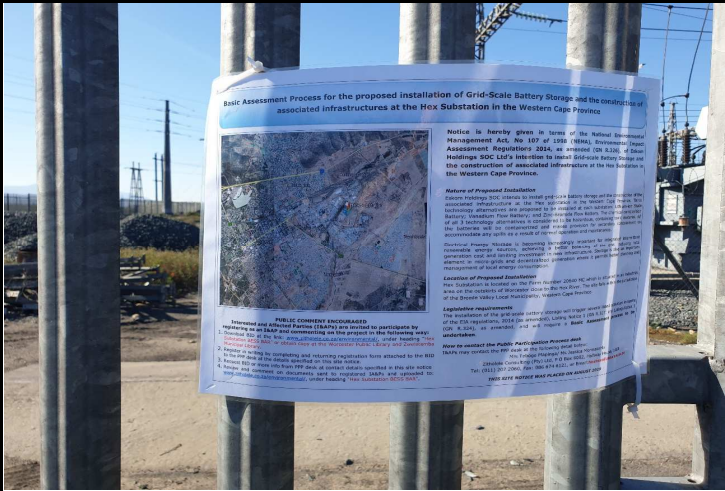


Project Name:	Application for the proposed installation of Grid-Scale Battery Storage and the construction of associated infrastructures at the Hex Substation within the Western Cape Province		
Report No:	18047-09-Photos-001-Hex Substation PPP Report	Appendix:	E-1
Event:	Placement of Site Notices and Distribution of Background Information Documents for public participation process.	Date:	02/09/2019



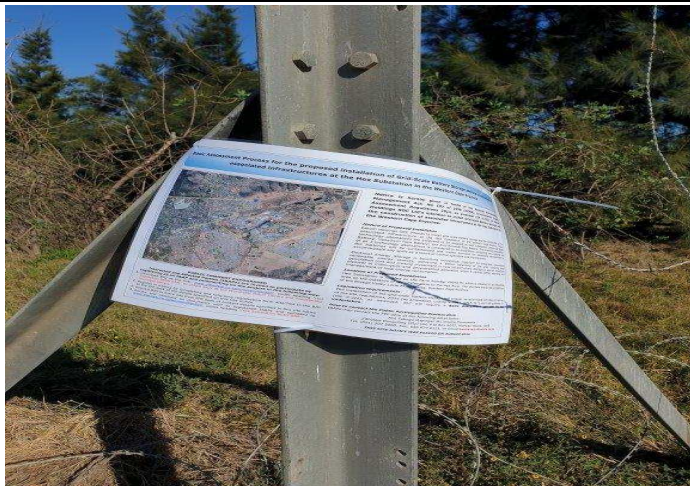
Notification of Public participation placed on the fence of the Existing Hex Substation.



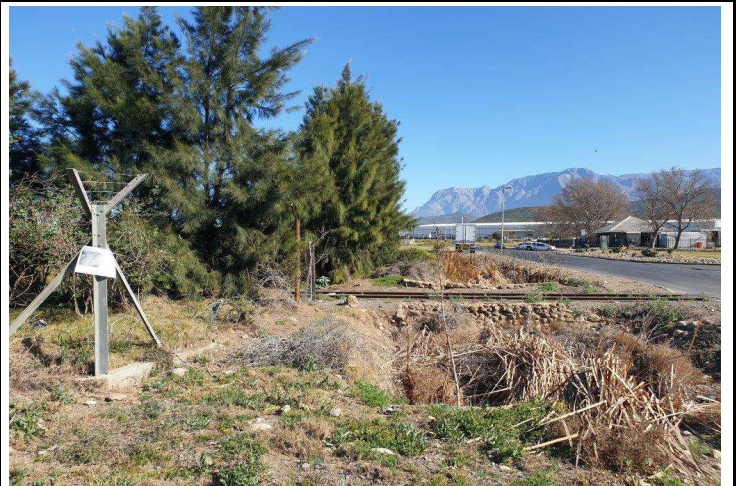
View of the notification of Public participation placed on the fence of the existing Hex Substation from the access road.

