

## CHAPTER SIX: PLAN OF STUDY FOR EIA

### 6.1 INTRODUCTION

In terms of Regulation 22 (a) of GN R 326, upon acceptance of the Scoping Report, the competent authority must “*advise the applicant to proceed or continue with the tasks contemplated in the plan of study for environmental impact assessment*”.

Appendix 3, Section 2 of GN R326 indicates that the objectives of the Environmental Impact Assessment Process are to:

- assess how the proposed activity complies with the relevant policy and legislative context;
- describe the need and desirability of the proposed activity, including in the context of the development footprint on the approved site as contemplated in the accepted scoping report;
- identify the location of the development footprint within the approved site as contemplated in the accepted scoping report based on an impact and risk assessment process inclusive of cumulative impacts and a ranking process of all the identified development footprint alternatives focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects of the environment;
- determine the--
  - nature, significance, consequence, extent, duration and probability of the impacts occurring to inform identified preferred alternatives; and
  - degree to which these impacts-
    - can be reversed;
    - may cause irreplaceable loss of resources, and
    - can be avoided, managed or mitigated;
- identify the most ideal location for the activity within the development footprint of the approved site as contemplated in the accepted scoping report based on the lowest level of environmental sensitivity identified during the assessment;
- identify, assess, and rank the impacts the activity will impose on the development footprint on the approved site as contemplated in the accepted scoping report through the life of the activity;
- identify suitable measures to avoid, manage or mitigate identified impacts; and
- identify residual risks that need to be managed and monitored.

Public participation is an essential part of the EIA process. During the EIA process, public participation is conducted in accordance with the Plan of Study (PoS) for EIA and may include additional requirements as opposed to the minimum requirements set out in the NEMA EIA Regulations, 2014 (as amended). After the required components of the assessment have been undertaken, including any specialist studies and specialised input, an EIA report is compiled, which must contain at least the information listed in Appendix 3 of the Regulations, including an Environmental Management Programme Report (EMPr).

The PoS as contained in this section of the report provides an overview of how the EIA for the proposed agricultural development on Farm 653 will proceed during the EIA Phase. This includes particulars of the public participation process and specialist studies forming part of this assessment, as well as a description of the tasks that will be undertaken and the proposed method of assessing the environmental impacts that are identified. A full project description and the alternatives to be assessed for the proposed agricultural expansion are contained in Chapter Two and Chapter Five, respectively. The findings of the Scoping Process include input from the project applicant, technical team and specialists, as well as I&APs and the competent authority; and has been used to inform the approach to the EIA and scope of specialist studies to be undertaken.

The EIA process consists of three overlapping processes:

- A central assessment process involving consultation with the competent authority where inputs are integrated and presented in documents that are submitted for approval by the competent authority (described in section 6.3.1.1).
- A specialist process which provides the necessary technical and legal input (section 6.2 and 6.3.3).
- A public participation process which communicates the findings of the various studies undertaken to I&APs and Organs of State on the register of I&APs and provides opportunities for I&APs to comment on all reports and plans submitted during the public participation process (section 6.3.1).

## 6.2 OVERVIEW OF THE APPROACH TO THIS EIA

The table below provides an overview of the specialist studies that have been identified to form part of this assessment. The main objective of the specialist studies is to provide independent, scientifically sound information on issues of concern relating to the project proposal and adequately assess the impact of the preferred alternative on the respective environmental aspects.

