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Attention –

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Letter of Recommendation (LoR) – Exemption from Archaeological and Palaeontological Studies based on Previous Heritage Studies Conducted for: - Proposed Sewer Pipeline and Wetland Rehabilitation associated with Jupiter Extensions 9-16, Germiston, Ekurhuleni Municipality, Gauteng

1) Executive Summary

The Proposed Sewer Pipeline and Wetland Rehabilitation associated with Jupiter Extensions 9-16, Germiston, Ekurhuleni Municipality, Gauteng development comprises an extension to and with the study site overlapping the previous 2015 Proposed Mixed Use Development (Jupiter Extension 9), on Farms Elandsfontein 90-IR and 108-IR, Germiston, Ekurhuleni Metropolitan Municipality, Gauteng, with the change in property description, from Jupiter Extension 9 to Jupiter Extensions 9-16 being the result of sub-division and rezoning for purposes of the mixed use development.

Heritage studies conducted for the original Proposed Mixed Use Development (Jupiter Extension 9), on Farms Elandsfontein 90-IR and 108-IR, Germiston, Ekurhuleni Metropolitan Municipality, Gauteng, are referenced as:

- o Almond, J. E. (Natura Viva). 2014. *Recommended Exemption from further Palaeontological Studies: Proposed Mixed Use Development on Farms Elandsfontein 90-IR and 108-IR, Germiston, Ekurhuleni Metropolitan Municipality, Germiston;* and
- o Van Ryneveld, K. (ArchaeoMaps). 2015. *Phase 1 Archaeological Impact Assessment – Proposed Mixed Use Development (Jupiter Extension 9) on Farms Elandsfontein 90-IR and 108-IR, Germiston, Ekurhuleni Metropolitan Municipality, Gauteng, South Africa.*

Almond (2014) ascribed a Low Significance to the palaeontology of the general area based on underlying Precambrian rock containing, at most, sparse microbial fossil remains, of widespread occurrence, whilst overlying mine tailings were described as paleontologically sterile. It was recommended that development proceeds without further palaeontological requirements, but pending the discovery of significant fossil remains during the construction phase.

Van Ryneveld (2015) identified 3 contemporary sites (Sites C1 – C3), all comprising structural remains younger than 60 years of age and not formally protected under the National Heritage Resources Act, No 25 of 1999 (NHRA 1999). In accordance with the NHRA 1999 it was recommended that these sites be destroyed for purposes of development without the developer having had to comply with SAHRA Site Destruction Permit requirements. No formally protected heritage sites were identified. Accordingly, the study site was ascribed a Low Significance with reference to

archaeological and cultural heritage resources. It was recommended that development proceeds, pending the on-site identification of significant archaeological or cultural sites or artefacts during the course of construction.

Based on the findings of the heritage studies (Almond 2014; Van Ryneveld 2015) for the Proposed Mixed Use Development (Jupiter Extension 9), on Farms Elandsfontein 90-IR and 108-IR, Germiston, Ekurhuleni Metropolitan Municipality, Gauteng, as summarized above, it is recommended that the Proposed Sewer Pipeline and Wetland Rehabilitation associated with Jupiter Extensions 9-16, Germiston, Ekurhuleni Municipality, Gauteng development be exempted from further heritage studies, provided that development be ceased in the event of either palaeontological or archaeological material being uncovered during the course of construction. Should any palaeontological or archaeological material be so discovered, the immediate area of the find should be temporarily fenced off and declared a no-go area, while the developer should ensure that a relevant heritage site inspection be conducted. Such a heritage site inspection will describe the way forward for development with reference to further recording, collection or Phase 2 Mitigation regarding the palaeontological or archaeological find.

2) Development Description

ArchaeoMaps was appointed by the Environmental Assessment Practitioner (EAP), Manyabe Consultancy, on behalf of Abland, to compile heritage recommendations for the *Proposed Sewer Pipeline and Wetland Rehabilitation associated with Jupiter Extensions 9-16, Germiston, Ekurhuleni Municipality, Gauteng* development, in order to meet requirements stipulated by the Gauteng Department of Agriculture and Rural Development (GDARD) in accordance with the National Environmental Management Act, No 107 of 1998 (NEMA 1998) and associated Regulations, for purposes of a Basic Assessment Report (BAR) and Environmental Authorization (EA).

