

CHAPTER NINE: CONCLUSIONS AND RECOMMENDATIONS

9.1 INTRODUCTION

As per section of Appendix 3 of the NEMA EIA Regulations, 2014 (as amended) this section of the report provides an environmental impact statement which contains a summary of the key findings of the environmental impact assessment including:

- *“a summary of the positive and negative impacts and risks of the proposed activity and identified alternatives”*
- *“recording of proposed impact management outcomes for the development for inclusion in conditions of authorization”*
- *“any aspects which were conditional to the findings of the assessment either by the EAP or specialist which are to be included as conditions of authorization”*
- *“a reasoned opinion as to whether the proposed activity should or should not be authorised, and if the opinion is that it should be authorised, any conditions that should be made in respect of that authorization”*

This section presents the conclusion on the most significant impacts identified through the EIA process, together with management actions required to avoid or mitigate the negative impacts; or to enhance the positive benefits.

The assessment of impacts is presented in the following sections:

- Ecology – potential impacts on vegetation, biodiversity patterns and processes, as well as fauna (Chapter 6)
- Heritage – potential impacts on heritage resources (Chapter 8)
- Assessment of Alternatives (Chapter 5)

The monitoring of impacts is outlined in the Environmental Management Programme included as Part B of this report. The key issues identified during the Scoping process, which have been the subject of separate specialist assessments during the EIA, are outlined below:

- Soil Suitability Assessment in the form of a Reconnaissance Soil Survey to determine the suitability of the soil for the rotational and seasonal planting of various crops
- Biophysical (fauna and flora) specialist assessment and aquatic survey to inform the proposed layout for the project together with the soil suitability assessment.
- Palaeontological Desktop Study and Phase 1 Archaeological Impact Assessment

9.2 IMPACTS ON ECOLOGY AND RECOMMENDED MITIGATORY MEASURES

The proposed clearing of vegetation for conversion to cultivated lands (Chapter Two) will result in the clearing of natural to near-natural thicket, which is classified as Sundays Spekboom Thicket, with some disturbed vegetation in the northern portion of the site indicated by an increase in open, grassy patches and a higher abundance of *Opuntia ficus-indica* (Prickly Pear). The loss of vegetation and subsequent faunal habitat will be greatest where intact vegetation is present.

The proposed development is anticipated to result in the clearing of approximately 35.7ha of vegetation (Sundays Spekboom Thicket). The applicant intends to conserve approximately 9ha (20%) of indigenous vegetation on the western and southern boundaries, which is adjacent to existing natural vegetation. The biodiversity target for Sundays Spekboom Thicket is 23.3% (in

terms of the NMBM Bioregional Plan). Because the Nelson Mandela Bay Bioregional Plan selected other areas to contribute towards achieving the biodiversity target for this *Vulnerable* vegetation type (i.e. it is not a CBA), and because selecting this relatively small portion of land for conservation does not make “conservation-sense”, since it is surrounded by cultivated lands to the north and east and fragmented by the railway line to the south (i.e. it is not an ESA), the magnitude of loss is not considered high.

The site is however, somewhat fragmented in places by cut-lines and portions are in a degraded state. Notwithstanding the above, vegetation in the less dense areas does provide important faunal habitat, as dense thicket tends to exclude many faunal species. A fauna and flora search and rescue operation must be conducted before and during vegetation clearing activities. Relevant permits will also be required before search and rescue can commence.

9.2.1 Impacts and Management of Ecology

The key ecological impacts associated with the construction and operational phase of the development are as follows:

- Loss of vegetation due to clearing (biodiversity loss).
- Loss of species of special concern due to clearing (biodiversity loss).
- Cumulative increase of chemical pollution of the Sundays Estuary due to the use of pesticides and fertilizers (hydrological processes and biodiversity loss).
- Cumulative increase in sedimentation and erosion of the Sundays Estuary due to increased irrigation on the farm (hydrological processes and biodiversity loss).
- Loss of faunal Species of Special Concern due to vegetation clearing and poaching
- Destruction of faunal habitat

All these impacts can be reduced by implementing the mitigation and management recommendations found in Chapter 6.