*Table 6.1 Proposed list of specialist studies and specialists.*

SPECIALIST STUDY	BROAD SCOPE OF ASSESSMENT	PROPOSED SPECIALIST
Biophysical Assessment	To include an assessment of the potential impacts on vegetation and fauna (desktop), as well as the delineation of sensitive no-go areas, and determination of buffer zones. An aquatic assessment will be undertaken to assess the impacts on aquatic features identified on the site as well as along the pipeline route, including wetlands, watercourses and drainage areas. To determine the PES of the site and confirm the mapping of CBAs and ESAs, as included in various biodiversity planning frameworks, including the ECBCP and NFEPA mapping resources. To provide recommendations for management/ mitigation of residual impacts.	Deborah Vromans, Vegetation and Aquatic Specialist  Zandri Grobbelaar, Public Process Consultants
Phase 1 Heritage Impact Assessment	To identify archaeological and palaeontological features on site and assess the potential impacts on these features. To provide recommendations for management/ mitigation of residual impacts.	Dr Lloyd Rossouw, Paleo Field Services
Soil Suitability Reconnaissance Survey	Soil suitability assessment to determine the agricultural potential for commercial citrus production and provide amelioration measures for soil limiting factors.	Dr Freddie Ellis
Traffic Impact Assessment	Traffic impact statement regarding access and egress from the site onto the MR00470 road (Sunland Road) as well as the potential impact of the additional trip generation.	Cary Hastie, Engineering Advice and Services
Visual Impact Assessment	Determine any changes in the "sense of place" and visual landscape as a result of the proposed development	Henry Holland, MapThis
Bulk Services Report	To confirm that the existing capacity of the services on site (water, effluent, stormwater management). To provide recommendations if upgrades to the existing facilities are required.	Jaco Spies, JJ Spies Civil Engineers
Security Risk Assessment	Evaluation of potential elevated security risk posed by the proposed development on rhino and exotic game in the area.	Rodney Visser
TECHNICAL TEAM		
Irrigation Infrastructure	Estimate the quantity of water required to irrigate the proposed development, to be stored on site in new dams that are required to be constructed/ expanded. To confirm associated irrigation infrastructure layout including pipe diameters and length, as well as dam dimensions and design.	Project applicant through their irrigation specialist

Section 6.3.3 below outlines the scope of the specialist studies and terms of reference. The results of the specialist studies and other relevant project information will be integrated into the Draft Environmental Impact Assessment Report (Draft EIA). The methodology utilized for the identification and ranking of impacts is outlined in Section 6.3.2 below.

The Draft EIA will be released for a **40-day I&AP** and authority review period, outlined in section 6.3.1 and 6.3.1.1 respectively. All I&APs on the project database will be notified in writing of the release of the Draft EIA for review. No public meetings are proposed to be held during this period but focus group meetings may take place with key I&APs upon request. Issues raised, through written correspondence (emails, comment forms), telephonically and at meetings held, will be captured in a Comments and Responses Trail for inclusion in the Final EIA. Issues raised will be responded to by the EAP, applicant and/ or relevant specialist which will indicate the manner in which the issue raised is incorporated in the EIA or in the EMPr. Should the comment received fall beyond the scope of this EIA clear reasons for this will be provided. All comments received will be attached as an appendix to the Final EIA for submission to the competent authority for their decision making.

The Draft EIA will include a Draft EMPr which will be prepared in compliance with Appendix 4 of GN R326. Impact management actions in the EMPr will be drawn primarily from the management actions in the specialist studies for the construction and operational phases of the project. The EMPr will also contain the method of monitoring the implementation of the impact management actions and a program for reporting on compliance.

If the project components are decommissioned or re-developed, this will need to be done in accordance with the relevant environmental regulations and standards and clean-up/ remediation requirements applicable at the time.

### **6.2.1 The NEMA EIA Regulations 2014 (as amended)**

This EIA process was initiated in terms of NEMA EIA Regulations, 2014 published in Government Notice R982, 983, 984 and 985 on the 4 December 2014 in Government Gazette 38282. These regulations have subsequently been amended by the publication of GN R326, 327, 325 and 324 in Government Gazette 40772 on the 7 April 2017. Therefore, the proposed Scoping and EIA process will be undertaken in terms of the NEMA EIA Regulations, 2014 (as amended on 7 April 2017). GN R326 governs the procedural requirements of the Scoping and Environmental Impact Assessment process (Scoping and EIA). Listed activities, for which Environmental Authorisation is being sought through this process, have been identified in terms of GN R327 (Listing Notice 1), GN R325 (Listing Notice 2) and GN R324 (Listing Notice 3) of the NEMA EIA Regulations, 2014 (as amended). The potential relevant activities are contained in Chapter Four of this report.

## **6.3 ENVIRONMENTAL IMPACT ASSESSMENT REPORT (EIA) AND EMPr**

The following section of this report provides the reader with information on the EIA phase of the process, including public participation, as well as an outline of the approach to the assessment of impacts.

