
Project: The cultivation of virgin soil on Rondo, Farm 756/1, Worcester

Applicant: Mr DN van Niekerk - Rondo Trust

Date: April 2010

Department of Environmental Affairs and Development Planning
Ref no: E12/2/3/2-B2/33-1022/10

Consultants: Boland Environmental Consultants CC
PO Box 250, Worcester, 6849
Tel / Fax 023 347 0336
work@BolandEnviro.co.za

© BolandEnviro CC 2010 All rights reserved
10. ENVIRONMENTAL ISSUES ................................................................. 27
11. SPECIALIST STUDIES ............................................................... 28
11.1 CRITERIA FOR SPECIALIST ASSESSMENT OF IMPACTS .... 28
11.2 BRIEFS FOR SPECIALIST STUDIES TO BE UNDERTAKEN AS PART OF THE EIA ................................................. 29
11.2.1 HERITAGE STATEMENT ......................................................... 29
11.2.2 BOTANICAL/ECOLOGICAL ASSESSMENT ......................... 29
11.2.3 SOCIO-ECONOMIC IMPACT ASSESSMENT ......................... 31
11.2.4 SOIL INVESTIGATION .......................................................... 31
11.3 AUTHORITY CONSULTATION .................................................. 31
12. ASSESSMENT OF ENVIRONMENTAL ISSUES AND IMPACTS .... 31
12.1 HERITAGE IMPACTS ............................................................... 32
12.2 BOTANICAL/ECOLOGICAL ...................................................... 32
12.3 SOCIO-ECONOMIC IMPACTS ................................................. 33
12.4 AGRICULTURE ................................................................. 33
12.5 EROSION ................................................................. 34
12.6 LAND TRANSFORMATION ....................................................... 34
13. ASSESSMENT OF IMPACTS ....................................................... 36
14. CONCLUSIONS AND RECOMMENDATIONS ........................... 37

FIGURES

Figure 1a: The Scoping Process ....................................................... 11
Figure 1b: The Environmental Impact Assessment Process .............. 11
Figure 2a and 2b: Looking northwards towards the Breede River and southwards towards the Gannaberg, mountains, respectively. 13
Figure 3: Looking eastwards towards the farm homestead on Farm 756/2, Worcester. 13
Figure 4: Map depicting the locality of proposed Portion A of Rondo, Farm 756/1, Worcester 14
Figure 5: Map depicting the locality of proposed Portion A of Rondo, Farm 756/1, Worcester 14
Figure 6: Satellite image depicting the proposed Portion A of Rondo, Farm 756/1, Worcester and indicating the area intended for clearing of natural vegetation. Imagery dated 7 August 2005 ............................................. 15
Figure 7: Climate graphs for Worcester depicting average rainfall and temperatures. 15
Figure 8: The Spatial Development Framework Proposal for the Worcester-Overhex/Moordkuil Planning depicting the location of the Subject Land . 20
APPENDICES

Appendix A: Locality Maps
Appendix B: Site Plan
Appendix C: Power of Attorney
Appendix D: Photographs
Appendix E: Public Participation Process
Appendix F: Permits, Licenses and Letters
Appendix G: Specialist Reports
Appendix H: Environmental Assessment Practitioners CV’s

GLOSSARY

DEA&DP  Department of Environmental Affairs and Development Planning
DEAT  Department of Environmental Affairs and Tourism
DWAF  Department of Water Affairs and Forestry
ECA  Environment Conservation Act (73 of 1989)
EIA  Environmental Impact Assessment
EIR  Environmental Impact Report
EMP  Environmental Management Programme
HIA  Heritage Impact Assessment
HWC  Heritage Western Cape
I&APs  Interested and Affected Parties
IEM  Integrated Environmental Management
LUPO  Land Use Planning Ordinance
NEMA  National Environmental Management Act
NEMBA  National Environmental Management: Biodiversity Act
NHRA  National Heritage Resources Act
NWA  National Water Act
OEMP  Operational Environmental Management Plan
SAHRA  South African Heritage Resources Agency
1. INTRODUCTION

1.1 BACKGROUND TO THE STUDY

The landowner is Rondo Trust represented by Mr DN Van Niekerk, (herein referred to as the Applicant), has the intention to sell a 55ha portion of Portion 1 of Farm 756, Worcester (Rondo, Scherpenheuwel). In order for the sale to be finalised, the Applicant on behalf of the prospective buyer must apply and obtain authorisation to clear 40ha of the 55ha for cultivation. The proposed cultivable land will be utilised for plum orchards aimed at local and export markets.

In October 2009, Mr Van Niekerk, following a Basic Assessment Reporting process, applied for authorisation to cultivate 40ha of virgin soil. The environmental process ran parallel to an application to subdivide the agricultural land from Portion 1 of the Farm 756, Worcester. This application submitted to the Breede Valley Municipality in terms of the Subdivision of Agricultural Land Act (Act 70 of 1970), was approved by the National Department of Agriculture, the Western Cape Department of Agriculture and the Municipality, pending the finalisation of the environmental authorisation.

Due to the proposal to clear more than 20ha of natural vegetation i.e. triggering Activity 2 in terms of GN 387, the Applicant chose to withdraw the application associated with the Basic Assessment Report as a full Environmental Impact Assessment (Scoping / EIA) process is required.

Boland Environmental Consultants cc were appointed to facilitate the completion of the Scoping Phase, i.e. to convert the Basic Assessment Report process into a Scoping Report and submitted this together with the Plan of Study in terms of the National Environmental Management Act (Act 107 of 1998) (NEMA).

A Scoping Report and draft Plan of Study, based on the available information provided by the Applicant and the issues raised to date, was compiled and submitted to the Department of Environmental Affairs and Development Planning for approval on the 12th of March 2010. Simultaneous with the submission of the Scoping Report, withdrawal of the initial application associated with the Basic Assessment Report was requested, and exemption applied for from certain provisions of Public Participation as required by Regulation 56 (2) of the EIA Regulations for the Scoping Phase (see Section 6 for further details on the process overview).

The Department of Environmental Affairs and Development Planning approved the Scoping Report and Plan of Study for EIA for the proposed cultivation of virgin soil on Rondo, Farm 756/1, Worcester on the 12th of April 2010 (Appendix F).

1.2 SCOPE OF THE WORK TO BE UNDERTAKEN

The scope of the study is determined with reference to the requirements of the relevant legislation namely the NEMA EIA Regulations, 2006. The main responsibilities of the environmental assessment practitioner would include but not be limited to, the following, as stipulated in the EIA Regulations:
• Submission of the required Application Form to the relevant authority to register the proposed project, and obtain the applicable reference number;
• Consultation with the relevant authorities and stakeholders, through the EIA process, to ensure that identification of relevant issues or concerns are undertaken in accordance with the EIA Regulations;
• Ensure the assessment of and response to the issues that are raised throughout the process;
• Compilation of the required Scoping and Environmental Impact Reports, describing the proposed activity, the affected environment, the potential environmental impacts, all applicable legislation and applicable guidelines, the detail of the public participation process followed, aspects that require further study (Scoping) and the findings of the specialist studies and recommendations and/or mitigations measures to be implemented during construction and operation (EIA);
• Submission of the above-mentioned documents to the public for comment and to the authority (DEA&DP) for a decision.