Vegetation, Biodiversity Patterns and Processes

The following recommendations are made with regards to the mitigation and management of impacts on vegetation:

- Adopt the Biodiversity Target or No-Go Areas as indicated in Chapter Six (and expanded upon in Chapter Two).
- If windbreaks are to be planted, plant indigenous windbreaks, if possible.
- Limit the disturbance footprint to the required cultivation area to reduce the impact on vegetation cover.
- Rehabilitation of disturbed areas post establishment with indigenous species, if necessary. Plants, however, can be used in the ‘rehabilitation’ of other disturbed areas on the Farm Badlands (rather than more pristine areas) e.g. the ‘conservation areas’, around farm sheds, farm entrance, and the buffer areas along the Sundays Estuary (which have been disturbed in the past). Small, immature indigenous trees translocated from the clearing process could potentially be planted in the disturbed areas.
- Control and management of alien invasive plants, such as *Opuntia ficus-indica* within the areas that are not proposed for clearing.
- Audit reporting by the Environmental Control Officer during site preparation and vegetation clearing phase.

- Permit applications to the Department of Economic Development, Environmental Affairs and Tourism and the Department of Agriculture, Forestry and Fisheries for the respective protected species.
- Translocate as many succulent species as reasonably possible to areas not proposed for development, especially in disturbed areas rather than more pristine areas.
- An attempt should be made to translocate some of the numerous *Sideroxylon inerme* (Milkwood trees) which occur on site. Small, immature trees will have a better chance of survival after translocation.
- Fertilizer applications should be used at the right time and at the required rates (i.e. excess fertilization can increase available nitrogen or phosphates entering aquatic features).
- Use of slow release nitrogen fertilizers are encouraged as this can improve nitrogen efficiency and reduce leaching of nitrogen.
- Avoid over irrigation. Drip irrigation is encouraged, as is proposed for the crops.
- The use of organic fertilizers and mulching is encouraged, as much as possible.
- The use of biodegradable chemicals, or biological pest control, is encouraged, as far as is possible.
- Strict management of potential sources of chemical pollution (e.g. pesticides, fertilizers, hydrocarbons from vehicles and machinery, etc.) i.e. waste management procedures.
- Chemicals and hazardous waste storage areas should be in existing storage buildings; and no waste materials to be stored (even temporarily) on portion 15.
- Hazardous and chemical wastes (includes old containers) should be disposed of at registered landfill sites.

Fauna

The vegetation on the area proposed for development therefore provides suitable habitat for a range of faunal species. However, given the transformed nature of the surrounding landscape – cultivated lands to the north and east and the railway line to the west – it is likely that faunal species diversity and abundance will be low. During the initial site visits on the 11 February 2016 or the 26 April 2016, some larger game (i.e. Kudu) were observed on the site.

The following provides recommendations for the management of impacts on fauna:

- The mobile fauna which may be occurring on the site are expected to vacate the area that is to be developed once vegetation clearing and other site preparation activities commence and will seek refuge in intact natural or near-natural areas that are not proposed for development.
- Measures should be implemented to ensure that fauna on site are not harmed during site preparation or operational phase activities associated with the development, e.g. environmental induction process for construction personnel and / or farm workers.
- Before site preparation and vegetation clearing commences, affected areas should be thoroughly searched for fauna that can be relocated. This is to be undertaken by a professional faunal specialist (with the necessary permits) and released into no-go areas or other suitable refuge areas.
- A professional reptile remover needs to be contacted to remove dangerous reptiles when in conflict with the workers.
- Search and rescue operations before and during the site preparation phase will decrease the impacts considerably.