### **6.3.1 Public Participation Process**

The following section outlines the various steps to be followed in the public participation process for the EIA. The participation process for the Scoping Process is outlined in detail in Chapter Four of this report. It is important to note that I&AP consultation forms a central component of the decision-making process, by providing potential information that may not have been sourced, should the

process have been conducted without consultation. While I&AP input is important to, amongst others, inform the range and scope of specialist assessments, I&APs also have a responsibility in terms of GN R 326, section 43. (1) “...” **to bring to the attention of the proponent or applicant any issues which that party believes may be of significance to the consideration of the application, provided that the interested and affected party discloses any direct business, financial, personal or other interest which that party may have in the approval or refusal of the application.**”

#### 6.3.1.1 *Compile Draft EIA Report and EMPr*

The first stage in the process will entail the compilation of the Draft EIA and EMPr for a **40-day** public and authority review period. The Draft EIA and EMPr will be compiled based on the specialist studies conducted for the project as outlined in the Final Scoping Report (FSR) and contained in the PoS for EIA and the acceptance of the FSR and approval of the PoS, received from the competent authority, should such be received.

#### 6.3.1.2 *Review of the Draft EIA (and EMPr) and ongoing Communication*

The Draft EIA and EMPr will be made available for a **40-day** review period. The following indicates the public participation process that will be implemented for the public review of the Draft EIA and EMPr in order to allow I&APs to raise issues on the Draft EIA and to facilitate access to information:

- Letter 5 to I&APs - All I&APs on the project database will be notified in writing of the release of the Draft EIA and EMPr for public review. Included with this notification will be an executive summary of the Draft EIA and a comment form.
- Key I&APs - (Competent Authority, Councilor, and Juristic Organs of State) will be provided with either a hard copy or electronic version (CD or email) of the report as agreed to with the respective Departments.
- Report to be placed on the project website [www.publicprocess.co.za](http://www.publicprocess.co.za).
- Focus Group Meetings – one on one meetings with key I&APs are not planned to form part of this process, however, such will be held upon request. Notes from meetings held will be included as an appendix to the Final EIA Report, as well as be included in the comments and responses trail.
- Authority Consultation – Organs of State having jurisdiction in respect of any aspect of the activity will be consulted and their input will be included in the Final EIA as agreed to with the relevant Department.

#### 6.3.1.3 *Comments and Responses Trail*

A key component of the EIA process is documenting and responding to the issues raised by I&APs and the authorities during the public participation process. Comments on the Draft EIA and EMPr will be received and documented as follows:

- Written and email comments (letters, emails and completed comment forms)
- Telephonic communication
- One on one meetings with key authorities and/ or I&APs (as requested)

The comments received will be compiled into a comments and responses trail for inclusion in the Final EIA Report. The comments and responses trail will indicate the nature of the comment, as well as when and who raised the comment. The comments received will be considered by the EIA team and appropriate responses will be provided by the relevant member of the team and/ or specialist. The response provided will indicate how the comment received has been considered in the Final EIA, in the project design, or in the EMPr for the project. Where the comment received falls outside of the scope of the EIA this will, as far as possible, be clearly indicated and reasons provided. Input from the project technical team may be required in responding to some of the comments received.

#### 6.3.1.4 *Compilation of the Final EIA and EMPr and Submission to Authorities*

In line with Regulation 23 (1) of the 2014 EIA Regulations (as amended), the Final EIA, including the comments and responses trail and EMPr will be compiled for submission to the DEDEAT for their decision making, within 106 days from the acceptance of the Scoping Report. The following process will be followed regarding the notification to I&APs and authorities for the submission of the Final EIA:

- Letter 6 to I&APs: Notification of submission of the Final EIA
- Report Distribution
  - Relevant Organs of State and key I&APs will be provided with a hard copy or electronic version (CD or email) of the report as agreed to with the respective Departments
  - Report to be placed on the project website [www.publicprocess.co.za](http://www.publicprocess.co.za).

The Final EIA will also include proof of the public participation process that was undertaken to inform all registered I&APs, including Organs of State, of the availability of the Draft EIA for the **40-day** comment and review period.

