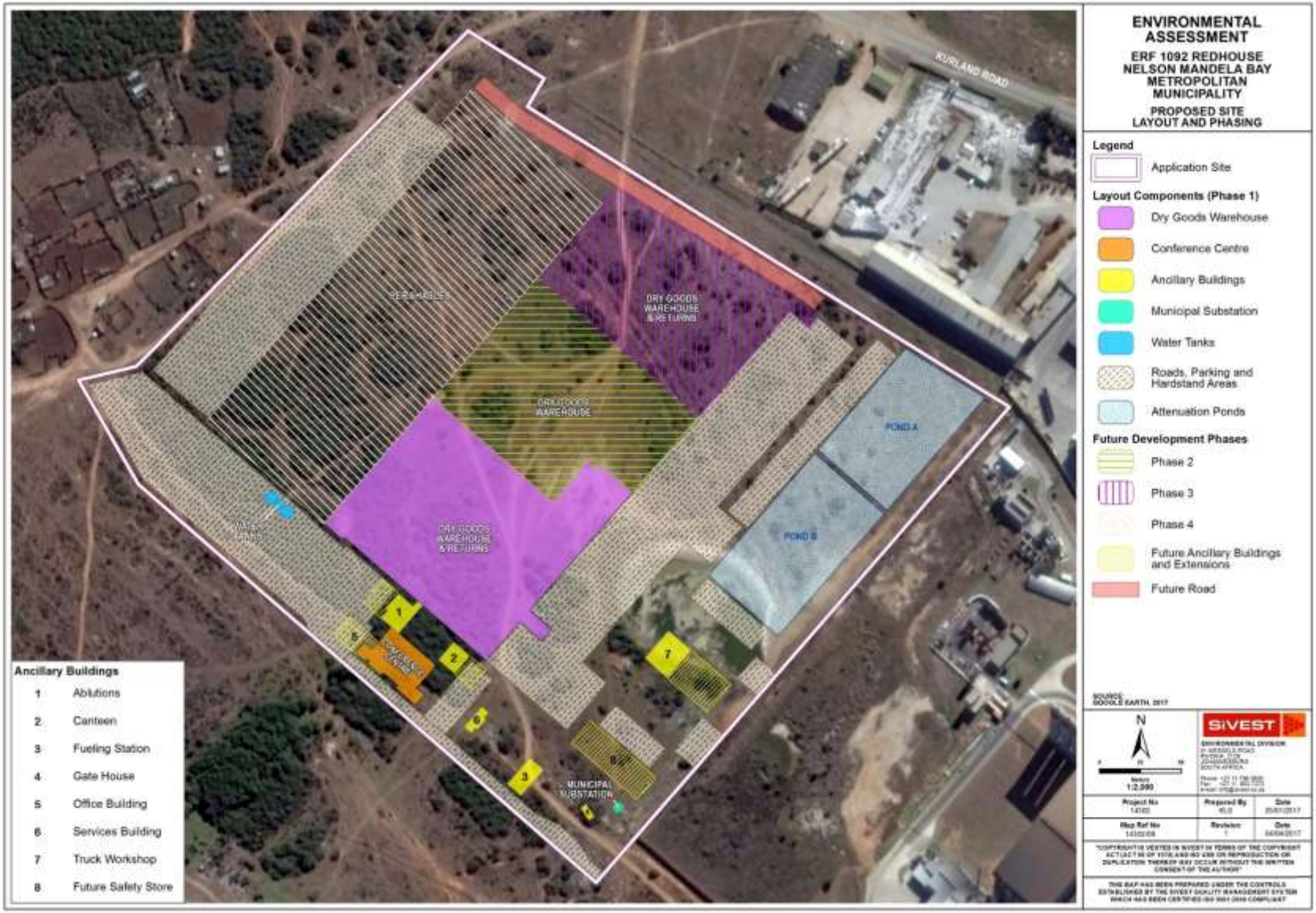

Figure 1: Site Layout Map

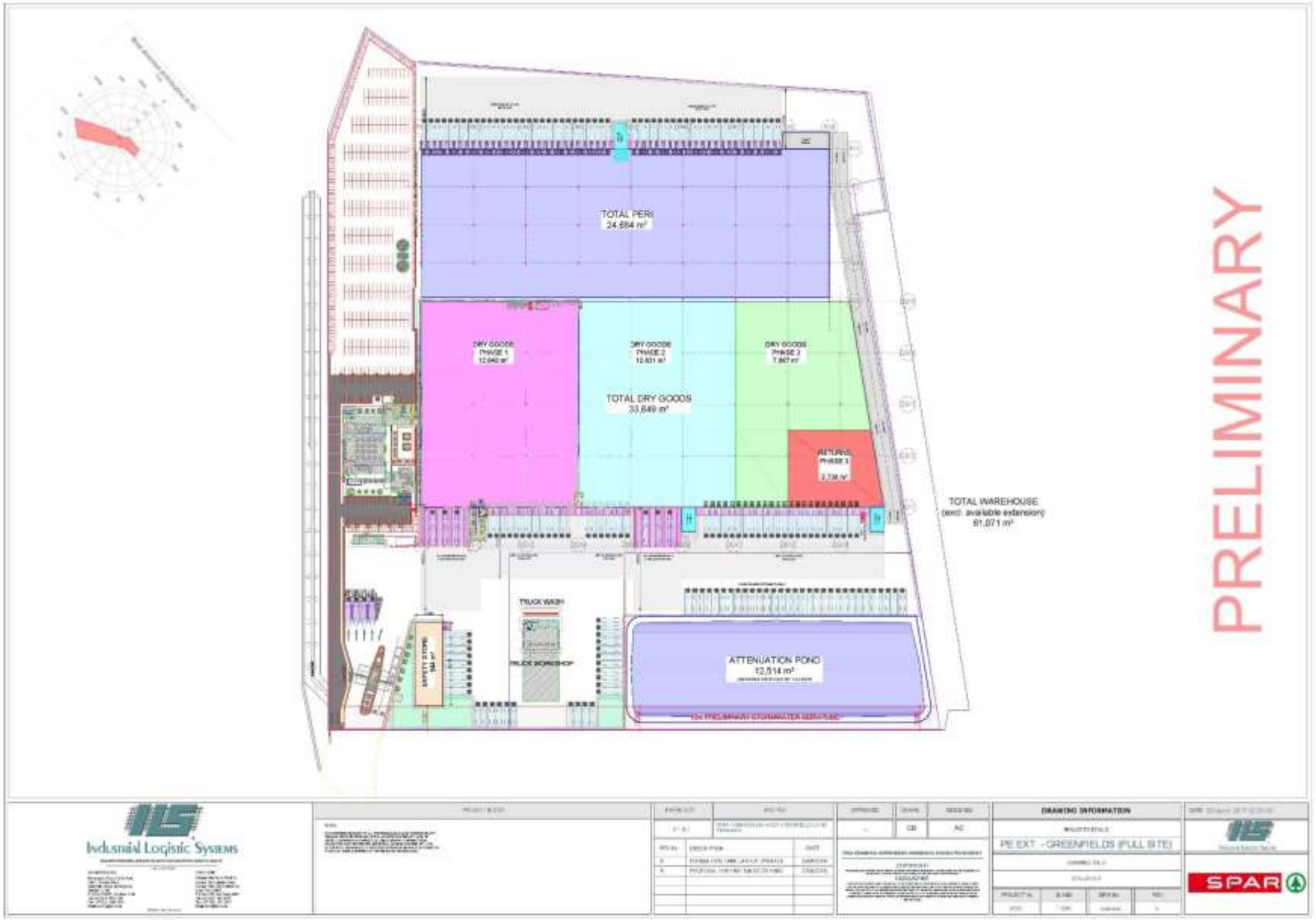

Figure 2: Long term site plan indicating the different components of the proposed development, as well the phasing for each respective component

It should be noted that no layout alternatives are being considered and/or assessed with regards to the proposed construction of the new SPAR Distribution Centre. This is due to the fact that the current proposed layout is planned to be carried out in a phased manner and has been achieved through the extensive organising and planning of the space and facilities required by SPAR. Additionally, SPAR are not looking to purchase any other sites as the chosen property is the only site which is considered to be feasible and viable with regards to the construction of the new SPAR Distribution Centre. Therefore the proposed project site is the only site alternative that is being considered with regards to the proposed development. As such, the current layout maximises the site usage, taking into consideration the phasing of the proposed development. The current proposed layout is also considered to be the most cost effective way to establish a facility in order to meet SPAR's current demands, as the topography of the site would result in large, expensive civil works in order to get phase one complete, and then still take into consideration the future phasing. The site currently only has one means of access to the proposed facility, due to the limitations of local infrastructure and the built environment, and therefore the first phase of the development had to be placed within realistic distances of the provided access point. In addition, the land to the north-west of the site (where phase 4 would happen), could potentially be sold off to another developer, which needed to be considered in the current proposal.

Figure 3 below highlights the phasing which is planned to be executed on the site over time and can clearly illustrates why alternative layouts would not be able to accommodate SPAR's programme requirements in the future.

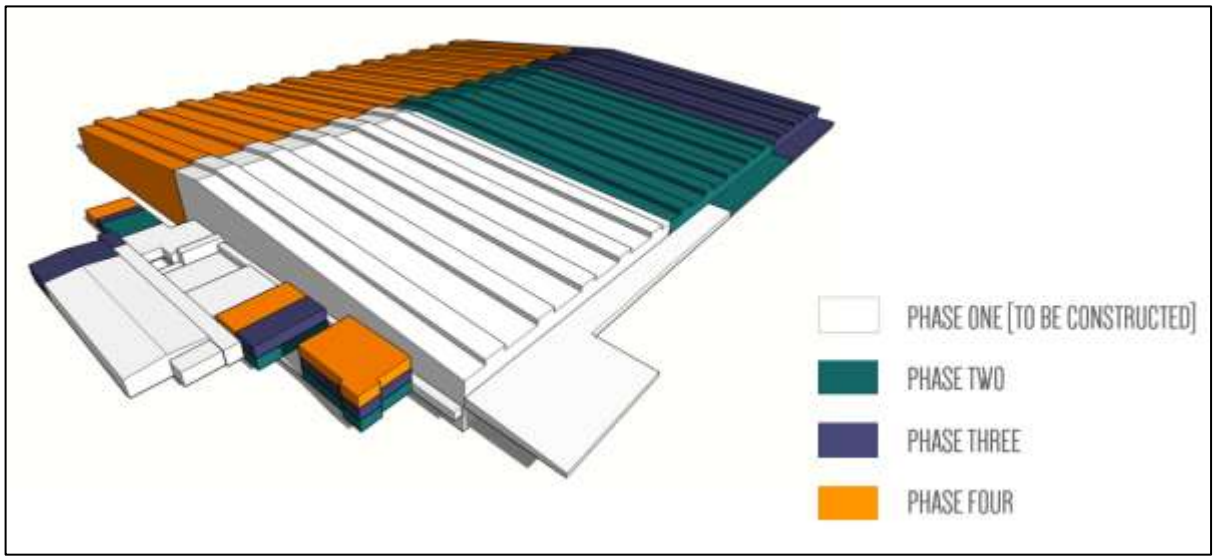

Figure 3: Image illustrating the phasing to be executed on the site over time and why alternative layouts would not be able to accommodate SPAR's programme requirements in the future.

According to the Surface Water Assessment, one (1) depression wetland can be found within the proposed project site. A buffer zone of 30m was implemented for adequate protection of the wetland should the proposed development accommodate a layout that can avoid the wetland and the associated buffer. However, based on the current layout, it is understood that this will not be possible. A buffer zone was implemented nonetheless to complete the assessment based on findings.

A site locality map indicating the delineated depression wetland found within the proposed project site is provided in Figure 4 below.

Figure 4: Site locality map indicating the delineated depression wetland found within the proposed project site

It is understood that due to limited space (based on the entire project and additional future phases to be constructed), the current layout and project components cannot be altered such that the Dry Goods Warehouse, Truck Workshop and Truck Wash can avoid the identified depression wetland. As a result, the proposed development will need to involve the infill of the wetland in order to facilitate construction of these components. Ultimately, the wetland will need to be destroyed. In light of the above, the only way to permit the loss of the depression wetland is to compile and implement a suitable wetland offset plan that is acceptable and authorised by the Department of Water and Sanitation (DWS) and DEDEA. The wetland offset plan will need to be such that a new wetland can be constructed of equal or better functionality, or to rehabilitate one or a number of other wetlands to the equivalent extent of wetland being lost to the desired standards in order to offset the loss of the depression wetland on the study site. As such, it is recommended that a wetland offset plan is compiled and submitted as part of the environmental and water use license application processes to facilitate the current layout and offset the proposed loss of the depression wetland.

Based on correspondence from DEDEA, following an environmental pre-application meeting held on the 23rd of March 2017, it has been confirmed that DEDEA are favourable to the process of issuing an EA (pending satisfactory assessment of the application) with conditional approval such that the EA conditions can be assessed by DWS in the processing of the Water Use License (WUL) application. The wetland offset process and plan will be undertaken in the next two (2) months of which meetings will be undertaken involving all relevant stakeholders (including DWS, DEDEA and any other relevant stakeholders) in order to discuss the various wetland offset options and to provide the way forward in compiling the wetland offset plan. As such, the proposed wetland offset plan will be undertaken as part of the water use license application (WULA) process and will only be submitted at a later stage. The wetland offset strategy will therefore not accompany the Basic Assessment Report (BAR). Provisional authorisation will rather be obtained for the proposed development and will depend on the findings of the wetland offset strategy.

It should be noted that a desktop Palaeontology Impact Assessment (PIA) was undertaken as part of the Heritage Impact Assessment (HIA). The desktop PIA subsequently indicated that the development footprint of the study area is underlain by the Cretaceous aged Sundays River and Kirkwood Formations of the Uitenhage Group. The Palaeontological sensitivity of these areas is rated as very high. It was thus recommended that a full EIA level PIA be conducted in order to assess the value and prominence of fossils in the development area and the effect of the proposed development on the palaeontological heritage. In light of the above, a full EIA level PIA was subsequently undertaken. The EIA level PIA forms part of the HIA and complies with the requirements of the South African National Heritage Resource Act No 25 of 1999. A “Chance Find Protocol” report for the chance find of fossils has also been compiled and forms part of the EIA level PIA study.

The EIA level PIA found that several possible mineralized (expected to be “fossilized”) bones occur with hundreds of clearly defined much younger bones in the study site that seems to be used as a dumping site by local inhabitants of the area. In addition, a Very High Palaeontological sensitivity is allocated to areas underlain by the Fossiliferous Cretaceous aged marine deposits of the Sundays River Formation and a High Palaeontological sensitivity to areas underlain Low Level Gravels of Tertiary to Quaternary age. Although suspiciously fossilsiferous, bone material found associated with Tertiary aged gravels might be related to recent (1968-69) flooding in the area and the HIA will take note of this fact. Despite the presence of the above-mentioned paleontologically sensitive areas, no fatal flaws have been identified from a palaeontology perspective and no significant legislative implications are therefore anticipated.

1.2 Technical Details

The various components (including the extent of each respective component) which will be constructed as part of the proposed development are provided in **Table 1** below.

Table 1: Extent of Proposed Development Components

BUILDING	AREA (m²)
Dry Goods Warehouse	**14 555**
Warehouse	**12 818**
Dry Goods Office	**342**
Office 1	15
Office 2	15
Office 3	16
Meeting Room	24
Kitchenette	8
Open Plan Office (in DGO)	105
Ablutions (male and female)	29
Issue Room	7
Meeting Room	22
Open Plan Office 2 (in warehouse)	60
Filing Room	7
Security Entrance Area	34
Battery Charging Area	**176**
Washbay	**31**
Returns Area	**1 188**
Warehouse	1 100
Returns Office	88
Conference Centre and Staff Facilities	**1 465**
Conference Facility	**1 154**
Conference Centre	485
Warehouse Connection	50
Reception	89
Search Cubicles	7
Conference Foyer	109
I.T. Centre	65
Training Room 1	55
Training Room 2	55
Bar Facility	54
Conference Centre Ablutions (male and female)	63
Entertainment Area (braai)	47
Conference Store 1	13
Conference Store 2	15
Exterior Store 1	11

Entertainment Store	11
AV Room	11
Server Room	5
Bar Kitchenette	9
Staff Ablutions (male and female)	**120**
Canteen	**191**
Canteen Area	122
Canteen Kitchen	40
Canteen Office	13
Cold Room	8
Dry Store	8
Courtyard 1	**380**
Courtyard 2	**240**
Other Buildings	**735**
Guard House	**40**
Entrance Canopy	**63**
Truck Workshop	**300**
Ablutions	20
Entrance	5
Storage Area's	84
Part Store	32
Oil Store	31
Tyre Store	14
Office	13
Open Plan Office	83
Kitchenette	11
Toilet	7
Truck Wash	**183**
Wash Area	170
Ablutions	5
Chemical Store	8
Services Room (electrical)	**96**
Switch-gear Room	20
Transformer Room	20
Generator Room	36
LV Room	20
Fire Pump House	**28**
Pump House	28
Municipal Substation	**25**

The various components which will be constructed as part of the proposed development are described in more detail below:

- **Dry Goods Warehouse**

The orientation and position of the Dry Goods Warehouse is determined by the 20 year expansion plan. The Warehouse has a floor area of 12 800m² and accommodates 8 levels of racking. The structure is designed for maximum spans to achieve uninterrupted warehouse floor space. The mono pitch roof configuration is the most cost effective and practical solution to the large roof area. This also allows for easy expansion to the east and north facades. The roof monitors are clad with polycarbonate sheeting, to allow for natural light to infiltrate the building. This will reduce the energy consumption of the artificial lighting. The exterior walls of the warehouse are 2.8m high masonry walls with aluminum cladding up to the desired height, with the south facing dock leveller walls constructed in concrete to provide a more robust element. The southern façade consists of 20 dock levellers and 5 "on grade" access points. The "on grade" receiving and dock levellers are covered with canopy's to provide protection from the elements whilst offloading.

Internally there is a Dry Goods Office, Battery Charging Area and a Wash Bay. The seamless concrete floors are designed to conform to the tolerances required for hysters that operate at heights of 16m. The seamless floor has minimal joints and provides a durable, robust solution. The entrance to the Warehouse on the western façade becomes the gateway to the Warehouse.

On the southern façade in between the "on-grade" receiving and dock levellers there is a 215m² Dry Goods Office that will house all the Dry Goods personnel and will be accessed from inside the Warehouse. The walls will be face brick with a concrete roof slab to accommodate future single storey vertical expansion. Internal configuration consists of an open plan area consisting of 2 Offices, a Boardroom, a Kitchenette and open plan Office Area.

- **Returns Area**

Adjacent to the main Warehouse is a 1 085m² Returns Area which will be used to return stock to be processed for recycling within the facility. The baler that is housed in the Returns Area will be able to recycle old stock by compressing old cardboard, paper and plastic into bales, thereby greatly increasing efficiency and significantly reducing cost for waste disposal. The Returns Area will be an extension to the Dry Goods Warehouse. The same roof configuration and materials are used to allow for easy expansion in the future. Internally there is a Returns Office with a concrete roof slab for future single storey vertical expansion. A steel fence will separate the Dry Goods Office area from Returns Area and there will be ramp with forklift access on the eastern façade.