9.2.2 Summary and Additional Recommendations

According to the Nelson Mandela Bay Bioregional Plan (2014), portion 15 of 203 is not designated as Critical Biodiversity Area (CBA) or Ecological Support Area (ESA). The loss of the *Vulnerable* Sundays Spekboom Thicket is considered LOW post mitigation, which is largely due to the fact that portion 15 is not a designated CBA or ESA and because approximately 20% of the vegetation cover will be retained for conservation purposes. This is the same for the cumulative loss of the *Vulnerable* Sundays Spekboom Thicket on Farm Badlands, which was subject to several Environmental Impact Assessments in the past, which has resulted in vegetation clearance.

The loss of species of special concern can be mitigated (reduced) through the translocation of species, particularly succulents that are easy to transplant, and the significance of the impact reduced to LOW. The key cumulative impacts associated with clearing vegetation and intensive cultivation was considered in this assessment given that cultivation on the site may contribute to sedimentation, erosion, turbidity and chemical pollution of the Sundays Estuary, which is already classified as Moderately Modified (Class C).

The associated impacts are therefore not deemed a fatal flaw. However, it will be important to compile and implement an Environmental Management Programme that incorporates the mitigation measures recommended to reduce the associated impacts.

The following provides a summary of the key direct and indirect impacts associated with the development. Only impacts that are rated as having a potential *Medium* or higher negative impact are listed below:

ENVIRONMENTAL IMPACT	DEVELOPMENT PHASE	PRE-MITIGATION	POST MITIGATION
Loss of vegetation due to clearing (biodiversity loss)	Establishment	MEDIUM	LOW
Loss of species of special concern due to clearing (biodiversity loss).	Establishment	MEDIUM	LOW
Cumulative increase of chemical pollution of the Sundays Estuary due to the use of pesticides and fertilizers (hydrological processes and biodiversity loss)	Operational	MEDIUM	MEDIUM
Cumulative increase in sedimentation and erosion of the Sundays Estuary due to increased irrigation on the farm (hydrological processes and biodiversity loss)	Establishment & Operational	MEDIUM	MEDIUM
Loss of faunal Species of Special Concern due to vegetation clearing	Establishment	MEDIUM	LOW
Destruction of faunal habitat	Establishment	MEDIUM	LOW
Loss of faunal Species of Special Concern due to poaching	Establishment and Operational	MEDIUM	LOW

It is recommended that the following are included as conditions in the Environmental Authorisation:

- No-go areas for development must be demarcated on site before vegetation clearing commences.
- Any lay-down areas must be contained within the proposed disturbance area and may not encroach on any no-go areas on the site.

- Before site clearing commences the development area should be surveyed for faunal and floral SSC by a suitably qualified individual. Faunal species of special concern should be relocated to the remaining patches of intact vegetation or other suitable refuge areas off-site.
- No fauna encountered on site to be intentionally harmed.
- Exotic plants present on the site, which are listed in CARA (Conservation of Agricultural Resources Act 43 of 1983) and/or NEMBA AIS Regulations should be progressively removed from the site. In addition, regular follow-up clearing should be conducted for the duration of the project lifetime to ensure that the No-go areas are kept free of these plants.

9.3 HERITAGE IMPACTS AND RECOMMENDATIONS

9.3.1 Impacts and Management of Palaeontology

The study area is underlain by potentially fossiliferous sediments of the Sundays River Formation (Uitenhage Group) of Early Cretaceous age. In accordance with the National Heritage Resources Act, 1999, a palaeontological heritage assessment is required for this project, since important fossil material (e.g. marine shells, dinosaur remains) has previously been recorded from the Kirkwood – Addo area within this formation. In view of the very limited exposure of Cretaceous bedrocks within the study area, a basic desktop assessment of the fossil heritage resources in the study region was prepared.

This mudrock-dominated succession with subordinate sandstones has yielded rich fossil assemblages of marine invertebrates (notably molluscs, such as ammonites and bivalves), plant remains (e.g. driftwood), as well as very rare vertebrate remains (e.g. dinosaurs) from the Algoa Basin of the Eastern Cape. Several important Cretaceous fossil localities have been recorded in the Barkly Bridge area by McLachlan and Anderson (1976), Engelbrecht *et al.* (1962) and earlier authors. Fossil groups recorded here include a wide range of invertebrates, as well as rare dinosaur remains.