#### 6.3.1.5 *Decision on Application and Appeal Period*

The competent authority must, within 107 days of receipt of the Final EIA, reach a decision with regards to the application (Environmental Authorisation Granted or Refused), in line with Regulation 24 (1) of the 2014 EIA Regulations (as amended). All I&APs on the project database will be notified once the competent authority has reached a decision on the application. In terms of Regulation 4 (2) the applicant must, within 14 days of the date of the decision, notify all registered I&APs of the decision and provide them with access to the decision and reasons for the decision, as well as draw their attention to the fact that an appeal may be lodged against the decision in terms of the National Appeal Regulations (Letter 7 to I&APs). The following process will be followed for the notification of the decision:

- A copy of the Environmental Authorisation Granted or Refused to be placed on the project website [www.publicprocess.co.za](http://www.publicprocess.co.za).
- Letter 7 to I&APs: Notification of the Decision and Appeal Period.

All I&APs on the project database will be notified of the outcome of the appeal period if an appeal is lodged, this notification will be included in Letter 8 to I&APs.

#### 6.3.1.6 *Authority Consultation during the EIA Phase*

It is proposed that the competent authority (DEDEAT) is consulted at various stages during the EIA process. The authority consultation process for the Scoping Process is outlined in Section 4.4 of this report. At this stage, the following authorities have been identified for the purpose of this EIA Process (additional authorities might be added to this list as the EIA Process proceeds):

- National and Provincial Government Departments (Potential Juristic Organs of State)
  - Provincial Department of Economic Development, Environmental Affairs and Tourism (Competent Authority)
  - Provincial Department of Economic Development, Environmental Affairs and Tourism (Biodiversity Section)
  - Provincial Department of Rural Development and Agrarian Reform
  - National Department of Agriculture, Forestry and Fisheries
  - Provincial Department of Water and Sanitation
  - East Cape Department of Roads and Public Works
  - East Cape Provincial Heritage Resources Agency

- Local Government Departments and Other Affected Organs of State
  - Sundays River Valley Municipality: Local Authority
  - SA National Parks and Addo Elephant National Park representatives
  - Lower Sundays River Water Users Association
  - Sundays River Valley Municipal Ward Councilor, Ward 8
  - Transnet Freight Rail

The table below indicates the proposed authority consultation schedule for the EIA phase of the assessment process.

*Table 6.2: Authority consultation schedule.*

STAGE IN EIA PHASE	FORM OF CONSULTATION
During the EIA Process	Site visit for authorities, if requested.
During preparation of EIA Reports	Communication with the DEDEAT on the outcome of specialist studies.
On submission of EIA Reports for decision-making	Meetings with dedicated Departments, if requested by the DEDEAT, with jurisdiction over particular aspects of the project (e.g. Local Authority).

As required in terms of Regulation 40 (2) (b) and (c) of GN R326 the public participation process conducted in terms of the NEMA EIA Regulations, 2014 (as amended), must include consultation with, amongst others, every State Department that administers a law relating to a matter affecting the environment relevant to an application, as well as all Organs of State which have jurisdiction in respect of the activity to which the application relates.

Regulation 42 of GN R326 requires that a register of I&APs must be opened and maintained and must be submitted to the competent authority. The register must contain, amongst others, the contact details and addresses of all Organs of State which have jurisdiction in respect of the activity. Appendix D.2 includes the register of Juristic Organs of State and/ or State Departments with their full contact details. Authorities and Organs of State will be provided with an opportunity to comment on the Draft EIA. All issues raised by authorities/ Organs of State during the comment period will be included in the comments and responses trail and copies of the correspondence received will be included as an Appendix to the Final EIA which will be submitted to DEDEAT for their decision-making.

### **6.3.2 Generic Terms of Reference for the Assessment of Impacts**

The following section outlines the assessment methodology and legal context for specialist studies. In addition, the specialist studies to be undertaken for this assessment will comply with the requirements of Appendix 6 of the NEMA EIA Regulations, 2014 (as amended). The identification of potential impacts should include impacts that may occur during the construction and operational phases of the activity. The assessment of impacts is to include direct, indirect, as well as cumulative impacts.

In order to identify potential impacts (both positive and negative) it is important that the nature of the proposed activity is well understood so that the impacts and risks associated with the activity can be well understood. The process of identification and assessment of impacts and risks will include:

- Determine the current environmental conditions in sufficient detail so that there is a baseline against which impacts can be identified and measured.
- Determine future changes to the environment that will occur if the activity does not proceed.
- An understanding of the activity in sufficient detail to understand its consequences; and

- The identification of significant impacts and risks which are likely to occur if the activity is undertaken.