- **Conference Facilities**

The Conference Facility consists of 1 000m² Conference Centre, including:

- Entrance Foyer
- IT Centre
- Training Rooms
- Bar Facility
- Conference Ablutions

- Entertainment Area

The Facility is located on the eastern side of the Dry Goods Warehouse. The final position and orientation is a result of future expansion studies, access, security and circulation.

The design concept is to create three separate building blocks around a permanent courtyard allowing flexibility for each building to expand independently as required. The “lego block” approach allows for all buildings to be able to grow with the 20 year expansion plan.

The Conference Centre is designed to accommodate 320 people. Acoustic sliding stacking doors will be used to create smaller Training Rooms when required. 50m² Training Room will be used for various training courses.

The Entrance Foyer is the threshold space for visitors as they approach the building during functions and events. The double volume space also leads into the IT Centre and the Conference Ablutions. The Entrance Foyer will have stacking doors opening on to a break away space on the northern side of the building.

The eastern façade of the Conference Centre leads out onto the main courtyard. Folding stacking doors can be opened during functions creating a connection to a green space in an otherwise harsh industrial environment. This green courtyard will act as a break away and gathering space when events take place and will improve the spatial qualities within the Conference Centre. When a conference takes place, additional acoustic doors can be used to reduce sound from the Canteen and the Staff Ablutions. The Conference Centre can open up on three facades that all lead to green spaces providing flexibility during events.

The Bar Facility leads off the Conference Centre and opens up and be used to serve the guests during a conference. Furthermore there are storage areas and a backstage access area for performers to access the stage.

The Conference Centre walls are masonry walls up to 4.5m high and an acoustic ceiling. Combined with acoustic wall panels these two acoustic elements will form part of the sound attenuation design. The Conference Centre consists of a steel A-frame structure cladded with aluminum sheeting. This design is the most cost effective and aesthetically pleasing roof configuration for large spans.

- **The Security Entrance and Staff Ablution**

The single Security Point is critical to the day to day operations of SPAR. In order to accommodate future growth the Security Entrance position is located on the northern façade of the building. The concept being that when the buildings expand to the northern side there is enough space to expand the parking north and keep the security entrance fixed throughout expansion.

The Security Entrance and main thoroughfare that leads into the warehouse is 165m² and acts as the main connecter of the Conference Centre, Ablutions and Warehouse. The Security Entrance has a reception/security node where staff and the public will be searched and welcomed. Once past the security node the staff are restricted within the confines of the facility. There is a second set of turnstiles before entering the Warehouse.

The thoroughfare southern facade is glass to create a connection to the Courtyard before entering the Warehouse whilst activating the northern edge of the Courtyard making the Courtyard more vibrant. At the end of the thoroughfare is the staircase that leads down a level onto the Dry Good Warehouse floor.

The 130m² Ablutions will accommodate 50 male and 30 female SPAR employees in Phase 1. The design concept is to extend the building to the northern side as the site grows. The internal layouts are designed to accommodate easy expansion with minimalistic disruption in the future.

- **The Canteen**

Enclosing the southern edge of the Courtyard is the Canteen. The Canteen will serve the SPAR staff compliment for Phase 1 and is designed to grow to the southern edge as the expansion takes place

By using glass folding stacking doors the northern façade of the Canteen opens up on to the Courtyard. Creating minimal thresholds and pleasant green spaces the Courtyard will act as an extension of the Canteen where staff can escape from the industrial environment.

The service yard is located on the southern edge of the Canteen building and leads straight of the kitchen.

- **Courtyard**

The 400m² Courtyard will be fixed throughout the 20 year expansion plan. As expansion takes place and the infrastructure around the Courtyard grows the activity inside the Courtyard will grow and will create a vibrant social space.

Activating all the edges surrounding the Courtyard by opening up the facades with glass stacking doors will create a visual and physical connection to the Courtyard that will result for good connected and vibrant spaces for visitors and employees to enjoy.

Trees, plants and grassed areas will be used in the Courtyard to soften the industrial elements surrounding it and act as driver for serenity within the surrounding buildings and Courtyard.

The Courtyard ultimately improves the spatial qualities of the surrounding building and gives the SPAR employees and visitors a space to break away and relax but also allows the buildings that surround the Courtyard to expand in each direction independently.

- **Guardhouse / Entrance Canopy**

The Entrance Canopy and Guardhouse will act as the main security point for trucks entering the site and will also be the first element viewed by the public. Using the iconic SPAR colors and materials it will give the site an identity and set the tone for the public as they enter the site.

The Entrance point consists of 2 truck lanes in and two lanes out which will be monitored by the staff within the 40m² Guardhouse. The Guardhouse has a kitchenette, toilet and space surrounded by glass viewing panels for maximum visibility. The Guardhouse will be constructed out of brickwork combined with SPAR cladding elements. The floor is raised 1500mm above the natural ground level to improve the connection between the truck drivers and security inside the Guardhouse. The roof will be concrete structure to accommodate future single storey vertical expansion.

Floating over the Guardhouse will be the steel structure Entrance Canopy that will protect truck drivers from the elements and together with the Guardhouse create a sense of entrance and identity as you enter the site.

- **Truck Workshop & Truck Wash**

The 415m² Truck Workshop is designed to accommodate two (2) trucks and has one (1) service pit. Roller shutter doors on the western and eastern facades of the building allow for good circulation and protection from the prevailing winds. The Truck Workshop consists of ablutions with locker space, 3 storage areas and a mezzanine with offices and kitchenette above the storage areas.

Adjacent to the Truck Workshop is the Truck Wash with its own ablution and locker space. The Truck Workshop and Truck Wash will consist of one mono pitch roof to reduce the cost of two separate roof structures. Expansion to the Truck Workshop will be to the southern boundary of the site. The combined roof structure will be used to capture rainwater in tanks. This water will be reused for the Truck Wash and irrigation to the site.

- **Services Room**

The Service Room is a 116m² free standing building to house electrical equipment. It comprises of 4no. independent rooms, namely the Switch-gear Room, Transformer Room, Generator Room and LV Room. Each room has independent access to the outside as well as sufficient ventilation by means of aluminum louvres. The façade of the Services Room comprises of both face brickwork to a height of 1.1m and then plaster and paint to roof height. The roof is an aluminum roof sheeting and as mentioned before, aluminum louvres are fitted into opening in the perimeter walls

- **Fire Pump House and Water Storage Tanks**

The Fire Pump House and Water Storage Tanks area has a foot print of 390m², which comprises of a Pump House to house all pumps and mechanical equipment and 2no. 459m³ Water Storage Tanks.

- **On-Site Infrastructure**

    - Main internal storm water drainage which will include paved/concrete/reno mattress overland flow routes, catch pits, manholes and pipework up to outside of the buildings

- Main internal water reticulation up to the outside of the buildings for operational purposes including supply to the fire tanks, fire hydrants and fire hose reels which will include the municipal water connection to site, bulk water meter, valves, specials, bends, thrust blocks, bulk water meter and strainer chambers
- Municipal sewer extension, connection to existing municipal system and main internal sewer drainage system up to the outside of the buildings which will include gravity sewer lines, manholes, sewer pump station and pumping main including valve and thrust blocks
- Paved road and parking area including layer works, kerbs, storm water drainage, road marking and traffic signs
- Concrete areas for entrance road and external operational area up to the outside of the buildings including layer works, joints and storm water drainage

- **Municipal Infrastructure**

  - Extension to Kohler road including the layer-works, kerbing, storm water drainage, traffic signs and road marking
  - Upgrade of the Kohler/Chelsea Roads intersection including layer works, storm water drainage, procurement of traffic signals and related ducts and manholes, traffic signs and road marking
  - Bulk storm water system which will include grassed storm water detention ponds, overflow structures, concrete lined channels, catch pits, pipework and connection to municipal system

- **Road Access**

  - The proposed extension to Kohler Road, Perseverance will serve Phase 1 of the mentioned development.
  - The access off Kohler Road will be the primary entrance/exit to and from the site for heavy vehicles.

- **Roads – Structural**

The structural design of the roads will have to be done in accordance with the TRH4 Specifications: structural design of Inter-urban and Rural ROAD Pavements subject to the conditions as indicated in the geo-technical report.

The structural layer works of the paved areas, roads and concrete pavements will be designed to accommodate the repetitive axle loads associated with post-development light vehicles, heavier' commercial vehicles and heavy vehicles as applicable. The applicable design wheel loads exerted on the roadway pavements, buried piping and embankments will be reviewed and selected prior to design.

Typically the THR4: Class VI 1.0 -3.0.1.0 million 80kN axle loads will be used to design the roadway pavements. However, the applicable axle loads of the forklifts could exceed the afore-mentioned Class VI loads. Such forklift axle loads will be considered where appropriate.

The in-situ material and structural layer works will mainly be classified in accordance with the TRH 14: Guidelines for road construction materials.

- **Roads - Geometric Design**

The minimum upgraded width of the road extension to Kohler Road will be 8.0m.

At the end of the Kohler road extension, a turning facility to accommodate up to 22m long vehicles shall be provided in the municipal road reserve. It is recommended to have a turning facility with a 16m radius.

As far as practical possible, the vertical alignment of the roads, paved areas and concrete pavements will have to be done in accordance with the mentioned guidelines as indicated earlier in this report. As far as practical possible the preferred gradients for the concrete pavements will vary between 1% and 2% and the roads between 3% and 0.5%.

The roads, paved areas and concrete pavements will also act as shallow overland stormwater flow routes.

- **Storm water System**

In general an approach will be adopted to detain the overland flow as far as practical possible on and near the proposed industrial development on the north-eastern part of Erf 1092 Redhouse to control the storm water run-off under discussion in a responsible way.

Considering the size of the storm water catchment area, the 10m width of the Storm water servitude adjacent to the north-western boundary of Erf 811 Redhouse downstream of Erf 1092, Redhouse, existing and future township layouts, and topography and soil conditions inter alia, the following design considerations shall be considered.

The Storm water flow of the catchment area south-west of the site and the site (up to 1 in 100 year flood conditions) will mainly be directed to and detained by detention ponds on site.

The detained discharge (up to 1 in 5 year rainstorm conditions) from the ponds will be directed to flow via the proposed piped connection to the formal municipal system.

The controlled discharge from potentially fuel and oil contaminated areas such as the fuel area and wash bay will be routed via grit traps and oil separators. The controlled piped flow will be discharged to the foul sewer system and the potential overflow will be directed to the ponds.

The surface flow from the roads, paved area and concrete pavements will be intercepted by catch pits with grate or side inlets. The intercepted flow will gravitate to the afore-mentioned ponds.

Erosion protection measures have to be implemented at embankments, inlet-, and outlet- and overflow structures including overland flow routes. This can be done by the effective design and construction of semi-rigid Gabion/Reno mattress/geo-textile structures and establishment of effective ground cover.

Due to the partial sedimentation process that occur under lower flow velocities in the detention ponds and biological breakdown of pollutants by the sun energy and oxidation, the quality of the intercepted run-off can be improved prior to discharge to the existing water courses.

- **Water Reticulation**

The main internal Water Reticulation to the development will be connected to the existing municipal 225mm diameter pipe near the south-eastern corner of Erf 1092 Redhouse.

The proposed water reticulation system on Erf 1092 Redhouse has to accommodate the required minimum residual head pressure of 150kPa under total instantaneous peak demands including maximum fire flows as well as maximum residual head pressures under low flow conditions.

The reticulation should consist predominantly of a branched and looped main feeder reticulation systems consisting of 160mm diameter water lines PVC-U Class 12 and a minimum of 75mm or 110mm diameter looped PVC-U pipe Class 12 Water Reticulation systems for the industrial development in accordance with SANS 966: 1998 Part 1 specifications and laid in accordance with SANS 1200 LB.

The completed Water Reticulation will be tested in accordance with SANS 1200 L. unless otherwise dictated by the Fire Consultant, the fire hydrants will be the pedestal type and the maximum spacing of the fire hydrants will be 90m in accordance with SANS 0900 - 1972.

- **Foulsewer Reticulation**

The Foulsewer System of the proposed development will be connected to the municipal system to the existing 300mm diameter sewer near the north-eastern corner of the site.

The gravity sewers will mainly consist of 160mm diameter Class 400 kPa PVC-U pipes: SANS 1601 Type 1 specification to convey the minimum and peak wet weather flows of the development to the proposed private sewer pump station near the northern part of the site.

The sewer pumping main from the private pump station will consist of a 160mm diameter PVC-U Class 9 SANS 966 pipe and will convey the sewer effluent to the mentioned 300mm municipal main.

Considering the topography of the site, it should be possible to lay the pumping main in this development with a very flat gradient to fall towards the municipal sewer line far as practical possible to limit the risk of pollution in case of a break down.

The sewer pumps (duty and standby pumps to alternate) will be installed in an 1800mm diameter precast concrete pump chamber. All precast dolomitic concrete elements to conform to SANS 677, SANS 1294 and SANS 1200 GE specifications. The sewer pump station shall also be provided with an emergency storage facility.

The gravity and pumping systems will have to be designed to accommodate the required self-cleansing velocity of more than 0, 75 m/s and the applicable peak wet weather flows.

The inlet to the underground pump station shall be designed with a screening manhole which will remove most material that could interfere with the effective working of the sewer pumps and will not get easily blocked like a conventional screen, thus avoiding excessive maintenance on the pumping system.

All main internal gravity sewers and NMBM sewer pipes and manholes have to be constructed in accordance with SANS 1200 LD, SANS 1200 LB and Municipal Standards and Specifications.

The Draft Scoping Document which was compiled for all of the technical aspects of proposed development has been provided in **Appendix G9**.

**It should be noted that information on the types of materials / stock which are to be stored in the proposed new warehouse and other associated buildings is not available at this stage as this is still being confirmed by SPAR. As such, this information will be provided in the Final Basic Assessment Report (FBAR), once it has been confirmed by SPAR. It can however be confirmed that all flammable liquids will stored in quantities of less than 40 litres in accordance with the requirements of Paragraph 4 of the General Safety Regulations under the Occupational Health and Safety Act (Act 85 of 1993) as well as Municipal By-Laws as required.*

2. BRIEF DESCRIPTION OF THE RECEIVING ENVIRONMENT

The study site is located on Erf 1092 of the property Redhouse, at Perseverance in Port Elizabeth, Nelson Mandela Bay Metropolitan Municipality (NMBMM) in the Eastern Cape Province (GPS Co-ordinate: 33° 50' 3.960" S; 25° 32' 15.737" E). The study site is a 146 000m² undeveloped erf situated approximately 15km north-west of the city of Port Elizabeth and roughly 7 km south-east of the town of Despatch. The site is however located within an industrial area. As previously mentioned, the proposed project site is in close proximity to an existing SPAR Distribution Centre in Kohler Road and makes provision for future expansion according to the SPAR 20 year expansion plan. In addition, the proposed project site will be accessed primarily via Kohler Road which will need to be extended as part of the proposed development.

A photograph showing the typical character of the proposed project site is provided in **Figure 5** below.

Figure 5: Typical character of the proposed project site

A Site Locality Map for the proposed development is provided in **Figure 6** below. Additionally, a site locality map showing the zoning of the proposed project site has also been provided in **Figure 7** below.

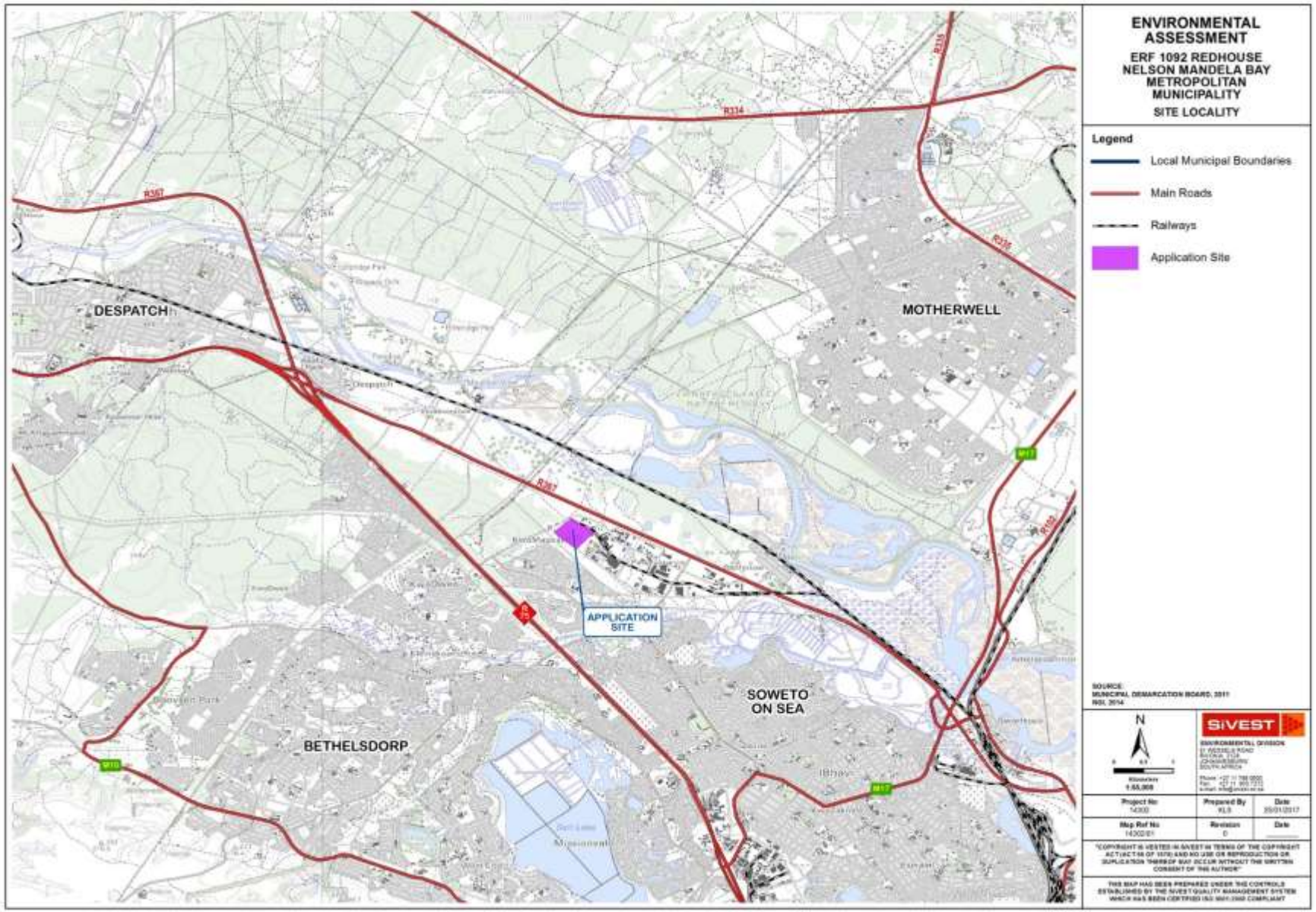

Figure 6: Site Locality Map

Figure 7: Site Locality Map showing the zoning of the proposed project site

With regards to geology, it was found that the study area is mainly underlain by Cretaceous aged sedimentary rocks of the Sundays River Formation, Uitenhage Group and Tertiary to Quaternary aged Intermediate and Low Level Fluvial Gravel of the Swartkops River (**Figure 8**). These Cretaceous to Quaternary aged sedimentary rocks weather into very clay rich soils that characterize the study area, with very high groundwater levels in the gravel beds.