### 1.3 ASSUMPTIONS AND LIMITATIONS

• The Applicant, prior to our appointment, has spent substantial time and resources facilitating his application for subdivision and environmental authorization. The assumption is that the process followed to date was proper and transparent. This noted, we applied for exemption from repeating the Public Participation Process during the Scoping Phase, as all immediate neighbours, general public and commenting authorities were given the opportunity to comment or object during the Public Participation Process related to the subdivision application (see Appendix E for detail). No objections were received.
• The assumption is made that the information on which the report is based (baseline studies and project information, as well as existing information as provided by the Applicant) are true and correct.
• No further specialist Agricultural, Faunal, Botanical/Ecological or Heritage/Archaeological are required, as confirmed by written comment and approvals received from National and Provincial Departments of Agriculture, the DWA/Central Breede River Water User Association, CapeNature and Heritage Western Cape (HWC) (see Appendix F).
• Statements or indicators of significance must be considered in the light of uncertainty regarding the extent and significance of such resources on the site.

The Senior Heritage Officer (Archaeologist) HWC listed the following limitations:

• “Due to limited time, a very small portion of the property was visited in the site inspection.”
• “The artefact scatters found may have higher significance than medium to low if investigated more thoroughly given the paucity of research and the understanding of material in this area.”
• “A full survey of the property is however not required, as the artefacts will only be shifted by the proposed orchards.”
1.4 RATIONALE FOR THE DEVELOPMENT

The Applicant has motivated for the need and desirability of the proposed cultivation of virgin soil on the proposed Portion to be subdivide from Portion 1 of Farm 756, as follows;

1.4.1 NEED

The proposed area identified for cultivation is currently used for grazing of small stock. This agricultural activity has a much lower profit / yield in comparison to the proposed fruit orchard to supply local and export markets. The proposed activity will provide additional employment opportunities and greater job security to local farm workers in comparison to the current small stock farming activity.

The Breede Valley Spatial Development Framework (2003) identifies the high levels unemployment in the farming areas surrounding Worcester as a major problem. Intensive agriculture such as fruit farming offers a solution.

1.4.2 DESIRABILITY

The Western Cape Provincial Growth and Development Strategy (Western Cape Provincial Government Gazette, PN 306/2006) identifies the Breede Valley, as a major Regional Development Corridor, and Worcester, as a Leader Town with high growth potential. The rural area surrounding Worcester is typified by intensively farmed, high value crops, irrigated through an advanced network of dams, canals and pipelines. The proposed activity is in line with the growth strategy utilising high potential, irrigable land for high value intensive crops.

This developments desirability is thus based on the following principles:

- The proposed development is desirable as it is in line with policy plans.
- The proposed development will encourage the social and economic development of marginalised, rural communities, particularly farm workers.
- The proposed development does not detract from the potential tourist attraction of the area, which hosts a number of wine cellars, farm tours, river boat trips and accommodation facilities.
- The sense of place will be maintained for the area since the surrounding land uses comprise similar agricultural activities (vineyards and olive tree plantations).
- The proposed product of export quality plums supplies a niche market.
- The increased property tax base will generate income for the Breede Valley Municipality.
- Approximately 15 - 20 permanent employment opportunities will be created through the development.
- Approximately 30 - 40 additional seasonal employment opportunities will be created during harvesting and pruning.

2. LEGAL REQUIREMENTS
The current environmental impact assessment is being undertaken in terms of the National Environmental Management Act (Act 107 of 1998), to be read with section 24 (5): NEMA EIA Regulations 2006. However, the provisions of various other Acts must also be considered within this EIA. Compliance with the provincial planning ordinance, the Land Use Planning Ordinance No. 15 of 1985 (LUPO) and in terms of the Subdivision of Agricultural Land Act (Act 70 of 1970), is being undertaken as a separate, but parallel process to the EIA.

The legislation that is relevant to this study is briefly outlined below. These environmental requirements are not intended to be definitive or exhaustive but serve to highlight key environmental legislation and responsibilities only.

**2.1. THE CONSTITUTION OF THE REPUBLIC OF SOUTH AFRICA**

The Constitution of the Republic of South Africa (Act 108 of 1996) states that everyone has a right to a non-threatening environment and to have the environment protected for the benefit of present and future generations through reasonable measures. This includes preventing pollution and promoting conservation and environmentally sustainable development, while promoting justifiable social and economic development.

**2.2. NATIONAL ENVIRONMENTAL MANAGEMENT ACT**

The National Environmental Management Act (Act 107 of 1998) (NEMA) makes provision for the identification and assessment of activities that are potentially detrimental to the environment and which require authorization from the relevant authorities based on the findings of an environmental assessment. NEMA is a national act, which is enforced by the Department of Environmental Affairs and Tourism (DEAT). These powers are delegated in the Western Cape to the Department of Environmental Affairs and Development Planning (DEA&DP).

According to the regulations of Section 24(5) of NEMA, authorisation is required for the following activities related to the development on the proposed portion of Portion 1 of Rondo (Farm 756/1, Worcester):

Government Notice **R386** of 2006, listed activities:

12 The transformation or removal of indigenous vegetation of 3 hectares or more or of any size where the transformation or removal would occur within a critically endangered or are endangered ecosystem listed in terms of section 52 of the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004).

Government Notice **R387** of 2006, listed activities:

2 Any development activity, including associated structures and infrastructure, where the total area of the developed area is, or is intended to be, 20 hectares or more.
2.3 CONSERVATION OF AGRICULTURAL RESOURCES ACT

The purpose of the Conservation of Agricultural Resources Act (Act 43 of 1983) provides for control over the utilization of the natural agricultural resources in order to promote the conservation of the soil, the water sources, vegetation and to combat weeds and invader plants.

A separate application for the cultivation of virgin soil was submitted to the Department of Agriculture: Resource Conservation. The Development was recommended (see Appendix F for recommended conditions).

2.4 SUBDIVISION OF AGRICULTURAL LAND ACT

The purpose of this the Subdivision of Agricultural Land Act (Act 70 of 1970) is to control the subdivision and the use of agricultural land, prohibiting the subdivision of agricultural land without the written consent of the Minister of Agriculture, and thus preventing the creation of uneconomic farming units. The Act 70 of 1970 was repealed in 1997 by the Subdivision of Agricultural Land Act Repeal (Bill 101 of 1997), although this Bill has not yet taken effect, the Act thus still stands.

A separate application was made to the National Department of Agriculture for permission to subdivide the subject land. Consent granted (see Appendix F for recommended conditions).

2.5 LAND USE PLANNING ORDINANCE

Chapter 3 of the Land Use Planning Ordinance (Ordinance 15 of 1985), as amended describes the process by which the landowner may apply to a local authority for land to be subdivided.