As per GN R 326 Appendix 2, 2. (1) (h) (i), the assessment of impacts must include alternatives to be assessed within the preferred site, including the option of not proceeding with the activity. Alternatives that will be assessed in the EIA phase of the assessment are outlined in Chapter Five of this report. The impact assessment methodology has been aligned with the requirements for EIA Reports as stipulated in GN R 326 Appendix 3. 3. (1) of the 2014 EIA Regulations (as amended), which states the following:

*“An EIA Report must contain the information that is necessary for the competent authority to consider and come to a decision on the application, and must include - ...*

- (j) an assessment of each identified potentially significant impact and risk, including –*
- (i) cumulative impacts;*
  - (ii) the nature, significance and consequences of the impact and risk;*
  - (iii) the extent and duration of the impact and risk;*
  - (iv) the probability of the impact and risk occurring;*
  - (v) the degree to which the impact and risk can be reversed;*
  - (vi) the degree to which the impact and risk may cause irreplaceable loss of resources; and*
  - (vii) the degree to which the impact and risk can be mitigated.”*

As per Guideline Document 5: Assessment of Alternatives and Impacts, the following methodology is to be applied to the prediction and assessment of impacts and risks. Potential impacts should be rated in terms of the direct, indirect and cumulative:

- **Direct** impacts are impacts that are caused directly by the activity and generally occur at the same time and at the place of the activity. These impacts are usually associated with the construction, operation or maintenance of an activity and are generally obvious and quantifiable.
- **Indirect** impacts of an activity are indirect or induced changes that may occur as a result of the activity. These types of impacts include all the potential impacts that do not manifest immediately when the activity is undertaken or which occur at a different place as a result of the activity.
- **Cumulative** impacts are impacts that result from the incremental impact of the proposed activity on a common resource when added to the impacts of other past, present or reasonably foreseeable future activities. Cumulative impacts can occur from the collective impacts of individual minor actions over a period of time and can include both direct and indirect impacts.
- **Spatial extent** – The size of the area that will be affected by the impact/risk
  - Site specific
  - Local (<2 km from site)
  - Regional (within 30 km of site)
  - National
- **Consequence/Intensity** –The anticipated severity of the impact/risk
  - Extreme (extreme alteration of natural systems, patterns or processes, i.e. where environmental functions and processes are altered such that they permanently cease)
  - High (severe alteration of natural systems, patterns or processes i.e. where environmental functions and processes are altered such that they temporarily or permanently cease)
  - Medium (notable alteration of natural systems, patterns or processes i.e. where the environment continues to function but in a modified manner)
  - Low (negligible alteration of natural systems, patterns or processes i.e. where no natural systems/environmental functions, patterns, or processes are affected)
- **Duration** –The timeframe during which the impact/risk will be experienced
  - Temporary (less than 1 year)
  - Short term (1 to 6 years)
  - Medium term (6 to 15 years)

- Long term (the impact will cease after the operational life of the activity)
- Permanent (mitigation will not occur in such a way or in such a time span that the impact can be considered transient)
- **Reversibility** – The degree to which the potential impacts/risks can be reversed
  - Reversible
  - Partially Reversible
  - Irreversible
- **Irreplaceable loss of Resources** - The degree to which the impact/risk may cause irreplaceable loss of resources
  - Replaceable
  - Partially Replaceable
  - Irreplaceable

Using the criteria above, the impacts will further be assessed in terms of the following:

- **Probability** –The probability of the impact/risk occurring
  - Improbable (little or no chance of occurring)
  - Probable (<50% chance of occurring)
  - Highly probable (50 – 90% chance of occurring)
  - Definite (>90% chance of occurring)
- **Significance** – Will the impact/ risk cause a notable alteration of the environment?
  - Low to very low (the impact/risk may result in minor alterations of the environment and can be easily avoided by implementing appropriate mitigation measures, and will not have an influence on decision-making)
  - Medium (the impact /risk will result in moderate alteration of the environment and can be reduced or avoided by implementing the appropriate mitigation measures, and will only have an influence on the decision-making if not mitigated).
  - High (the impact/risk will result in major alteration to the environment even with the implementation of the appropriate mitigation measures and will have an influence on decision-making)
  - Very high (the impact/impact will result in very major alteration to the environment even with the implementation on the appropriate mitigation measures and will have an influence on decision-making i.e. the project cannot be authorised unless major changes to the engineering design are carried out to reduce the significance rating).
- **Status** - Whether the impact/risk on the overall environment will be positive, negative or neutral
  - “+” (positive - environment overall will benefit from the impact/risk).
  - “-” (negative - environment overall will be adversely affected by the impact/risk).
  - “o” (neutral - environment overall will not be affected).
- **Confidence** – The degree of confidence in predictions based on available information and specialist knowledge
  - Low
  - Medium
  - High