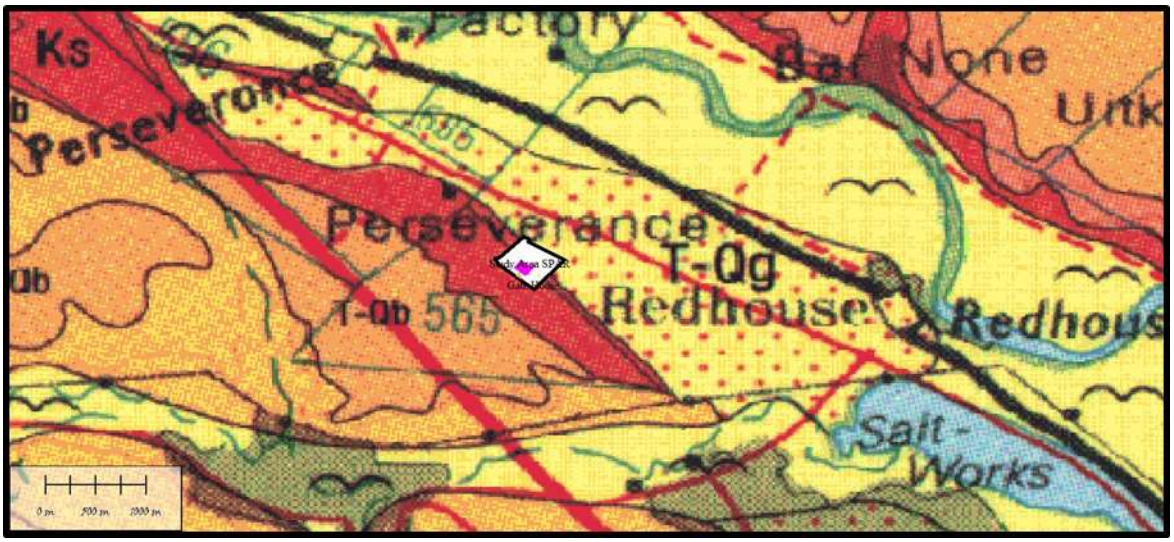

Figure 8: Geology underlying the development is mainly Cretaceous aged Sundays River mudstone (Ks) and Tertiary to Quaternary aged fluvial gravels (T-Qg)

As previously mentioned, the desktop PIA undertaken as part of the HIA indicated that the palaeontological sensitivity of the areas underlain by the Cretaceous aged Sundays River and Kirkwood Formations of the Uitenhage Group is rated as very high. As a result, a full EIA level PIA was undertaken. The EIA level PIA indicated that a Very High Palaeontological sensitivity is allocated to areas underlain by the Fossiliferous Cretaceous aged marine deposits of the Sundays River Formation and a High Palaeontological sensitivity to areas underlain by Low Level Gravels of Tertiary to Quaternary age.

A map showing the Palaeontological Sensitivity of the project site is provided in **Figure 9** below.

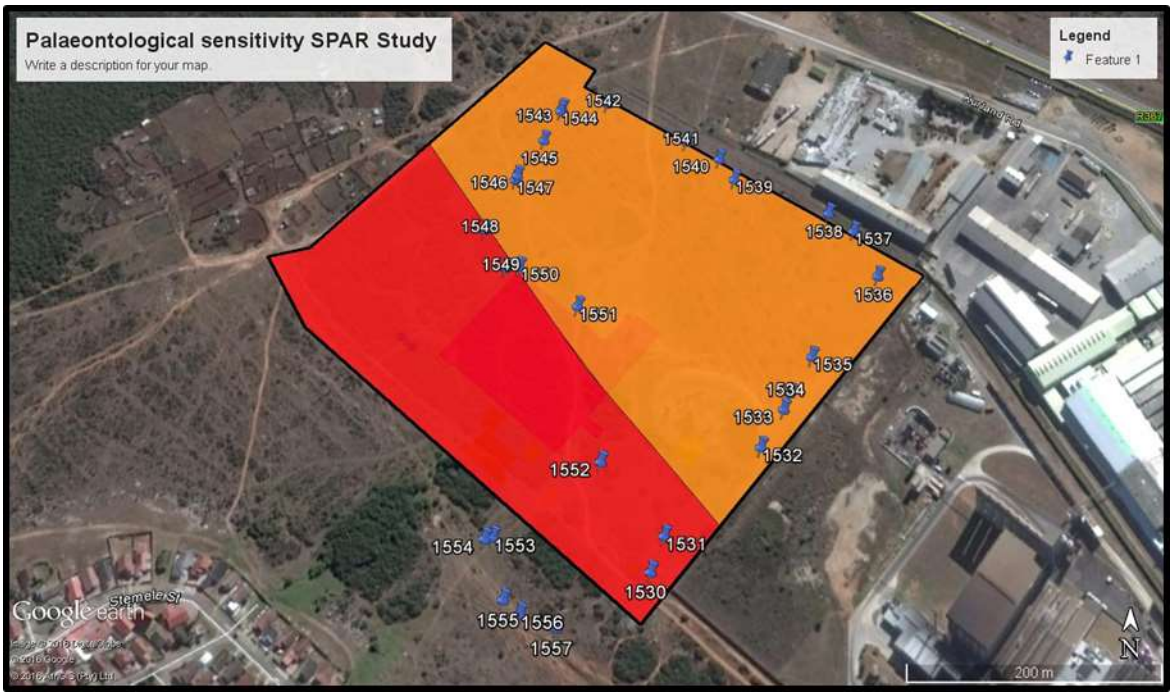

Figure 9: Map showing the Palaeontological Sensitivity of the project site

Legend:

Very High Palaeontological sensitivity / vulnerability

High Palaeontological sensitivity / vulnerability

According to Mucina and Rutherford (2006), the study site for the proposed development falls within the Albany Thicket Biome. Going into finer detail, vegetation units are classified which contain a set of general but more local biophysical characteristics as opposed to the entire Biome. The study site can be found within the Sundays Thicket vegetation unit.

The vegetation and landscape features of the Sundays Thicket vegetation unit are characterised by undulating plains, low mountains and foothills covered with tall, dense thicket, where trees, shrubs and succulents are common, with many spinescent species. The transition between lower and upper canopies is obscured by the presence of a wide variety of lianas. The local dominance of *Portulacaria afra* increases and the relative abundance of woody species present decreases with increasing aridity. There is considerable structural heterogeneity within this vegetation unit.

The geology and soils of the vegetation unit are mostly deep (>1m) red, loamy to clayey soils derived from Sundays River and Kirkwood Formations (Mesozoic Uitenhage Group) in the south. In the Zuurberg Mountains, soils are more sandy and nutrient poor and derived from the Bokkeveld and Witteberg Groups (Cape Supergroup). In the inland region of the Sundays River, the soils are derived from Ecca Group shales and mudstones, and are heavy due to high clay content. Fc land type dominates the area, followed by Ae.

The climate of the area is characterised by non-seasonal rainfall with slight optima in March and October/November. Mean Annual Precipitation (MAP) ranges from about 190mm in the northwest to 480mm in the southeast on the coast near Port Elizabeth. The coefficient of variation in MAP is 29-38%, increasing with distance inland in a north-westerly direction. The incidence of frost is 8 days, but ranging widely from 3 days near the coast in the southeast to more than 24 days of frost per year in the more inland sites on the north west. Mean monthly maximum temperatures for Uitenhage are 36.9º C for February and minimum temperatures for Uitenhage are 1.3º C for July.

A vegetation unit map has been provided in Figure 10 below.

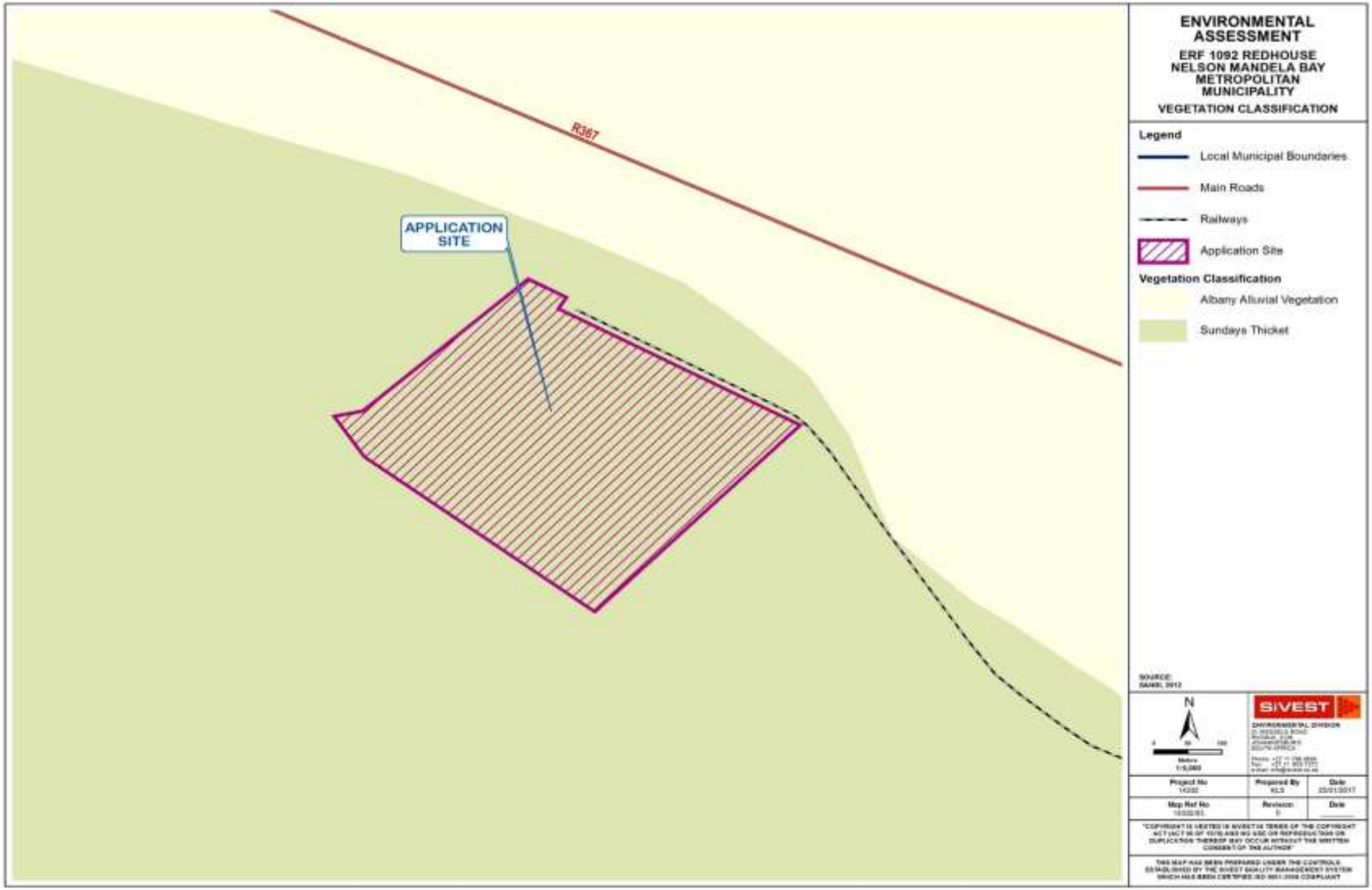

Figure 10: Vegetation Unit Map

According to the biodiversity specialist, three (3) habitat units can be found within the boundaries of the proposed project site, namely Degraded Sundays thicket, Transformed habitat and Wetland Habitat. Limited areas of Sundays Thicket remain, and the habitat integrity has been degraded by land uses such as intensive livestock grazing and vegetation clearance. The Wetland habitat unit has been severely degraded by dumping of rubble and discharge from urban storm water runoff. In addition, the Transformed habitat unit has been severely degraded by vegetation clearance, rubble dumping, edge effects associated with industrial activities, alien floral invasion and subsistence agriculture.

Figure 11: Typical views of the proposed project site showing that the disturbed / degraded nature of the site as a result of land uses such as vegetation clearance, waste and rubble dumping. In addition, the surrounding existing industrial development is also visible.

A map showing the habitat units encountered within the study area during the biodiversity specialist's site visit is provided in **Figure 12** below.

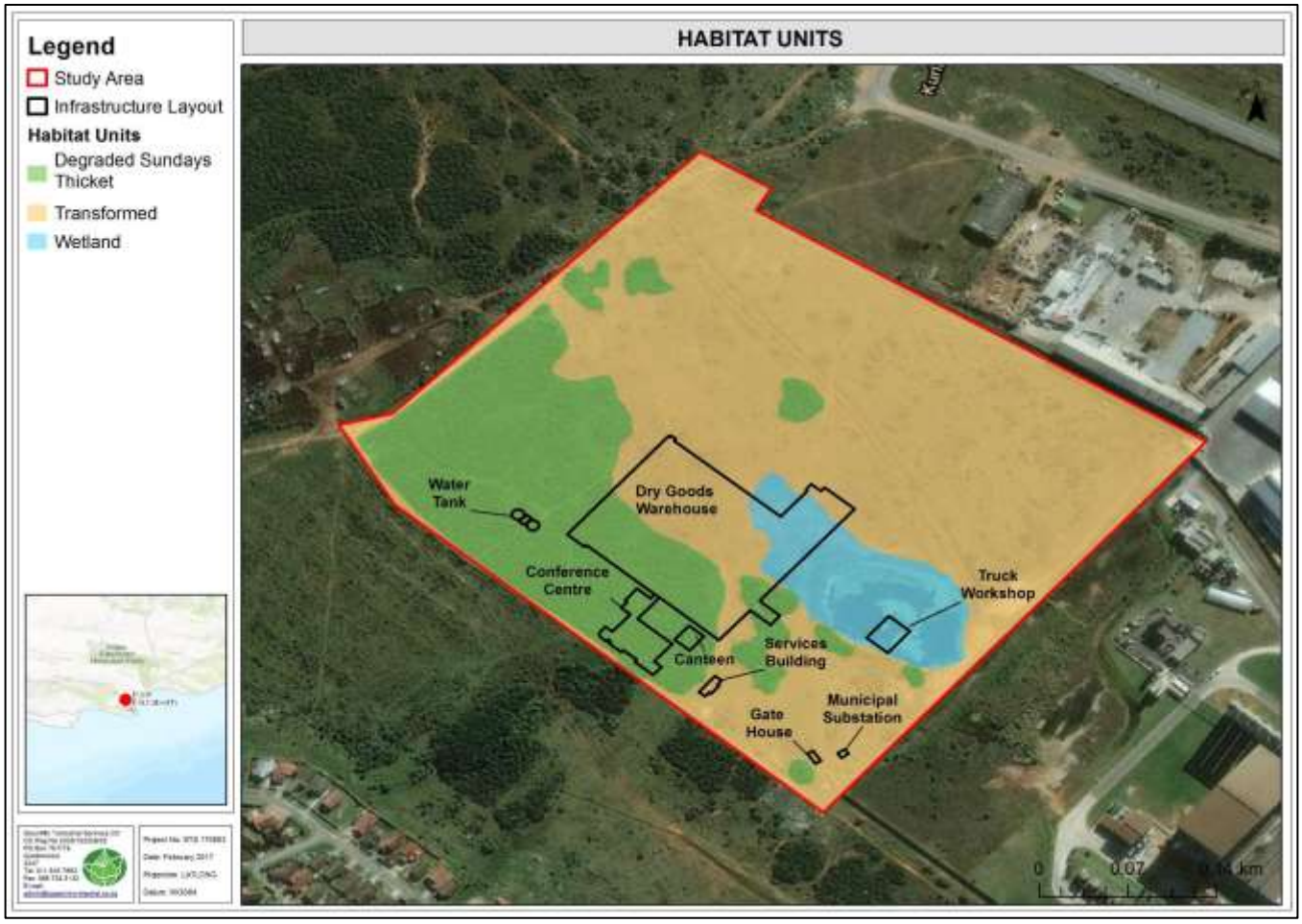

Figure 12: Map showing the habitat units encountered within the study area during the biodiversity specialist's site visit

As previously mentioned, the proposed project site is not within a CBA, ESA or riverine process area in terms of the NMBM's Bioregional Plan (2015). The proposed project site is however located within 5 km of a Formal Protected Area, namely the Swartkops Valley Local Authority Nature Reserve.

Site locality maps indicating the sensitive and projected areas identified within close proximity to the proposed project site have been provided in Figure 13 and Figure 14 below respectively.

Figure 13: Site locality map indicating the sensitive areas identified within close proximity to the proposed project site

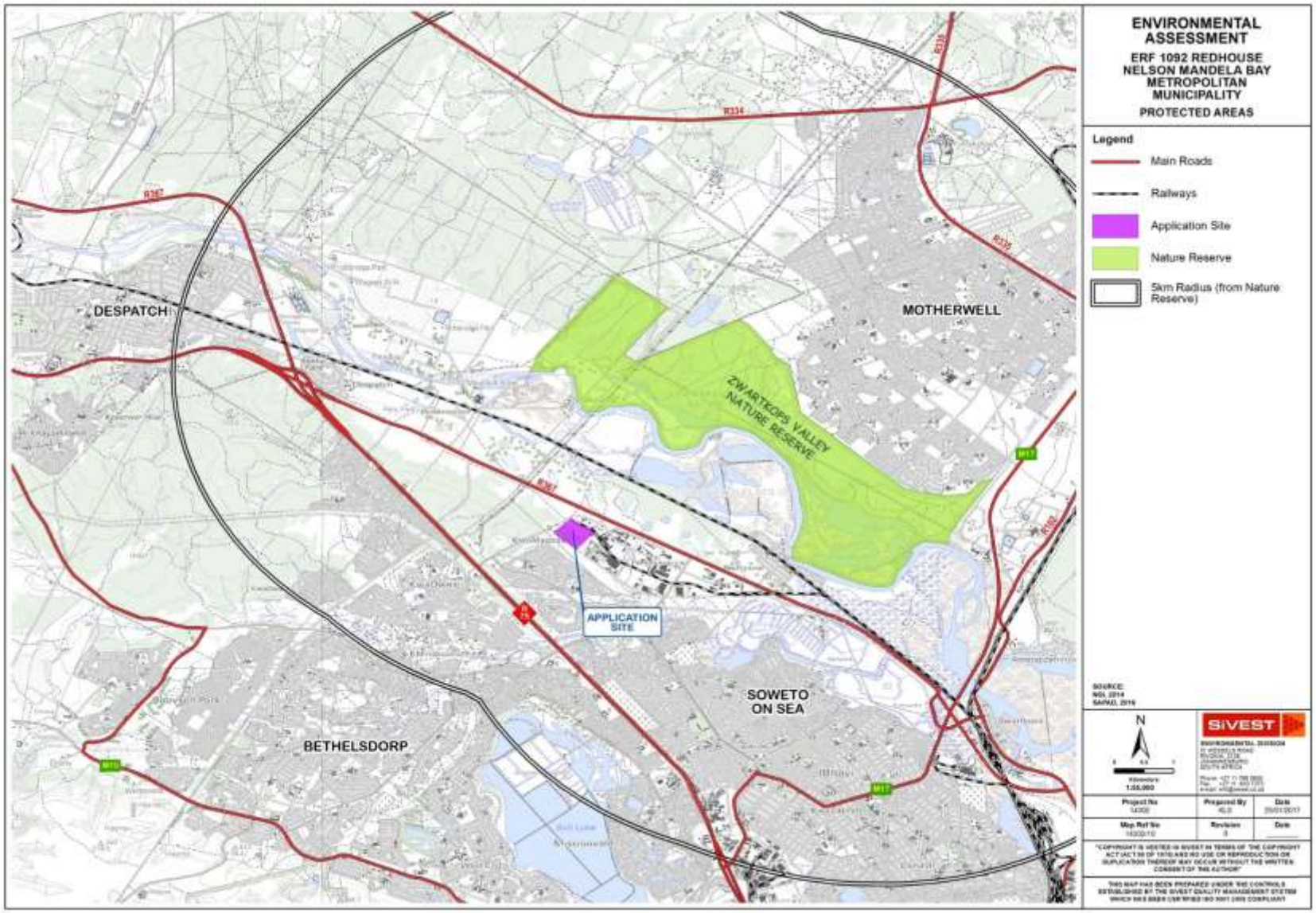

Figure 14: Site locality map indicating the protected areas identified within close proximity to the proposed project site

As previously mentioned, a surface water feature can be found within the study site. According to the Surface Water Assessment, the above-mentioned surface water feature has been identified as a depression wetland (**Figure 15**). The wetland is considered ecologically important at a desktop level due to the classification as a Wetland FEPA. The Present Ecological Status (PES) of the wetland was assessed to be a Class D (Largely Modified). Factors identified contributing to the degraded hydrological status included increased surface run-off from the surrounding catchment (most notably storm water outlets from the Kwamagxaki residential area to the south). Additionally, changes to the water distribution and retention of the wetland were noted due to changes in surface roughness (including removal of vegetation, establishment of dirt roads and overgrazing) and dumping alters the distribution of flows to the wetland. Furthermore, excavation of furrows to divert water out of the wetland were also identified to reduce the retention ability of the wetland.

