



# **THE PROPOSED EXPANSION OF THE SUPREME POULTRY CHICKEN PROCESSING PLANT FROM 120 000 UNITS TO 150 000 UNITS PER DAY ON ERF 9907, MAHIKENG, NORTH WEST PROVINCE**

## **Appendix I1 - Site Verification and Motivation for the Exclusion of Specialist Studies**

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## Quality and Revision Record

### 1. QUALITY APPROVAL

	Capacity	Name	Signature	Date
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<b>Reviewer</b>	Environmental Consultant & Ecological Specialist	Elana Mostert		30/05/2022

This report has been prepared in accordance with Enviroworks Quality Management System.

### 2. REVISION RECORD

Revision Number	Objective	Change	Date
1	General Revision	Internal revision	30/05/2022

### 3. DISCLAIMER:

*Even though every care is taken to ensure the accuracy of this report, environmental assessment studies are limited in scope, time and budget. Discussions are to some extent made on reasonable and informed assumptions built on bona fide information sources, as well as deductive reasoning. Since environmental impact studies deal with dynamic natural systems additional information may come to light at a later stage during the impact assessment phase. The author does not accept responsibility for conclusions made in good faith based on own databases or on the information provided. Although the author exercised due care and diligence in rendering services and preparing documents, he accepts no liability, and the client, by receiving this document, indemnifies the author against all actions, claims, demands, losses, liabilities, costs, damages, and expenses arising from or in connection with services rendered, directly or indirectly by the authors and by the use of this document. This report should therefore be viewed and acted upon with these limitations in mind.*

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## 1. Introduction

The Department of Forestry, Fisheries and the Environment (DFFE) Screening Tool is used to determine various theme sensitivities, in terms of sections 24(5)(a) and (h) and 44 of the National Environmental Management Act, 1998, within the development footprint. Based on protocols (as stipulated in Government Notices no. 43110 and no. 42946), the level (Low, Medium, High, or Very High) of these sensitivities needs to be confirmed or disputed by a site verification. Following the site verification, a Compliance Statement or a Full Impact Assessment by a specialist needs to be compiled based on the sensitivity level of each theme. Where the protocols were not followed i.e., a Compliance Statement or Full Impact Assessment was not done, valid and detailed reasons, based on the site verification, need to be outlined.

In addition to the theme sensitivities, the required specialist studies are identified by the DFFE Screening Tool. The need for a specialist study is dependent on whether the sensitivity of the respective theme has been confirmed or disputed with a site verification. Where a specialist study has not been conducted as suggested by the DFFE Screening Tool, a motivation to exclude the study needs to be outlined with reference to the site verification.

### 1.1. Project outline

Phakamile Risk Consultants (Pty) Ltd. appointed Enviroworks, an independent Environmental Assessment Practitioner (EAP), on behalf of Supreme Poultry (Pty) Ltd. (The Applicant), to undertake the required Basic Assessment (BA) process for the proposed expansion of the output of Poultry from 120 000 units per day to 150 000 units per day at the Supreme Poultry Mahikeng Chicken Processing Plant, North West Province.

The Processing Plant is an already established facility, with the current slaughtering volumes not exceeding a hundred and twenty thousand (120 000) units per day. The Applicant proposes an expansion of the output to a hundred and fifty thousand (150 000) units per day. This will lead to an increase in the availability of processed poultry products for the surrounding community and businesses. The Processing Plant is designed in such a manner as to process more units than what it currently processes, therefore no physical construction will occur in order to facilitate this increase of the slaughtering volumes.

The overall site amounts to an area of just under four hectares (4 ha), encompassing a total development footprint of ten thousand three hundred- and forty-five-point three square metres (10 345.3 m<sup>2</sup>). The total development footprint of the site includes, but is not limited to, a Compressor plant, Boiler house, "Rendering Plant", Processing building, Holding room and Office building. The Abattoir building measures at approximately three thousand nine hundred and eleven square metres (3 911 m<sup>2</sup>). The Steam Generator house and Rendering plant combined equates to six hundred- and thirteen-point six square metres (613.6 m<sup>2</sup>). Please refer to the Site Layout Plan (Appendix C) for further references regarding the infrastructure present on site, as well as the square metre coverage of all the buildings present on Erf 9907, Mahikeng.

The standard activities taking place in the abattoir include four (4) phases. The initial phase includes the delivery of the chickens, ante-mortem (before slaughtering) inspection and the lairage (where the birds are kept prior to slaughtering). Should there be Dead on Arrival birds present during delivery at the receiving bay, then a post-mortem (after death) inspection will be performed. The second phase includes the slaughtering activities, which consist of the stunning and bleeding out of the chickens, debunking, removal of feathers and internal organs. After the organs are removed, they are washed, packaged, weighed and are stored. Hereafter the organs are sold to the intended prospective clients. The blood

and feathers are transported to the rendering area are removed and transported via conveyer belts and pipes in the facility to the Rendering Plant, whereas the heads, feet and viscera are packaged and stored in the holding rooms before being sold. The third phase includes the packaging and cooling of the processed units. An inspection is performed on the meat after slaughtering in order to determine whether the produce is compliant according to Health and Safety standards of the facility as well as the Foodstuffs, Cosmetics and Disinfectant Act, 1972 (Act No. 54 of 1972) and Meat Safety Act, 2000 (Act No. 40 of 2000). The cutting or quartering of the carcasses into portions then takes place, after which the portions are washed at the cut-up wash station. Hereafter the portions are packaged and chilled in large industrial freezers and in “fresh areas”.

Finally, the last phase constitutes the delivery phase, whereby the processed portions are transported to the loading bay area and then transferred to the intended prospective clients. Should the post-mortem inspection identify undesirable or unusable biological material, this material is transported to the Rendering Plant.