The subject land falls under the jurisdiction of the Breede Valley Municipality and the subdivision would need to be allocated in order to permit the development of the land for the intended purpose. A separate application for subdivision was submitted to the municipality. Approval is pending the finalisation of the environmental authorisation.

2.6 NATIONAL ENVIRONMENTAL MANAGEMENT: BIODIVERSITY ACT

The National Environmental Management: Biodiversity Act, 2004 (Act 10 of 2004) (NEMBA) is part of a suite of legislation falling under NEMA, which includes the Protected Areas Act, the Air Quality Bill and the Coastal Zone Bill. Chapter 4 of NEMBA deals with threatened and protected ecosystems and species and related threatening processes and restricted activities. The need to protect listed ecosystems is addressed (Section 54). Section 73 deals with Duty of Care relating to invasive species, while Section 76(2) calls for development of invasive species monitoring, control and eradication plans by all organs of state in all spheres of government, as part of environmental management plans required in terms of Section 11 of NEMA.

2.7 NATIONAL HERITAGE RESOURCES ACT

The protection and management of South Africa’s heritage resources are controlled by the National Heritage Resources Act (Act No. 25 of 1999). South African National Heritage Resources Agency (SAHRA) is the enforcing authority and in the Western Cape, SAHRA have, in most cases, delegated this authority to Heritage Western Cape (HWC).
In terms of Section 38 of the National Heritage Resources Act, SAHRA and/or HWC will require a Heritage Impact Assessment (HIA) where certain categories of development are proposed. Section 38(8) also makes provision for the assessment of heritage impacts as part of an EIA process and indicates that if such an assessment is found to be adequate, a separate HIA is not required.

The National Heritage Resources Act requires relevant authorities to be notified regarding this proposed development, as the following activity is applicable:

- any development or other activity which will change the character of a site exceeding 5 000 m² in extent;

Furthermore, in terms of Section 34(1), no person may alter or demolish any structure or part of a structure, which is older than 60 years without a permit issued by the SAHRA, or the responsible resources authority. Nor may anyone destroy, damage, alter, exhume or remove from its original position, or otherwise disturb, any grave or burial ground older than 60 years, which is situated outside a formal cemetery administered by a local authority, without a permit issued by the SAHRA, or a provincial heritage authority, in terms of Section 36(3). In terms of Section 35(4), no person may destroy, damage, excavate, alter or remove from its original position, or collect, any archaeological material or object, without a permit issued by the SAHRA, or the responsible resources authority.

As part of the Scoping process, a request for exemption from conducting an Archaeological Impact Assessment was submitted. In response to this request a site visit was conducted by HWC, after which HWC issued a Site Visit Report, confirming that no further heritage assessments are required (see Appendix F).

2.8 GUIDELINES AND CONSERVATION PLANS

There are a number of guideline documents and conservation plans that must inform the work of both the environmental practitioner and the various specialists. The principles contained in these documents will be incorporated into the various aspects of the study. They include: Department of Environmental Affairs and Development Planning Guidelines on Public Participation (2009); Guidelines on Alternatives (2009); Guidelines on the Interpretation of the Listed Activities (2006). Conservation plans include the fine scale mapping and biodiversity plans available on the SANBI GIS website.
3. SCOPING & ENVIRONMENTAL IMPACT ASSESSMENT PROCESS OVERVIEW

The environmental scoping and EIA processes are being undertaken in distinct phases, refer to Figures 1a & 1b.

Figure 1a: The Scoping Process (completed)

Figure 1b: The Environmental Impact Assessment Process being followed.

The Public Participation Process in relation with the Scoping Phase (Basic Assessment Report process, which is now converted to a Scoping Report) was directly linked to the application for subdivision in terms of Section 24(1) of the Land Use Planning Ordinance (LUPO) 1985 (Ordinance 15 of 1985), which took place in June 2009. The process was facilitated by the Planning Department of the Breede Valley Municipality and followed their standard procedures.

1. **No comment** was received from neighbouring property owners during the Public Participation process conducted in terms of Land Use Planning Ordinance (Ordinance 15 of 1985).
2. Written comment and approvals were received from the National Department of Agriculture, the Western Cape Departments of Agriculture, the Central Breede Water User Association, CapeNature and Heritage Western Cape (Appendix F).
3. The Scoping Report was not released for public comment and exemption for this component of the Public participation process is being applied for. To motivate this, it should be noted that the activities mentioned in the application for subdivision are identical to those listed here i.e. subdivision for purposes of cultivation of virgin soil, although initially an area of 30ha was mentioned which has been increased to 40ha (both values exceed the 20ha threshold and require a full Scoping - EIA process).
An Application Form, Scoping Report and draft Plan of Study, based on the available information as provided by the Applicant was compiled and submitted to the Department of Environmental Affairs and Development Planning for approval on the 12th of March 2010. Simultaneous with the submission of the Scoping Report, was the withdrawal of the initial application associated with the Basic Assessment Report. Exemption has been applied for from certain provisions of Public Participation as required by Regulation 56 (2) of the EIA Regulations for the Scoping Phase.

The Department of Environmental Affairs and Development Planning approved the Scoping Report and Plan of Study for EIA for the proposed cultivation of virgin soil on Rondo, Farm 756/1, Worcester on the 12th of April 2010 (Appendix F) and issued a reference number (E12/2/3/2-B2/33-1022/10).

Upon approval of the Scoping Report and Plan of Study for EIA, further information were gathered, site visits conducted and specialists input incorporated to address, resolve and/or mitigate potential impacts identified during the scoping phase. No further specialist Agricultural, Faunal, Botanical/Ecological or Heritage/Archaeological studies were required during the EIA phase, as confirmed by written comment and approvals received from National and Provincial Departments of Agriculture, the Water User Association, CapeNature and Heritage Western Cape (Appendix F). *This draft EIR reflects all aspects and findings of the various investigations and assessments for the proposed project.*

The draft EIR is available for public comment for a 40 day period (29 April – 7 June 2010). By incorporating all comments and recommendation as received by the I&APs and commenting authorities, a Final EIR will be compiled, which will be submitted to DEA&DP for a decision.
4. SITE DESCRIPTION

4.1 LOCATION AND LANDSCAPE

The subject land is currently part of Rondo, Farm 756 Portion 1, Worcester and is located in the Breede Valley Municipal area, approximately 20 km south of Worcester (Figure 4 & 5). The site slopes gently northward from an elevation of approximately 238 m amsl to 190 m amsl. Access to the site is reached via Public Subdivisional Road Number 1375.

Figure 2a and 2b: Looking northwards towards the Breede River and southwards towards the Gannaberg Mountains, respectively.