The *Proposed Sewer Pipeline and Wetland Rehabilitation associated with Jupiter Extensions 9-16, Germiston, Ekurhuleni Municipality, Gauteng* development is situated on the properties Farm Elandsfontein 90-IR and 108-IR (subdivided and rezoned as Jupiter 9-16) at general development co-ordinate S26°13'28.9"; E28°08'02.1" [1:50,000 Map Ref – 2628AA].

The greater mixed use study site is split by a north-south running watershed, resulting in 2 catchments. The western catchment slopes at gradients ranging from 1.2° – 3.0° to the west, while the eastern catchments slopes at an average angle of 1.0° towards the south-east of the site (Manyabe Consultancy 2019).

The western catchment connects to an existing bulk sewer network, which drains into the Gothsford Park Ext. 2 pump station, from where water is pumped to the Waterfall Dekema Rondebult Waste Water Treatment Works (WWTW). But it is planned that the Gothsford Park Ext 2 and the Nasmith pump stations be discontinued and a new gravity outfall sewer, running along the eastern bank of the Natalspruit River, crossing beneath the N3 highway and connecting up to the existing Johannesburg Water Bulk Sewer (Bushkoppies WWTW) be constructed. This new gravity outfall sewer will drain sewerage from the entire mixed use development study site to the north (Manyabe Consultancy 2019).

The proposed sewer line will be approximately 0.84km (840m) in length, with outfall sewer pipe sizes ranging from 250mm – 315mm in diameter resulting in an associated construction area of approximately 0.03ha. The pipeline route is designed to align with the wetland buffer and with construction situated within the 15m delineated wetland buffer. Upon completion of construction and rehabilitation, the wetland buffer will be relaxed for the sewer pipeline to be located outside the newly created wetland buffer. Design alternatives are not considered, based on the sewer line being a gravity line and associated on-site topographic limitations (Manyabe Consultancy 2019).

The preferred design philosophy favours an open channel system which will enhance the ability to introduce new appropriate plant species and improve the overall aesthetics of the watercourse whilst allowing attenuation of increased stormwater from the mixed use development (Manyabe Consultancy 2019).