Impacts, mitigatory measures and the monitoring of impacts will then be collated into the EMPr and these will include the following:

- Quantifiable standards for measuring and monitoring mitigatory measures and enhancements will be set. This will include a programme for monitoring and reviewing the recommendations to ensure their ongoing effectiveness.
- Identifying negative impacts and prescribing mitigation measures to avoid or reduce negative impacts. Where no mitigatory measures are possible, this will be stated.
- Positive impacts will be identified, and mitigation measures will be identified to potentially enhance positive impacts where possible.



### Management Actions and Monitoring of the Impacts:

- Where negative impacts are identified, mitigatory measures will be identified to avoid or reduce negative impacts. Where no mitigatory measures are possible this will be stated.
- Where positive impacts are identified, mitigatory measures will be identified to potentially enhance positive impacts.

The table below is to be used by specialists for the rating of impacts:

*Table 6.3: Rating of impacts.*

Nature of the Impact	This should include a description of the proposed impact to indicate if the impact is a direct, indirect or a cumulative impact.
Extent	Site specific, local, regional or national
Duration	Temporary, short term, medium term, long term or permanent
Consequence /Intensity	Extreme, High, medium or low
Probability	Improbable, probable, highly probable, definite
Degree of Confidence	Low, medium or High
Reversibility	Reversible, Partially Reversible, Irreversible
Irreplaceable Loss of Resources	Replaceable, Partially Replaceable, Irreplaceable
Status and Significance (without mitigation)	Low, medium or High indicating whether Positive (+), Negative (-) or Neutral (o)
Mitigation	Overview of mitigatory measures to mitigate potentially negative impacts or enhance potential positive impacts indicating how this mitigatory measure impacts on the significance of the impact
Status and Significance (after mitigation)	Low, medium or High indicating whether the status of the impact is Positive (+), Negative (-) or Neutral (o)

Other aspects to be taken into consideration in the assessment of impact significance are:

- Impacts will be evaluated for the construction and operational phases of the project:
  - **NOTE:** No assessment of impacts during the decommissioning phase of the project is proposed. The relevant guidelines and rehabilitation requirements applicable at that time will need to be applied.
- Impacts will be evaluated with and without mitigation in order to determine the effectiveness of mitigation measures on reducing the significance of a particular impact; and
- The impact evaluation will, where possible, take into consideration the cumulative effects associated with this and other facilities/ projects which are either developed or in the process of being developed in the local area.
- The impact assessment will attempt to quantify the magnitude of potential impacts (direct and cumulative effects) and outline the rationale used. Where appropriate, national standards are to be used as a measure of the level of impact.

### 6.3.3 Specific Aspects to be Addressed in Specialist Studies

Specific aspects that will require further assessment have been summarised at the end of Chapter Two, Three and Four of this report. The following specialist studies (as indicated in table 6.1 above) are proposed to be undertaken:

- Biophysical (fauna and flora) specialist assessment, as well as an aquatic assessment to inform the proposed layout for the project together with the soil suitability assessment. Recommendations regarding stormwater and surface water runoff management.
- A Phase 1 Heritage Impact Assessment to identify heritage features on site, if any.
- Soil Suitability Assessment in the form of a Reconnaissance Soil Survey to determine the suitability of the soil for the establishment of citrus orchards, before the layout is finalised.
- Traffic Impact Statement to assess safe access and egress from the site.

- Visual Impact Assessment to determine any changes in the “sense of place” and visual landscape as a result of the proposed development.
- Security Risk Assessment to evaluate the potential elevated security risk posed by the proposed development on rhino and exotic game in the area.
- Roads and Wet Services Report to determine the capacity of existing services on site (water, effluent, stormwater management) and to provide recommendations if upgrades to the existing facilities are required.

Based on the outcome of the various specialist assessments, technical input and consultation with the irrigation specialist, the most suitable planting plan and irrigation layout for the site will be determined.