However, in the low-lying areas of Farm 203 (Portion 15) that are earmarked for development, the Sundays River Formation is largely or entirely mantled by Pliocene to Pleistocene river sediments of the Kudus Kloof Formation that may be up to several meters thick and are, at most, very sparsely fossiliferous. **Significant impacts on fossil heritage are therefore not anticipated here.**

Should fossil remains be discovered during construction, these should be safeguarded (preferably *in situ*) and the ECO should alert the Eastern Cape Provincial Heritage Resources Authority (ECPHRA. Contact details: Mr Sello Mokhanya, 74 Alexander Road, King Williams Town 5600; Email: smokhanya@ecphra.org.zaso) so that appropriate mitigation (e.g. recording, sampling or collection) can be taken by a professional palaeontologist. The specialist involved would require a collection permit from ECPHRA. Fossil material must be curated in an approved repository (e.g. museum or university collection) and all fieldwork and reports should meet the minimum standards for palaeontological impact studies developed by SAHRA (2013).

9.3.2 Impacts and Management of Archaeology

The southern part of the area earmarked for clearing is a relatively flat flood plain composed of thick reddish alluvial deposits covered by dense thicket vegetation. No archaeological sites/materials were observed in this area, but material may be covered by soil and vegetation. From the yellow peg the flood plain suddenly drops several metres to another flat plain which stretches all the way to the Sundays River. This drop must represent an old river embankment.

A small number of 'informal' Middle Stone Age stone tools eroded from the edge of the embankment (GPS reading: 33.38.446S; 25.42.521E). These stone tools date between 250 000 to 30 000 years old and the flakes displayed typical faceted striking platforms manufactured from river pebbles/ cobbles. Most of the tools were thick 'informal' flakes and chunks. No spatial patterning or activity areas such as 'manufacturing' sites were located. All stone tools were in secondary context and not associated with any other remains. Although the property is near the Sundays River, no freshwater shell middens /materials were observed.

There are no known graves or buildings older than 60 years on the property surveyed and in general it would appear that the area is of **low cultural sensitivity and that it is unlikely that any sensitive archaeological remains will be exposed during the development.**

The main impact on archaeological sites/remains will be the physical disturbance of the material and its context. The clearing of the vegetation to expand the existing agricultural activities (approximately 36 ha) will expose, disturb and displace archaeological sites/material. However, from the investigation, it would appear that the proposed area earmarked for development is **of low archaeological sensitivity and the visual impact on the surrounding cultural landscape will also be low.**

Recommendations

- Although it would seem unlikely that any significant archaeological remains will be exposed during the development, there is always a possibility that human remains and/or other archaeological such as freshwater shell middens and historical material may be uncovered during the development. Should such material be exposed during construction, all work must cease in the immediate area (depending on the type of find) and it must be reported to the archaeologist at the Albany Museum in Grahamstown (Tel: 046 6222312) or to the Eastern Cape Provincial Heritage Resources Authority (Tel: 043 6422811), so that a systematic and professional investigation can be undertaken. Sufficient time should be allowed to investigate and to remove/collect such material. Recommendations will follow from the investigation.
- All clearing activities and other developments must be monitored. Managers/foremen should be informed before clearing/construction starts on the possible types of heritage sites and cultural material they may encounter and the procedures to follow when they find sites. Alternatively, it is suggested that a person must be trained (ECO) as a site monitor to report to the foreman when heritage sites/materials are found.
- It is suggested that an archaeologist should conduct a walkthrough of the area after the vegetation is cleared and before development starts to check if any significant sites/materials were exposed. Further recommendations will follow after the investigation.

9.4 ASSESSMENT OF ALTERNATIVES

The following alternatives were identified for consideration in this assessment:

- Property/ Location alternatives (reason for elimination)
- No-go alternative
- Land-Use alternatives
 - Grazing/ game
 - Crop/ Citrus cultivation
- Layout alternatives
 - Irrigation efficiency and requirements

The preferred alternatives from the list above as contemplated in detail in Chapter 5 are summarized below.