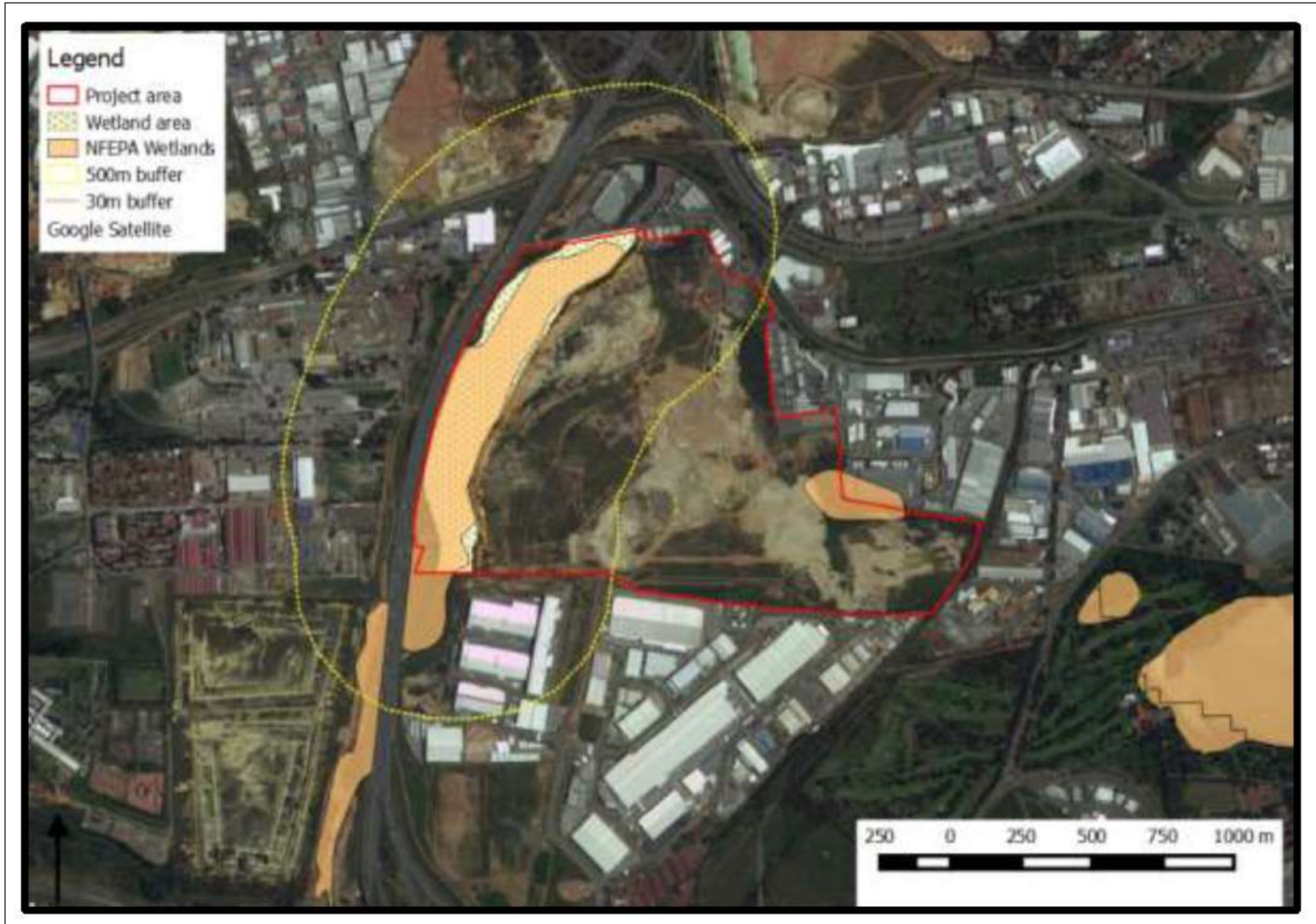


Figure 1: Locality of the proposed sewer pipeline and wetland study site in relation to the mixed use development area (courtesy Manyabe Consultancy 2019)