The total size of Farm 756/1 is 555.0178 ha and the Subject Land to be subdivided is 55ha in extent. There are a few shale rock outcrops on site, otherwise the site is covered with sandy loamy soil (15% clay content). The Clovelley, Oakleaf, Dundee soil types are typical for the area and are suitable for planting orchards. The Subject Land is currently un-occupied with no existing buildings on site. A farmstead dwelling and associated farm outbuildings such as stores and sheds is located on a separate land parcel namely, Portion 2 of Farm 756 (Figure 3).

Figure 3: Looking eastwards towards the farm homestead on Farm 756/2, Worcester.
Figure 4: Map depicting the locality of proposed Portion A of Rondo, Farm 756/1, Worcester (from the 1:250 000 topo-cadastral map series). Not to scale.

Figure 5: Map depicting the locality of proposed Portion A of Rondo, Farm 756/1, Worcester (from the 1:50 000 topo-cadastral map series). Not to scale.
4.2 CLIMATE

Worcester normally receives about 246mm of rain per year, mostly during winter and is classified as having a Mediterranean climate. Figure 7 (lower left) shows the average rainfall values for Worcester per month. The Subject Land, lying further away from the mountains in a rain shadow, receives an average rainfall of 150 mm per annum (pers com D. Van Niekerk).

The monthly distribution of average daily maximum temperatures (Figure 7) indicates that the average midday temperatures for Worcester range from 16.5°C in July to 29.3°C in February. The region is the coldest during July when the temperature drops to 4.7°C on average during the night.

Figure 6: Satellite image depicting the proposed Portion A of Rondo, Farm 756/1, Worcester and indicating the area intended for clearing of natural vegetation. Imagery dated 7 August 2005 (sourced from Google Earth).

Figure 7: Climate graphs for Worcester depicting average rainfall and temperatures.
4.3 VEGETATION

According to the South African National Biodiversity GIS mapping tool (2010), the Subject Land is predominately covered by Robertson Karoo (“Least Threatened”), while approximately 2.5 ha in the north-east corner consists of Breede Alluvium Renosterveld (“Endangered”) (Figure 8). The north-eastern corner was, according to the Applicant, cleared in stages of 1.5 ha per year, between 2002 and 2005, totalling approximately 5 ha (pers com D. Van Niekerk).

Officials from CapeNature inspected the Subject Land on the 11th March 2009, and provided written comment on the 12 March 2009 (see Appendix F). The letter confirms the vegetation type as Robertson Karoo, that no Red Data plants were noted, the vegetation is not in pristine condition as it was used for grazing and that there are signs of erosion, and finally CapeNature state that they have no objection to the application and find no reason to request additional faunal or botanical surveys.

Figure 8. SANBI GIS Vegetation map depicting the two vegetation types that occur on the proposed Portion A of Farm 756/1, Worcester. The map also depicts, in pale green, Critical Biodiversity Areas (CBA’s), a small section (approximately 0.2 ha) of a CBA overlaps into the proposed Portion A (classified mixed land cover, wetland cluster and maintain natural land).

The small (0.2 ha) of CBA as indicated in Figure 8 was inspected on the 22nd April 2010 and found to correspond to vegetation on a small hill outside the Subject Land.
4.4 HYDROLOGY

The perennial Breede River flows approximately 700m to the north of the northern boundary of the Subject Land. (Figure 5). An ephemeral stream runs northward along the eastern boundary of the Subject Land, towards the Breede River. CapeNature’s visit mentions that some erosion is evident on the farm.

The Subject Land was inspected on the 22nd April 2010. The ephemeral stream shows signs of erosion and measures to mitigate further erosion are recommended.

4.5 FAUNA

The site visit by official of CapeNature on the 11th March 2009, concluded that they have no objection to the application and find no reason to request additional faunal or botanical surveys. CapeNature also concluded that the property had been used for grazing for many years and that the veld was not in pristine condition.

4.6 SOCIO-ECONOMIC CHARACTERISTICS

The farm, where the proposed agricultural development will take place is located within the Worcester, none-urban sub-region of the Breede Valley Municipality. The Greater Breede Valley Municipality consists of the town of Worcester, De Doorns, Rawsonville and Touwsrivier, and smaller settlements of Nuy, Overhex and De Wet.

The closest urban settlements (Historically Disadvantaged (HD) communities of Johnsons Park, Riverview and Hex Park) are between 15 to 20 km North of the proposed development. The description of the socio-economic context is drawn from the Census 2001 data on the Breede Valley Municipality, Worcester non-urban sub-region.

The Breede Valley non-urban sub-region:

In 2001 the Breede Valley non-urban sub-region had a population of 44 112 (Census 2001). The vast majority of people are Coloured (75%), with African (17%) and White (8%) at the minorities. Afrikaans is by far the most commonly spoken first language (88%), followed by isiXhosa (10%) and English (1%). The sex ratio is slightly skewed in favour of females (52% females and 48% males).

Education levels were low, with 17% of people 20 years and older having received no schooling, 11% having only obtained complete primary education, only 8% obtained secondary education and less than 3% obtained tertiary education.

Although the estimated 2001 unemployment rate was very low (2% for this non-urban region compared to13% for the whole Breede Valley local Municipality area), monthly individual income of the working population was overwhelmingly less than R800 per month (84%). The majority of the community was
employed in the Agricultural industry (62%) or had an occupation as farm labourers (43%) with 4% in retail and trade.

In summary: In terms of 2001 Census data, the Breede Valley, Worcester non-urban sub-region may be described as an overwhelmingly Coloured, Afrikaans speaking community with a low levels of education. Although the unemployment rate is low, the largest portion of the community is employed in the agricultural industry. Most people are occupied as farm workers, with a monthly income below R800/month.
5. PLANNING CONTEXT

The Breede Valley Municipality Spatial Development Framework (SDF) broadly aims to:

- improve access to services and opportunities for the largest part of the community,
- place new services where they will not only benefit the surrounding inhabitants but also the wider community,
- improve the quality of life for all inhabitants,
- integrate the racially divided communities,
- stimulate economic development and access to resources.

The proposed agricultural development on the Subject Land supports these objectives especially with respect to stimulation of economic development.

The Breede Valley Municipality’s SDF states; “The rural areas of the municipality is characterised by intensive agricultural activities. These activities together with the natural and scenic beauty of the rural areas lends itself to a host of tourism-related activities, including resort development, tourist accommodation, wine routes and eco-tourism. The nature of the agricultural activities contributes to large farmsteads with a multiplicity of processing facilities, farm labour accommodation and storage and cooling facilities. These characteristics of the agricultural industry give rise to unique challenges in the form of poor and insecure labourer accommodation, poor access to basic services and facilities and environmental management.”

Furthermore, the SDF recognizes that unemployment is a “major problem in farm areas” and is a priority issue. The report finds that “with the rural component making up just under one third of the total populace dependent on seasonal employment in the agricultural sector ... decisive intervention from the public sector is required.”

The SDF specifically identifies the need to develop the following opportunities in the Worcester-Overhex/Moordkuil Planning Unit:

- “Promote intensive agricultural activities through tax incentives and discourage subdivision of agricultural land into unviable units”;

The proposed intensive agricultural development on the proposed Portion A of Rondo aims to add to the realisation of the above mentioned opportunities and contribute towards finding solutions for the challenges.