9.4.1 No-Go Option

The no-go option would entail not clearing the site for the seasonal planting of crops and the retention of the Sundays Spekboom Thicket. This will include the continued ad hoc grazing on the site, which may contribute to the degradation of vegetation on Portion 15 and the continued invasion of exotics, if not actively controlled.

Conversely, the no-go option would result in several temporary construction, permanent, as well as seasonal employment phase opportunities not being realized. The no-go option would result in the loss of a capital investment estimated to be approximately R7.2 million as well as the loss of 20 new employment opportunities at a value of R300 000 during the construction phase. The operational phase of the project will result in the creation of 25 permanent employment opportunities with an annual income of approximately R937 000 and 150 seasonal employment opportunities (six months of the year) with an additional annual income of R2.1 million. The no-go option would result in a loss of these economic opportunities as well as other indirect opportunities along the supply chain, for the region, which is considered to be a negative impact.

9.4.2 Property/ Location Alternatives

Portion 15 of Farm 203 Logan Braes, is owned by the project applicant and is currently zoned for agricultural use, within an area designated for agriculture in the NMBM. The property under assessment forms part of an existing working farm, referred to as Badlands. The working Farm Badlands, is made up of a number of properties (14 properties) which measure ~618ha in combined extent. With the exception of Portion 15, all other properties on the Farm Badlands are currently under a level of cultivation. Portions of other properties forming part of the Farm Badlands which are intact/ not under cultivation (e.g. on Portion 16, 17, 18 and 19 of Farm 203 Logan Braes), have previously received Environmental Authorisation. This includes, amongst others, intact areas to be set aside to meet the required conservation targets. The conditions in these authorisations are legally binding upon the applicant and, therefore, the intact portions set aside for conservation purposes are not feasible location alternatives for the proposed activity.

As a result, **there are no other reasonable or feasible property/ location alternatives to be assessed** within the Badlands farming unit. Layout alternatives within Portion 15 have, however, been assessed.

9.4.3 Land Use Alternatives: Crop / Citrus Cultivation

Portion 15, forms part of the working farming unit, Badlands, which is currently under various forms of intensive cultivation on a rotational as well as seasonal basis (e.g. citrus, various melons, butternut, mielies/ maize, and cabbages). The properties north, east and south east of Portion 15, which form part of the farming unit Badlands, are currently under cultivation. The area south of Portion 15 is intact vegetation which has been set aside for conservation purposes as part of the Environmental Authorisation for Portion 17 of Farm 203, Badlands. The applicant has existing water use rights for irrigation purposes from the LSRWUA. Dependent on the type of crop, either drip or pivot irrigation is used to supply water to the crops.

Some of the key elements contributing to the sustainability of the agricultural potential of the site is access to land, suitable soils, topography of the site and access to, as well as availability of water. Based on the experience of the independent Environmental Impact Assessment Practitioner (EAP) in the area, access to land meeting the abovementioned requirements in the NMBM and specifically the Sundays River Valley area, is no longer readily available because suitable lands

have already been cultivated. This is resulting in agricultural expansion into areas which are ecologically more sensitive and require a larger capital investment to ensure a reliable irrigation water supply, due to the distance from a readily available water resource. Therefore, because Portion 15 meets the abovementioned criteria, it is considered to have a **high agricultural potential and, therefore, is suitable for the proposed development.**

The expansion on the Farm Badlands will create a number of temporary construction, as well as permanent, operational and seasonal employment opportunities. A variety of crops are proposed to be cultivated on a rotational, as well as seasonal basis, for both local and international markets, thereby providing income directly and indirectly into the local market and improving local food security.

For the reasons outlined above **this is the preferred alternative**, which has been assessed in detail during the EIA phase of the assessment, and includes and assessment of layout alternatives within the approved site.