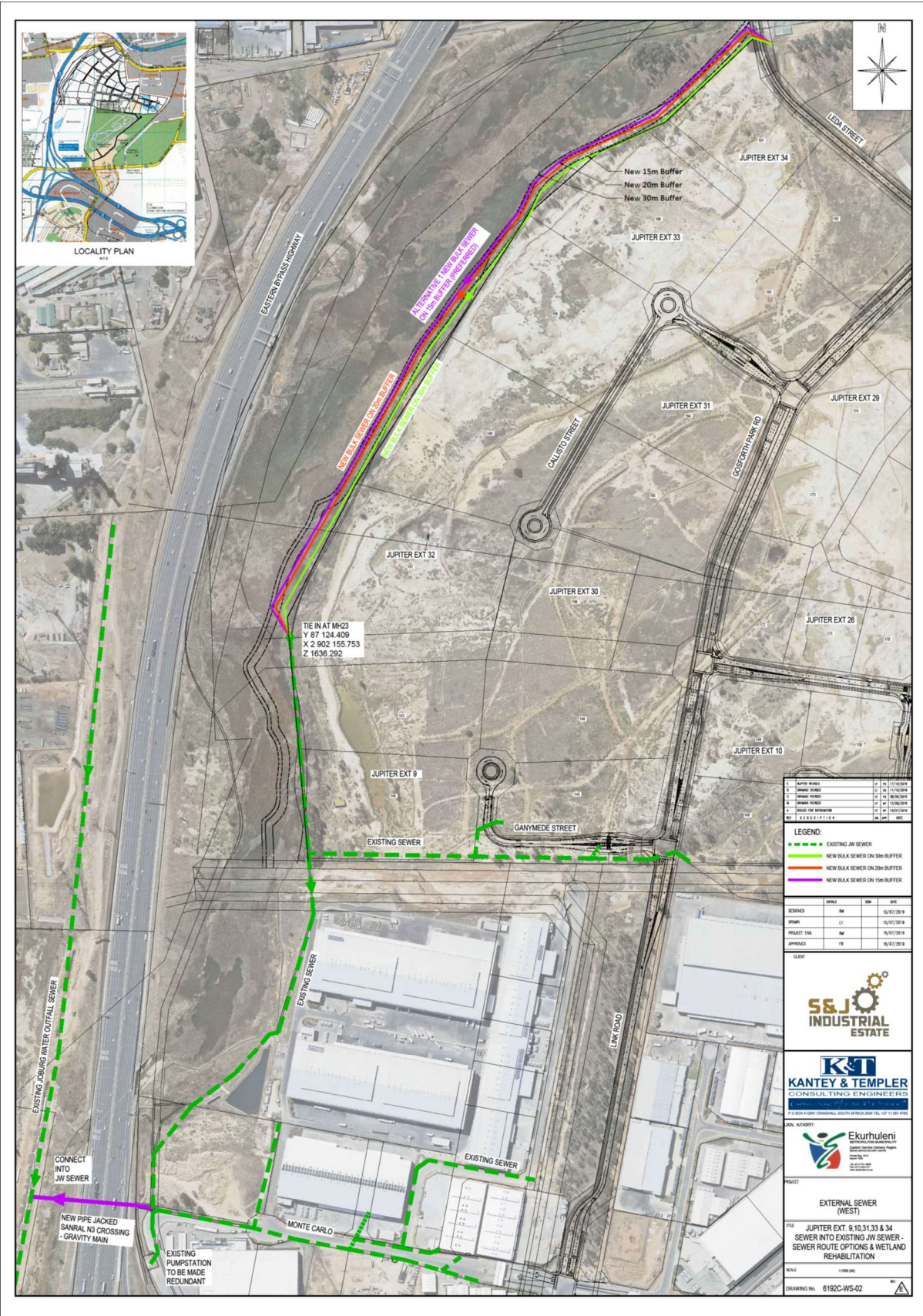


Figure 2: Schematic layout plan of the proposed sewer line (courtesy Manyabe Consultancy 2019)

3) Heritage Assessment for the Original Mixed Use Development

Heritage studies conducted for the original *Proposed Mixed Use Development (Jupiter Extension 9)*, on Farms Elandsfontein 90-IR and 108-IR, Germiston, Ekurhuleni Metropolitan Municipality, Gauteng, are referenced as:

- Almond, J. E. (Natura Viva). 2014. *Recommended Exemption from further Palaeontological Studies: Proposed Mixed Use Development on Farms Elandsfontein 90-IR and 108-IR, Germiston, Ekurhuleni Metropolitan Municipality, Germiston*; and
- Van Ryneveld, K. (ArchaeoMaps). 2015. *Phase 1 Archaeological Impact Assessment – Proposed Mixed Use Development (Jupiter Extension 9) on Farms Elandsfontein 90-IR and 108-IR, Germiston, Ekurhuleni Metropolitan Municipality, Gauteng, South Africa*.

Almond (2014) ascribed a Low Significance to the palaeontology of the general area based on underlying Precambrian rock containing, at most, sparse microbial fossil remains, of widespread occurrence, whilst overlying mine tailings were described as paleontologically sterile. It was recommended that development proceeds without further palaeontological requirements, but pending the discovery of significant fossil remains during the construction phase.

Van Ryneveld (2015) identified 3 contemporary sites (Sites C1 – C3), all comprising structural remains younger than 60 years of age and not formally protected under the National Heritage Resources Act, No 25 of 1999 (NHRA 1999). In accordance with the NHRA 1999 it was recommended that these sites be destroyed for purposes of development without the developer having had to comply with SAHRA Site Destruction Permit requirements. No formally protected heritage sites were identified. Accordingly the study site was ascribed a Low Significance with reference to archaeological and cultural heritage resources. It was recommended that development proceeds, pending the on-site identification of significant archaeological or cultural sites or artefacts during the course of construction.



Figure 3: Phase 1 AIA results (contemporary structures C1-C3) in relation to the proposed sewer pipeline and wetland study site (Van Ryneveld 2015)

4) Conclusion and Recommendations

The *Proposed Sewer Pipeline and Wetland Rehabilitation associated with Jupiter Extensions 9-16, Germiston, Ekurhuleni Municipality, Gauteng* development comprises an extension to and with the study site overlapping the previous 2015 *Proposed Mixed Use Development (Jupiter Extension 9)*, on Farms Elandsfontein 90-IR and 108-IR, Germiston, Ekurhuleni Metropolitan Municipality, Gauteng, with the change in property description, from Jupiter Extension 9 to Jupiter Extensions 9-16 being the result of sub-division and rezoning for purposes of the mixed use development.