The following planning applications are in process:

- Approval in terms of Act 70 of 1970, (the Subdivision of Agricultural Land Act) to enable Agricultural Land to be released for residential development (approved).
- The subdivision of the property in terms of Section 24 of the Land Use Planning Ordinance (Ord 15 of 1985) to accommodate the development as indicated on the attached plan of subdivision.
Figure 8: The Spatial Development Framework Proposal for the Worcester-Overhex/Moordkuil Planning Unit depicting the location of the Subject Land.
6. OPPORTUNITIES AND CONSTRAINTS

An exercise was undertaken whereby various specialists identified constraints to the proposed development that arose during their assessments.

6.1 BOTANICAL CONSTRAINTS

According to the South African National Biodiversity GIS mapping tool GIS (2010) (see Figure 8), a small portion (approximately 2.5 ha) of the Subject Land consists of the endangered Breede Alluvium Renosterveld vegetation type, while the remaining 52.5 ha consists of least threatened Robertson Karoo. This area however falls within the 5 ha section of the Subject Land, already cleared by the Applicant in stages of 1.5 ha per year between 2002 and 2005 (D. van Niekerk pers com).

Additionally, a small section (approximately 0.2 ha) of a Critical Biodiversity Area (CBA) - classified mixed land cover, wetland cluster and maintain natural land, appears to overlap into the Subject Land (Figure 8).

Despite these potential constraints, field visits by our own Botanical Specialist and officials from CapeNature, confirmed that the only vegetation type currently present on the Subject Land is Robertson Karoo. Furthermore CapeNature stated that “no Red Data plants were noted, the vegetation is not in pristine condition as it was used for grazing and that there are signs of erosion”. Finally, “CapeNature have no objection to the application and find no reason to request additional faunal or botanical surveys” (see Appendix F). BolandEnviro Botanical Specialist compiled a Botanical Report to provided further input in terms of the broad ecological characteristics of the site and the surroundings (Appendix G).

6.2 FAUNAL CONSTRAINTS

A site visit was conducted by official of CapeNature on the 11th March 2009. No faunal constraints were identified (see Appendix F).

6.3 SOIL EROSION

Officials from the Western Cape Department of Agriculture visited the site on the 9th of March 2009 and identified surface erosion on the Subject Land. To reduce the risk of surface erosion in respect with the cultivation of the virgin soil, they recommended that the proposed cultivation of plum orchards should proceed in combination with a cover crop. Additionally they identified a small catchment area around the upper portion of the Subject Land and recommended that the natural run-off in the eastern corner should be respected (see Appendix F).

6.4 ARCHAEOLOGICAL CONSTRAINTS

Officials from Heritage Western Cape identified scatters of artifacts within the area of the proposed cultivation of virgin soil on the property during a site visit on the 17th December 2009. They confirmed
that a full survey of the entire property is not required, as the artifacts will only be shifted by the proposed orchard. Should, in future, a construction of a house take place on the remaining virgin soil in the southern section of the property, a detailed archaeological study mapping artifact scatters must be done by an archaeological specialist (see Appendix F).

7. DEVELOPMENT PROPOSALS

7.1 SITE ALTERNATIVES

It is the Applicant’s intention to sell a 55 ha portion of Portion 1 of Farm 756, Worcester (Rondo, Scherpenheuwel). In order for the sale to be concluded, the Applicant, on behalf of the prospective buyer must apply and obtain authorisation to clear 40ha of the 55 ha for cultivation.

The proposed portion of Farm 756/1 is therefore the preferred and only site alternative considered in this application. Any other sites, including the No Go option, will result in the lapse of the purchase contract, which requires the availability of at least 30 ha arable land.

The prospective buyer intends to establish plum orchards for export markets. The area considered for clearing (see Figure 6 and Appendix B) proved most suitable for cultivation as it is the flattest and least rocky area on the Subject Land. A soil specialist confirmed that the area considered for cultivation is suitable for the establishment of deciduous fruit orchards (see Appendix G).

The Applicant’s main objective is to sell the proposed 55 ha Portion of Farm 756/1 for agricultural development. An application, submitted in terms of the Subdivision of Agricultural Land Act (Act 70 of 1970), to the Breede Valley Municipality, was approved by the National Department of Agriculture, the Western Cape Department of Agriculture and the Breede Valley Municipality, pending the finalisation of the environmental process.

7.2 OTHER ALTERNATIVES

The clearing of 40 ha is the only activity alternative. The only other alternative is the No Go alternative where no vegetation will be cleared. This would however, result in the lapse of purchase contract.

8. SERVICES

8.1 WATER

The Applicant, and owner of the Farm Rondo Farm 756/1, is registered for 94.8 ha water at the Central Breede River Water Users Association (see attached supporting documents, Appendix F). Of the registered water available for the 555.178 ha agricultural land on Farm 756/1, 42.8 ha water is allocated from irrigation canals and 52 ha is abstracted from the Breede River.

According to water use calculations on Farm 756/1, Worcester, (see Appendix F), there is a 348 360 m$^3$ surplus of water not being used on the farm. The Trustees of Rondo Trust, the owners of Farm 756/1, agreed on the 9th March 2009, to the transfer of 25 ha water for sale together with the proposed Portion
A of Farm 756/1. This water would be adequate for the cultivation of 40 ha with the use of efficient irrigation systems (D. van Niekerk pers com).

8.2 SEWER
No sewerage facilities are required for the proposed agricultural development.

8.3 ROADS
No new roads will be constructed. An entrance to the Subject land is currently situated on the Public Subdivisional Road Number 1375. Existing farm tracks will be used for farming purposes. The exact layout of orchards is yet to be finalized once the Subject Land is transferred to the prospective buyer.

8.4 STORMWATER
Storm water runoff will be controlled by correct tilling and cultivation of soil, including planting of cover crops around fruit trees.

8.5 TELKOM
No Telkom network is required by the agricultural development.

8.6 ELECTRICITY
Electricity for pumping water will be provided by Eskom (Appendix F).

9. PROCESS TO DATE
The section below outlines the process concluded to date by the Applicant (without the assistance of an EAP), the conversion of the Basic Assessment to Scoping and EIA (with the assistance of Boland Environmental Consultants CC).

9.1 INITIAL BASIC ASSESSMENT PROCESS FOLLOWED BY THE APPLICANT
5 In October 2009, Mr Van Niekerk, applied for authorisation to cultivate 30 ha of virgin soil following a Basic Assessment Reporting process.
6 The environmental process ran parallel to an application to subdivide the agricultural land from Portion 1 of the Farm 756, Worcester. This application submitted to the Breede Valley Municipality in terms of the Subdivision of Agricultural Land Act (Act 70 of 1970),
7 The application for subdivision was supported by the National Department of Agriculture, the Western Cape Department of Agriculture and the Breede Valley Municipality, pending the finalisation of the environmental authorisation.
8 No comment was received from neighbouring property owners during the Public Participation process conducted in terms of Landuse Planning Ordinance (Ordinance 15 of 1985).
9 Further comment was received from authorities i.e. CapeNature, Heritage Western Cape and Central Breede Water Users Association.

