

## **CHAPTER TWO: PROJECT DESCRIPTION**

### **2.1 INTRODUCTION**

The applicant, Mr HHJ (Hermanus) Potgieter of the Hermanus Potgieter Familie Trust, proposes to expand existing agricultural activities for citrus production on Portion 23 a portion of 5 of 104 (94 ha); and the Remainder of Farm No 650 Swanepoels Kraal (136ha), Division Uitenhage, Sundays River Valley Municipality. The two adjoining properties, which measure approximately 230 ha, are zoned for agriculture.

It is the intention of the applicant to clear approximately 94 hectares and establish citrus orchards and associated infrastructure (internal roads, a dam and irrigation system). This section of the report however deals with the already cleared portion on the two properties (approximately 20.2 ha of the proposed 94 ha) and indicates activities that have taken place on the cleared area, and activities still to be undertaken on the 20.2 ha, should environmental authorisation be received.

As noted in Chapter 1, section 1.3 there are certain limitations to the assessment of impacts as the activity on site has partially commenced with the clearing of vegetation. The assessment of alternatives including the no-go alternative, which could entail rehabilitation of the site, is assessed in Chapter Seven of this Report.

### **2.2 PROJECT NEED AND MOTIVATION**

The area proposed for the expansion of the citrus activities has to date largely remained intact for game associated with the lodge on the site, Dung Beetle Lodge. However the surrounding properties have developed into a citrus producing area and currently Portion 23 of Farm 104 and the Remainder of Farm 650 are surrounded by agricultural activities on all sides (pastures and orchards). The development of the surrounding area has resulted in an increase in illegal poaching of game on the properties, despite appointing a permanent team which removed approximately 40 to 50 snares a week (pers comm. Hermanus Potgieter), the game stock numbers on the property have systematically declined over time.

The site is surrounded by agricultural activities. Thus it is largely isolated from the ecological process and faunal movement corridors in the surrounding areas. The nearest indigenous vegetation is approximately 500 metres to the south east of the cleared area on the site and is intercepted by citrus orchards.

Soil suitability studies conducted on the cleared portion of the site (approximately 20,2 ha) have ascertained this portion of the site is suitable for agriculture, in particular for the establishment of citrus.

It is proposed that the citrus activities tie into the existing access and administrative infrastructure of the current farming operation, Miskruier Citrus farm. Once established, it is

anticipated that the 20.2 ha area will produce between 1000 and 2000 tons of fruit annually, depending on the variety used. The plantation will ensure sustainability of the current farming operations and the optimal use of already established infrastructure and operations.

The area under assessment forms part of an existing working farm in the Sundays River Valley Municipality (SRVM). According to the SRVM Integrated Development Plan (2010/2011) "*...the Sundays River Valley plays an important role in the local economy of the Eastern Cape. The area is characterized by high intensity irrigation farming which is largely based on the export market...*"(Pg 19). Agricultural development is a key driver in the local economy, with agriculture related industries (agriculture, forestry & fisheries) currently providing approximately 48.6% of employment in the SRVM, while these industries account for 31.2% of the Gross Geographic Product in the area (Pg 38). "*Of particular importance to the Municipality is the partnership with the Department of Agriculture regarding the poverty alleviation projects of agriculture coupled with the high agricultural potential in the area.*" (Pg. 38.)

Due to the poaching that is taking place on the properties under assessment it is no longer financially viable to maintain the entire area for habitation by game. It is anticipated that transformation of this area for agricultural expansion of the existing citrus farming operations on the adjacent farm will ensure the sustainability thereof.

Planting and harvesting are done manually and are labour intensive processes. It is estimated that the 20.2 ha will create an additional 4 direct permanent employment opportunities, 1 indirect permanent employment opportunity and an additional 25 seasonal employment opportunities (8 months of the year). At an average of R125 000 per hectare for site preparation and construction it is estimated the capital investment of the development is R2.25 million for 20.2 ha. Labour will be sourced locally from communities in both the NMBM as well as the Sundays River Valley Municipality.