An average of one hundred and fifty-two point twenty-nine (152,29) tonnes of Grade A coal is delivered to the Supreme Poultry Mahikeng Processing Plant on a monthly basis. The coal is stored in a bunded storage area, before being loaded into the two Boilers (steam generators) present on site. Coal is burnt in the two Boilers (steam generators), hereby generating steam which is subsequently transferred to various areas of Production and the Rendering Plant. It should be noted that one Steam Generator is not always simultaneously operational, with said Steam Generator being on stand-by and only used when/if necessary. The coal ash produced by the Boilers (steam generators) are then stored in a designated storage area, whereafter it is collected and removed by a brick maker. Approximately thirty-two point zero four cubic metres (32,04 m<sup>3</sup>) of ash is produced on a monthly basis.

As mentioned above, the heads, feet, blood, feathers, fats, inedible viscera and Dead-on Arrival birds are received from the processing plant with dedicated pipelines, conveyer belts and “trolleys” at the Rendering Facility. Here, steam obtained from the Boilers (steam generators) is utilised in order to cook the biological material. After the cooking process has been finalised, the material is then dried out, and grounded. The final product is feather meal, which is then packaged and stacked, whereafter it is sold to prospective clients. These clients use the meal as a high protein additive for animal feed.

It is estimated that the facility currently produces one hundred and seventy thousand, nine hundred and thirty kilogrammes (170 930 kg) (170.93 tons) of biological material per month, with Dead-on Arrival birds included within this figure. The upper and lower limits for this aforementioned quantity of biological material per month are two hundred and fifteen point forty four (215,44) tons and hundred and forty three point thirty eight (143,38) tons respectively. The feathers, blood, fat and Dead-on Arrival birds are re-worked into feather meal via the Rendering Plant (sterilization process). This process involves the cooking, drying out and grounding of the material whereby the biological material are transformed into feather meal.

Sieves at the back of the facility collect any solid materials (when the blood, feathers and fat material is removed), preventing these materials from entering the effluent drains. The liquid effluent is discarded within the municipality drains and is tested on a monthly basis. The excess fat and blood are collected from the sieves, and also processed at the Sterilizing Plant, whereafter it would be sold as feather meal. On average, more than eight thousand kilogrammes (8 000

kg) (8 tons) of animal matter (blood, feathers, fat, Dead-on Arrival birds) are processed by the Sterilizing Plant on a daily basis.

Sanitary and Medical Waste are collected by a registered waste removal contractor (Eco First and Averda respectively) and are incinerated off site. Sewerage from the ablution processing, admin, stores and workshop areas, as well as grey water from the showers and washing facilities are disposed of at an approved treatment facility. Additionally, industrial effluent from processing activities are disposed of via the municipal effluent system. Paper and cardboard, plastic, scrap metal and wood pallets are recycled and reused wherever possible, where excess material is recycled by a third party. Food waste produced within the Canteen is collected by a local pig farmer and/or disposed of at the local, registered landfill site by a registered general waste removal contractor.

Additionally, the Applicant proposes to construct a new generator building, with a new bunded diesel tank, south-east of the Rendering Plant. Please note that the new forty-five cubic metre (45 m<sup>3</sup>) diesel tank would be encapsulated within a fifty-point six cubic metre (50.6 m<sup>3</sup>) bund area. Although diesel may be classified as a dangerous good, due to the dimensions of the storage infrastructure being less than eighty cubic metres (80 m<sup>3</sup>), Activity No. 14 of Government Notice 327 dated 07 April 2017, as amended (Listing Notice 1) would not be triggered and therefore an Environmental Impact Assessment in the form of a Basic Assessment would not be required. Additionally, although the diesel container does have a larger capacity than the thirty cubic metres (30 m<sup>3</sup>) prescribed by Activity No. 10 in Government Notice 324 of 07 April 2017, as amended (Listing Notice 3), the proposed location where the proposed activity is to be situated does not fall within the ambit of geographical areas described for the North West Province, and therefore a Basic Assessment would not be necessary. Additionally, as all the necessary specialist studies and management plans were performed and drafted during the Water Use Licence application, including an Integrated Waste Water Management Plan, thus additional specialist studies regarding the installation of the diesel storage tank and subsequent bund area are deemed to be unnecessary.

Please note that a Category 10 as per the NEM: Air Quality Act GN R. 893 in Government Gazette 37054 dated 22 November 2013, as amended, will be applicable for this expansion. However, an Atmospheric Emission Licence (NWPG/SUPREME/AEL10/JULY2020) has been applied for, and was issued on 21 July 2020 by the North West Department of Economic Development, Environment, Conservation and Tourism. A Water Use Application (WU16808) has also been submitted prior to this application on the 4th of December 2021, due to the abstraction of water from boreholes, the storage of water in reservoirs and tanks, processing water and irrigation (Section 21 (a), (b), (e) and (g)).

## **2. Site Verification**

The expansion site is situated on Portion 0 of Erf 2688 Mahikeng Extension 27, Portion 0 of Erf 2689 Mahikeng Extension 27 and Portion 0 of Erf 2690 Mahikeng Extension 27, which were all consolidated into Erf 9907 Mahikeng Extension 27, in Mahikeng North West Province. The proposed site is situated approximately eight hundred and eighty metres (880m) west of the N18 (R503) Highway, the Erf borders a railway to the west and is situated on the western border of the Mahikeng Industrial Area. The central site coordinates are: 25° 50' 23.33" S; 25° 37' 41.86" E.

The method used to verify the site sensitivity involved conducting a desktop screening assessment whereby GIS data layers and satellite imagery were used to evaluate the sensitivity of the themes. The Supreme Poultry Mahikeng

Processing Plant where the proposed expansion will occur is located within the urban limits and in the industrial area of Mahikeng.