Based on the findings of the heritage studies (Almond 2014; Van Ryneveld 2015) for the *Proposed Mixed Use Development (Jupiter Extension 9)*, on Farms Elandsfontein 90-IR and 108-IR, Germiston, Ekurhuleni Metropolitan Municipality, Gauteng, as summarized above, it is recommended that the *Proposed Sewer Pipeline and Wetland Rehabilitation associated with Jupiter Extensions 9-16*, Germiston, Ekurhuleni Municipality, Gauteng development be exempted from further heritage studies, provided that development be ceased in the event of either palaeontological or archaeological material being uncovered during the course of construction. Should any palaeontological or archaeological material be so discovered, the immediate area of the find should be temporarily fenced off and declared a no-go area, while the developer should ensure that a relevant heritage site inspection be conducted. Such a heritage site inspection will describe the way forward for development with reference to further recording, collection or Phase 2 Mitigation regarding the palaeontological or archaeological find.

5) References

1. Almond, J. E. (Natura Viva). 2014. *Recommended Exemption from further Palaeontological Studies: Proposed Mixed Use Development on Farms Elandsfontein 90-IR and 108-IR, Germiston, Ekurhuleni Metropolitan Municipality, Germiston.*
2. Manyabe Consultancy. 2019. *Draft Basic Assessment Report for the Proposed Sewer Pipeline and Wetland Rehabilitation Associated with Jupiter Extensions 9 to 16.*
3. Van Ryneveld, K. (ArchaeoMaps). 2015. *Phase 1 Archaeological Impact Assessment – Proposed Mixed Use Development (Jupiter Extension 9) on Farms Elandsfontein 90-IR and 108-IR, Germiston, Ekurhuleni Metropolitan Municipality, Gauteng, South Africa.*

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Heritage Protocol for Incidental Finds during the Construction Phase

Should any palaeontological, archaeological or cultural heritage resources, including human remains / graves, as defined and protected by the NHRA 1999, be identified during the construction phase of development (including as a norm during vegetation clearing, surface scraping, trenching and excavation phases), it is recommended that the process described below be followed.

➤ On-site Reporting Process:

1. The identifier should immediately notify his / her supervisor of the find.
2. The identifier's supervisor should immediately (and within 24 hours after reporting by the identifier) report the incident to the on-site SHE / SHEQ officer.
3. The on-site SHE / SHEQ officer should immediately (and within 24 hours after reporting by the relevant supervisor) report the incident to the appointed ECO / ELO officer. [Should the find relate to human remains the SHE / SHEQ officer should immediately notify the nearest SAPS station informing them of the find].
4. The ECO / ELO officer should ensure that the find is within 72 hours after the SHE / SHEQ officers report reported on SAHRIS and that a relevant heritage specialist is contacted to make arrangements for a heritage site inspection. [Should the find relate to human remains the ECO / ELO officer should ensure that the archaeological site inspection coincides with a SAPS site inspection, to verify if the find is of forensic, authentic (informal / older than 60 years), or archaeological (older than 100 years) origin].
5. The appointed heritage specialist should compile a 'heritage site inspection' report based on the site specific findings. The site inspection report should make recommendations for the destruction, conservation or mitigation of the find and prescribe a recommended way forward for development. The 'heritage site inspection' report should be submitted to the ECO / ELO, who should ensure submission thereof on SAHRIS.
6. SAHRA / the relevant PHRA will state legal requirements for development to proceed in the SAHRA / PHRA Comment on the 'heritage site inspection' report.
7. The developer should proceed with implementation of the SAHRA / PHRA Comment requirements. SAHRA / PHRA Comment requirements may well stipulate permit specifications for development to proceed.
 - Should permit specifications stipulate further Phase 2 archaeological investigation (including grave mitigation) a suitably accredited heritage specialist should be appointed to conduct the work according to the applicable SAHRA / PHRA process. The heritage specialist should apply for the permit. Upon issue of the SAHRA / PHRA permit the Phase 2 heritage mitigation program may commence.
 - Should permit specifications stipulate destruction of the find under a SAHRA / PHRA permit the developer should immediately proceed with the permit application. Upon the issue of the SAHRA / PHRA permit the developer may legally proceed with destruction of the palaeontological, archaeological or cultural heritage resource.
 - Upon completion of the Phase 2 heritage mitigation program the heritage specialist will submit a Phase 2 report to the ECO / ELO, who should in turn ensure submission thereof on SAHRIS. Report recommendations may include that the remainder of a heritage site be destroyed under a SAHRA / PHRA permit.
 - Should the find relate to human remains of forensic origin the matter will be directly addressed by the SAPS: A SAHRA / PHRA permit will not be applicable.