Coordinates:

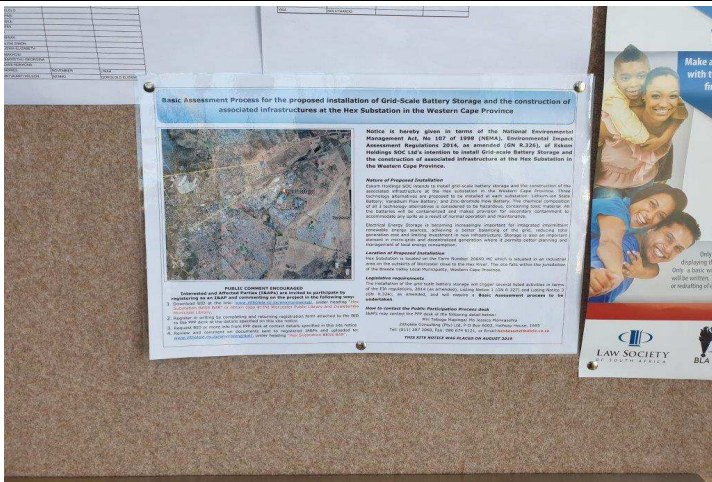
Coordinates:



View of notification of Public participation placed on the turn-off from Louis Lange Street towards the Existing Hex Substation.



View of notification of Public participation placed on the turn-off from Louis Lange Street towards the Existing Hex Substation from the access road.