## **2.3 PROJECT OVERVIEW**

It is the applicants intention to establish citrus orchards and associated infrastructure on the cleared 20,2 ha of land on Portion 23 a portion of 5 of 104 and the Remainder of Farm No 650 Swanepoels Kraal, subject to the outcome of the specialist studies and recommendations forming part of this assessment process.

### **2.3.1 Activities on Site to Date**

The site visit, by the appointed independent Environmental assessment practitioner on the 27 September 2012 identified that approximately 20.2 hectares of vegetation, on the southern most portion of the two properties has been cleared. The vegetation cleared to date amounts to approximately 8.7% of the 230 ha. Vegetation in a drainage line located on an eastern portion of the cleared area has not been removed. The vegetation cleared from the site has been stockpiled in rows. Chapter Four of this report provides a detailed overview of the affected environment and makes recommendations for mitigatory measures.

The area south and east of the cleared area are existing citrus orchards, while the area west and north of the two properties contains intact vegetation which is proposed for further citrus expansion. All activities on the cleared area have ceased and no further activities relating to the establishment of additional areas for citrus cultivation have taken place, pending the outcome of the Section 24G application.

The following activities are still proposed to take place on the area that has been cleared.



Photo 2.1 Vegetation cleared on site and stockpiled in rows.

### 2.3.2 Construction Phase

The following provides an overview of the activities which are still required to take place on the cleared portion of the site before citrus orchards can be established.

#### ***Shaping and earthworks***

The topography of the cleared area slopes in a northerly to southerly direction, thus minor shaping and levelling may be required in order to manage runoff from the cultivated lands and prepare the site for crop planting.

#### ***Planting of windbreaks***

The orchards will require the establishment of suitable windbreaks. In order to provide optimum yields and quality, citrus crops need to be protected from environmental extremes, including wind. It is an accepted practice to establish exotic Silky Oaks (*Grevillia robusta*) as wind-breaks in the citrus orchards in the Sundays River valley. However this tree is listed in Category 3 of the Regulations in terms of the Conservation of Agricultural Resources Act (Act 43 of 1983). According to these regulations; propagative material of these plants, such as seeds or cuttings, may no longer be planted, propagated, imported, bought, sold or traded in any way. It is recommended that a tree species, which is not listed as invasive in terms of the CARA Regulations, is selected for planting as a windbreak.

#### ***Irrigation infrastructure***

The crops will require regular watering. In order to achieve this, a system of underground pipes to provide drip/ micro-irrigation is required to be installed in order to deliver water to the crops. The drip / micro irrigation infrastructure is proposed to tie into the new dam which forms part of the Basic Assessment Process for the intact portion of the two properties. It is proposed that a storage dam with a total capacity of 33 750m<sup>3</sup> be constructed, which will be sufficient to meet the requirements of the already cleared portion of the site. Water will be pumped from the LSRWUA canal adjacent to the site and stored in the dam to provide irrigation water for the proposed development.

### **Internal Roads**

The development does not require formal surfaced roads, however reliable vehicle access needs to be maintained to the cultivated area. There is an existing vehicle track from the entrance of Dung Beetle Lodge directly to the cleared portion of the site as well as from the proposed irrigation dam. The vehicle tracks extend up to and approximately through the centre of the cleared area, and along the southern as well as eastern boundary of the cleared area. It is anticipated these vehicle tracks will provide access for vehicles and equipment to the proposed new orchards for the construction phase as well as operational phases of the project.



Photo 2.2 Existing vehicle track through the centre of the cleared area from Dung Beetle Lodge.

### **Planting of the crops**

Seed has already been purchased, which has been sent to a nursery for germination. The saplings are planted annually in the last quarter of the year from approximately September to December. A variety of citrus crops are proposed for planting, predominantly for the export market.

### **Supporting Infrastructure (potable water, sanitation, administration)**

Swanepools Kraal is a member of the Sundays River Citrus Company (SRCC) which directly receives and packs citrus for export. During harvesting of the crops, the citrus is directly transported to the SRCC for processing, packaging and export. Therefore no additional infrastructure is required on site for the processing or packaging of the citrus

## **2.3.3 Operational Phase**

### **Cultivation**

Once established the lands will be used to cultivate a variety of citrus crops for the export market. This will require seasonal harvesting of the citrus over approximately 8 months of the year and transport to the SRCC for export.