### 3. Environmental Themes identified

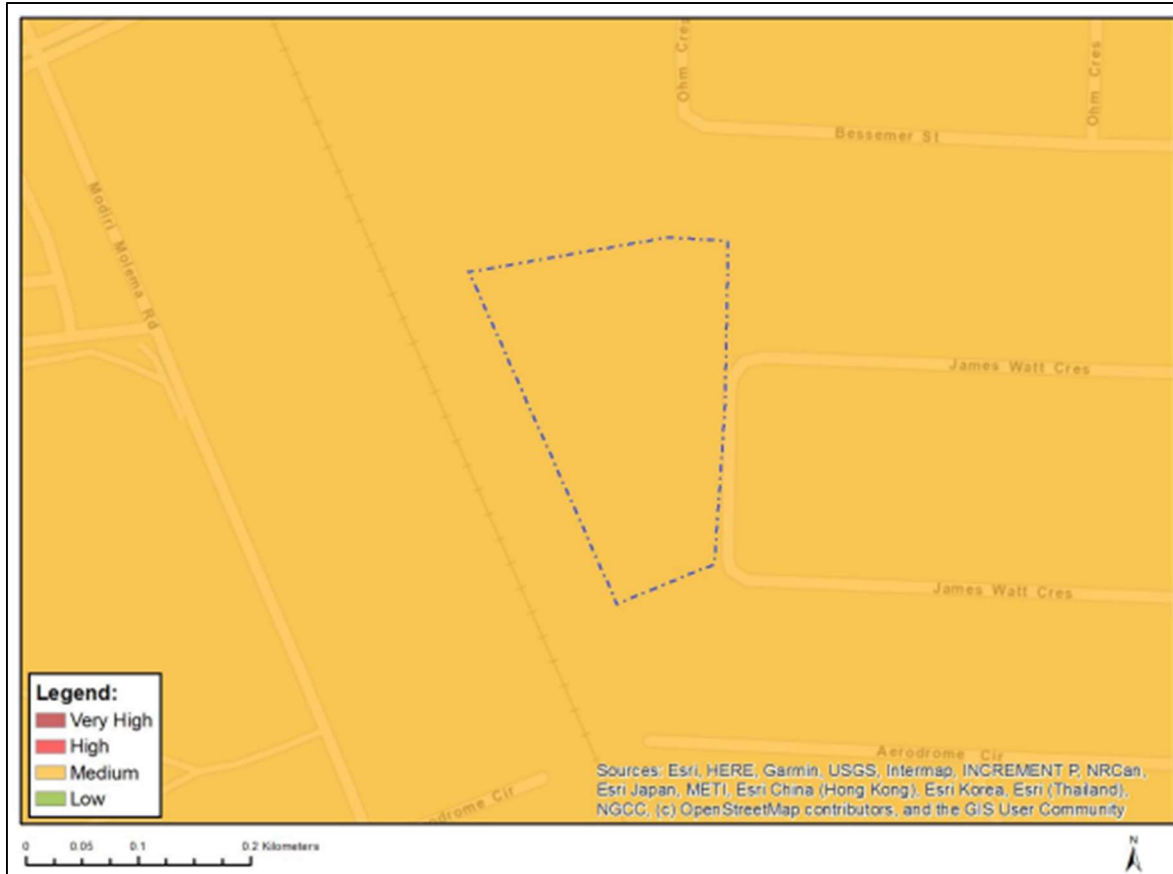
Based on the findings of the DFFE Online Screening Tool the following themes with sensitivities (Very High, High, Medium, Low) were identified for the total property of the Mahikeng Processing Plant where the proposed expansion will occur:

- Agricultural Theme – Medium
- Animal Species Theme - Low
- Aquatic biodiversity Theme – Very High
- Archaeological and Cultural Heritage – Very High
- Civil Aviation Theme – High
- Defence Theme – Low
- Palaeontology Theme – High
- Plant Species Theme – Medium
- Terrestrial Biodiversity Theme – Low

Based on the site verification of the proposed development site, according to the above themes, drawing on the Environmental Assessment Practitioner's (EAP) and the Reviewing EAP's experience with similar projects, the sensitivities of the various Environmental Themes for the proposed development site have been scrutinised. Where the procedures for reporting on identified environmental themes in terms of sections 24(5)(a) and (h) and 44 of the National Environmental Management Act, 1998, as stipulated in Government Notices no.43110 and no. 42946, was not followed a detailed motivation is outlined in Section 4 below.

### 4. Sensitivity Verification of Environmental Themes and Motivation to Exclude Assessments

	Recommendation
<b>Agricultural Theme</b>	No further studies are required in terms of the Agricultural Theme. The site includes an existing facility that only proposes to increase its unit output capacity per day and is situated within the Industrial Area of Mahikeng.
The site is classified as "Medium" sensitivity for the Agriculture theme by the screening tool:	