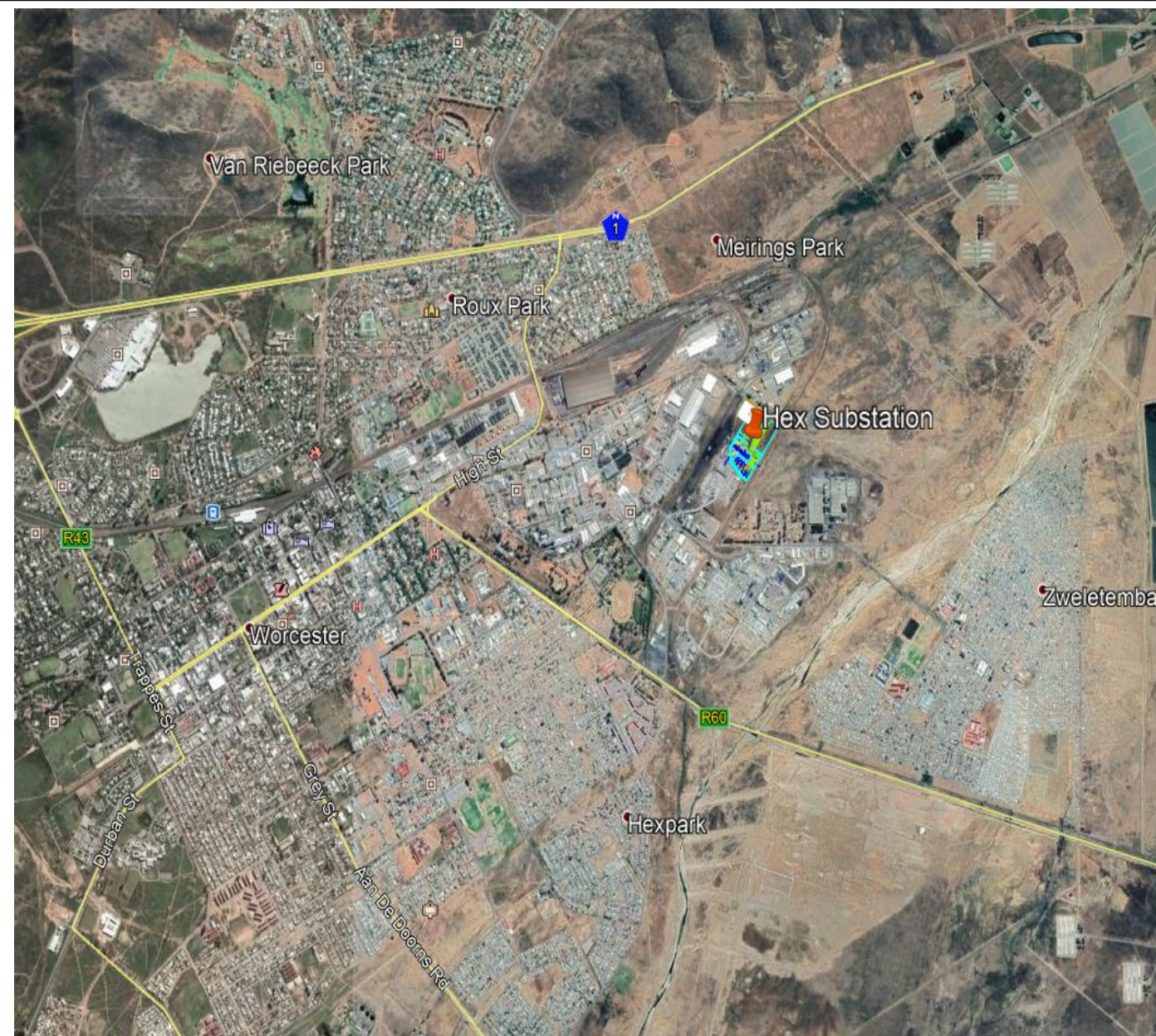


Poster notification for Public Comment placed on the notice board in the reception of the Breede River Municipal Building in Worcester, c/o Barring Street and Hoog Street



Poster notification for Public Comment placed on the notice board outside of the Breede River Municipal Building in Worcester, c/o Barring Street and Hoog Street

Basic Assessment Process for the proposed installation of Grid-Scale Battery Storage and the construction of associated infrastructures at the Hex Substation in the Western Cape Province



PUBLIC COMMENT ENCOURAGED

Interested and Affected Parties (I&APs) are invited to participate by registering as an I&AP and commenting on the project in the following way:

1. Download BID at the link: www.zitholele.co.za/environmental/, under heading "Hex Substation BESS BAR" or obtain copy at the Worcester Public Library and Zweletemba Municipal Library.
2. Register in writing by completing and returning registration form attached to the BID to the PPP desk at the details specified on this site notice.
3. Request BID or more info from PPP desk at contact details specified in this site notice
4. Review and comment on documents sent to registered IA&Ps and uploaded to: www.zitholele.co.za/environmental/, under heading "Hex Substation BESS BAR".

Notice is hereby given in terms of the National Environmental Management Act, No 107 of 1998 (NEMA), Environmental Impact Assessment Regulations 2014, as amended (GN R.326), of Eskom Holdings SOC Ltd's intention to install Grid-scale Battery Storage and the construction of associated infrastructure at the Hex Substation in the Western Cape Province.

Nature of Proposed Installation

Eskom Holdings SOC intends to install grid-scale battery storage and the construction of the associated infrastructure at the Hex substation in the Western Cape Province. Three technology alternatives are proposed to be installed at each substation: Lithium-ion State Battery; Vanadium Flow Battery; and Zinc-Bromide Flow Battery. The chemical composition of all 3 technology alternatives is considered to be hazardous, containing toxic material. All the batteries will be containerized and makes provision for secondary containment to accommodate any spills as a result of normal operation and maintenance.

Electrical Energy Storage is becoming increasingly important for integrated intermittent renewable energy sources, achieving a better balancing of the grid, reducing total generation cost and limiting investment in new infrastructure. Storage is also an important element in micro-grids and decentralized generation where it permits better planning and management of local energy consumption.

Location of Proposed Installation

Hex Substation is located on the Farm Number 20640 MC which is situated in an industrial area on the outskirts of Worcester close to the Hex River. The site falls within the jurisdiction of the Breede Valley Local Municipality, Western Cape Province.

Legislative requirements

The installation of the grid-scale battery storage will trigger several listed activities in terms of the EIA regulations, 2014 (as amended), Listing Notice 1 (GN R.327) and Listing Notice 3 (GN R.324), as amended, and will require a **Basic Assessment process to be undertaken.**

How to contact the Public Participation Process desk

I&APs may contact the PPP desk at the following detail below:

Mrs Tebogo Mapinga/ Ms Jessica Morwasehla

Zitholele Consulting (Pty) Ltd, P O Box 6002, Halfway House, 1685

Tel: (011) 207 2060, Fax: 086 674 6121, or Email: hexbess@zitholele.co.za

THIS SITE NOTICE WAS PLACED ON AUGUST 2019

Basic Assessment Process for the proposed installation of Grid-Scale Battery Storage and the construction of associated infrastructures at the Hex Substation in the Western Cape Province.