From a vegetation perspective, contributing factors affecting the ecological state included the influx of sediment from the storm water outlets, infilling of rubble material, deposition of litter and other substances in the wetland, as well as overgrazing from cattle due to subsistence agriculture in the area. The assessment of the ecological importance and sensitive category (EISC) for the depression wetland showed that the depression wetland was categorised as a Class C (Moderate). A buffer zone of 30m was implemented for adequate protection of the wetland should the proposed development accommodate a layout that can avoid the wetland and the associated buffer. However, based on the current layout, it is understood that this will not be possible. A buffer zone was implemented nonetheless to complete the assessment based on findings.

Figure 15: Typical view of the depression wetland which was identified within the project site and delineated. This wetland has been severely degraded by land uses such as dumping of rubble / waste and discharge from urban storm water runoff.

As previously mentioned, the identified depression wetland will need to be infilled in order to facilitate construction of the proposed development and will ultimately need to be destroyed. This is due to the fact that the current layout

and project components cannot be altered to avoid the identified depression wetland. With this in mind, the only way to permit the loss of the depression wetland is to compile and implement a suitable wetland offset plan that is acceptable and approved by the DWS and DEDEA. The wetland offset plan will need to be such that a new wetland can be constructed of equal or better functionality, or to rehabilitate one or a number of other wetlands to the equivalent extent of wetland being lost to the desired standards in order to offset the loss of the depression wetland on the study site. As such, a suitable wetland offset plan that is acceptable and approved by DWS and DEDEA will be compiled and implemented. The wetland offset plan will be compiled and submitted as part of the environmental and water use license application processes in order to facilitate the current layout and offset the proposed loss of the depression wetland.

Based on correspondence from the Eastern Cape Department of Economic Development and Environmental Affairs (i.e. DEDEA), following an environmental pre-application meeting held on the 23rd of March 2017, it has been confirmed that DEDEA are favourable to the process of issuing an EA (pending satisfactory assessment of the application) with conditional approval such that the conditions can be assessed by Department of Water & Sanitation (DWS) in the processing of the Water Use License (WUL) application. The wetland offset process and plan will be undertaken in the next two (2) months of which meetings will be undertaken involving all relevant stakeholders (including DWS, DEDEA and any other relevant stakeholders) in order to discuss the various wetland offset options and to provide the way forward in compiling the wetland offset plan. As such, the proposed wetland offset plan will be undertaken as part of the water use license application (WULA) process and will only be submitted at a later stage. The wetland offset strategy will therefore not accompany the Basic Assessment Report (BAR). Provisional authorisation will rather be obtained for the proposed development and will depend on the findings of the wetland offset strategy.

3. EXPERTISE OF ENVIRONMENTAL ASSESSMENT PRACTITIONER (EAP)

Table 2: Environmental Consultants

Name and Organisation	Role
Kelly Tucker– SiVEST	Project Manager
Stephan Jacobs–SiVEST	Project Leader / Environmental Consultant
Kerry Schwartz –SiVEST	GIS Specialist
Hlengiwe Ntuli– SiVEST	Public Participation
Emile van der Westhuizen – Scientific Aquatic Services (SAS)	Biodiversity
Shaun Taylor – SiVEST	Surface Water and Wetlands
Wouter Fourie – PGS Heritage	Heritage
Elize Butler – Banzai Environmental	Palaeontological Desktop Assessment (part of Heritage Impact Assessment)
Gideon Groenewald	EIA Level Palaeontological Impact Assessment

4. AUTHORITY CONSULTATION

The Eastern Cape Department of Economic Development, Environmental Affairs and Tourism (DEDEA) is the competent authority for this BA application. The following consultation has subsequently taken place with DEDEA:

- A representative from SiVEST met with the EIM Assistant Director for the Cacadu Region (i.e. Mr. Andries Struwig) at the DEDEA offices in Port Elizabeth on the 17th of January 2017 in order to confirm whether there were any other previous applications for Environmental Authorisation (EA) on the project site / property. Mr. Struwig subsequently informed the representative from SIVEST that there were no other applications for EA on the project site / property to his knowledge.
- SiVEST sent Mr. Andries Struwig an email on the 31st of January 2017 in order to obtain written confirmation regarding other applications for EA on the project site / property. Mr. Struwig subsequently responded on the 2nd of February 2017 and confirmed that his office has not processed any previous application for EA relating to the property. A copy of the email which SiVEST sent to Mr. Struwig on the 31st of January 2017, as well as the subsequent response received from Mr. Struwig on the 2nd of February 2017, is included in **Appendix G1**.
- SiVEST sent Mr. Andries Struwig a pre-application meeting request via email on the 10th of March 2017. SiVEST requested this pre-application meeting in order to confirm an appropriate approach with regards to the BA, WULA and wetland offset strategy processes for the proposed development before commencing. Mr. Struwig did not respond in writing to the pre-application meeting request which was sent to him but rather confirmed his availability via telephone. Copies of the pre-application meeting request which was sent to Mr. Struwig is included in **Appendix G2**.
- SiVEST sent Mr. Struwig a confirmation email for the pre-application meeting which was planned with DEDEA, on the 17th of March 2017. This confirmation email also contained an agenda for the pre-application meeting. Copies of the confirmation email which was sent to Mr. Struwig, as well as the pre-application meeting agenda which was attached to the confirmation email, is included in **Appendix G3**.
- A representative from SiVEST (i.e. Mr. Shaun Taylor) met with Mr. Struwig at the DEDEA offices in Port Elizabeth on the 23rd of March 2017, in order to attend the above-mentioned pre-application meeting for the proposed development.
- Following the pre-application meeting, Mr. Taylor sent Mr. Struwig an email on the 23rd of March 2017 in order to summarise the main points that were discussed and agreed upon during the pre-application meeting and to confirm that these were accurate. Mr. Struwig subsequently replied via email on the 23rd of March 2017 and confirmed that the summary adequately captured the main points / issues discussed. Copies of the email which were sent to Mr. Struwig in order to summarise the main points that were discussed, as well as Mr. Struwig's subsequent response, are included in **Appendix G4**.
- SiVEST also sent representatives from DWS several emails in order to request a pre-application meeting and site visit for the proposed development. Several representatives from DWS responded to these requests. SiVEST subsequently sent another email to representatives from DWS on the 8th of March 2017 in order to confirm the meeting request for the 22nd of March 2017. A representative from SiVEST (i.e. Mr. Shaun Taylor) met with representatives from DWS in Port Elizabeth on the 22nd of March 2017 in order to attend the above-mentioned pre-application meeting and site visit. Copies of all consultation and/or correspondence undertaken with representatives from DWS are included in **Appendix G5**.

- SiVEST submitted the BA Application Form for the proposed development to DEDEA on the 18th of April 2017. DEDEA sent SiVEST an email on the 20th of April 2017 in order to confirm receipt of the above-mentioned application form, as well as to inform SiVEST of the subsequent amendments to the 2014 EIA Regulations. This email mainly served to advise SiVEST to scrutinise the application form which was submitted in order to determine whether the amendments would result in any changes to the content of the application form and to inform the Department accordingly. A reference number for the proposed development has however not yet been allocated by DEDEA. Copies of the BA Application Form which was submitted to DEDEA, as well as the email sent to SiVEST in order to confirm receipt of the application form and to inform of the subsequent amendments to the 2014 EIA Regulations, are provided in **Appendix G6** respectively.

The following list summarises other authorities which will be informed as part of the BA Process:

National / Provincial Authorities

- Eastern Cape Department of Economic Development, Environmental Affairs and Tourism (DEDEA)
- National Department of Water & Sanitation (DWS)
- National Department of Agriculture, Forestry & Fisheries (DAFF)

Local Authorities

- Nelson Mandela Bay Metropolitan Municipality (NMBMM).

Parastatals / Organs of State

- South African National Roads Agency Limited (SANRAL)
- Telkom SA (Ltd)
- Eskom
- South African Heritage Resource Agency (SAHRA)
- Eastern Cape Provincial Heritage Resource Authority (ECPHRA)
- SA Civil Aviation Authority (SA CAA)
- Agri Eastern Cape (formerly known as the Eastern Province Agricultural Union)
- Air Traffic Navigation Service (ATNS)

NGO's / Other Entities

- Birdlife South Africa
- Endangered Wildlife Trust (EWT)
- Wildlife and Environment Society of South Africa (WESSA)

5. BASIC ASSESSMENT REPORT STRUCTURE

- **Section A** describes the activity and technical project components, including the proposed alternatives, location and physical size of the activity. This section also provides an activity motivation by describing the need and desirability for the proposed project. Section A expands on the legal ramifications applicable to

the project and describes relevant development strategies and guidelines. Finally the section explains the infrastructural requirements of the proposed project such as waste, effluent, emission water use and energy efficiency.

- **Section B** provides a description of the site and region in which the proposed development is intended to be located. Although the chapter provides a broad overview of the region, it is also specific to the application.
- **Section C** describes the Public Participation Process (PPP) undertaken during the Basic Assessment (BA) and tables issues and concerns raised by Interested and Affected Parties (I&APs).
- **Section D** identifies the resource use and process details associated with the proposed development. These include details pertaining to Waste, Effluent and Emission Management, Water Use, Power Supply and Energy Efficiency**.**
- **Section E** identifies potential issues associated with the proposed project by outlining the impacts that may result from the planning, design, construction, operational, decommissioning and closure phases. **Section D** also provides a description of the mitigation and management measures for each potential impact and outlines the recommendations of the Environmental Assessment Practitioner (EAP). The section concludes with an Environmental Impact Statement which summarises the impacts that the proposed development may have on the environment.
- **Section F** outlines the relevant appendices which must be attached as part of the Draft Basic Assessment Report (DBAR).

6. ASSUMPTIONS AND LIMITATIONS

The following assumptions and limitations have been taken into account when compiling this DBAR:

- It is assumed that all technical information provided by SPAR is technically acceptable and accurate;
- The proposed development is still in the planning stages and therefore some of the project specific technical details are not available at present;
- The following assumptions, uncertainties and gaps in knowledge were encountered by various specialist:
    - **Biodiversity**
        - The ecological assessment is confined to the study area, and does not include the neighbouring and adjacent properties. These were however considered as part of the desktop assessment.
        - With ecology being dynamic and complex, some aspects (some of which may be important) may have been overlooked. It is, however, expected that most floral and faunal communities have been accurately assessed and considered.
        - Due to the nature and habits of most faunal taxa and the high level of surrounding anthropogenic activities, it is unlikely that all species would have been observed during a site assessment of limited duration. Therefore, site observations were compared with literature studies where necessary.
        - The data presented in this report are based on one site visit, undertaken in January 2017. A more accurate assessment would require that assessments take place in all seasons of the year. However, on-site data was significantly augmented with all available desktop data, as well

as previous studies conducted in the area, and the findings of this assessment are considered to be an accurate reflection of the ecological characteristics of the study area.

- **Surface Water**
  - A Global Positioning System (GPS) device was used to groundtruth any identified wetlands, as well as for delineation purposes. The GPS is expected to be accurate from 5m up to 15m depending on meteorological conditions.
  - The site visit was undertaken on the 17th January 2017. Different wetland vegetation can grow at specific times / seasons of the year depending on climate. As such, some hydrophytic wetland vegetation species may not have been present at the time of the assessment since January is considered one of the driest months for the area. Most rain is most frequent during August. Vegetation limitations therefore apply to this assessment given the short term once-off nature of the assessment. The assessment should therefore not be undertaken to be a fully comprehensive study on wetland and riparian vegetation species occurrence within the surface water resources.
  - This study has focused on the delineation of wetlands to be affected by the layout of the proposed development on the study site. Identification and delineation of surface water resources in the wider area outside of the proposed development area was not undertaken.
  - This study is limited to providing a surface water delineation, present ecological state determination, ecosystem services assessment, environmental importance and sensitivity classifications and, an impact assessment. No other assessments were undertaken or form part of this study. Aquatic studies of fish, invertebrates, amphibians etc. have not been included in this report. Nor have hydrological, floodlines or groundwater studies been included.
  - The geomorphological component of the Present Ecological Status (PES) was not assessed in this study for the endorheic depression wetland. The WET Health methodology (Macfarlane et al., 2009) focuses on wetlands that are connected to the drainage network in some way, and it therefore excludes endorheic pans. As such, this component cannot be evaluated until a methodology exists for this purpose.
  - Use of database information for the desktop assessment included the National Freshwater Ecosystem Priority Areas **(NFEPA, 2011)** database. This database is a national level database and some smaller surface water resources may not be contained in the database. Additionally, mainly permanently saturated wetlands are included in the database. Therefore, wetlands with seasonal and temporary saturation cycles may not be included. The fieldwork component was included in the assessment to verify the desktop database information in order to address these shortcomings.
- **Heritage**
  - Not detracting in any way from the comprehensiveness of the fieldwork undertaken, it is necessary to realise that the heritage resources located during the fieldwork do not necessarily represent all the possible heritage resources present within the development area. Various factors account for this, including the subterranean nature of some archaeological sites. As such, should any heritage features and/or objects not included in the present inventory be located or observed, a heritage specialist must immediately be contacted.

- It should be noted that during the field survey, the team encountered extremely dense thicket vegetation over the western portion of the study area. The two isolated stone tools were both found in disturbed areas within this thicket vegetation.

- **Palaeontology**
  - The scope of the phase 1 Investigation included an on-site investigation to assess the identified palaeontological sensitive areas within the development footprint/study area rather than formal palaeontological collection. The investigation focused on the bedrock exposure where excavations would most probably require palaeontological monitoring.
  - The results of the field investigation are used to predict the potential of buried fossil heritage within the development footprint. In some investigations, this involves the examination of similar accessible bedrock exposures, such as road cuttings and quarries, along roads that run parallel to or across the development footprint.

SECTION A: ACTIVITY INFORMATION

Has a specialist been consulted to assist with the completion of this section? NO✓

If YES, please complete form XX for each specialist thus appointed:

Any specialist reports must be contained in Appendix D.

Biodiversity, Surface Water, Heritage, and Palaeontology Specialists have been appointed by SiVEST to undertake specialist assessments for the Basic Assessment (BA) process. The Biodiversity, Surface Water, Heritage and Palaeontology Specialist Reports are provided in **Appendix D1, Appendix D2, Appendix D3 and Appendix D4** respectively.

1. ACTIVITY DESCRIPTION

Describe the activity, which is being applied for, in detail

Due to the growing market demands, the SPAR Group (Ltd) (hereafter referred to as 'SPAR') are proposing to construct a new SPAR Distribution Centre on Erf 1092 at Redhouse in Perseverance, Port Elizabeth, Nelson Mandela Bay Metropolitan Municipality (NMBMM) in the Eastern Cape Province (hereafter referred to as the 'proposed development'). The proposed development will entail the construction of a self-sustainable facility which includes a new Dry Goods Warehouse with an internal Returns Area and Workshop/Charging Bay. In addition, the proposed development will also include the construction of the following:

- Conference Facility (including Entrance Foyer, IT Centre, Training Rooms, Bar Facility, Conference Ablutions & Entertainment Area);
- Security Entrance & Staff Ablution;
- Canteen;
- Guardhouse / Entrance Canopy;
- Truck Workshop & Truck Wash;
- Services Room (accommodating electrical, transformer and generator);
- Municipal Sub-station;
- Truck Entrance & Guard House;
- Fire Pump House;
- Main internal storm water drainage (including paved/concrete/reno mattress overland flow routes, catch pits, manholes and pipework up to outside of the buildings);
- Main internal water reticulation up to the outside of the buildings for operational purposes (including supply to the fire tanks, fire hydrants and fire hose reels which will include the municipal water connection to site, bulk water meter, valves, specials, bends, thrust blocks, bulk water meter and strainer chambers);

- Municipal sewer extension, connection to existing municipal system and main internal sewer drainage system up to the outside of the buildings (including gravity sewer lines, manholes, sewer pump station and pumping main including valve and thrust blocks);
- Paved road and parking area (including layer works, kerbs, storm water drainage, road marking and traffic signs);
- Concrete areas for entrance road and external operational area up to the outside of the buildings (including layer works, joints and storm water drainage);
- Bulk storm water system (including grassed storm water detention ponds, overflow structures, concrete lined channels, catch pits, pipework and connection to municipal system);
- Extension to Kohler road (including the layer-works, kerbing, storm water drainage, traffic signs and road marking); and
- Upgrade of the Kohler/Chelsea Roads intersection (including layer works, storm water drainage, procurement of traffic signals and related ducts and manholes, traffic signs and road marking).

The following information should also be noted:

- The site is undeveloped but is located within an industrial area;
- The site does not fall within any National Threatened Ecosystems;
- The site is within 5 km of a Formal Protected Area – i.e. the Swartkops Valley Local Authority Nature Reserve;
- The site is not within a CBA or riverine process area in terms of the NMBM's Bioregional Plan (2015);
- Pre-transformation vegetation types mapped on the site are Motherwell Karroid Thicket and Sundays Doringveld Thicket (NMBM Bioregional Plan, 2015); and
- The Ecosystem Status of the site is rated as 'endangered' on a metropolitan scape (NMBM Bioregional Plan, 2015).