10 In March 2010, after discussions with officials from the Department of Environmental Affairs and Development Planning, the Applicant decided to the withdrawal of the application associated with the Basic Assessment Report, due to the proposal to clear more than 20ha of natural vegetation i.e triggering Activity 2 in terms of GN 387 and commence with a Scoping - EIA process.

11 Boland Environmental Consultants CC were thus appointed to facilitate the completion of the Scoping Phase, submit a Plan of Study, and once approval has been obtained commence with the EIA process as required in terms of the National Environmental Management Act (Act 107 of 1998) (NEMA).

9.2 TASKS UNDERTAKEN – SCOPING AND EIA

BolandEnviro was requested to facilitate the conversion of the Basic Assessment Report process, submitted independently by the Applicant, into a Scoping Report and submit this together with the Plan of Study for EIA.

- The Applicant, prior to our appointment, has spent substantial time and resources facilitating his application for subdivision and environmental authorization.
- The Applicant is therefore applied for exemption from repeating the Public Participation Process for the Scoping Phase (see Public Participation process already completed in terms of LUPO, Appendix E).
- Written comment and approvals have been received by the Applicant, from the National Department of Agriculture, the Western Cape Departments of Agriculture, the Central Breede River Water User Association, CapeNature and Heritage Western Cape (see Appendix F).
- To date no detailed specialist (Agricultural, Botanical, Faunal or Heritage/Archaeological) assessments were required, as stated by the relevant commenting authorities (see Appendix F for documents from CapeNature, Department of Agriculture and Heritage Western Cape).
- A soil study statement was compiled by Mr. Frank van den Heever (Agricultural Specialist: Deciduous Fruit and Irrigation Scheduling) for the proposed area to be cultivated (see Appendix G - Specialist Reports).
- A Final Scoping Report (FSR) and draft Plan of Study, based on the available information provided by the Applicant and the issues raised to date, was compiled and submitted to the Department of Environmental Affairs and Development Planning for approval.
- Approval of the FSR and Plan of Study for EIA was obtained and the draft EIR was compiled for public comment and review.

9.3 PUBLIC PARTICIPATION

A Public Participation Process was undertaken in accordance with the requirements of the NEMA EIA regulations that were promulgated in July 2006. All issues and concerns raised were incorporated in both the Scoping and EIA phases. The issues raised by I&APs are noted in detail in Appendix E of this report.
9.3.1 PUBLIC PARTICIPATION DURING THE SCOPI NG PHASE

The Public Participation Process in relation with the Scoping Phase (Basic Assessment Report process, which is now converted to a Scoping Report), took place in June 2009 in terms of Section 24(1) of the Land Use Planning Ordinance (LUPO) 1985 (Ordinance 15 of 1985). The process was facilitated by the Planning Department of the Breede Valley Municipality and followed their standard procedures.

Notice was given in terms of Section 24(1) of the Land Use Planning Ordinance 1985 (Ordinance 15 of 1985) that an application was received for the subdivision of the proposed land. The notice included particulars where further information regarding the proposed development could be obtained as well as details of the commenting period and the manner in which representations on the application could be made.

Letters, dated 2nd of June 2009 (see Appendix E), were sent to all the landowners of the farms neighbouring Farm 756/1 (Address list and maps showing surrounding farms attached in Appendix E).

An advert, in English and Afrikaans, was published in one local newspaper (Worcester Standard) on the 4th of June 2009 (see Appendix E).

Particulars regarding the application have been made available for public input at the Director: Operational Services, Department Planning, Development and Building Control (3rd floor), Civic Centre, Baring Street, Worcester for the duration of the commenting period.

The commenting period commenced on the 2nd of June 2009 and closed on the 6th of July 2009.

The following authorities were consulted and submitted written comment:

- CapeNature Western Cape
- Heritage Western Cape
- Western Cape Department of Agriculture
- National Department of Agriculture, Forestry and Fisheries
- Central Breede River Water User Association
- Breede Valley Local Municipality

See Appendix E for scanned copies of all the supporting documents related to the Public Participation Process followed.

Comments and supporting letters received from the above mentioned stakeholders are included in Appendix F (Permits/licenses and supporting documents).

No comments or objections to the application were received from neighbouring land owners regarding the application.

There have been no changes in the activities planned for the proposed development, regardless of the conversion from Basic Assessment to Scoping and EIA process. The proposed agricultural development still entails the subdivision of the 55 ha, referred to as Portion A of Farm 756/1, Worcester and the
clearing of 40 ha of natural vegetation (Listed Activity 12 of GN 386 (2006) and Activity 2 of GN R387 (2006)). According to information and documentation provided by the Applicant, no objections to the proposed agricultural development were received. It is therefore in our opinion of that the public participation process conducted in terms of LUPO (Ordinance 15 of 1985) is sufficient for this Scoping Phase of the EIA process.

9.3.2 PUBLIC PARTICIPATION DURING THE EIA PHASE

This section will be updated and completed at the end of the commenting period in relation with the EIA Phase.

Full copies of the draft Environmental Impact Report (EIR) were placed at the Worcester Library and on the BolandEnviro website www.BolandEnviro.co.za. Interested and affected parties will be notified of the draft EIR by means of advertisements in the Worcester Standard as well as an A1 site notice. In addition to the advertisements, registered I&APs will be notified via registered mail and the executive summaries and digital copies of the full EIR will be posted to them. The draft EIR will be available for a 40-day comment period (29 April – 7 June 2010).

Correspondence with I&APs will be via registered post, fax, telephone, email and newspaper advertisements. All reports will be in English, with advertisements, notification letters and Executive Summaries in English and Afrikaans.

At the end of the comment period, the EIR will be revised in response to feedback received from I&APs. All comments received and responses to the comments will be incorporated into the final EIR. The final EIR will then be submitted to DEA&DP for a decision.
10. ENVIRONMENTAL ISSUES

Environmental and planning issues raised by I&APs and commenting authorities during the scoping phase can be summarised as follows:

Botanical
- Vegetation type confirmed as Robertson Karoo (least threatened)
- A small portion of Critical Biodiversity Area appears to overlap with the Subject Land. A field visit conducted on the 20th April 2010 confirmed that the CBA does not fall within the Subject Land.

Heritage issues
- If buildings are to be constructed in future, the Archaeological value to be assessed on the remaining uncultivated land.

Services and Infrastructure
- 25 ha water use will be transferred to the Subject Land.
- ESKOM has confirmed availability of power for pumping (Appendix F).

Sensitivity to erosion
- Cover crops should be planted in combination with the intended plum orchards.
- The natural run-off in the eastern corner of the Subject land should be respected. Measures regarding this will be included in the Operational Management Plan.