BACKGROUND INFORMATION DOCUMENT

DATE: 28 August 2019

PURPOSE OF THIS DOCUMENT

This Background Information Document (BID) has been structured to provide all potential Interested and Affected Parties (I&APs) with a concise overview of the proposed project activities as well as the associated Environmental Authorisation Processes. Furthermore this BID also intend to provide I&APs with information relating to the manner in which I&APs can voice any issues concerning the proposed project. The compilation and distribution of this BID form part of the Public Participation Process for the project.

When you complete and return the registration form included with the BID, you will be included in the stakeholder database and receive further documents for review and comment. Your comment will ensure that all issues of concern are incorporated. To raise your concerns, please complete the enclosed registration sheet, write a letter, call or e-mail the public participation office. All documents will be available on the internet at www.zitholele.co.za/environmental, under heading "Hex Substation BESS BAR"

For enquiries, please contact: Mrs Tebogo Mapinga / Jessica Morwasehla

Zitholele Consulting (Pty) Ltd
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Waterfall City, Midrand, 1685
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hexbess@zitholele.co.za

1. BACKGROUND AND DESCRIPTION OF THE PROJECT

Eskom Holdings SOC intends to install grid-scale battery storage and the construction of the associated infrastructure at the Hex substation in the Western Cape Province. Three technology alternatives are proposed to be installed at each substation: Lithium-ion State Battery; Redox Flow Battery; Vanadium Flow Battery; and Zinc-Bromide Flow Battery. The chemical composition of all these technology alternatives is considered to be hazardous, containing toxic material. All the batteries will be containerized and makes provision for secondary containment to accommodate any spills as a result of normal operation and maintenance.



Figure 1: Location of the Hex Substation near Worcester, Western Cape Province

2. DESCRIPTION OF THE STUDY AREA

The study area is located on the Farm Number 20640 MC which is situated in an industrial area on the outskirts of Worcester close to the Hex River. The site falls within the jurisdiction of the Breede Valley Local Municipality, Western Cape Province.

3. NEED AND DESIRABILITY OF THE PROJECT

The project forms part of the World Bank funding set of criteria for the Major Build program and requires a carbon friendly alternative to be implemented in Eskom as an alternative to the Kiwano CSP project. The project is thus required to connect an equivalent of a 100 MW of Renewable Energy plant, with a capacity of at least 525 GWh per year. Furthermore, according to a high-level analysis of constrained feeders within the distribution business, current feeder levels do not meet the required voltage and thermal characteristics as required by its license conditions.

Eskom has therefore proposed BESS to provide ancillary support in terms of enhanced frequency control of the network, reactive power support and improved quality of supply performance near existing Distributed Generation Renewable Energy plants. The Battery Storage technology may enable the immediate levels of constraint to be addressed and provide continued access to potential customers to these networks. The battery storage technology will also improve the quality of supply and mitigate voltage related concerns on the networks. The Battery Storage technology may also enable some significant strengthening investments to be deferred, whilst providing a reliable and effective interim solution to the problems faced on the Distribution Networks.

Electricity generation from renewable sources is limited by the intermittency and variability of wind and solar resources, i.e. when wind blows and sun shines. Energy storage allows for the storing of electricity for later use even when the renewable resource is unavailable. The process involves the conversion of electrical energy into another form of energy such as chemical or kinetic energy, store it temporarily and then converted back to electrical energy, therefore giving the utility considerable flexibility and control.

4. LEGAL REQUIREMENTS

Environmental Authorisation

The proposed development require environmental authorisation from the Competent Authority, i.e. the Department Environmental Affairs (DEA), in terms of the National Environmental Management Act, No 107 of 1998 (NEMA): Environmental Impact Assessment (EIA) regulations 2014, as amended. The proposed project will trigger a listed activity in terms of Listing Notice 1 (GN R983) and Listing Notice 3 (GN R985) of EIA regulations 2014 as amended (refer to Table 1).

Activities triggered in Listing Notice 1 and 3 indicates that an application for environmental authorisation must be undertaken via a Basic Assessment Process.