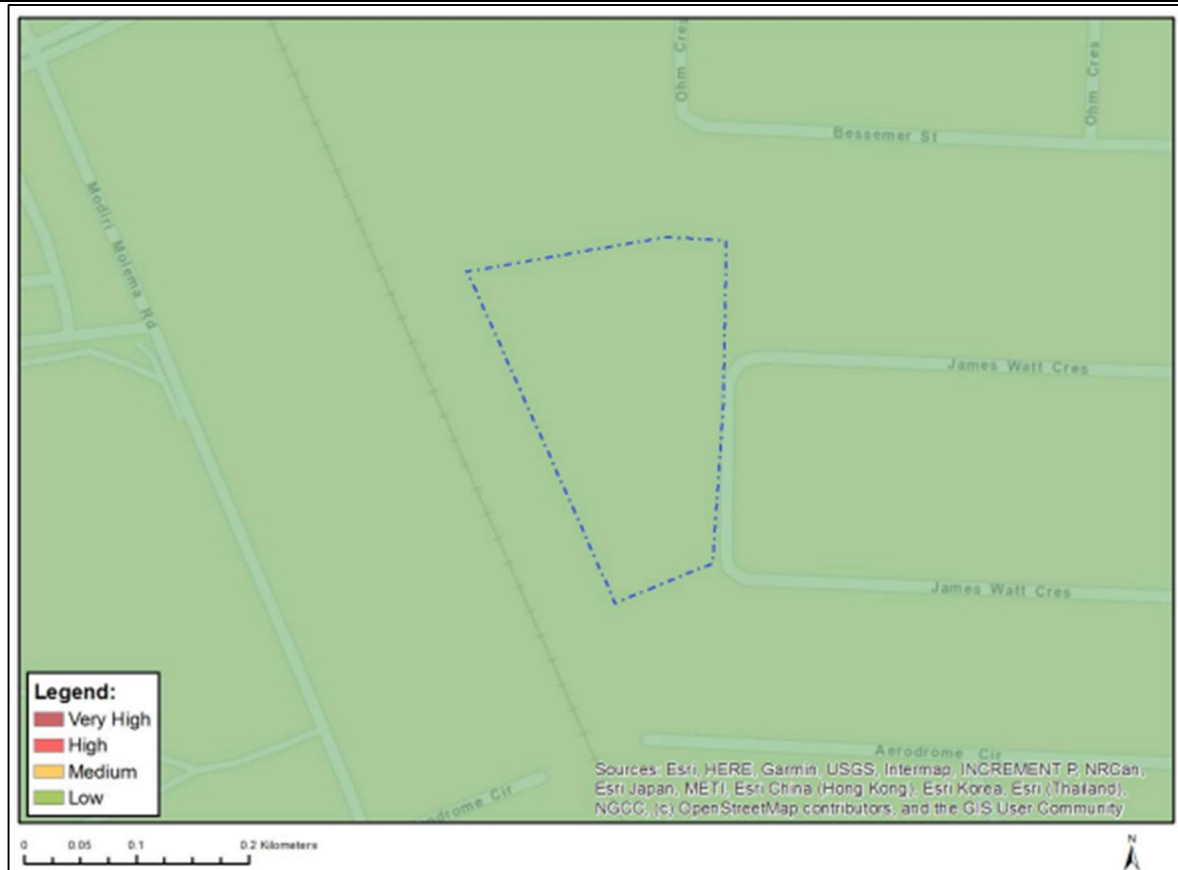
A “Medium” site sensitivity classification for the Agriculture theme is not deemed applicable to the proposed expansion for the following reasons:

- Although the DFFE Screening Tool highlights a “Medium” sensitivity for this site, the site consists of an already established Processing Facility that will only experience an increase in the unit output capacity, and therefore would not have a negative impact on the area’s Agricultural potential;
- No construction will take place in order to achieve this increase in the unit output capacity of the facility; and,
- The site is situated within the Urban, specifically Industrial, Area of Mahikeng;

In light of the above the proposed development site is considered to be of a “Low” Agricultural sensitivity rather than a “Medium” sensitivity as classified by the Screening Tool.

Animal Species Theme	Recommendation
	No further studies will be necessary in terms of the Animal Species Theme. The site includes an existing facility that only proposes to increase its unit output capacity per day and is situated within the Industrial Area of Mahikeng.
The site is classified as “Low” sensitivity for the Animal Species Theme by the Screening Tool:	





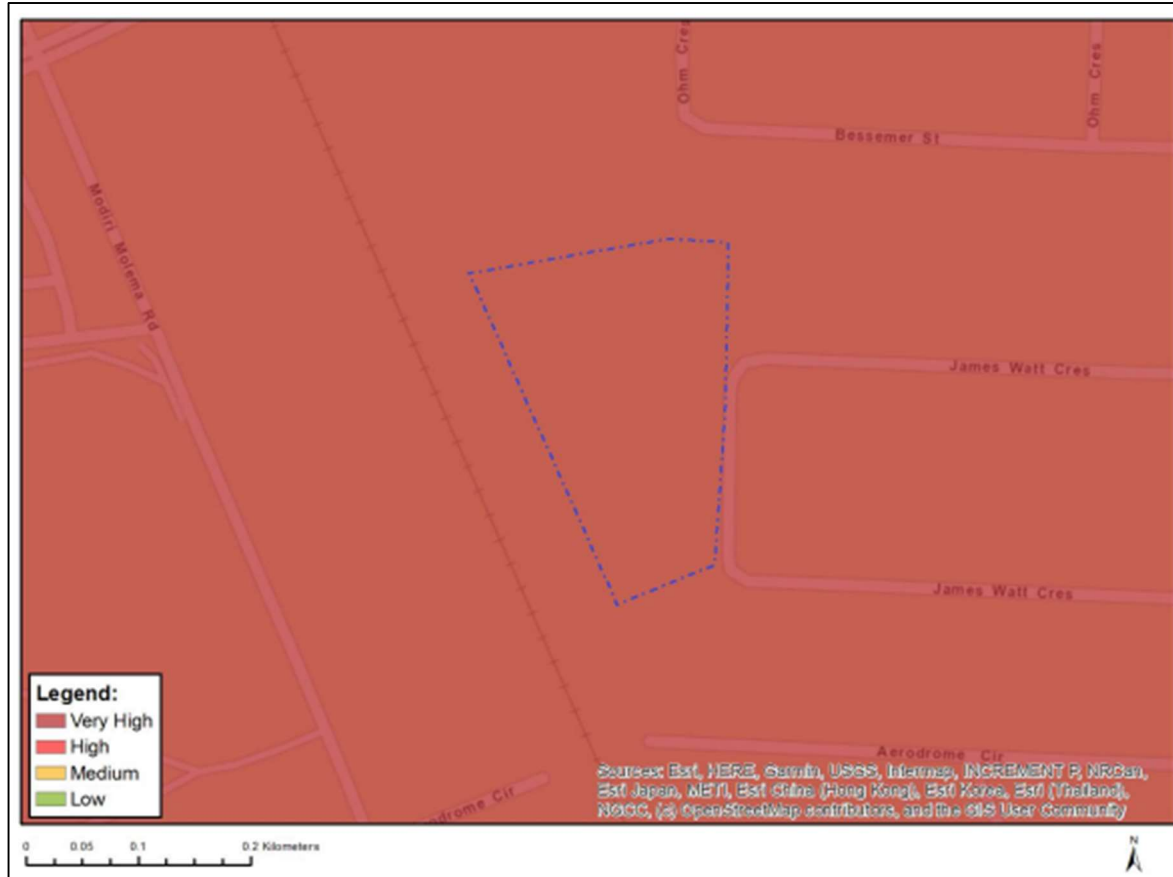
The sensitivity features identified for the site by the Screening Tool is of a “Low” sensitivity, with no sensitive species identified. The site classification of “Low” sensitivity for the Animal Species theme is deemed applicable for the following reasons:

- The site consists of an already established Processing Facility that will only experience an increase in the unit output capacity, and therefore would not have a negative impact on sensitive Animal species;
- No construction will take place in order to achieve this increase in the unit output capacity of the facility; and,
- The site is situated within the Urban, specifically Industrial, Area of Mahikeng;

In light of the above the sensitivity classification of “Low” is deemed to be accurate.

Aquatic Biodiversity Theme	Recommendation
	No further assessments are deemed to be necessary with regards to the Aquatic Biodiversity Theme. The site includes an existing facility that only proposes to increase its unit output capacity per day and is situated within the Industrial Area of Mahikeng.

The site is classified as “Very High” sensitivity for the Aquatic Biodiversity Theme by the Screening Tool:



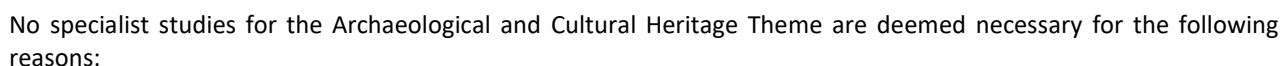
A “Very High” site sensitivity classification for the Aquatic Biodiversity theme is deemed applicable due to the site being located within a Strategic water source area. However, no further studies would be necessary for the following reasons:

- The necessary Studies and Management Plans were performed and formulated during the Application of the Water Use License (WU16808), which has been submitted on the 4th of December 2021. An Integrated Waste Water Management Plan was furthermore required during this application process;
- The site consists of an already established Processing Facility that will only experience an increase in the unit output capacity, and therefore would not have a negative impact on this theme;
- The depth to groundwater is more than twenty (20) metres below the surface and as no construction will take place in order to achieve the increase in the unit output capacity of the facility, the site is not expected to have a Very High impact on the Aquatic Biodiversity Theme; and,
- The site is situated within the Urban, specifically Industrial, Area of Mahikeng.

Based on the abovementioned reasoning the site is thus verified as being of a “High” sensitivity for the Aquatic Biodiversity theme but no further studies would be required as aspects relating to water resources would have been addressed in the Integrated Waste Water Management Plan submitted as part of the Water Use License (WU16808).

<b>Archaeological and Cultural Heritage Theme</b>	<b>Recommendation</b> It is recommended that no further studies will take place with regards to the Archaeological and Cultural Heritage Theme. The site includes an existing facility that only proposes to increase its unit output capacity per day and is situated within the Industrial Area of Mahikeng.
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The site is classified as “Low” and “Very High” sensitivity for the Archaeological and Cultural Heritage Theme by the Screening Tool:



- Based on the reasoning above, the site sensitivity should be classified as “Low”, and further studies with regards to the Archaeological and Cultural Heritage Theme are deemed unnecessary.

The site has been classified as a “High” sensitivity area for the Civil Aviation Theme by the Screening Tool:

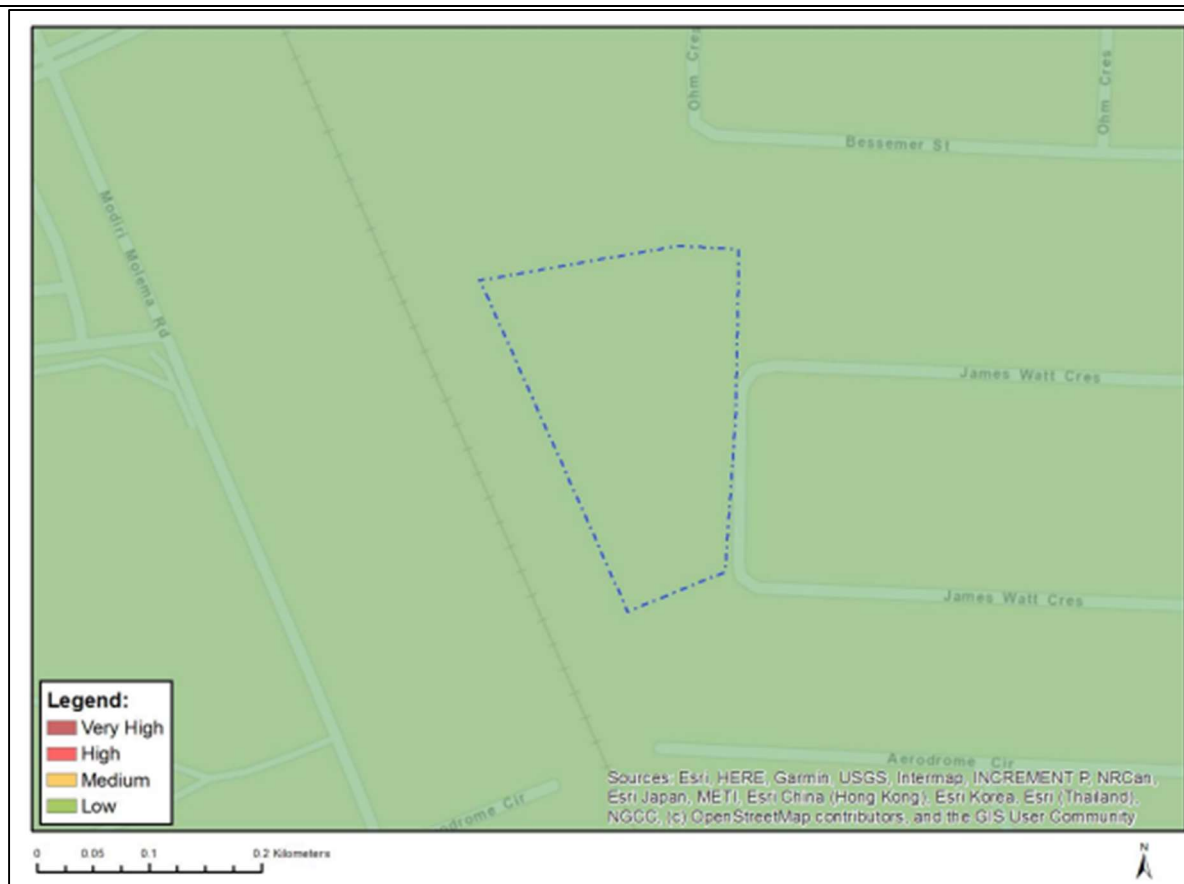


A specialist assessment to determine the impact of the proposed development on the Civil Aviation Theme is not deemed necessary for the following reasons:

- The South African Civil Aviation Authority will be included as an Interested and Affected Party during the public participation process. The draft Basic Assessment Report will be made available to them and they will be given an opportunity to comment on the proposed development; and,
- Should any concerns be raised, the EAP will take these into consideration and take the necessary steps to address them.

Defence Theme	Recommendation
	No further studies will be required in terms of the Relative Defence Theme. EAP to include the South African National Defence in the public participation period as best practice.

The site has been classified as a “Low” sensitivity area for the Relative Defence Theme by the Screening Tool:



A specialist assessment to determine the impact of the proposed development on the Relative Defence Theme is not deemed necessary for the following reasons:

- Although the site is classified as of a “Low” sensitivity, the South Africa National Defence Force will be included as an Organ of State during the public participation process. The draft Basic Assessment Report will be made available to them and they will be given an opportunity to comment on the proposed development; and,
- Should any concerns be raised, the EAP will take these into consideration and take the necessary steps to address them.

Palaeontology Theme	Recommendation
	No further studies will be required in terms of the Palaeontological Theme. The site includes an existing facility that only proposes to increase its unit output capacity per day and is situated within the Industrial Area of Mahikeng.
The proposed site is classified as “High” sensitivity for the Palaeontology Theme by the Screening Tool:	