It is important to note that the proposed development will be constructed in a phased manner. It was advised that construction of the entire proposed development will ultimately be undertaken in four (4) phases over a period of approximately 20 years. The timing of the subsequent phases (2 to 4) will be determined by market forces, as well as SPAR's business requirements and priorities in the future. This may vary from year to year as SPAR assess their development strategy as the need is required. As such, a detailed programme indicating when the above-mentioned phases will be implemented, is not available. It is envisaged that Phase 1 construction activities will be undertaken in 2017 / 2018, while the construction activities related to Phases 2 to 4 will be undertaken at intervals dependent on the growth of the region. Phase 2 related construction activities are expected to be undertaken in the next 5 to 7 years, Phase 3 related construction activities in 10 to 12 years and the final phase (i.e. Phase 4) in 15 to 20 years' time. These timeframes are however not final and may be subject to change as the project progresses. It should be noted that this Environmental Authorisation (EA) will however include all four (4) phases of the proposed development and will ultimately cover the activities related to all four (4) phases.

As mentioned above, the proposed development involves the construction of a new SPAR Distribution Centre, with the purpose of housing the increase in SPAR's operational demands due to national and regional growth. It should be noted that the new project site makes provision for future expansion according to the SPAR 20 year expansion plan. In addition, the project site is a 146 000m^2 undeveloped erf and is in close proximity to an existing SPAR Distribution Centre on Kohler Road.

The proposed project site currently belongs to the NMBMM. Ownership of the project site is however in the process of being transferred to SPAR. The drafting of a sale agreement has commenced and will include a number of suspensive conditions, one being EA. The transfer of ownership of the project site will thus only commence (conveyancing) once the suspensive conditions are met and therefore the property will ultimately belong to SPAR. The proposed project site will be accessed primarily via Kohler Road which will need to be extended as part of the proposed development. Additionally, the proposed development will also include the upgrade of the Kohler/Chelsea Roads intersection.

It should be noted that no layout alternatives are being considered and/or assessed with regards to the proposed construction of the new SPAR Distribution Centre. This is due to the fact that the current proposed layout is planned to be carried out in a phased manner and has been achieved through the extensive organising and planning of the space and facilities required by SPAR. Additionally, SPAR are not looking to purchase any other sites as the chosen property is the only site which is considered to be feasible and viable with regards to the construction of the new SPAR Distribution Centre. Therefore the proposed project site is the only site alternative that is being considered with regards to the proposed development. As such, the current layout maximises the site usage, taking into consideration the phasing of the proposed development. The current proposed layout is also considered to be the most cost effective way to establish a facility in order to meet SPAR's current demands, as the topography of the site would result in large, expensive civil works in order to get phase one complete, and then still take into consideration the future phasing. The site currently only has one means of access to the proposed facility, due to the limitations of local infrastructure and the built environment, and therefore the first phase of the development had to be placed within realistic distances of the provided access point. In addition, the land to the north-west of the site (where phase 4 would happen), could potentially be sold off to another developer, which needed to be considered in the current proposal.

According to Mucina and Rutherford (2006), the study site for the proposed development falls within the Albany Thicket Biome. Going into finer detail, the study site can be found within the Sundays Thicket vegetation unit. Additionally, three (3) habitat units can be found within the boundaries of the proposed project site, namely Degraded Sundays thicket, Transformed habitat and Wetland Habitat. Limited areas of Sundays Thicket remain, and the habitat integrity has been degraded by land uses such as intensive livestock grazing and vegetation clearance. The Wetland habitat unit has been severely degraded by dumping of rubble and discharge from urban storm water runoff. In addition, the Transformed habitat unit has been severely degraded by

vegetation clearance, rubble dumping, edge effects associated with industrial activities, alien floral invasion and subsistence agriculture.

As previously mentioned, the proposed project site does not fall within a Critical Biodiversity Area (CBA), Ecological Support Area (ESA) or riverine process area in terms of the NMBMM's Bioregional Plan (2015). The proposed project site is however located within 5 km of a Formal Protected Area, namely the Swartkops Valley Local Authority Nature Reserve. It should also be noted that a surface water feature can be found within the study site. This surface water feature has been identified as a depression wetland. A buffer zone of 30m was implemented for adequate protection of the wetland should the proposed development accommodate a layout that can avoid the wetland and the associated buffer. However, based on the current layout, it is understood that this will not be possible. A buffer zone was implemented nonetheless to complete the assessment based on findings.

It is understood that due to limited space (based on the entire project and additional future phases to be constructed), the current layout and project components cannot be altered to avoid the identified depression wetland. As a result, the proposed development will need to involve the infill of the wetland in order to facilitate construction of the proposed development. Ultimately, the wetland will need to be destroyed. In light of the above, the only way to permit the loss of the depression wetland is to compile and implement a suitable wetland offset plan that is acceptable and authorised by the Department of Water and Sanitation (DWS) and DEDEA. The wetland offset plan will need to be such that a new wetland can be constructed of equal or better functionality, or to rehabilitate one or a number of other wetlands to the equivalent extent of wetland being lost to the desired standards in order to offset the loss of the depression wetland on the study site. As such, a wetland offset plan will be compiled and submitted as part of the environmental and water use license application processes to facilitate the current layout and offset the proposed loss of the depression wetland.

Based on correspondence from DEDEA, following an environmental pre-application meeting held on the 23rd of March 2017, it has been confirmed that DEDEA are favourable to the process of issuing an EA (pending satisfactory assessment of the application) with conditional approval such that the EA conditions can be assessed by DWS in the processing of the Water Use License (WUL) application. The wetland offset process and plan will be undertaken in the next two (2) months of which meetings will be undertaken involving all relevant stakeholders (including DWS, DEDEA and any other relevant stakeholders) in order to discuss the various wetland offset options and to provide the way forward in compiling the wetland offset plan. As such, the proposed wetland offset plan will be undertaken as part of the water use license application (WULA) process and will only be submitted at a later stage. The wetland offset strategy will therefore not accompany the Basic Assessment Report (BAR). Provisional authorisation will rather be obtained for the proposed development and will depend on the findings of the wetland offset strategy.

It should be noted that a desktop Palaeontology Impact Assessment (PIA) was undertaken as part of the Heritage Impact Assessment (HIA). The desktop PIA subsequently indicated that the development footprint of the study area is underlain by the Cretaceous aged Sundays River and

Kirkwood Formations of the Uitenhage Group. The Palaeontological sensitivity of these areas is rated as very high. It was thus recommended that a full EIA level PIA be conducted in order to assess the value and prominence of fossils in the development area and the effect of the proposed development on the palaeontological heritage. In light of the above, a full EIA level PIA was subsequently undertaken. The EIA level PIA forms part of the HIA and complies with the requirements of the South African National Heritage Resource Act No 25 of 1999. A "Chance Find Protocol" report for the chance find of fossils has also been compiled and forms part of the EIA level PIA study.

The EIA level PIA found that several possible mineralized (expected to be "fossilized") bones occur with hundreds of clearly defined much younger bones in the study site that seems to be used as a dumping site by local inhabitants of the area. In addition, a Very High Palaeontological sensitivity is allocated to areas underlain by the Fossiliferous Cretaceous aged marine deposits of the Sundays River Formation and a High Palaeontological sensitivity to areas underlain Low Level Gravels of Tertiary to Quaternary age. Although suspiciously fossilsiferous, bone material found associated with Tertiary aged gravels might be related to recent (1968-69) flooding in the area and the HIA will take note of this fact. A "Chance Find Protocol" report for the chance find of fossils has also been compiled and forms part of the EIA level PIA study. Despite the presence of the above-mentioned paleontologically sensitive areas, no fatal flaws have been identified from a palaeontology perspective and no significant legislative implications are therefore anticipated.

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. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity 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.

Paragraphs 3 – 13 below should be completed for each alternative.

It should be noted that no layout alternatives are being considered and/or assessed with regards to the proposed construction of the new SPAR Distribution Centre. This is due to the fact that the current proposed layout is planned to be carried out in a phased manner and has been achieved through the extensive organising and planning of the space and facilities required by SPAR. Additionally, SPAR are not looking to purchase any other sites as the chosen property is the only site which is considered to be feasible and viable with regards to the construction of the new SPAR Distribution Centre. Therefore the proposed project site is the only site alternative that is being considered with regards to the proposed development. As such, the current layout maximises the site usage, taking into consideration the phasing of the proposed development. The current proposed layout is also considered to be the most cost effective way to establish a facility in order to meet SPAR's current demands, as the topography of the site would result in large, expensive civil works in order to get phase one complete, and then still take into consideration the future phasing. The site currently only has one means of access to the proposed facility, due to the limitations of local infrastructure and the built environment, and therefore the first phase of the development had to be placed within realistic distances of the provided access point. In addition, the land to the north-west of the site (where phase 4 would happen), could potentially be sold off to another developer, which needed to be considered in the current proposal.

It is understood that due to limited space (based on the entire project and additional future phases to be constructed), the current layout and project components cannot be altered to avoid the depression wetland which has been identified within the project site. As a result, the proposed development will need to involve the infill of the wetland in order to facilitate construction of the proposed development. Ultimately, the wetland will need to be destroyed. In light of the above, the only way to permit the loss of the depression wetland is to compile and implement a suitable wetland offset plan that is acceptable and approved by the Department of Water and Sanitation (DWS) and DEDEA. The wetland offset plan will need to be such that a new wetland can be constructed of equal or better functionality, or to rehabilitate one or a number of other wetlands to the equivalent extent of wetland being lost to the desired standards in order to offset the loss of the depression wetland on the study site. As such, a wetland offset plan will be compiled and submitted as part of the environmental and water use license application processes to facilitate the current layout and offset the proposed loss of the depression wetland.

Based on correspondence from the Eastern Cape Department of Economic Development and Environmental Affairs (i.e. DEDEA), following an environmental pre-application meeting held on the 23rd of March 2017, it has been confirmed that DEDEA are favourable to the process of issuing an EA (pending satisfactory assessment of the application) with conditional approval such that the EA conditions can be assessed by DWS in the processing of the Water Use License (WUL) application. The wetland offset process and plan will be undertaken in the next two (2) months of which meetings will be undertaken involving all relevant stakeholders (including DWS, DEDEA and any other relevant stakeholders) in order to discuss the various wetland offset options and to provide the way forward in compiling the wetland offset plan. As such, the

proposed wetland offset plan will be undertaken as part of the water use license application (WULA) process and will only be submitted at a later stage. The wetland offset strategy will therefore not accompany the Basic Assessment Report (BAR). Provisional authorisation will rather be obtained for the proposed development and will depend on the findings of the wetland offset strategy.

3. ACTIVITY POSITION

Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in 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.

List alternative sites if applicable.

Alternative:	**Latitude (S):**		**Longitude (E):**	
Alternative S1[1] (preferred or only site alternative)	33 o	50‘	25o	32‘
Alternative S2 (if any)				
Alternative S3 (if any)				

In the case of linear activities:

Alternative:	**Latitude (S):**		**Longitude (E):**	
Alternative S1 (preferred or only route alternative)				
• Starting point of the activity				
• Middle point of the activity				
• End point of the activity				
Alternative S2 (if any)				
• Starting point of the activity				
• Middle point of the activity				
• End point of the activity				
Alternative S3 (if any)				
• Starting point of the activity				

[1] “Alternative S..” refer to site alternatives.

- Middle point of the activity
- End point of the activity

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.

4. PHYSICAL SIZE OF THE ACTIVITY

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

Alternative:	**Size of the activity:**
Alternative A1[2] (preferred activity alternative)	Approx. 146 000m^2
Alternative A2 (if any)	
Alternative A3 (if any)	

or, for linear activities:

Alternative:	**Length of the activity:**
Alternative A1 (preferred activity alternative)	
Alternative A2 (if any)	
Alternative A3 (if any)	

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

Alternative:	**Size of the site/servitude:**
Alternative A1 (preferred activity alternative)	146 000m^2
Alternative A2 (if any)	
Alternative A3 (if any)	

5. SITE ACCESS

Does ready access to the site exist?	**NO✓**
If NO, what is the distance over which a new access road will be built	Approx. 225m

Describe the type of access road planned:

[2] "Alternative A.." refer to activity, process, technology or other alternatives.

SPAR plan on upgrading the existing gravel track to an asphalt road which will match the existing Kohler Road. As such, the existing Kohler Road will be extended to provide access to the site.

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.

6. SITE OR 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:

6.1 the scale of the plan which must be at least a scale of 1:500;

6.2 the property boundaries and numbers of all the properties within 50 metres of the site;

6.3 the current land use as well as the land use zoning of each of the properties adjoining the site or sites;

6.4 the exact position of each element of the application as well as any other structures on the site;

6.5 the position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, street lights, sewage pipelines, storm water infrastructure and telecommunication infrastructure;

6.6 all trees and shrubs taller than 1.8 metres;

6.7 walls and fencing including details of the height and construction material;

6.8 servitudes indicating the purpose of the servitude;

6.9 sensitive environmental elements within 100 metres of the site or sites including (but not limited thereto):

- rivers;
- 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 invested with alien species);

6.9 for gentle slopes the 1 metre contour intervals must be indicated on the plan and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the plan; and

6.10 the positions from where photographs of the site were taken.

The following maps have been provided as **Appendix A**:

- A Detailed Site Layout Map;
- A Site Locality Map;
- A Site Locality Map indicating sensitive environments and protected areas;
- A Regional Context Map;
- A Site Locality Map indicating Land Cover;
- A Site Locality Map indicating Topography;
- A Site Locality Map indicating Slope;
- A Site Locality Map Indicating Vegetation; and
- A Site Locality Map Indicating Zoning.

7. 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 form**.** It must be supplemented with additional photographs of relevant features on the site, if applicable.

Colour photographs taken from the centre of the site in at least the eight major compass directions with a description of each photograph, as well as photographs of relevant features on the site, are attached under **Appendix B**.

8. FACILITY ILLUSTRATION

A detailed illustration of the activity must be provided at a scale of 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.

Detailed site plans / facility illustrations for the proposed buildings, infrastructure, roads, bulk storm water, sewage and water reticulation are provided as **Appendix C**.

9. ACTIVITY MOTIVATION

9(a) Socio-economic value of the activity

What is the expected capital value of the activity on completion?	**UNKNOWN AT THIS STAGE**

What is the expected yearly income that will be generated by or as a result of the activity?	The new Distribution Centre will replace two (2) leased units in Burman Road and Kempston Road. The amount of sales going through the new Distribution Centre will be about R510 million per annum from October 2018. This figure will increase annually depending on volume and inflation growth.
Will the activity contribute to service infrastructure?	**YES✓**
Is the activity a public amenity?	**NO✓**
How many new employment opportunities will be created in the development phase of the activity?	**UNKNOWN AT THIS STAGE** It was advised that this is difficult to establish as each contractor will appoint their own number of staff during the construction phase. In addition, Small, Medium and Micro Enterprise (SMMEs) appointments will only be done by the contractor at time of construction.
What is the expected value of the employment opportunities during the development phase?	**UNKNOWN AT THIS STAGE**
What percentage of this will accrue to previously disadvantaged individuals?	**UNKNOWN AT THIS STAGE**
How many permanent new employment opportunities will be created during the operational phase of the activity?	Approximately 10 per annum
What is the expected current value of the employment opportunities during the first 10 years?	R 2.5 million per annum for permanent staff
What percentage of this will accrue to previously disadvantaged individuals?	**UNKNOWN AT THIS STAGE**

9(b) Need and desirability of the activity

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

Spar Eastern Cape has outgrown their current Distribution Centre in Perseverance and therefore needed to find a new site to establish a new larger distribution centre. The new site had to accommodate the 20 year expansion plan and also be in close proximity to the existing site. The site identified is a 146 000m² undeveloped erf that was in the

same street as the existing Distribution Centre, thus fulfilling their need of having a large site to accommodate their expansion plans as well as being close to the existing Distribution Centre.

Indicate any benefits that the activity will have for society in general:

The proposed development entails the construction of a new SPAR Distribution Centre which will be situated within close proximity to one (1) of their existing Distribution Centres in Perseverance, Port Elizabeth. The proposed development will supply local shops / stores / businesses within the surrounding area with fresh and affordable food and produce, thus ensuring that members of the local communities have easy access to fresh and affordable food. In addition, construction of the proposed development will create a number of employment opportunities for a significant amount of time, as construction will be undertaken in four (4) phases over a period of 20 years. The creation of these employment opportunities is thus expected to subsequently contribute to and/or increase the local economy for a significant period of time. New permanent employment opportunities will also be created during the operation of the new proposed Distribution Centre and this will also in turn contribute to and/or increase the local economy. It is anticipated that SPAR will be undertaking social development programmes during the construction of the proposed development. This will allow members of the local communities to acquire new skills or develop their existing set of skills further in order to improve their employment opportunities. Since the proposed development will be located within an industrial area which contains other existing warehouses and/or distribution centres, it will promote competition as well as bolster the business development within the area.

Indicate any benefits that the activity will have for the local communities where the activity will be located:

The proposed development is considered to be desirable to the local municipality as the surrounding communities will be able to benefit directly and indirectly as a result of factors such as increased job opportunities, socio-economic development and an increase in the local economy. During the construction of the proposed development, a significant amount of employment opportunities for members of nearby local communities will be created and therefore the proposed development will have a positive contribution towards the surrounding communities. This is also expected to contribute to the economy of the nearby local communities. It should be noted that construction of the proposed development will be undertaken in four (4) phases over a period of approximately 20 years. As such, members of nearby local communities will have employment opportunities for a significant period of time. It is anticipated that SPAR will be undertaking social development programmes during the construction of the proposed development. This will allow members of the local communities to acquire new skills or develop their existing set of skills further in order to improve their employment opportunities. These individuals therefore also have the opportunity to potentially become permanent employees of SPAR. The construction of the proposed development is therefore expected to continue having a positive contribution towards the surrounding communities for a significant period of time. In addition, approximately 10 new permanent employment opportunities will be created per annum once the new distribution centre is operational.

10. 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:	Administering authority:	Date:
National Environmental Management Act (Act No. 107 of 1998) as amended.	Provincial	27 November 1998
National Environmental Management Act (Act No. 107 of 1998) as amended.	Provincial	4 December 2014
Environmental Impact Assessment Regulations (2014)	Provincial	4 December 2014
National Environmental Management: Biodiversity Act (NEMBA) (Act No. 10 of 2004)	Provincial	7 June 2004
Conservation of Agricultural Resources Act (CARA) (Act No. 43 of 1983) as amended	Provincial	27 April 1983
National Water Act (Act No. 36 of 1998)	Provincial	26 August 1998
National Water Amendment Act (Act No. 27 of 2014)	Provincial	2 June 2014
National Heritage Resources Act (NHRA) (Act No. 25 of 1999)	Provincial	28 April 1999
National Heritage Council Act (Act No. 11 of 1999)	Provincial	23 April 1999

11. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

11(a) Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?	**YES✓**
If yes, what estimated quantity will be produced per month?	20m^3

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

Construction solid waste will be disposed of at an approved refuse site using waste skips. Alternatively, construction solid waste will be loaded into "bakkies" or trucks.