9.4.4 Layout alternatives

The EIA phase of the assessment has assessed layout alternatives on the site, based on the detailed specialist studies as well as technical input, namely:

- Soil suitability
- Vegetation – loss of vegetation, species of special concern, ecological corridors, conservation targets
- Irrigation efficiency and requirements – drip and pivot irrigation
- Archaeological – heritage features on site, if any

The final layout for the project has been determined by the specialists, as well as technical input in the EIA phase of the assessment (see Chapter Two).

The proposed preferred development footprint totals 35.7ha for cultivation, and 8.9ha to be set aside as a no-go area, to meet conservation targets. The preferred layout alternative was developed based on the recommendations from the Vegetation Specialist Assessment, as well as technical input from the irrigation specialist.

The Farm Badlands provides for the rotational planting of a variety of crops, e.g. melons, citrus, maize and cabbage. Certain diseases/ pests that are plant-family specific, have been found to develop on the melons/ butternuts after a period of three years. By planting an alternative crop (from a different plant family) the diseases/ pests that are plant-family specific, die off. In order for the proposed agricultural development to remain sustainable, alternative crops need to be planted on a rotational basis (every three years, for one to two years). The alternative crops utilised by the applicant are maize, wheat and cabbages. While the preferred irrigation method for the melons/ butternuts is drip irrigation, the alternative crops have to be irrigated by means of a pivot irrigation system. Therefore, both forms of irrigation systems are proposed to be utilised for the development. For this reason, the proposed layout has been designed so as to accommodate both forms of irrigation systems

In addition, the development footprint will facilitate the retention of a corridor of vegetation along the western and southern boundaries of Portion 15, which measures 8.9ha in extent. The proposed vegetated corridor will link up with existing natural areas on the adjacent farm portions (Portion 16, 17, 18 and 19) as indicated in Chapter Two, Map 2.4. Portion 16, 17, 18 and 19 of Farm 203

Logan Braes, have previously received Environmental Authorisations, which include, amongst others, intact areas to be set aside in order to meet the required conservation targets.

For more detail regarding the alternatives that were not considered further in the assessment process due to them not being preferred, see Chapter Five of this report. For more detail on the preferred alternative assessed in detail in this assessment process, see Chapter Two of this report.

9.5 PERMIT REQUIREMENTS

Permission will be required from the provincial environmental authorities for the clearance of vegetation and removal of plant species protected by provincial legislation.

- Permits from the relevant authority (Department of Economic Development Environmental Affairs and Tourism) are required for the removal, translocation or destruction of all plants and animals listed as endangered or protected in terms of the Cape Nature and Provincial Conservation Ordinance (No. 19 of 1974) and the NEMBA Threatened or Protected Species List.
- Permits to be obtained from the Department of Agriculture, Forestry and Fisheries (DAFF) for tree species protected in terms of the National Forests Act (No. 84 of 1998)
- Application for the cultivation of virgin land in terms of Regulation 2 of the Conservation of Agricultural Resources Act (CARA, No. 43 of 1983) to be made to DAFF: Land Use and Soil Management Directorate.

9.6 OVERALL EVALUATION OF IMPACTS

Local labor is sourced by Habata Boerdery, from both the NMBM area, as well as the SRVM, hence reference below to both the NMBM Integrated Development Plan (IDP, 2016-2017) and the SRVM Final IDP (2015/ 2016), as well as the SRVM Spatial Development Plan (April 2013).

The Nelson Mandela Bay Municipality (NMBM) Integrated Development Plan (IDP, 2016-2017) highlights some of the key socio-economic challenges in the NMBM and lists unemployment and poverty among them. One of the reasons sighted for the high unemployment rate (62.74% of the economically active population) and dependency ratio (77.83% of households are indigent), is that the local economy is experiencing low economic growth (3% per annum), although the NMBM is an important node of activity within the economy of the Eastern Cape.

The Final IDP (2015/2016) for the Sundays River Valley Municipality (SRVM) estimates that the current unemployment rate in the municipal area is 38.54% of the economically active population. The Agricultural sector provides room for growth in terms of employment opportunities, as it currently represents approximately 11% of the employment for the SRVM area (Final SRVM IDP 2015/2016).