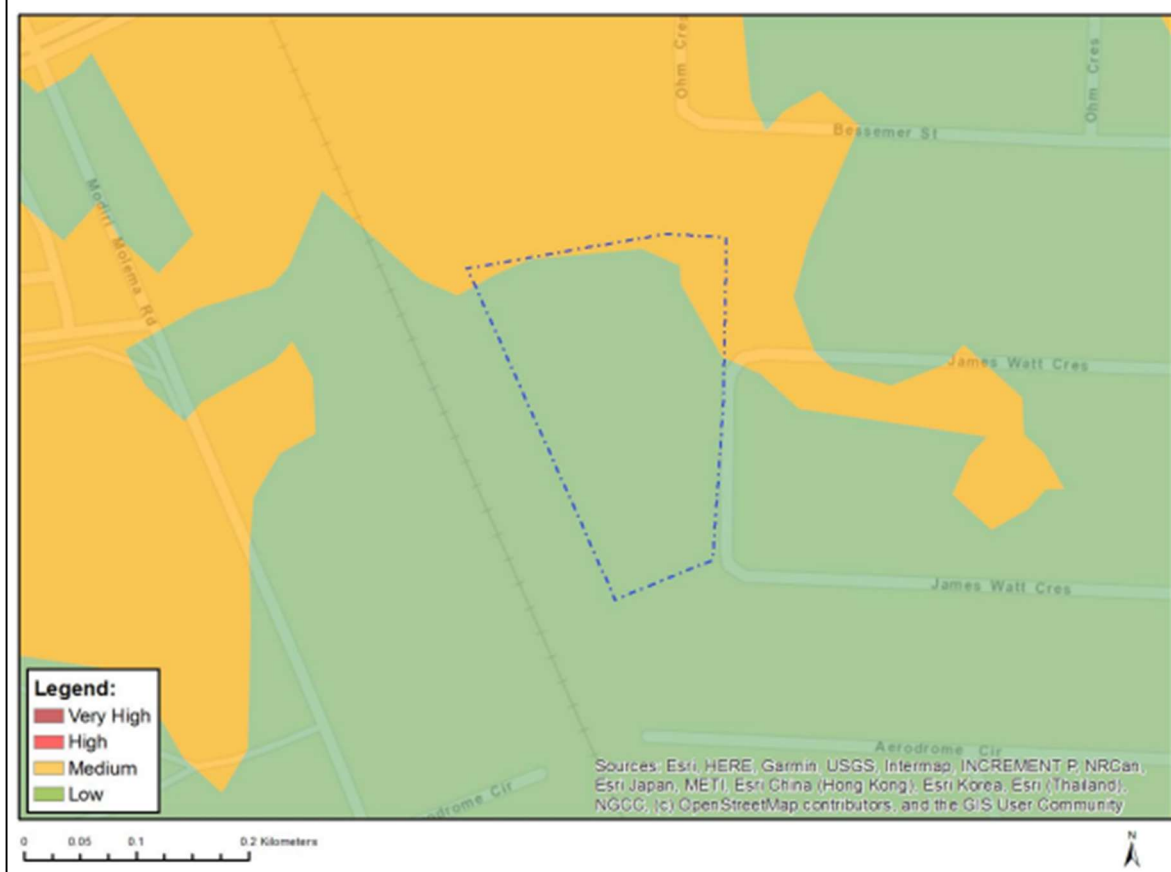


Although the site sensitivity is classified as “High”, no further specialist studies in terms of the Palaeontological Theme are deemed necessary due to the following reasoning:

- The site consists of an already established Processing Facility that will only experience an increase in the unit output capacity, and therefore would not have a negative impact on this theme;
- As no construction or excavations will take place in order to achieve this increase in the unit output capacity of the facility, the site is not expected to have a High impact on the Palaeontology Theme; and,
- The site is situated within the Urban, specifically Industrial, Area of Mahikeng.

In light of the above, no further Heritage and Palaeontological studies are required for the proposed development due to no construction occurring at the established facility.

	<b>Recommendation</b>
<b>Plant Species Theme</b>	No further studies are required in terms of the Plant Species Theme. The proposed development footprint has no or very low probability of containing plant species of conservation concern. The site includes an existing facility that only proposes to increase its unit output capacity per day and is situated within the Industrial Area of Mahikeng.
The proposed site is classified as “Medium” and “Low” sensitivity for the Plant Species Theme by the Screening Tool:	



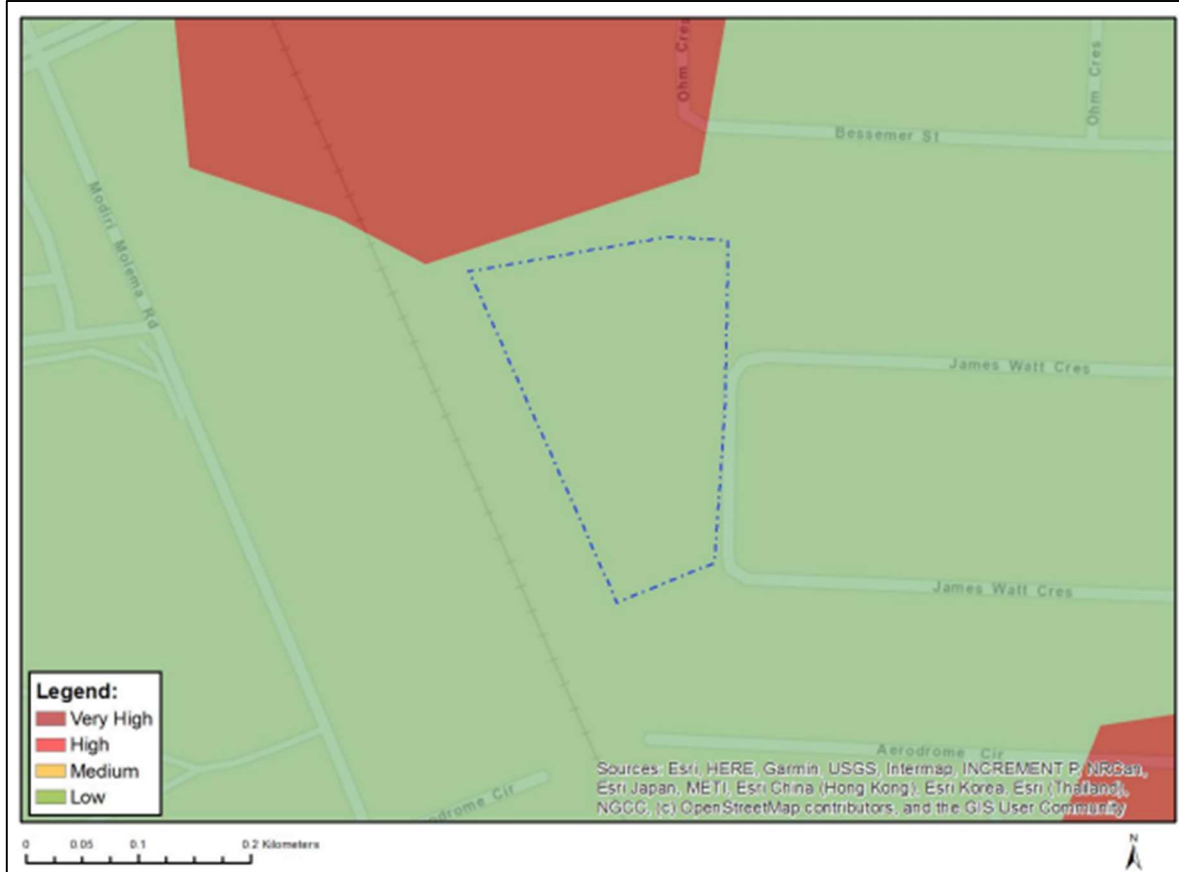
Based on the findings of the site verification the classification of “Medium” sensitivity is deemed not applicable for the Plant Species Theme for the following reasons:

- The site consists of an already established Processing Facility that will only experience an increase in the unit output capacity, and therefore would not have a negative impact on this theme;
- As no construction or excavations will take place in order to achieve this increase in the unit output capacity of the facility, the site is not expected to have a High impact on the Plant Species Theme;
- The site is situated within the Urban, specifically Industrial, Area of Mahikeng; and
- The majority of the site is classified as of a “Low” sensitivity, with a small, transformed, portion on the northern edge of the property being classified “Medium” for the species *Searsia maricoana*. The Processing Facility is situated within the Klerksdorp Thornveld, classified as a vegetation type within the Dry Highveld Grassland group (Mucina & Rutherford, 2006), which is a major habitat type within which populations of *S. maricoana* can be found (Victor & Archer, 2020). It should however be noted that this established site has no natural vegetation present, and no specimens are present on the site.