Table 1: Listed activities that may be applicable to the project

Listed Activities as per EIA regulations 2014, GN R983 (Listing Notice 1), as amended	Applicability to proposed project
Listing Notice 1, Activity 2(i): The development and related operation of facilities or infrastructure for the generation of electricity from a non-renewable resources where: (i) The electricity output is more than 10 megawatts.	Installation of the Grid-scale battery storage at the Hex substation.
Listing Notice 1, Activity 14: The development and related operations of facilities or infrastructure, for the storage, or for the storage and handling, of a dangerous good, where such storage occurs in containers with a combined capacity of 80 cubic metres or more but not exceeding 500 cubic metres.	The grid-scale battery storage will contain toxic materials.
Listing Notice 1, Activity 27: The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation.	Clearance of the vegetation for the installation of the grid-scale battery storage.
Listing Notice 1, Activity 56(ii): The widening of a road by more than 6 metres, or the lengthening of a road by more than 1 kilometre- (ii) Where no reserve exists, where the existing road is wider than 8 metres;	Installation of the Grid-scale battery storage at the Hex substation.
Listed Activities as per EIA regulations 2014, GN R985 (Listing Notice 3), as amended	Applicability to proposed project
Listing Notice 3, Activity 4: The development of a road wider than 4 metres with a road reserve less than 13.5 metres. (i) Western Cape (ii) Within critical biodiversity areas identified in bioregional	Installation of the Grid-scale battery storage at the Hex substation.

(aa) Areas outside containing indigenous vegetation	
<p>Listing Notice 3, Activity 10: The development and related operation of facilities or infrastructure for the storage, or storage and handling of a dangerous good, where such storage occurs in containers with a combined capacity of 30 but not exceeding 80 cubic metres</p> <p>(i) Western Cape (ii) All areas outside urban areas</p>	The grid-scale battery storage will contain toxic materials.
<p>Listing Notice 3, Activity 12: The clearance of an area of 300 square metres or more of vegetation-</p> <p>(i) Western Cape (ii) Within critical biodiversity areas identified in bioregional plans</p>	Clearance of the vegetation for the installation of the grid-scale battery storage

- **Water Use Licence**

- In terms of Section 21 of the National Water Act (NWA) (36 of 1998), as amended the abovementioned development may potentially require water use license for the following activities:
 - Section 21(c) “impeding or diverting the flow of water in a watercourse”; and
 - Section 21 (i) “altering the bed, banks, course or characteristics of a watercourse”.

5. BASIC ASSESSMENT PROCESS

A Basic Assessment (BA) aims to provide an objective view of the potential environmental and social impacts that could arise during the planning, construction, operation and decommissioning phase of a proposed project. A critical element of the BA Process is the Public Participation Process that gives Interested and Affected Parties (I&APs) an opportunity to provide comments on a proposed development. The outcome of the BA Process is concisely presented and documented in the Basic Assessment Report (BAR) in order to provide the Competent Authority with all the information in order to make an informed decision.

The BAR content aligns with the requirements of Appendix 1 of the EIA regulations, 2014 (as amended) (GN R.982) and timeframes are strictly adhered to through careful management of process. **Figure 2** provides a process flow diagram indicating the key tasks to be carried out for the BA Process and Public Participation Process (PPP).