A full copy of all the comments and recommendations received is attached in Appendix F.
11. SPECIALIST STUDIES

Specialists were required to address concerns and assess impacts of the proposed development on the environment. The various specialists indicating opportunities and constraints have provided baseline information. Specialists are provided with set criteria for undertaking their assessments, to allow for comparative assessment of all issues.

11.1 CRITERIA FOR SPECIALIST ASSESSMENT OF IMPACTS

The specialists considered the following criteria:

- **Nature of the impact** - This is an appraisal of the type of effect the construction, operation and maintenance of a development would have on the affected environment. This description should include what is to be affected and how.

- **Extent of the impact** - Describe whether the impact will be: local extending only as far as the development site area; or limited to the site and its immediate surroundings; or will have an impact on the region, or will have an impact on a national scale or across international borders.

- **Duration of the impact** - The specialist should indicate whether the lifespan of the impact would be short term (0-5 years), medium term (5-15 years), long terms (16-30 years) or permanent.

- **Intensity** - The specialist should establish whether the impact is destructive or benign and should be qualified as low, medium or high. The specialist study must attempt to quantify the magnitude of the impacts and outline the rationale used.

- **Probability of occurrence** - The specialist should describe the probability of the impact actually occurring and should be described as improbable (low likelihood), probable (distinct possibility), highly probable (most likely) or definite (impact will occur regardless of any prevention measures).

The impacts should also be assessed in terms of the following aspects:

- **Status of the impact**
  The specialist should determine whether the impacts are negative, positive or neutral (“cost – benefit” analysis). The impacts are to be assessed in terms of their effect on the project and the environment. For example, an impact that is positive for the proposed development may be negative for the environment. It is important that this distinction is made in the analysis.

- **Cumulative impact**
  Consideration must be given to the extent of any cumulative impact that may occur due to the proposed development. Such impacts must be evaluated with an assessment of similar developments already in the environment. Such impacts will be either positive or negative, and will be graded as being of negligible, low, medium or high impact.

- **Degree of confidence in predictions**
The specialist should state what degree of confidence (low, medium or high) is there in the predictions based on the available information and level of knowledge and expertise.

Based on a synthesis of the information contained in the above-described procedure, the specialist is required to assess the potential impacts in terms of the following significance criteria:

- **No significance**: the impacts do not influence the proposed development and/or environment in any way.
- **Low significance**: the impacts will have a minor influence on the proposed development and/or environment. These impacts require some attention to modification of the project design where possible, or alternative mitigation.
- **Moderate significance**: the impacts will have a moderate influence on the proposed development and/or environment. The impact can be ameliorated by a modification in the project design or implementation of effective mitigation measures.
- **High significance**: the impacts will have a major influence on the proposed development and/or environment.

### 11.2 BRIEFS FOR SPECIALIST STUDIES TO BE UNDERTAKEN AS PART OF THE EIA

Apart from baseline studies conducted during the scoping phase, no further specialists studies have been required during the EIA phase of this project as confirmed by written comment and approvals received from National and Provincial Departments of Agriculture, the Water User Association, CapeNature and Heritage Western Cape (see Appendix F).

#### 11.2.1 HERITAGE STATEMENT

In terms of the National Heritage Resources Act (Act No. 25 of 1999), a Heritage Impact Assessment (HIA) is required for this proposal. Preliminary heritage information was submitted to Heritage Western Cape for consideration during the scoping phase. HWC have issued a Site Visit Report, confirming that no further heritage assessments are required (see respective letters dated 03 November and 24 December 2009 – Appendix F). The main aim of the site visit was to assess whether any heritage resources would be affected by the proposed development.

No further Archaeological or Heritage Impact Assessment was conducted on the area identified for cultivation of orchards.

#### 11.2.2 BOTANICAL/ECOLOGICAL ASSESSMENT

Although comment already received from CapeNature has stated that no further botanical assessments are required, our botanical specialist provided further botanical input to the EIR (Appendix G).
The terms of reference for this includes the following:

- The broad ecological characteristics of the site and its surrounds will be described in terms of any mapped spatial components of ecological processes and/or patchiness, patch size, relative isolation of patches, connectivity, corridors, disturbance regimes, ecotones, buffering, viability, etc.

- In terms of biodiversity pattern:

  **Community and ecosystem level**
  - The main vegetation type, its aerial extent and interaction with neighbouring types, soils or topography.
  - The types of plant communities that occur in the vicinity of the site.
  - Threatened or vulnerable ecosystems.

  **Species level**
  - Red Data Book (RDB) species.
  - The viability of, and estimated population size of the RDB species that are present.
  - The likelihood of other RDB species, or species of conservation concern, occurring in the vicinity.

  **Other pattern issues**
  - Any significant landscape features or rare or important vegetation associations such as seasonal wetlands, alluvium, seeps, quartz patches in the vicinity.
  - The extent of alien plant cover of the site, and whether the infestation is the result of prior soil disturbance such as ploughing or quarrying.
  - The condition of the site in terms of current or previous land uses.

- In terms of biodiversity process:
  - The key ecological “drivers” of ecosystems on the site and in the vicinity.
  - Any mapped spatial component of an ecological process that may occur at the site or in its vicinity.
  - Any possible changes in key processes.

The baseline assessment were updated into a report that indicates any constraints that would need to be taken into account in considering the development proposals further, as well as indications of important constraints on the Subject Land. The following are considered in the report:

- The significance of the potential impact of the proposed project, alternatives and related activities – with and without mitigation – on biodiversity pattern and process at the site, landscape and regional scales.

- The following will be indicated on a topographical map or orthomap:
  - The area that would be impacted by the proposed development.
  - The location of vegetation and spatial components of ecological processes that should not be developed or otherwise transformed.
Areas that must remain intact as corridors or ecological “stepping stones” to maintain ecosystem functioning, including fires in fire-prone systems.

- Recommended actions that should be taken to prevent or, if prevention is not feasible, to mitigate impacts and restore disturbed vegetation or ecological processes.
- Limitations and assumptions, particularly in relation to seasonality.
- Biodiversity considerations, which could be used to inform socio-economic aspects of the proposed project.

11.2.3 SOCIO-ECONOMIC IMPACT ASSESSMENT

The current socio-economic environment and planning context is described at an initial level and address the potential impacts of the proposed development within the environment (Section 4 and 5).

The proposed development entails farming within an existing farming area and the activity will create approximately 15 – 20 new job opportunities. A detailed specialist, socio-economic study is therefore negligible due to the limited impact that the activity will impose.

11.2.4 SOIL INVESTIGATION

A soil study statement was compiled by Mr. Frank van den Heever (Agricultural Specialist: Deciduous Fruit and Irrigation Scheduling) for the proposed area to be cultivated (see Appendix G - Specialist Reports). The main purpose of this study was to determine whether the soils of the proposed Portion A is suitable for the intended cultivation of plum orchards.