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

Constriction solid waste will be disposed of at an approved refuse site

Will the activity produce solid waste during its operational phase?	**YES✓**
If yes, what estimated quantity will be produced per month?	**UNKOWN** This information will be provided in the Final Basic Assessment Report (FBAR)

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

SPAR has a sophisticated waste compressing machine which will compresses any unwanted waste (boxes etc.) into smaller manageable pallets. These pallets will then be delivered to a waste facility off site. Smaller pallets mean less trips, thus efficient in delivery and turnaround time.

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

Solid waste will only be fed into a municipal waste stream and will not be disposed of in any other manner. This has however not been confirmed yet. This will be confirmed at a later stage and information regarding this will be provided in the Final Basic Assessment Report (FBAR)

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 relevant legislation?	[redacted] NO✓

If yes, inform the competent authority and request a change to an application for scoping and EIA.

Is the activity that is being applied for a solid waste handling or treatment facility?	[redacted] NO✓

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.

11(b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?	[redacted] NO✓
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?	[redacted] 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.

Will the activity produce effluent that will be treated and/or disposed of at another facility?	[redacted] NO✓

If yes, provide the particulars of the facility:

Facility name: [redacted]

Contact person:	[redacted]
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:

No recycling of grey water has been incorporated into the design as this stage.

11(c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere?	[redacted]	**NO✓**
If yes, is it controlled by any legislation of any sphere of government?		**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.

If no, describe the emissions in terms of type and concentration:

The type of facility is warehouse storage based. There is no mechanical plant which will be omitting emissions into the atmosphere as one would expect in a factory environment / setting. The only emissions anticipated on site is that of the trucks travelling to and from the site.

11(d) Generation of noise

Will the activity generate noise?	[redacted]	**NO✓**
If yes, is it controlled by any legislation of any sphere of government?		**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.

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

The type of activity is warehouse storage based and therefore has no noise pollution one would expect at a factory or industry plant. Noise levels are minimal and limited to only that of the trucks travelling to and from the site.

12. WATER USE

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

municipal√	

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 permit from the Department of Water Affairs?

YES√	

If yes, please submit the necessary application to the Department of Water Affairs and attach proof thereof to this application if it has been submitted.

A water use license application will need to be applied for considering activities that will take place within or within close proximity to the identified depression wetland. It is understood that due to limited space (based on the entire project and additional future phases to be constructed), the current layout and project components cannot be altered to avoid the identified depression wetland. As a result, the proposed development will need to involve the infill of the wetland in order to facilitate construction of the proposed development. Ultimately, the wetland will need to be destroyed. In light of the above, the only way to permit the loss of the depression wetland is to compile and implement a suitable wetland offset plan that is acceptable and approved by the Department of Water and Sanitation (DWS) and DEDEA. The wetland offset plan will need to be such that a new wetland can be constructed of equal or better functionality, or to rehabilitate one or a number of other wetlands to the equivalent extent of wetland being lost to the desired standards in order to offset the loss of the depression wetland on the study site. As such, a wetland offset plan will be compiled and submitted as part of the environmental and water use license application processes to facilitate the current layout and offset the proposed loss of the depression wetland.

Based on correspondence from the Eastern Cape Department of Economic Development and Environmental Affairs (i.e. DEDEA), following an environmental pre-application meeting held on the 23rd of March 2017, it has been confirmed that DEDEA are favourable to the process of issuing an EA (pending satisfactory assessment of the application) with conditional approval such that the EA conditions can be assessed by Department of Water & Sanitation (DWS) in the processing of the Water Use License (WUL) application. The wetland offset process and plan will be undertaken in the next two (2) months of which meetings will be undertaken involving all relevant stakeholders (including DWS, DEDEA and any other relevant stakeholders) in order to discuss the various wetland offset options and to provide the way forward in compiling the wetland offset plan. As such, the proposed wetland offset plan will be undertaken as part of the water use license application (WULA) process and will only be submitted at a later stage. The wetland offset strategy will therefore not accompany the Basic Assessment Report (BAR). Provisional authorisation will rather be obtained for the proposed development and will depend on the findings of the wetland offset strategy.

13. ENERGY EFFICIENCY

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

- The truck workshop will have large water tanks for rainwater harvesting, allowing the stored water to be used for the washing of the trucks and site irrigation within the vicinity.
- Storm water harvesting has been incorporated into the sites design, with attenuation ponds collecting all the water, to be a source for grey water irrigation.
- The design of the warehouse roof and vertical sheeting monitors maximizes the amount of natural light that can penetrate the warehouse envelope. Sensors in the warehouse will gauge the natural light levels and adjust the amount of artificial lighting required, reducing energy.
- The new facility will include automated truck washing stations to eliminate high man hours and resources needed to manually clean the spar fleet.
- The buildings have been orientated and incorporates design elements such as strip windows on sun facing facades in order to reduce the building heat gain, resulting in less energy used in the cooling systems for the facility.
- The facility will make use of in-house recycling systems to reduce the recycling process, creating smaller packages and therefore being more energy efficient in the waste management of the warehouse.
- The main warehouse roof will be insulated, reducing the heat gain and loss of the building.

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

- All artificial lighting will use LED technology rather than standard light fittings to reduce power consumption and increase lifespan of the bulbs.
- Approximately 13 000m² of roof area is available for solar panels to be located upon.
- Solar power will be used to supply power to lights and battery charging bays among others, reducing the electrical load on the national grid.

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 C and indicate the area, which is covered by each copy No. on the Site Plan.

Section C Copy No. (e.g. 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✓**

If YES, please complete form XX for each specialist thus appointed:

All specialist reports must be contained in Appendix D.

Biodiversity, Surface Water, Heritage, and Palaeontology Specialists have been appointed by SiVEST to undertake specialist assessments for the Basic Assessment (BA) process. The Biodiversity, Surface Water, Heritage and Palaeontology Specialist Reports are provided in **Appendix D1**, **Appendix D2**, **Appendix D3** and **Appendix D4** respectively.

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✓**

As indicated above, the gradient of the proposed project site varies across the site. The proposed project site is considered to have a gradient of 1:15 – 1:10 within the south-western part, while the north-eastern part of the site is considered to have a gradient flatter than 1:50

Alternative S2 (if any):

[redacted]

Alternative S3 (if any):

[redacted]

2. LOCATION IN LANDSCAPE

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

2.1 Ridgeline
2.2 Plateau
2.3 Side slope of hill/mountain✓
2.4 Closed valley
2.5 Open valley
2.6 Plain
2.7 Undulating plain / low hills
2.8 Dune
2.9 Seafront

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

	Alternative S1:		Alternative S2 (if any):	Alternative S3 (if any):
Shallow water table (less than 1.5m deep)	YES✓		[redacted]	[redacted]
Dolomite, sinkhole or doline areas		NO✓		
Seasonally wet soils (often close to water bodies)	YES✓			
Unstable rocky slopes or steep slopes with loose soil		NO✓		

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

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. GROUNDCOVER

Indicate the types of groundcover present on the site:

4.1 Natural veld – good condition [E]
4.2 Natural veld – scattered aliens [E] ✓
4.3 Natural veld with heavy alien infestation [E]
4.4 Veld dominated by alien species [E]
4.5 Gardens
4.6 Sport field
4.7 Cultivated land
4.8 Paved surface
4.9 Building or other structure
4.10 Bare soil ✓

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

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.

A Biodiversity specialist study was undertaken for the proposed development. The Biodiversity specialist report is include in **Appendix D1**.

5. 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:

5.1 Natural area✓
5.2 Low density residential
5.3 Medium density residential
5.4 High density residential✓
5.5 Informal residential✓
5.6 Retail commercial & warehousing✓
5.7 Light industrial
5.8 Medium industrial AN✓
5.9 Heavy industrial AN
5.10 Power station
5.11 Office/consulting room
5.12 Military or police base/station/compound
5.13 Spoil heap or slimes dam A
5.14 Quarry, sand or borrow pit
5.15 Dam or reservoir
5.16 Hospital/medical centre
5.17 School
5.18 Tertiary education facility
5.19 Church
5.20 Old age home
5.21 Sewage treatment plant A
5.22 Train station or shunting yard N
5.23 Railway line N✓
5.24 Major road (4 lanes or more) N
5.25 Airport N
5.26 Harbour
5.27 Sport facilities
5.28 Golf course
5.29 Polo fields
5.30 Filling station H
5.31 Landfill or waste treatment site
5.32 Plantation

5.33 Agriculture
5.34 River, stream or wetland✓
5.35 Nature conservation area
5.36 Mountain, koppie or ridge
5.37 Museum
5.38 Historical building
5.39 Protected Area
5.40 Graveyard
5.41 Archaeological site
5.42 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.

The proposed project site is situated within 500m of a railway line. This railway line traverses the project site, as well as the existing industrial area which is located adjacent to the proposed project site. The railway line appears to end at the northern corner of the proposed project site. In addition, this railway line links to another railway line which is located to the south-east of the project site. The closest railway yard / train station is located in the village of Redhouse, approximately 2.7km to the east of the project site. Due to the fact that the identified railway line traverses an already transformed / disturbed industrial area which contains existing warehouses, businesses, distribution centres etc., the proposed development is not expected to impact this railway line. Additionally, this railway line can be used by SPAR in order to transport materials and/or machinery / equipment to the project site during construction, as well as stock / inventory and/or machinery / equipment to the new Distribution Centre during operation.

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

If YES, specify and explain:

The proposed project site is situated adjacent to an already transformed / disturbed industrial area. There are several other businesses, warehouses, distribution centres etc. which are currently operating within this industrial area. As such, the proposed development would impact these other businesses, warehouses, distribution centres etc. during the construction phase. In addition, construction of the entire proposed development will ultimately be undertaken in four (4) phases over a period of approximately 20 years. In light of the above, the adjacent industrial area will be impacted by the construction proposed development for a significant period of time. It should however be noted that SPAR also own a distribution centre within this existing industrial area. As SPAR have a vested interest in the proposed development, their existing distribution centre would not be impacted negatively by the proposed development. SPAR would therefore benefit from the proposed development as this would aid in housing the increase in SPAR's operational demands due to national and regional growth.

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

6. 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 palaeontological sites, on or close (within 20m) to the site?	**YES✓**
If YES, explain:	A Heritage Impact Assessment (HIA) was undertaken in order to determine whether the proposed development would impact any significant heritage resources located within the project site. The archival research undertaken as part of the HIA indicated that there was not expected to be any significant archaeological or historical resources present. The subsequent field work completed for the HIA component in January 2017, has however confirmed that two heritage sites /find spots were identified within the project study area. A desktop Palaeontological Impact Assessment (PIA) was undertaken as part of the HIA. The desktop PIA subsequently indicated that the development footprint of the study area is underlain by the Cretaceous aged Sundays River and Kirkwood Formations of the Uitenhage Group. The palaeontological sensitivity of these areas is rated as very high. It was thus recommended that a full EIA level PIA be conducted in order to assess the value and prominence of fossils in the development area and the effect of the proposed development on the palaeontological heritage. In light of the above, a full EIA level PIA was subsequently undertaken. The EIA level PIA forms part of the HIA and complies with the requirements of the South African National Heritage Resource Act (Act No. 25 of 1999). A "Chance Find Protocol" report for the chance find of fossils has also been compiled and forms part of the EIA level PIA study.

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

Briefly explain the findings of the specialist:	The archival research undertaken as part of the HIA indicated that there was not expected to be any significant archaeological or historical resources present within the proposed project site. The subsequent field work completed for the HIA component in January 2017, has however confirmed that two heritage sites / find spots were identified within the project study area. These two isolated archaeological findspots are considered to be of low to negligible significance. Based on the recommendation of the HIA, an EIA level Palaeontological Impact Assessment (PIA) was undertaken. The EIA level PIA found that several possible mineralized (expected to be "fossilized") bones occur with hundreds of clearly defined much younger bones in the study site that seems to be used as a dumping site by local inhabitants of the area. In addition, a Very High Palaeontological sensitivity is allocated to areas underlain by the Fossiliferous Cretaceous aged marine deposits of the Sundays River Formation and a High Palaeontological sensitivity to areas underlain Low Level Gravels of Tertiary to Quaternary age. Although suspiciously fossilsiferous, bone material found associated with Tertiary aged gravels might be related to recent (1968-69) flooding in the area and the HIA will take note of this fact. A "Chance Find Protocol" report for the chance find of fossils has also been compiled and forms part of the EIA level PIA study. Despite the presence of the above-mentioned paleontologically sensitive areas, no fatal flaws have been identified from a palaeontology perspective and no significant legislative implications are therefore anticipated.
Will any building or structure older than 60 years be affected in any way?	**NO✓**
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?	**NO✓**

If yes, please submit or, make sure that the applicant or a specialist submits the necessary application to SAHRA or the relevant provincial heritage agency and attach proof thereof to this application if such application has been made.

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT

The person conducting a public participation process must take into account any guidelines applicable to public participation as contemplated in section 24J of the Act and must give notice to all potential interested and affected parties of the application which is subjected to public participation by—

(a) fixing a notice board (of a size at least 60cm by 42cm; and must display the required information in lettering and in a format as may be determined by the competent authority) at a place conspicuous to the public at the boundary or on the fence of—
  (i) the site where the activity to which the application relates is or is to be undertaken; and
  (ii) any alternative site mentioned in the application;

(b) giving written notice to—
  (i) the owner or person in control of that land if the applicant is not the owner or person in control of the land;
  (ii) the occupiers of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;
  (iii) owners and occupiers of land adjacent to the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;
  (iv) the municipal councillor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represent the community in the area;
  (v) the municipality which has jurisdiction in the area;
  (vi) any organ of state having jurisdiction in respect of any aspect of the activity; and
  (vii) any other party as required by the competent authority;

(c) placing an advertisement in—
  (i) one local newspaper; or
  (ii) any official *Gazette* that is published specifically for the purpose of providing public notice of applications or other submissions made in terms of these Regulations;

(d) placing an advertisement in at least one provincial newspaper or national newspaper, if the activity has or may have an impact that extends beyond the boundaries of the metropolitan or local municipality in which it is or will be undertaken: Provided that this paragraph need not be complied with if an advertisement has been placed in an official *Gazette* referred to in subregulation 54(c)(ii); and

(e) using reasonable alternative methods, as agreed to by the competent authority, in those instances where a person is desiring of but unable to participate in the process due to—
  (i) illiteracy;
  (ii) disability; or
  (iii) any other disadvantage.

Proof of the site notice which was erected near the proposed project site, as well the advert which was placed in a local newspaper in order to advertise the proposed development, are include in **Appendix G7** and **Appendix G8** respectively. In addition, a copy of the Background Information Document (BID) and BID Registration and Comment Form which were left at prominent positions at the Kwamagxaki Public Library in Ibhayi are provided in **Appendix G10**.

2. CONTENT OF ADVERTISEMENTS AND NOTICES

A notice board, advertisement or notices must:

(a) indicate the details of the application which is subjected to public participation; and

(b) state—

(i) that the application has been submitted to the competent authority in terms of these Regulations, as the case may be;

(ii) whether basic assessment or scoping procedures are beingapplied to the application, in the case of an application for environmental

authorisation;

(iii) the nature and location of the activity to which the application relates;

(iv) where further information on the application or activity can be obtained; and

(iv) the manner in which and the person to whom representations in respect of the application may be made.

Proof of the site notice which was erected near the proposed project site, as well the advert which was placed in a local newspaper in order to advertise the proposed development, are include in **Appendix G7** and **Appendix G8** respectively. In addition, a copy of the Background Information Document (BID) and BID Registration and Comment Form which were left at prominent positions at the Kwamagxaki Public Library in Ibhayi are provided in **Appendix G10**.

3. PLACEMENT OF ADVERTISEMENTS AND NOTICES

Where the proposed activity may have impacts that extend beyond the municipal area where it is located, a notice must be placed in at least one provincial newspaper or national newspaper, indicating that an application will be submitted to the competent authority in terms of these regulations, the nature and location of the activity, where further information on the proposed activity can be obtained and the manner in which representations in respect of the application can be made, unless a notice has been placed in any *Gazette* that is published specifically for the purpose of providing notice to the public of applications made in terms of the EIA regulations.

Advertisements and notices must make provision for all alternatives.

Proof of the site notice which was erected near the proposed project site, as well the advert which was placed in a local newspaper in order to advertise the proposed development, are include in **Appendix G7** and **Appendix G8** respectively. In addition, a copy of the Background Information Document (BID) and BID Registration and Comment Form which were left at prominent positions at the Kwamagxaki Public Library in Ibhayi are provided in **Appendix G10**.

4. DETERMINATION OF APPROPRIATE MEASURES

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

5. COMMENTS AND RESPONSE REPORT

The practitioner must record all comments and respond to each comment of the public before the application 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 this application. The comments and response report must be attached under Appendix E.

It should be no comments and/or concerns have been received with regards to the proposed development to date. As such, a comments and response report has not been compiled yet. In light of the above, the comment and response report will be included in the Final Basic Assessment Report (FBAR), once the Public Meeting (PM) and Focus Group Meetings (FGMs) have been undertaken and comments and/or concerns have been received.

6. AUTHORITY PARTICIPATION

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

List of authorities informed:

The following authorities or key interested and affected parties have been informed about the BA application:

- Eastern Cape Department of Economic Development, Environmental Affairs and Tourism (DEDEA);
- Department of Water and Sanitation (DWS), and
- Nelson Mandela Bay Metropolitan Municipality (NMBMM)

List of authorities from whom comments have been received:

No comments have been received from authorities or key interested and affected parties at this stage. All comments received from authorities or key interested and affected parties will be included in the Final Basic Assessment Report (FBAR).

7. CONSULTATION WITH OTHER STAKEHOLDERS

Note that, for linear activities, or 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.

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

Has any comment been received from stakeholders? NO✓

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

No comments and/or concerns have been received from stakeholders at this stage. All comments and/or concerns received from stakeholders will be included in the Final Basic Assessment Report (FBAR).

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. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

List the main issues raised by interested and affected parties.

No issues or concerns have been raised by interested and affected parties at this stage. All comments or concerns received by interested and affected parties will be included in the Final Basic Assessment Report (FBAR).

Response from the practitioner to the issues raised by the interested and affected parties (A full response must be given in the Comments and Response Report that must be attached to this report):

No issues or concerns have been raised by interested and affected parties at this stage. All comments or concerns received by interested and affected parties, as well as the subsequent response from the practitioner, will be included in the Final Basic Assessment Report (FBAR).

2. 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

List the potential direct, indirect and cumulative property/activity/design/technology/operational alternative related impacts (as appropriate) 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.

Alternative (preferred alternative)

Direct impacts:

- **Biodiversity Related Direct Impacts:**

Impact 1 – Impact on Floral Species of Conservation Concern

One floral SCC, namely *Sideroxylon inerme* (milkwood) was observed during the site assessment. As the majority of the trees are relatively small and easy to transplant because the soil is sandy, it is recommended that the trees are incorporated as part of the landscaping of the proposed development, after obtaining the relevant permits. No other floral SCC were observed.

The impact associated with the loss of habitat for these species is considered to be of medium-low significance during the construction phase and of low significance during the operational phase of the project prior to the implementation of mitigation measures. With the implementation of mitigation measures, the impact significance of the loss of important species may be reduced to low and very-low levels.