The following provides the Terms of Reference (TOR) for each of the specialist studies as outlined in Table 6.1 above. Issues included in the specialist TOR have been identified through the specialist site visit, technical team meeting and I&AP and authority consultation. Additional issues, identified through public and authority consultation during the Scoping Phase, as well as specialist inputs, will be included in the final Terms of Reference for specialists (i.e. in the PoS in the FS Report).

### 6.3.3.1 *Biophysical Assessment*

The following aspects will be included in the biophysical specialist assessment:

#### **Vegetation**

- Conduct a desktop assessment of available literature in order to identify and describe the status of the vegetation in terms of applicable local and regional conservation planning frameworks (e.g. Vegetation Map of South Africa, National Biodiversity Assessment 2011, Eastern Cape Biodiversity Conservation Plan, Subtropical Thicket Ecosystem Project, Sundays River Valley Municipality Biodiversity Sector Plan):
  - Include the identification and evaluation of Critical Biodiversity Areas, Ecologically Sensitive Areas and Biodiversity Corridors.
- Conduct field research in order to identify, map and describe the current state of the vegetation on site, supported by relevant photographs.
- Determine buffer zones for sensitive areas, as well as no-go areas on the site:
  - Identify and determine the relative abundance of species of special concern within the study area (Vulnerable, Endangered or Critically Endangered and Protected).
  - Identify and determine alien species present and their distribution within the study area.
  - Determine the density of the alien vegetation and the potential for post-removal recovery of indigenous vegetation.
  - Provide a detailed vegetation sensitivity map of the site.
  - Detailed mapping of disturbance and transformation on site.
  - Identify and map sensitive or specialized habitats.
- Identify and assess impacts on conservation areas (Addo Elephant National Park), where relevant.
- Identify and assess potential project related impacts (both positive and negative) for the construction and operational phases of the project using the prescribed methodology. Where feasible include the assessment of cumulative impacts.
- Outline mitigatory measures for the future management of potential project related impacts and include, where feasible, the individuals/ organizations responsible for implementation.
- Outline management recommendations for the construction and operational phases of the project.
- Identify and assess impacts on sensitive areas and no-go areas on the site and where necessary establish buffer areas appropriate to the feature.

### ***Fauna***

- Conduct a site visit and desktop review of available literature to determine whether the study area falls wholly or partially within the distribution range of species listed as Vulnerable, Endangered or Critically Endangered and Protected.
- Conduct fieldwork to identify potentially important or unique faunal habitat on site.
- Identify and assess potential project related impacts (both positive and negative) for the construction and operational phases of the project using the prescribed methodology. Where feasible include the assessment of cumulative impacts.
- Outline mitigatory measures for the future management of potential project related impacts and include, where feasible, the individuals/ organizations responsible for implementation.
- Outline management recommendations for the construction and operational phases of the project.

### ***Aquatic***

- Conduct a desktop assessment of available literature including local and regional conservation planning frameworks (e.g. National Freshwater Ecosystem Priority Areas, Eastern Cape Biodiversity Conservation Plan, Sundays River Valley Municipality Biodiversity Sector Plan) in order to identify and describe the number and extent of wetlands, drainage lines and watercourses on the site, if any.
- Conduct a site visit to confirm the presence of aquatic features and delineate wetlands and drainage lines if any are present on site.
- Provide comment on the potential impact on Aquatic CBAs as identified in the ECBCP and the SRVM Biodiversity Sector Plan.
- Make appropriate management recommendations for the EMPr.
- Make appropriate recommendations for areas or features which may require a buffer zone.

#### ***6.3.3.2 Heritage Impact Assessment***

- Screening of potential heritage resources on site, including a desktop study of palaeontological and archaeological features.
- The area will be surveyed on foot to find as many visible archaeological sites and palaeontological features as possible, including cultural features.
- All sites, features and material will be recorded by GPS coordinates.
- Site, features, material and general environment will be photographically recorded.
- Compile a report and recommendations which include an assessment of the potential impacts on heritage features/ material as a result of the development on the site, and proposals for mitigation and/ or protection - towards a Phase 2 and possible Phase 3 investigation.