### **Water Use and Availability**

Water for the additional agricultural area will be provided from the adjacent canal system belonging to the Lower Sundays River Water Users Association (LSRWUA). Confirmation of the availability of water to service the area has been received from Harms Du Plessis of the LSRWUA (pers comm. Hermanus Potgieter) and written confirmation thereof will be provided in the Final Assessment Report. Water will be pumped from the canal system to an onsite dam, located on a northern section of Portion 23 of Farm 104, with a storage capacity of 33 750m<sup>3</sup>.

***This component of the project however forms part of the Basic Assessment Application for the development.*** From the storage dam water will be reticulated via a system of underground PVC pipes to the orchards for micro and/or drip irrigation. The water requirements will be approximately <math>900\text{mm/year/ha}</math>. Therefore, it is estimated that approximately 181 000 m<sup>3</sup> of water will be required annually to irrigate the cleared area of 20.2ha. The cumulative total for the entire area (94 ha) is 847 000 m<sup>3</sup> annually.

### ***Employment Creation and Capital Investment***

Planting and harvesting are done manually and are labour intensive processes. It is estimated that the development will create an additional 4 direct permanent employment opportunities, 1 indirect permanent employment opportunities and an additional 25 seasonal employment opportunities (8 months of the year). Thus an additional income into the local market from permanent employment opportunities is estimated at approximately R120 000 annually and R400 000 annually from seasonal employment. At an average of R125 000 per hectare for site preparation and construction it is estimated the capital investment of the development is R2.25 million for 20.2 ha. Labour will be sourced locally from communities in both the NMBM as well as the Sundays River Valley Municipality. The cumulative capital investment for the 94 ha is estimated to be approximately R11.7 million.

### ***Supporting Infrastructure (potable water, sanitation, administration)***

No additional infrastructure is proposed on the area already cleared. The existing administrative and technical infrastructure at Miskruier Farm will be utilised to service the expanded agricultural activities (offices, storage areas, and service buildings). The sanitation facilities at the Miskruier Farm will be used during the day to day maintenance of the orchards and associated infrastructure. During harvesting when there is a larger labour force present at the site, portable sanitation and washing facilities need to be provided.

## **2.4 PROJECT TIMEFRAMES**

The establishment of additional areas for citrus production requires careful timing between the seasonal planting of citrus (last quarter of each year) and the nursery providing the saplings for production purposes. For export purposes seed block must be secured in advance, which is normally accompanied by a financial deposit. The grow-out period for the seed is approximately two years.

Prior to the planting of the crops a period of preparation (construction and installation of infrastructure) is required. Should Environmental Authorisation for the project be issued, it is anticipated that the applicant will secure the necessary permits and authorisations and project implementation and construction is proposed to take place in a phased manner over three periods of 18 months. The first period of 18 months is proposed on the already cleared 20.2 ha portion of the site, should this receive authorisation. The phases for the remainder of site proposed for development are as follows:

Phase 1: 20.2 ha, 2012/2013 **(this application)**

Phase 2: 37 ha, 2013/14 (September to December – not part of this application)

Phase 3: 37 ha, 2014/2015 (September to December – not part of this application)

## 2.5 CONCLUDING REMARKS

Vegetation clearing on site has commenced with the clearing of approximately 20.2 ha of vegetation, the following has been assessed in this assessment process:

- Identify and describe the status of the biophysical environment (vegetation, fauna and wetlands) affected by vegetation clearing in terms of applicable local and regional conservation planning frameworks
- Identify, map and describe the biophysical environment that would have been present within the area cleared
- Identify and assess impacts on conservation areas, e.g. Addo Elephant National Park
- Identify and assess current and potential project related impacts (both positive and negative) for the cleared area, include operational phase impacts.
  - Where feasible include the assessment of cumulative impacts.
- Assessment of the soil suitability for citrus production
- Assessment of heritage related impacts
- The assessment of alternatives, including the no-go option and rehabilitation of the site.