Impacts on floral species of conservation concern during the **construction** phase include:

1) Further site clearance and removal of remaining indigenous vegetation including floral SCC;
2) Increased anthropogenic activity within the study area and an increase in the collection of plant material for medicinal and other purposes; and
3) Potential uncontrolled fires due to increased human activity may impact on floral communities within the surrounding areas.

Impacts on floral species of conservation concern during the **operational** phase include:

1) An increase in alien floral species in the surrounding area and within open space areas, due to edge effects from the development within the study area; and
2) Loss of remaining indigenous plant species due to increased competition from alien invasive plants

Impact 2 – Impact on Faunal Species of Conservation Concern

No faunal SCC were identified within the study area and none are expected to occur permanently within this area due to the degraded state of faunal habitat and the constant predatory threat from domestic dogs and cats. The impact associated with the loss of habitat for these species is considered to be of low significance during both the construction and operational phase of the project prior to the implementation of mitigation measures. With the implementation of mitigation measures, the impact significance of the loss of important species may be further reduced to very-low levels.

Impacts on faunal species of conservation concern during the **construction** phase include:

1) Increased poaching risk of potential faunal SCC in the surrounding area due to increased human activity associated with the development;
2) Loss of potential faunal SCC due to habitat loss and a decrease in food supply;
3) Failure to implement a conservation strategy should any faunal SCC be encountered within the study area; and
4) Potential uncontrolled fires due to increased human activity may impact on faunal communities within the study area

Impacts on faunal species of conservation concern during the **operational** phase include:

1) Loss of potential biodiversity of SCC due to continued habitat loss within the study area and surrounding areas; and

2) Increased poaching risk, and hunting by domestic dogs of faunal SCC within the study area as a result of the increased human activity.

Mitigation measures for the above-mentioned biodiversity related impacts include the following:

- It is recommended that any infrastructure is planned away from the wetland. Some of the rescued species could be planted in the wetland buffer zone to re-establish Sundays Thicket as a further trade-off for development in the remaining Degraded Sundays Thicket. Rehabilitation and clean-up of the wetland can also be considered;
- If the Sundays Thicket habitat unit is to be developed, a suitable trade-off would be to conserve and rehabilitate a portion of the remaining habitat on site. Furthermore, the majority of the genera occurring naturally (*Crassula*, *Portulacaria*, *Carissa*, *Euphorbia*, *Aloe*, *Schotia* etc.) are excellent waterwise landscaping plants. Thus, plants sourced from the disturbance footprint can be used for landscaping purposes and the local floral genetic diversity can be conserved in-situ;
- Upon completion of construction activities, it must be ensured that no bare areas outside the development footprint remain and that indigenous grassland species endemic to the area are reintroduced as part of landscaping activities;
- *Sideroxylon inerme* (milkwood) was observed during the site assessment. This species is protected under the National Forest Act (1998). In terms of this act, protected tree species may not be cut, disturbed, damaged or destroyed and their products may not be possessed, collected, removed, transported, exported, donated, purchased or sold - except under licence granted by the Department of Water Affairs (DWA) (or a delegated authority). As the majority of the trees are relatively small and easy to transplant because the soil is sandy, it is recommended that the trees are incorporated as part of the landscaping of the proposed development, after obtaining the relevant permits;
- It is recommended that a rescue and relocation operation is implemented for *Chersina angulata* (Angulate Tortoise) prior to any site clearing activities taking place and that all tortoises be relocated to the nearby Zwartkops Valley Nature Reserve.
- Should any other floral or faunal SCC be encountered within the development footprint during the construction or operational phase, the following should be ensured:
    - Effective conservation/relocation of individuals to suitable similar habitat in the vicinity of the area from where they have been removed must be ensured; and
    - All rescue and relocation plans should be overseen by a suitably qualified specialist.
- No trapping or hunting of any faunal species is to take place;
- Prohibit the collection of any plant material for firewood or medicinal purposes;
- Informal fires by construction personnel should be prohibited;

- Keep the proposed development footprint as small as possible, managed all edge effects so as to not impact upon the surrounding more sensitive areas;
- Construction vehicles should be restricted to travelling on designated roadways only to limit the ecological footprint of the proposed development activities;
- Edge effect control needs to be implemented within construction areas, with specific consideration to erosion control and alien floral species management;
- Establishment of reintroduced vegetation must be monitored during the operational phase;
- Alien vegetation as listed in Appendix F of the biodiversity specialist report must be removed from the footprint area during the construction phase, with specific mention of Category 1b species in line with the NEMBA Alien and Invasive Species Regulations (2016); and
- Should maintenance or further infrastructure expansion activities be required during the operational phase, it should be ensured that these activities are kept strictly within the development footprint.

- **Surface Water Related Direct Impacts:**

Pre-construction phase potential direct impacts include:

1) Impacts to Wetland Habitat - A construction lay-down area will be required for the proposed development. The location of the construction lay-down area is important. Placing the lay-down area within the wetland habitat of the will likely result in both direct and indirect negative impacts. Where site clearing for the lay-down area is required, the clearance/removal of vegetation will result in a loss of riparian habitat. Infill and compaction of the lay-down area and subsequent movement at the surface will also result in geomorphological impacts to the wetland disrupting the hydrogeomorphic processes of the wetland. This can also affect the hydrology of the wetland altering the water retention and distribution through disturbance of the substrate.

   Pre-mitigation significance rating is medium and negative. With appropriate mitigation measures, the impact can be reduced to low.

Mitigation measures for pre-construction phase impacts to wetland habitat include the following:

- **Location of the Lay-down Area**: The construction lay-down area must not be placed within 50m nor directly within the identified wetland unless absolutely necessary. Where this is absolutely required, the relevant environmental authorization and water licenses must be obtained before construction is allowed to commence. A wetland offset would be required where there will be a permanent loss of wetland habitat. Where obtained, the stipulated conditions and any further mitigation measures are to be adhered to accordingly.

- **Preventing Fire Risks**: Operational fire extinguishers are to be available in the case of a fire emergency. Given the dry seasons and strong winds that the region experiences, it is recommended that a fire management and emergency plan is compiled. A suitably qualified health and safety officer must compile the fire management and emergency plan for proposed development.

Construction phase potential direct impacts include:

1) Impacts to Wetland Habitat - As per the layout of the proposed development, the Truck Workshop and Dry Goods Warehouse are earmarked for construction directly over portions of the depression wetland. As a result, infill will be required and foundations for these components will need to be established. This would result in loss of wetland habitat and geomorphology. In addition, construction vehicles (heavy and light) will require access to the proposed components as per the layout. Further physical degradation to other areas of the wetland are highly likely to take place, thereby further impacting on the wetland habitat and geomorphology. The possibility of human degradation to wetland habitat is also likely to occur during the construction phase. Human degradation can take the form of physical direct degradation such as lighting fires in or near the wetland, as well as damaging and/or removing vegetation associated with the wetland. Ultimately, any functions (biogeochemical cycling processes, sediment trapping, flood attenuation etc.) that the wetland currently provides will be lost should construction take place over the wetland.

   Pre-mitigation significance rating is very high and negative. With appropriate mitigation measures, the impact can be offset elsewhere.

Mitigation measures for construction phase impacts to wetland habitat include the following:

- **Offset Against Loss of Wetland Habitat:** Where the wetland is destroyed for the proposed development, a wetland offset strategy must be put in place and implemented such that there is no "net-loss" of the wetland. This will need to be compiled by a suitably qualified wetland specialist.

2) Impacts to Water Quality - Water quality impacts can result from workers using the wetland for various purposes, such as for sanitation. Usage of sanitary substances (for example, soap) in or near the wetland can alter the chemical balance or water quality thereby causing pollution to the hydrological system. Additionally, usage of the wetlands for urine and faecal waste is another potential negative water quality impact. Use of water for building purposes can also lead to impaired water quality. Mixing cement and cleaning construction tools in the wetland can affect the water quality of the wetland.

   Pre-mitigation significance rating is medium and negative. With appropriate mitigation measures, the potential impact can be minimised to low.

Mitigation measures for construction phase impacts to water quality include the following:

- **Storage of Oils, Fuels and Hazardous Substances / Liquids**: All oils, fuels and hazardous substances or liquids must not be stored within 100m from surface water resources. Where these items are stored, the storage area must be adequately bunded to contain any spillage from containers. Emergency spill kits must be available to clean up and remove spills.

- **Preventing Increased Run-off, Sedimentation and Erosion Impacting on Surface Water Resources**: Vegetation clearing must take place in a phased manner, only clearing areas where construction will take place and not additional areas where construction will only take place in the future. Vegetation clearing must be limited to the construction areas and RoW within surface water resources.

  In general, adequate structures must be put into place (temporary or permanent where necessary in extreme cases) to deal with increased/accelerated run-off and sediment volumes. The use of silt fencing and potentially sandbags or hessian "sausage" nets can be used to prevent erosion in susceptible construction areas. All impacted areas are to be adequately sloped to prevent the onset of erosion.

  An appropriate construction storm water management plan formulated by a suitably qualified professional must accompany the proposed development to deal with increased run-off in the designated construction areas.

- **Preventing Soil and Surface Water Contamination**: All vehicles and machinery operating on the study site are to be checked for oil, fuel or any other fluid leaks before entering the construction areas. All vehicles and machinery must be regularly serviced and maintained before being allowed to enter the construction study site. No fuelling, re-fuelling, vehicle and machinery servicing or maintenance is to take place within 50m of the wetland.

  The study site is to contain sufficient safety measures throughout the construction process. Safety measures include (but are not limited) oil spill kits and the availability of fire extinguishers. Additionally, fuel, oil or hazardous substances storage areas must be bunded at 110% capacity to prevent oil or fuel contamination of the ground and/or nearby wetland, including the associated buffer zone.

  No cement mixing is to take place in the wetland. In general, any cement mixing should take place over a bin lined (impermeable) surface or alternatively in the load bin of a vehicle to prevent the mixing of cement with the ground. Cement / concrete can also be trucked in readymix vehicles. Importantly, no mixing of cement or concrete directly on the surface is allowed in the wetland and associated buffer zone.

  No "long drop" toilets are allowed on the study site. Suitable temporary chemical sanitation facilities are to be provided. Temporary chemical sanitation facilities must be placed at least 100 meters from any surface water resource(s) where required.

Temporary chemical sanitation facilities must be checked regularly for maintenance purposes and cleaned often to prevent spills.

3) Impacts to Biodiversity (Fauna & Avi-Fauna) - In terms of direct impacts, fauna and avi-fauna associated with wetlands can be hunted, trapped, killed, injured or eaten. Despite very little fauna and avi-fauna observed during the site visit, animals may well be present at different stages in the year.

   Pre-mitigation significance rating is low and negative. With appropriate mitigation measures, the degree of impact can be further reduced.

Mitigation measures for construction phase impacts to biodiversity (fauna & avi-fauna) include the following:

- **Preventing Human Physical Degradation of Surface Water Resource Fauna**: No animals or avi-fauna on the construction site or surrounding areas are to be hunted, captured, trapped, removed, injured, killed or eaten by construction workers or any other project team members. Should any party be found guilty of such an offence, stringent penalties should be imposed. The appointed Environmental Control Officer (ECO) or another suitably qualified appointed individual may only remove animals, where such animals (including snakes, scorpions, spiders etc.) are a threat to construction workers.

- The ECO or appointed individual is to be contacted should removal of any fauna or avi-fauna be required during the construction phase. Animals or avi-fauna that cause a threat and need to be removed, may not be killed. Additionally, these animals are to be relocated outside the study site, but within relative close proximity where they were found.

- **Heritage Related Direct Impacts:**

Construction phase potential direct impacts include:

1) Impact on Palaeontological Heritage – This will take place should any fossils be disturbed, damaged, destroyed or permanently sealed-in at or below the ground surface and then no longer be available for scientific study. The entire development footprint of the study area is underlain by the Cretaceous aged Sundays River and Kirkwood Formations of the Uitenhage Group. The Palaeontological sensitivity of these areas is rated as very high.

   Should the project progress without due care to the possibility of fossils being present at the proposed site within the Sundays River and Kirkwood Formation of the Uitenhage Group, the resultant damage, destruction or inadvertent relocation of any affected fossils will be permanent and irreversible. Thus, any fossils occurring within the site are potentially scientifically and culturally significant and any negative impact

on them would be of high significance (without the implementation of mitigation measures).

Mitigation measures for construction phase impacts on palaeontological heritage include the following:

- It is recommended that a full EIA level palaeontology report be conducted to assess the value and prominence of fossils in the development area and the effect of the proposed development on the palaeontological heritage.

- Depending on the results of the full PIA, it may be recommended that a Palaeontologist should apply for a SAHRA permit and field work would entail surveying, recording and describing fossil heritage, and obtaining relevant data concerning the surrounding sedimentary matrix) and the well preserved fossils must be excavated and sent to a permitted institution. All of the information regarding the process followed must be compiled into a report after fossils have been excavated.

- The recommendations must be included in the EMPr of the project.

2) Impact on Archaeological Resources – Two (2) isolated Stone Age resources were identified during the fieldwork, having low archaeological significance. All the identified find spots could be impacted by construction activities, however the impact is seen as negligible.

   The significance of the impact on archaeological resources during the construction phase is expected to be low negative before mitigation and low negative after mitigation.

No mitigation measure have been provided with regards to the impact on archaeological resources during the construction phase.

3) Impact on Unidentified Heritage / Archaeological Resources or Chance Finds - Due mainly to the dense vegetation occurring over the western portion of the area assessed, the possibility of encountering heritage resources in the un-surveyed areas does exist.

   The significance of the impact on unidentified heritage / archaeological resources or chance finds during the construction phase is expected to be low negative before mitigation and low negative after mitigation.

Mitigation measures for construction phase impacts on unidentified heritage / archaeological resources or chance finds include the following:

- If any heritage resources are uncovered during construction, a heritage specialist should be contacted to undertake a specialist assessment and make recommendations.

- **Palaeontology Related Direct Impacts:**

Pre-construction phase potential direct impacts include:

1) Impacts on Palaeontological Heritage – During the pre-construction phase, actions without mitigation according to "Chance Find Protocol" will lead to destruction of and permanent loss of fossils. With mitigation Palaeontological Heritage will benefit by the fact that areas with no outcrop will become available for scientific investigation, albeit for a very limited time. The Phase 1 field assessment revealed the presence of possible vertebrate fossils and it is a known fact that excavation into the Sundays River Formation has a Very High likelihood of exposing significant marine invertebrate palaeo-fauna. Any excavation will either provide a unique opportunity to find new fossils if properly mitigated, or lead to permanent loss of information if not mitigated according to the "Chance Find Protocol".

   Without mitigation, the significant negative impact on Palaeontological Heritage will be Very High during the planning phase. There will be no impact on Palaeontological Heritage during operational and decommissioning phases.

Construction phase potential direct impacts include:

1) Impacts on Palaeontological Heritage - During the construction phase, actions without mitigation according to "Chance Find Protocol" will lead to destruction of and permanent loss of fossils. With mitigation Palaeontological Heritage will benefit by the fact that areas with no outcrop will become available for scientific investigation, albeit for a very limited time. The Phase 1 field assessment revealed the presence of possible vertebrate fossils and it is a known fact that excavation into the Sundays River Formation has a Very High likelihood of exposing significant marine invertebrate palaeo-fauna. Any excavation will either provide a unique opportunity to find new fossils if properly mitigated, or lead to permanent loss of information if not mitigated according to the "Chance Find Protocol".

   Without mitigation, the significant negative impact on Palaeontological Heritage will be Very High during the construction phases. There will be no impact on Palaeontological Heritage during operational and decommissioning phases.

Mitigation measures for the pre-construction and construction phase impacts on palaeontological heritage include the following:

- It is essential that the appointed palaeontologist, in consultation with the Project Manager of the Excavation works and SPAR Warehouse Team, develop a short-term strategy for the recovery of significant fossils during the excavation operation. As part of such a strategy, the palaeontologist will have to:
    - *Initially, and at least for the first week of excavation, visit the site at least once to ensure recording of all potentially significant fossil strata.*

- *Determine a short-term strategy and budget for the recording of significant fossils. This Strategy can simply be an oral agreement on when the site is to be inspected and what the finds are that might be recorded. The site visit must include an introduction session with all the managers of the Project Team, including training of the ECO by the appointed palaeontologist to basically know what to look out for in terms of fossil heritage on site.*

- *In the case of any unusual structures, the Palaeontologist must be notified, and a site visit must be arranged at the earliest possible time with the Palaeontologist. In the case of the ECO or the Site Manager becoming aware of suspicious looking material that might be a "Significant Find", the construction must be halted in that specific area and the Palaeontologist must be given enough time to reach the site and remove the material before excavation continues.*

Mitigation measures normally encountered include:

- Mitigation of palaeontological material must begin as soon as possible and preferably when "trial excavation" takes place. The appointed specialists must acquaint themselves with the operation and determine feasible mitigation strategies.

- A plan for systematic sampling, recording, preliminary sorting and storage of palaeontological and sedimentological samples will be developed during the early stages of the project, in collaboration with the Evolutionary Studies Institute (ESI) at WITS University (or any other registered Institute proposed by ECPHRA which is the closest Institute to the site. If appropriate, the Nelson Mandela Metropolitan University might be asked for their involvement in this project.

- Mitigation will involve an attempt to capture all rare fossils and systematic collection of all fossils discovered. This will take place in conjunction with descriptive, diagrammatic and photographic recording of exposures, also involving sediment samples and samples of both representative and unusual sedimentary or biogenic features. The fossils and contextual samples will be processed (sorted, sub-sampled, labelled, boxed) and documentation consolidated, to create an archive collection from the excavated sites for future researchers.

Exposure of palaeontological material

In the event of construction exposing new palaeontological material, not regarded as normative/routine as outlined in the initial investigation, such as a major fossil find, the following procedure must be adhered to:

- The appointed specialist or alternates (ECPHRA, SAHRA, ESI, WITS University and/or other Institute as applicable) must be notified by the responsible officer (e.g. the ECO or

contractor manager), of major or unusual discoveries during excavation, found by the Contractor Staff.

- Should a major in situ occurrence be exposed, excavation will immediately cease in that area so that the discovery is not disturbed or altered in any way until the appointed specialist or scientists from the appropriate Institute and Authority (e.g. ESI at WITS University), or its designated representatives, have had reasonable opportunity to investigate the find. Such work will be at the expense of the Developer.

Indirect impacts:

- **Surface Water Related Indirect Impacts:**

Pre-construction phase potential indirect impacts include:

1) Impacts to Wetland Habitat - A construction lay-down area will be required for the proposed development. The location of the construction lay-down area is important. Placing the lay-down area within the wetland habitat of the will likely result in both direct and indirect negative impacts. Where site clearing for the lay-down area is required, the clearance/removal of vegetation will result in a loss of riparian habitat. Infill and compaction of the lay-down area and subsequent movement at the surface will also result in geomorphological impacts to the wetland disrupting the hydrogeomorphic processes of the wetland. This can also affect the hydrology of the wetland altering the water retention and distribution through disturbance of the substrate.

   Pre-mitigation significance rating is medium and negative. With appropriate mitigation measures, the impact can be reduced to low.