The site is thus verified as being of “Low” sensitivity for the Plant Species theme and, due to the transformed nature and no physical construction or excavations occurring, no further assessments or specialist studies would be required with regards to the Plant Species Theme.

	<b>Recommendation</b>
<b>Terrestrial Biodiversity Theme</b>	The proposed development footprint has no or very low capability for sustaining terrestrial biodiversity. Furthermore, as no physical construction will occur, it is anticipated that little to no impact with respect to the Terrestrial Biodiversity Theme will take place. Therefore no further specialist studies will be required with regards to the Terrestrial Biodiversity Theme.

The proposed site is classified as “Low” sensitivity for the Terrestrial Biodiversity theme by the Screening Tool:



The site classification of “Low” sensitivity for the Terrestrial Biodiversity Theme is deemed applicable for the following reasons:

- The site verification found the entire development footprint to be transformed, with no natural vegetation being present;
- The site consists of an already established Processing Facility that will only experience an increase in the unit output capacity, and therefore would not have a negative impact on this Theme;
- As no construction or excavations will take place in order to achieve this increase in the unit output capacity of the facility, the site is not expected to have a High impact on the Terrestrial Biodiversity Theme; and,
- The site is situated within the Urban, specifically Industrial, Area of Mahikeng.

In light of the above, the proposed development site should be classified as of “Low” sensitivity, as is classified by the DFFE Screening Tool. As per the abovementioned reasoning no further assessments or specialist studies are deemed necessary for the proposed expansion of the facility.

## 5. Specialist Studies Identified

Based on the findings of the DFFE Online Screening Tool the following specialist studies were identified for the abovementioned expansion of the Supreme Poultry Mahikeng Processing Plant:

- Agricultural Assessment;
- Aquatic Biodiversity Impact Assessment;
- Archaeological and Cultural Heritage Impact Assessment;
- Civil Aviation Assessment;
- Palaeontological Impact Assessment;



- Plant Species Assessment.

Where specialist studies are not deemed necessary, in full or in part, motivation has been provided for the exclusion in Section 6 below.

## 6. Motivation for the Exclusion of Specialist Studies

<b>Agricultural Theme</b>	<b>Recommendation</b>
	No further studies are required in terms of the Agricultural Theme. The site includes an existing facility that only proposes to increase its unit output capacity per day and is situated within the Industrial Area of Mahikeng.
Covered by the Agricultural Theme above.	
<b>Aquatic Biodiversity Theme</b>	<b>Recommendation</b>
	No further assessments are deemed to be necessary with regards to the Aquatic Biodiversity Theme. The site includes an existing facility that only proposes to increase its unit output capacity per day and is situated within the Industrial Area of Mahikeng.
Covered by the Aquatic Biodiversity Theme above.	
<b>Archaeological and Cultural Heritage Theme</b>	<b>Recommendation</b>
	It is recommended that no further studies will take place with regards to the Archaeological and Cultural Heritage Theme. The site includes an existing facility that only proposes to increase its unit output capacity per day and is situated within the Industrial Area of Mahikeng.
Covered by the Archaeological and Cultural Heritage Theme Above.	
<b>Civil Aviation Theme</b>	<b>Recommendation</b>
	No further studies will be required in terms of the Civil Aviation Theme. EAP to include the South African Civil Aviation Authority in the public participation period, providing them with the Basic Assessment Report, the supporting documents and an opportunity to comment.
Covered by the Civil Aviation Theme above.	
<b>Palaeontology Theme</b>	<b>Recommendation</b>
	No further studies will be required in terms of the Palaeontological Theme. The site includes an existing facility that only proposes to increase its unit output capacity per day and is situated within the Industrial Area of Mahikeng.
Covered by the Palaeontology Theme above.	
<b>Plant Species Theme</b>	<b>Recommendation</b>
	No further studies are required in terms of the Plant Species Theme. The proposed development footprint has no or very low probability of containing plant species of conservation concern. The site includes an existing facility that only proposes to increase its unit output capacity per day and is situated within the Industrial Area of Mahikeng.
Covered by the Plant Species Theme above.	

In addition to the above, the following Guidelines were consulted in determining the need for relevant Specialist Studies:

- Guideline for determining the scope of specialist involvement in EIA processes;
- Guideline for the review of specialist input into the EIA process;
- Guideline for involving biodiversity specialists in EIA processes;
- Guideline for involving hydrogeologists in EIA processes;
- Guideline for involving visual and aesthetic specialists in EIA processes; and,

- Guideline for involving heritage specialists in EIA processes.

## 7. References

Mucina, L. & Rutherford, M., 2006. Gh 13 Klerksdorp Thornveld. In: L. Mucina & M. Rutherford, eds. *The Vegetation of South Africa, Lesotho and Swaziland*. Pretoria: South African National Biodiversity Institute, pp. 386-387.

Victor, J. & Archer, R., 2020. *Red List of South African Plants*. [Online]  
Available at: <http://redlist.sanbi.org/species.php?species=5522-91>  
[Accessed 10 02 2022].