According to the SRVM Integrated Development Plan (2013/2014) "*...the Sundays River Valley is one of the developing local municipalities within the Cacadu District Municipality (Western Region) and boasts with its eco-tourism and agricultural potential...*" (pg10).

"The agricultural sector is one of the key economic drivers of the Sundays River Valley Municipality.", according to the SRVM Spatial Development Plan (April 2013) (pg. 8).

It is the applicant's intention to build on this economic base in the NMBM and the SRVM, by making optimum use of the available resources the area has to offer, i.e. the availability of a

sustainable supply of irrigation water from the LSRWUA canal system; the suitability/ fertility of the soils on the site, as well as the available work force from local communities. The suitability of the site for such agricultural activities is supported by the existing cultivated areas that have been established to the north and east of the area under assessment.

By making use of this labor market the proposed development would also support the vision of the Sundays River Valley Local Economic Strategy as outlined in the SDF (April 2013) which indicates Agriculture as a Local Economic Development Priority and identifies the need to “...*expand the agricultural section in the region.*” as an Economic Development Objective.

It is estimated the capital investment of the development, upon completion of construction, will be approximately R7.2 million. It is estimated that the construction phase of the development will create approximately 20 new employment opportunities at a value of R300 000.00.

Upon completion of construction and during the operational phase of the development it is estimated that 25 permanent employment opportunities will be created at a value of R937 000.00 annually and 150 seasonal opportunities at an annual value of R2.1 million.

Labour will be sourced locally from communities in both the NMBM as well as the Sundays River Valley Municipality. In addition to the direct employment opportunities that are created as part of the farming operations, a number of indirect jobs will also be created by the proposed development. Habata Boerdery supplies a number of local street vendors at reduced prices. In addition, the cabbages grown by Habata Boerdery are specifically grown for the local market, thus contributing to local food security. Habata Boerdery is also known as one of the largest local suppliers of melons.

The project will provide economic stimulation in the NMBM, and the SRVM, through the increased demand for goods and services associated with increased agricultural production. These include, among others: higher demand for packing materials (pallets, cardboard boxes, ink); increased shipping and cargo handling requirements; increased demand in agrichemical, fertiliser and supporting industries; as well as increased transport requirements for goods and labour. This increased demand will therefore lead to increased employment in the various sectors.

The proposed development is anticipated to result in the clearing of approximately 35.7ha of vegetation (Sundays Spekboom Thicket). The applicant intends to conserve approximately 9ha (20%) of indigenous vegetation on the western and southern boundaries, which is adjacent to existing natural vegetation. The biodiversity target for Sundays Spekboom Thicket is 23.3% (in terms of the NMBM Bioregional Plan). Because the Nelson Mandela Bay Bioregional Plan selected other areas to contribute towards achieving the biodiversity target for this *Vulnerable* vegetation type (i.e. it is not a CBA), and because selecting this relatively small portion of land for conservation does not make “conservation-sense”, since it is surrounded by cultivated lands to the north and east and fragmented by the railway line to the south (i.e. it is not an ESA), the magnitude of loss is not considered high.

By applying the mitigatory measures proposed *Construction Phase* direct and indirect impacts of medium significance can mostly be reduced to impacts of medium to low negative significance. The key direct and indirect impacts associated with the *Operational Phase* of the development can, by applying the mitigatory measures proposed, be reduced from negative impacts of medium significance to impacts of medium to low significance.

The Environmental Assessment process has not identified any negative impacts that should be considered “fatal flaws” from an environmental perspective, and thereby necessitate substantial re-design or termination of the project. Taking into consideration the findings of the EIA process, it is the opinion of the Environmental Assessment Practitioner that the project benefits outweigh the negative residual environmental impacts, provided that the specified mitigation measures are applied effectively, it is proposed that the project receive environmental authorization in terms of the EIA process.