NOTE: Note that SAHRA / PHRA permit and process requirements relating to the mitigation of human remains requires suitable advertising of the find, a consultation, mitigation and re-interment / deposition process.

➤ Duties of the Supervisor:

1. The supervisor should immediately upon reporting by the identifier ensure that all work in the vicinity of the find is ceased.
2. The supervisor should ensure that the location of the find is immediately secured (and within 12 hours of reporting by the identifier), by means of a temporary conservation fence (construction netting) allowing for a 5-10m heritage conservation buffer zone around the find. The temporary conserved area should be sign-posted as a 'No Entry – Heritage Site' zone.
3. Where development has impacted on the resource, no attempt should be made to remove artefacts / objects / remains further from their context, and artefacts / objects / remains that have been removed should be collected and placed within the conservation area or kept for safekeeping with the SHE / SHEQ officer. It is imperative that where development has impacted on palaeontological, archaeological and cultural heritage resources the context of the find be preserved as good as possible for interpretive and sample testing purposes.
4. The supervisor should record the name, company and capacity of the identifier and compile a brief report describing the events surrounding the find. The report should be submitted to the SHE / SHEQ officer at the time of the incident report.

➤ **Duties of the SHE / SHEQ Officer:**

1. The SHE / SHEQ officer should ensure that the location of the find is recorded with a GPS. A photographic record of the find (including implementation of temporary conservation measures) should be compiled. Where relevant a scale bar or object that can indicate scale should be inserted in photographs for interpretive purposes.
2. The SHE / SHEQ officer should ensure that the supervisors report, GPS co-ordinate and photographic record of the find be submitted to the ECO / ELO officer. [Should the find relate to human remains the SHE / SHEQ officer should ensure that the mentioned reporting be made available to the SAPS at the time of the incident report].
3. Any retrieved artefacts / objects / remains should, in consultation with the ECO / ELO officer, be deposited in a safe place (preferably on-site) for safekeeping.

➤ **Duties of the ECO / ELO officer:**

1. The ECO / ELO officer should ensure that the incident is reported on SAHRIS. (The ECO / ELO officer should ensure that he / she is registered on the relevant SAHRIS case with SAHRIS authorship to the case at the time of appointment to enable heritage reporting].
2. The ECO / ELO officer should ensure that the incident report is forwarded to the heritage specialist for interpretive purposes at his / her soonest opportunity and prior to the heritage site inspection.
3. The ECO / ELO officer should facilitate appointment of the heritage specialist by the developer / construction consultant for the heritage site inspection.
4. The ECO / ELO officer should facilitate access by the heritage specialist to any retrieved artefacts / objects / remains that have been kept in safekeeping.
5. The ECO / ELO officer should facilitate coordination of the heritage site inspection and the SAPS site inspection in the event of a human remains incident report.
6. The ECO / ELO officer should facilitate heritage reporting and heritage compliance requirements by SAHRA / the relevant PHRA, between the developer / construction consultant, the heritage specialist, the SHE / SHEQ officer (where relevant) and the SAPS (where relevant).

➤ **Duties of the Developer / Construction Consultant:**

The developer / construction consultant should ensure that an adequate heritage contingency budget is accommodated within the project budget to facilitate and streamline the heritage compliance process in the event of identification of incidental palaeontological, archaeological and cultural heritage resources during the course of development, including as a norm during vegetation clearing, surface scraping, trenching and excavation phases, when resources not visible at the time of the surface assessment may well be exposed.