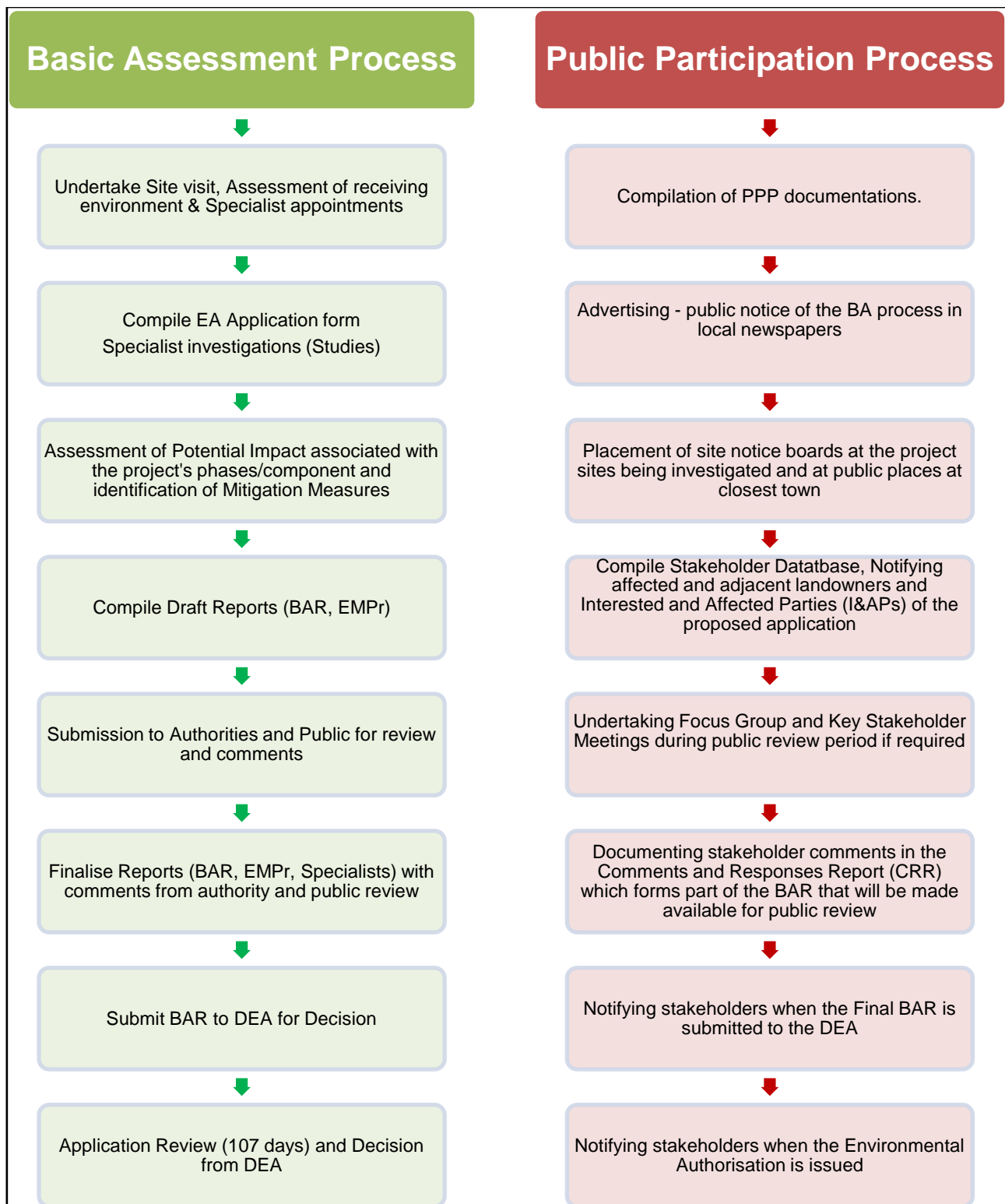


Figure 2: Process Flow Diagram for the steps required in a Basic Assessment and Public Participation Process

A decision on the application for environmental authorisation through a BA process is usually reached within 107 days of receipt of the BAR by the Competent Authority.

6. PUBLIC PARTICIPATION PROCESS

As an important element in undertaking the BA for the proposed project, Zitholele Consulting will conduct the public participation process as set out in the NEMA EIA regulations, 2014 (as amended). Applicable guidelines and best practice procedures will furthermore be taken into consideration. The public participation process will enable stakeholders to contribute to the process through information sharing and to review the findings of the independent studies that are to be undertaken. The steps of the public participation component are outlined in **Figure 2**.

7. DECISION-MAKING (ENVIRONMENTAL AUTHORISATION)

Based on the information provided in the final BAR, the Competent Authority will make a decision to grant or refuse environmental authorisation. The granting of environmental authorisation will allow the Applicant to proceed with implementing the proposed project activities. Once the Competent Authority has reached a decision, with regards to granting the environmental authorisation, all registered I&APs will be notified thereof within 14 days of the date of the decision. An appeal may be lodged against the decision made in terms of the National Environmental Management Act (107 of 1998) and National Appeal Regulations, 2014. I&APs will be notified of the decision made by the Competent Authority by means of the following:

- Via electronic mail;
- Facsimile (to I&APs who do not have access to electronic mail); and
- Registered mail (to those I&APs who do not have access to electronic mail nor facsimile facilities).

The Basic Assessment Process will be concluded by the notification of I&APs of the decision made by the Competent Authority.

Only once the EA has been granted by the DEA will the WULA application be submitted to the DWS for consideration and decision.

8. MAP OF PROJECT LOCATION

A locality Map of the proposed project can be found in **Figure 3** below.