#### ***6.3.3.3 Soil Suitability Assessment***

- Undertake soil analysis to establish the suitability of the soil for the proposed establishment of citrus orchards.
- Identify potential constraints imposed on the proposed farming activity by the soil/ landscape characteristics of the site.
- Provide suitable mapping for the development taking into account the soil suitability of the area and the biophysical site constraints.
- Provide amelioration measures for soils that are not suitable for commercial citrus production in their current state.

#### ***6.3.3.4 Traffic Impact Assessment***

- The expected trips that will be generated by the development.
- The suitability and safety of proposals for access to and egress from the site.
- The capacity of the existing and future road network within the influence radius.

- The impact of traffic generated by the proposed development in terms of traffic safety, operations and road condition.
- By taking into account the findings of the study, conclusions regarding the financial responsibilities of the affected parties for required road upgrading measures, if any, to mitigate the identified impacts.

#### 6.3.3.5 *Visual Impact Assessment*

- Review relevant legislation, policies, guidelines and standards.
- Conduct a site reconnaissance visit and photographic survey of the proposed project site.
- Describe and rate the scenic character and sense of place of the area and site.
- Establish extent of visibility by mapping the view-sheds and zones of visual influence.
- Establish visual exposure to viewpoints.
- Establish the inherent visual sensitivity of the site by mapping slope grades, landforms, vegetation, special features and land use and overlaying all relevant above map layers to assimilate a visual sensitivity map.
- Assess visual sensitivity criteria such as extent of visibility, the sites inherent sensitivity, visual sensitivity of the receptor's, visual absorption capacity of the area and visual intrusion on the character of the area.
- Assess the proposed project against the visual impact criteria (visibility, visual exposure, sensitivity of site and receptor, visual absorption capacity and visual intrusion) for the site.
- Establish mitigation measures/ recommendations with regards to minimizing visual risk areas.

#### 6.3.3.6 *Security Risk Assessment*

- Assess the security risks the development may pose during the construction and operational phase of the project with regards to increased poaching as a result of increased activity on the Farm.
- Assess and comment on a suitable buffer or other mitigation measures to minimise potential security risks associated with poaching, as well as stray bullets from neighbouring game farms.
- Provide measures to mitigate/ reduce potential increased security risks.
- Provide measures/ recommendations for inclusion in the EMPr with regards to minimizing security risk during the Construction and Operational Phase of the proposed development.

### **6.3.4 Technical Input**

#### 6.3.4.1 *Irrigation Water Infrastructure*

- Estimate the quantity of water required to irrigate the proposed development.
- Provide details regarding dam and irrigation infrastructure requirements including a layout of the proposed irrigation infrastructure.
- Details required include pipe diameters and length, as well as dam dimensions and design.

#### 6.3.4.2 *Roads and Wet Services Report*

- Estimate the domestic water consumption requirements for personnel and indicate the source of domestic water.
- Estimate the domestic effluent load to be created by the onsite personnel and size of the existing effluent treatment/ storage facility.
- Explanation of the effluent containment facility (septic, conservancy tank) and if effluent is removed for disposal at a Wastewater Treatment Works, name of the works and confirmation that the works has sufficient capacity to receive the effluent.
- Determine whether existing facilities have capacity to supply domestic water and manage domestic effluent.
- Make recommendations towards the effective management of effluent and water supply systems, if upgrades are required.

### 6.3.5 Proposed Scheduling of EIA Phase

Table 6.4 below outlines the proposed scheduling for the EIA phase of the assessment process.

Table 6.4: Proposed EIA schedule.

ACTIVITY	ESTIMATED TIMING
<b>PRE-APPLICATION PHASE</b>	
Initiate Scoping and Environmental Impact Assessment (EIA) Process	October 2016
I&AP review of the Draft Consultation Scoping Report	June 2017 (30 days)
<b>APPLICATION AND SCOPING PHASE</b>	
Submit Application form to DEDEAT	March 2018
Legislated 30-day review period for the Consultation Scoping report	March / April 2018(30 days)
Submit Final Scoping Report and Plan of Study for EIA to DEDEAT for Approval	May 2018
DEDEAT decision making	July 2018 (43 days)
<b>EIA PHASE</b>	
Review of Draft EIA	September/ October 2018 (40 days)
Submit Final EIA to DEDEAT for Approval	End October 2018
DEDEAT decision making	Approximately January 2019 (107 days)
<b>APPEAL PERIOD</b>	
Appeal Period (should no appeals be received)	20 days