Mitigation measures for pre-construction phase impacts to wetland habitat include the following:

- **Location of the Lay-down Area:** The construction lay-down area must not be placed within 50m nor directly within the identified wetland unless absolutely necessary. Where this is absolutely required, the relevant environmental authorization and water licenses must be obtained before construction is allowed to commence. A wetland offset would be required where there will be a permanent loss of wetland habitat. Where obtained, the stipulated conditions and any further mitigation measures are to be adhered to accordingly.

- **Preventing Fire Risks:** Operational fire extinguishers are to be available in the case of a fire emergency. Given the dry seasons and strong winds that the region experiences, it is recommended that a fire management and emergency plan is compiled. A suitably qualified health and safety officer must compile the fire management and emergency plan for proposed development.

2) Impacts to Water Quality - Potential impacts in terms of water quality can result where the construction lay-down area is placed inside or in close proximity (approximately 30m) of the wetland. Potential contamination and pollution impacts from stored oils, fuels, and other hazardous substances or materials being transported via storm water run-off are a possibility. Furthermore, additional sediment loads can also be transported in storm water run-off entering the wetland. High sediment loads can smother vegetation and change the wetland flow paths and dynamics making affected areas susceptible to bush encroachment and alien plant colonisation leading to negative impacts.

   Pre-mitigation significance rating is medium and negative. With appropriate mitigation measures, the impact can be reduced to low.

Mitigation measures for pre-construction phase impacts to water quality include the following:

- **Location of the Lay-down Area:** The construction lay-down area must not be placed within 50m nor directly within the identified wetland unless absolutely necessary. Where this is absolutely required, the relevant environmental authorization and water licenses must be obtained before construction is allowed to commence. A wetland offset would be required where there will be a permanent loss of wetland habitat. Where obtained, the stipulated conditions and any further mitigation measures are to be adhered to accordingly.
- **Storage of Oils, Fuels and Hazardous Substances / Liquids**: All oils, fuels and hazardous substances or liquids must not be stored within 100m from surface water resources. Where these items are stored, the storage area must be adequately bunded to contain any spillage from containers. Emergency spill kits must be available to clean up and remove spills.
- **Preventing Increased Run-off, Sedimentation and Erosion Impacting on Surface Water Resources:** In general, adequate structures must be put into place (temporary or permanent where necessary in extreme cases) to deal with increased/accelerated run-off and sediment volumes. The use of silt fencing and potentially sandbags or hessian "sausage" nets can be used to prevent erosion in susceptible construction areas.
- **Preventing Soil and Surface Water Contamination**: All vehicles and machinery are to be checked for oil, fuel or any other fluid leaks before entering the designated construction areas.

Construction phase potential indirect impacts include:

1) Impacts to Water Quality - Similar water quality potential impacts as described in Section 7.1.2 of the Surface Water specialist report can occur for general construction activities on the study site. This can include increased sediment loads entering the wetland as a result of clearing activities and bulk earthworks, as well as potential contamination impacts as a result of stored oils, fuels, and other hazardous substances or materials being transported via storm water run-off. Oil leaks from construction vehicles and machinery is an additional possibility.

Pre-mitigation significance rating is medium and negative. With appropriate mitigation measures, the potential impact can be minimised to low.

Mitigation measures for construction phase impacts to water quality include the following:

- **Storage of Oils, Fuels and Hazardous Substances / Liquids**: All oils, fuels and hazardous substances or liquids must not be stored within 100m from surface water resources. Where these items are stored, the storage area must be adequately bunded to contain any spillage from containers. Emergency spill kits must be available to clean up and remove spills.

- **Preventing Increased Run-off, Sedimentation and Erosion Impacting on Surface Water Resources**: Vegetation clearing must take place in a phased manner, only clearing areas where construction will take place and not additional areas where construction will only take place in the future. Vegetation clearing must be limited to the construction areas and RoW within surface water resources.

  In general, adequate structures must be put into place (temporary or permanent where necessary in extreme cases) to deal with increased/accelerated run-off and sediment volumes. The use of silt fencing and potentially sandbags or hessian "sausage" nets can be used to prevent erosion in susceptible construction areas. All impacted areas are to be adequately sloped to prevent the onset of erosion.

  An appropriate construction storm water management plan formulated by a suitably qualified professional must accompany the proposed development to deal with increased run-off in the designated construction areas.

- **Preventing Soil and Surface Water Contamination**: All vehicles and machinery operating on the study site are to be checked for oil, fuel or any other fluid leaks before entering the construction areas. All vehicles and machinery must be regularly serviced and maintained before being allowed to enter the construction study site. No fuelling, re-fuelling, vehicle and machinery servicing or maintenance is to take place within 50m of the wetland.

  The study site is to contain sufficient safety measures throughout the construction process. Safety measures include (but are not limited) oil spill kits and the availability of fire extinguishers. Additionally, fuel, oil or hazardous substances storage areas must be bunded at 110% capacity to prevent oil or fuel contamination of the ground and/or nearby wetland, including the associated buffer zone.

  No cement mixing is to take place in the wetland. In general, any cement mixing should take place over a bin lined (impermeable) surface or alternatively in the load bin of a vehicle to prevent the mixing of cement with the ground. Cement / concrete can also be trucked in readymix vehicles. Importantly, no mixing of cement or concrete directly on the surface is allowed in the wetland and associated buffer zone.

No "long drop" toilets are allowed on the study site. Suitable temporary chemical sanitation facilities are to be provided. Temporary chemical sanitation facilities must be placed at least 100 meters from any surface water resource(s) where required. Temporary chemical sanitation facilities must be checked regularly for maintenance purposes and cleaned often to prevent spills.

2) Impacts to Biodiversity (Fauna & Avi-fauna) - The possibility of potential impacts to fauna utilising the wetland can occur during the construction phase. Impacts can take place indirectly due to lighting fires (purposefully or accidentally) in or near to surface water resources. Fauna and avi-fauna can be harmed or even killed as a result of fires.

   Pre-mitigation significance rating is low and negative. With appropriate mitigation measures, the degree of impact can be further reduced.

Mitigation measures for construction phase impacts to biodiversity (fauna & avi-fauna) include the following:

- **Preventing Human Physical Degradation of Surface Water Resource Fauna**: No animals or avi-fauna on the construction site or surrounding areas are to be hunted, captured, trapped, removed, injured, killed or eaten by construction workers or any other project team members. Should any party be found guilty of such an offence, stringent penalties should be imposed. The appointed Environmental Control Officer (ECO) or another suitably qualified appointed individual may only remove animals, where such animals (including snakes, scorpions, spiders etc.) are a threat to construction workers.

- The ECO or appointed individual is to be contacted should removal of any fauna or avi-fauna be required during the construction phase. Animals or avi-fauna that cause a threat and need to be removed, may not be killed. Additionally, these animals are to be relocated outside the study site, but within relative close proximity where they were found.

Operational phase potential indirect impacts include:

1) Impacts to Water Quality and Quantity - The constructed impermeable surfaces for the proposed development can contribute increased run-off which can contain sediments and or other hazardous soluble liquids (oils, fuels and other liquids from the Truck Workshop, Truck Wash and Municipal Substation). Storm water run-off containing sediments that deposit in the wetland can cause sedimentation. With existing activities already contributing to storm water impacts, the additional sediment loads from the study site itself can further degrade the wetland. As previously mentioned, sedimentation can be detrimental by destabilizing the current sediment regime and the associated ecological processes. Where hazardous soluble liquids contained in storm water run-off also get deposited into the wetland, water quality contamination impacts can take place.

Pre-mitigation significance rating is medium and negative. With appropriate mitigation measures, the impact can be reduced to low.

Mitigation measures for operational phase impacts to water quality and quantity include the following:

- Any hardstand area or building within 50m proximity to the wetland must have energy dissipating structures in an appropriate location to prevent increased run-off entering adjacent areas or the wetland. This can be in the form of hard concrete structures or soft engineering structures (such as grass blocks for example).

- Alternatively, a suitable operational storm water management design or plan can be compiled and implemented that accounts for the use of appropriate alternative structures or devices. These need to account for bunding of facilities where polluted or hazardous liquids are being dealt with regularly or where floods can lead to overspill on the study site (i.e. Truck Workshop, Truck Wash and Municipal Substation). At a general level, the storm water management plan must account for prevention of increased run-off, sedimentation entering the wetland.

Cumulative impacts:

- **Heritage Related Cumulative Impacts:**

The Heritage Impact Assessment (HIA) evaluated the possible cumulative impacts (CI) on heritage resources with the addition of the SPAR Warehouse. The evaluation was based on available heritage studies. The evaluation could however not take the findings of outstanding studies on current on-going EIA's in consideration.

Since most of the previous heritage studies for the surrounding area noted that the landscape has been disturbed severely in the past, and most of them recorded only isolated archaeological resources, together with the study area itself being located within an industrial area, the CI on heritage resources for the general area is deemed to be low for archaeological resources. However, the CI for palaeontological resources would be medium-high due to the highly disturbed nature of the surrounding area and the very high sensitivity recorded for palaeontological resources.

Construction phase potential cumulative impacts include:

1) Cumulative Impact on Archaeological Resources – The addition of the proposed development is expected to contribute to the overall cumulative impacts in the region on heritage / archaeological resources as a number of other buildings, structures, warehouses, distribution centres etc. have been constructed within the surrounding area.

It is the heritage specialist's reserved but considered opinion that this additional load on the overall impact on heritage resources will be low. With a detailed and comprehensive regional dataset this rating could possibly be adjusted and more accurate.

The significance of the cumulative impact on archaeological resources will be negative low impact before mitigation and low negative after mitigation.

No mitigation have been provided with regards to the construction phase cumulative impacts on archaeological resources.

2) Cumulative impact on Palaeontological Resources – The addition of the proposed development is expected to contribute to the overall cumulative impacts in the region on heritage / palaeontological resources as a number of other buildings, structures, warehouses, distribution centres etc. have been constructed within the surrounding area.

It is the heritage specialist's reserved but considered opinion that the additional load on the overall impact on palaeontological resources will be medium to high. However, this will depend on the results of the full PIA study. With a detailed and comprehensive regional dataset this rating could possibly be adjusted and more accurate.

The significance of the cumulative impact on palaeontological resources will be medium to high negative before mitigation. Appropriate mitigation measures could however adjust the significance rating to medium to low negative.

No mitigation have been provided with regards to the construction phase cumulative impacts on palaeontological resources.

- **Biodiversity Related Cumulative Impacts**

Should the mitigation measures as set out in the Biodiversity specialist report be adhered to and implemented, no significant latent and/or cumulative impacts on the receiving terrestrial ecological environment are deemed likely.

3. 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.

Alternative A (preferred alternative)

It is SiVEST's opinion that the impacts associated with the proposed development are not significant enough to prevent the project from proceeding and that an EA should be granted. The existing industrial area which is located adjacent to the proposed project site, as well as the nearby residential communities, have transformed and/or altered the natural character of the surrounding environment significantly and given it a more industrial and/or urban character. Additionally, due to the fact that the proposed project site is situated adjacent to other existing warehouses and/or distribution centres, the proposed development also fits in with the current activities taking place on site. The impacts anticipated as a result of the proposed development are thus likely to be similar to the current impacts taking place on site as a result of the other existing operations. The surrounding receptors are therefore not expected to be significantly affected as a result of the proposed development.

According to the Biodiversity specialist assessment, three (3) habitat units were observed within the boundaries of the study area, namely Degraded Sundays Thicket, Transformed habitat and Wetland habitat. Limited areas of Sundays Thicket remain, and the habitat integrity has been degraded by land uses such as intensive livestock grazing and subsistence agriculture. The Wetland habitat unit has been severely degraded by dumping of rubble and discharge from urban storm water runoff. In addition, the Transformed habitat unit has been severely degraded by vegetation clearance, rubble dumping, edge effects associated with industrial activities, alien floral invasion and subsistence agriculture. As such, the proposed project site is not considered to be environmentally sensitive and will not significantly be impacted on by the proposed development.

It is important to note that due to limited space (based on the entire project and additional future phases to be constructed), the current layout and project components cannot be altered to avoid the identified depression wetland. As a result, the proposed development will need to involve the infill of the wetland in order to facilitate construction of the proposed development. Ultimately, the wetland will need to be destroyed. In light of the above, the only way to permit the loss of the depression wetland is to compile and implement a suitable wetland offset plan that is acceptable and authorised by DWS and DEDEA. As such, a wetland offset plan will be compiled and submitted as part of the environmental and water use license application processes to facilitate the current layout and offset the proposed loss of the depression wetland. The proposed wetland offset plan will be undertaken as part of the water use license application (WULA) process. In addition, provisional EA will be obtained for the proposed development and will depend on the findings of the wetland offset strategy. The wetland offset process and plan will be undertaken in the next two (2) months of which meetings will be undertaken involving all relevant stakeholders (including DWS, DEDEA and any other relevant stakeholders) in order to discuss the various wetland offset options and to provide the way forward in compiling the wetland offset plan.

The impact assessments undertaken for each respective specialist study / assessment revealed that majority of the anticipated impacts of the proposed development are rated as being negative and low. The impact assessment for the EIA level PIA however revealed that the impact on Palaeontological Heritage was rated as having a high positive significance after to the implementation of mitigation measures. In addition, the impacts associated with the degradation

and loss of wetland habitat and functionality during the construction phase were found to have a very high negative significance rating after the implementation of mitigation measures from a surface water perspective. Despite this, no fatal flaws exist as a result of the proposed development. SiVEST is therefore of the opinion that the impacts associated with the construction and operation phases can be mitigated to acceptable levels provided the recommended mitigation measures and/or specialist recommendations are implemented.

No-go alternative (compulsory)

The "no-go" option is the option of not undertaking the proposed development. The proposed development is being proposed in order to house the increase in SPAR's operational demands due to national and regional growth. SPAR Eastern Cape has outgrown their current Distribution Centre in Perseverance and therefore need to find a new site to establish a new distribution centre. The new site has to accommodate SPAR's 20 year expansion plan and must also be in close proximity to the existing Distribution Centre. The proposed project site identified is an undeveloped erf that is located in the same street as SPAR's existing Distribution Centre, thus fulfilling their need of having a large site to accommodate their expansion plans as well as being close to the existing Distribution Centre. The proposed development will increase the extent of SPAR's operations within the area, as well as bolster the business development within the area. The proposed development is also considered to be in the best interest of both SPAR, as well as the surrounding local communities, as it has the potential to increase profits for SPAR and contribute to employment opportunities for members of the local communities. In SiVEST's opinion, the only reason for not proceeding with the proposed development would be as a result of the project not being considered feasible by SPAR.

SECTION E: RECOMMENDATIONS 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✓**
Is an EMPr attached?	**YES✓**

The EMPr must be attached as Appendix F.

A Draft Environmental Management Programme (EMPr) in attached as **Appendix F**.

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):

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:

The following Biodiversity related recommendations / mitigation measures should be considered for inclusion in the authorisation that may be granted by the competent authority in respect of the application:

- *Sideroxylon inerme* (milkwood) was observed during the site assessment. This species is protected under the National Forest Act (1998). In terms of this act, protected tree species may not be cut, disturbed, damaged or destroyed and their products may not be possessed, collected, removed, transported, exported, donated, purchased or sold - except under licence granted by the Department of Water and Sanitation (DWS) (or a delegated authority). As the majority of the trees are relatively small and easy to transplant because the soil is sandy, it is recommended that the trees are incorporated as part of the landscaping of the proposed development, after obtaining the relevant permits;
- It is recommended that a rescue and relocation operation is implemented for *Chersina angulata* (Angulate Tortoise) prior to any site clearing activities taking place and that all tortoises be relocated to the nearby Zwartkops Valley Nature Reserve;
- Should any other floral or faunal SCC be encountered within the development footprint during the construction or operational phase, the following should be ensured:
    - Effective conservation/relocation of individuals to suitable similar habitat in the vicinity of the area from where they have been removed must be ensured; and\
    - All rescue and relocation plans should be overseen by a suitably qualified specialist.

- Alien vegetation as listed in Appendix F of the biodiversity specialist report must be removed from the footprint area during the construction phase, with specific mention of Category 1b species in line with the NEMBA Alien and Invasive Species Regulations (2016).

The following Surface Water related recommendations / mitigation measures should be considered for inclusion in the authorisation that may be granted by the competent authority in respect of the application:

- A suitable wetland offset plan that is acceptable and approved by the DWS and DEDEA must be compiled and implemented. The wetland offset plan will need to be such that a new wetland can be constructed of equal or better functionality, or to rehabilitate one or a number of other wetlands to the equivalent extent of wetland being lost to the desired standards in order to offset the loss of the depression wetland on the study site. As such, it is recommended that a wetland offset plan is compiled and submitted as part of the environmental and water use license application processes to facilitate the current layout and offset the proposed loss of the depression wetland.

The following Heritage related recommendations / mitigation measures should be considered for inclusion in the authorisation that may be granted by the competent authority in respect of the application:

- If any heritage resources are uncovered during construction, a heritage specialist should be contacted to undertake a specialist assessment and make recommendations.

The following Palaeontology related recommendations / mitigation measures should be considered for inclusion in the authorisation that may be granted by the competent authority in respect of the application:

- The EAP and ECO must be informed of the fact that a Very High Palaeontological Sensitivity was allocated to the greater part of the development. The discovery of "suspiciously heavy bones" and other material, significant fossil finds are expected at the start of excavations for foundations;

- The entire team at the construction site must be introduced to Palaeontological material that is likely to be found on site. It is best to pre-arrange a once-off information session with the Palaeontological specialist, to present a simple and understandable (preferably audio-visual presentation in an "interpreted voice") of the majority of the contractual workers on site during the initial site visit that must form part of the EMPr for the project;

- The "Chance Find Protocol" needs to be included in the EMPr of the project and a reasonable budget need to be allocated, to ensure compliance with the legal

responsibility of the developer in terms of the proper conservation of and storage of Palaeontological Heritage.

- The ECPHRA and SAHRA must be informed of the content of the "Chance Find Protocol" and EMPr arrangements by the EAP or the developer, for final approval of the ROD documentation during the EIA process;

- It is essential that the appointed palaeontologist, in consultation with the Project Manager of the excavation works and SPAR Warehouse Team, develop a short-term strategy for the recovery of significant fossils during the excavation operation. As part of such a strategy, the palaeontologist will have to:

    - Initially, and at least for the first week of excavation, visit the site at least once to ensure recording of all potentially significant fossil strata;

    - Determine a short-term strategy and budget for the recording of significant fossils. This Strategy can simply be an oral agreement on when the site is to be inspected and what the finds are that might be recorded. The site visit must include an introduction session with all the managers of the Project Team, including training of the ECO by the appointed palaeontologist to basically know what to look out for in terms of fossil heritage on site; and

    - In the case of any unusual structures, the Palaeontologist must be notified, and a site visit must be arranged at the earliest possible time with the Palaeontologist. In the case of the ECO or the Site Manager becoming aware of suspicious looking material that might be a "Significant Find", the construction must be halted in that specific area and the Palaeontologist must be given enough time to reach the site and remove the material before excavation continues.

SECTION F: APPENDICES

The following appendixes must be attached as appropriate:

Appendix A: Site plan(s)

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports

Appendix E: Comments and responses report

Appendix F: Environmental Management Programme (EMPr)

Appendix G: Other information

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