9. BID COMMENT SHEET

A comment sheet associated with this project and Basic Assessment process is included at the end of this BID. Please complete and return to the PPP desk by hand delivery to the offices of Zitholele Consulting, scan and email to the email address provided, fax to fax number provided or by submitting your comments telephonically to the PPP desk via the landline number specified in the left column on page 1 of this BID.

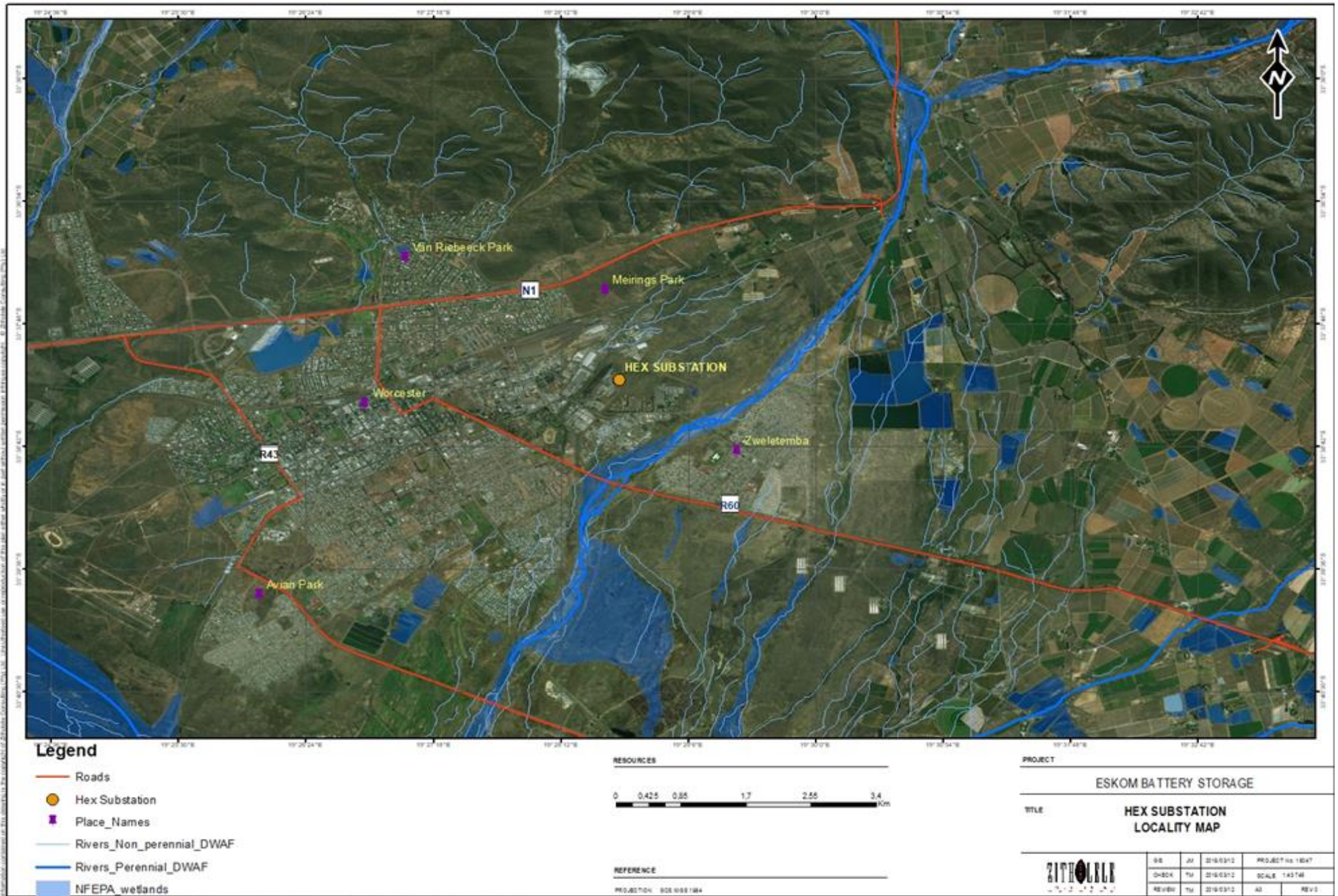


Figure 3: Locality Map of the Proposed Project