11.3 AUTHORITY CONSULTATION

The relevant authority (DEA&DP) were contacted during the following stages of the EIA Process:

- Scoping Report and Plan of Study for EIA
- Submission of Draft EIR
- Submission of Final EIR
- Issuing of the Environmental Authorisation

12. ASSESSMENT OF ENVIRONMENTAL ISSUES AND IMPACTS

The specialists input and studies detailed in Section 11 as well as consultation with commenting authorities was undertaken to determine significance of the impacts that may arise from the proposed development. The main findings and recommendations are summarized here. Full copies of the input
from commenting authorities and studies conducted by specialists are included in Appendix F (Supporting letters - written comments and recommendations) and Appendix G (Specialists Reports).

The following impacts were identified and are dealt with accordingly:

- Heritage (Archaeological)
- Botanical/Ecological
- Socio-economic
- Agricultural (land use)
- Erosion (land care)
- Land transformation

12.1 HERITAGE IMPACTS

Officials from Heritage Western Cape conducted a site visit in December 2009 to the Subject Land (see detailed report – Appendix F & G). Scatters of Middle Stone Age (MSA) artefacts were encountered on the property. Low numbers of white quartz flakes and one isolated bifacial handaxe was also found amongst the MSA artefacts. The artifact scatters were most evident on the southern portions, while almost no artifacts were visible where the property sloped down towards the Breede River where the proposed orchard is planned.

- The artifact scatters will only be disrupted/shifted by the plum orchard, and not entirely destroyed. A full survey of the property is thus not required.
- The artifact scatters will be inaccessible in the area that is not intended for cultivation (southern portion) should a house be constructed.

Proposed mitigation:

- The proposed orchards should be restricted to the northern portion of the Subject Land intended for cultivation.
- Should any human/archaeological remains be uncovered during the clearing of land for cultivation, work in the area should cease, the site demarcated and Heritage Western Cape notified as soon as possible.
- A detailed mapping exercise of the artifact scatters in the southerly portion of the property should be conducted by an archaeologists with expertise on Middle Stone Age artefacts, should the construction of a house be planned in future on this site.

12.2 BOTANICAL/ECOLOGICAL

Officials from CapeNature conducted a site visit on the 11th of March 2009, while BolandEnviro Botanical Specialist revisited the site on the 21 April 2010 and proved further botanical input (Appendix F – Supporting Letters and Appendix G – Specialists Reports).

The site consists of Robertson Karoo vegetation that is least threatened. Erosion is visible on site, and no Red Date Book species were found. The site is bordered by an extensive area of natural vegetation comprising the same plant communities as on the subject land. A natural vegetation corridor is maintained to the west of the proposed site. A Critical Biodiversity Area (where natural vegetation should
be maintained) and an Other Ecological Support Area (where ecological processes should be maintained), identified by the C.A.P.E. Fine-Scale Biodiversity Planning project is present directly adjacent to the eastern border of the proposed site.

Medium-Low negative impacts before mitigation include:

1. Loss of indigenous plant species
2. Loss of vegetation type
3. Loss of habitat
4. Loss of ecological processes

Proposed mitigation to reduce the overall negative impacts to Low:

- Ensure that the development is restricted to the proposed area
- Existing tracks should be used to access the site to prevent further damage to adjacent natural vegetation.
- Rocks and vegetation debris should not be dumped on adjacent natural vegetation.
- Dust levels should be kept to a minimum to avoid smothering of sensitive areas by windblown sediments.
- Any animals encountered during the land clearing should be relocated to adjacent natural habitat.
- The natural vegetation on the hill to the east of the subject land, which comprise the Critical Biodiversity Area, should be left in tact.
- The non-seasonal tributary to the east of the site should not be disturbed.

12.3 SOCIO-ECONOMIC IMPACTS

The proposed development will have a positive socio-economic impact as it will work towards alleviating the high unemployment in farming areas identified by the Breede Valley Spatial Development Framework (2003). The proposed cultivation of virgin soil with plum orchards (intensive agriculture) will provide more employment opportunities and greater job security to local farm workers compared to the current land use (i.e. small stock farming).

- Approximately 15 - 20 permanent employment opportunities will be created through the development.
- Approximately 30 - 40 additional seasonal employment opportunities will be created during harvesting and pruning.
- The increased property tax base by the proposed development will generate income for the Breede Valley Municipality, and the South African Revenue Services.

Proposed mitigation:
Not applicable

12.4 AGRICULTURE

The proposed development will have a positive impact on agriculture. The area identified for cultivation is currently used for grazing small stock. This agricultural activity has a much lower profit / yield in
comparison to the proposed fruit orchard aimed at local and export markets. The proposed cultivation of export quality plums will supply a niche market. It is in line with the Western Cape Provincial Growth and Development Strategy utilising high potential, irrigable land for high value intensive crops as typified by the surrounding land uses of the Worcester rural area.

The Western Cape Department of Agriculture supports the development (Appendix F) with the certain mitigation measures that need to be followed.

Proposed mitigation:
- The planting of plum orchards should be conducted in combination with a cover crop to prevent surface erosion.
- The natural tributary to the east should be respected.
- As the intended plum orchards are sensitive to brackish conditions, underground drainage should be examined before cultivation commence.

The Trustees of Rondo Trust, the owners of Farm 756/1, agreed on the 9th March 2009, to the transfer of 25 ha water for sale together with the proposed Portion A of Farm 756/1. This water will be adequate for the cultivation of 40 ha.

A soil study conducted by Mr Frank van den Heever (Agricultural Specialist: Deciduous Fruit and Irrigation Scheduling) confirmed that the proposed Portion A is suitable for the intended cultivation of plum orchards, in terms of soil type, climate, locality, slope and drainage (Appendix G – Specialists Reports).

Proposed mitigation:
- Effective irrigation scheduling is proposed, which will have an effect on the drainage of the soil.

12.5 EROSION

The proposed development could cause soil erosion. The site has a gentle slope with some localized surface erosion visible on site.

Proposed mitigation:
- The cleared land should be exposed for a limited time and crops planted as soon as possible to stabilize soil.
- A cover crop should be planted in combination with the orchards.
- Effective irrigation practices should be followed to enhance drainage.

12.6 LAND TRANSFORMATION

The proposed development will have the following impacts in relation to land transformation.
1. Visual
2. Noise
3. Dust levels
The proposed development will have a low visual impact as the cultivation is in line with the current surrounding land uses and bordered by vineyards. Land clearing will result in a noise impact, but this is only short term. Any other noise impact will be related to normal agricultural activities typical to the surrounding land uses. Land clearing will also result in increased dust levels.

Proposed mitigation:

- The land clearing should be conducted in normal working hours.
- The cleared land should be exposed for the shortest possible time, to limit dust levels.
### 13. SUMMARY OF IMPACTS

<table>
<thead>
<tr>
<th>Nature</th>
<th>Extent</th>
<th>Duration</th>
<th>Intensity</th>
<th>Probability</th>
<th>Status</th>
<th>Confidence</th>
<th>Significance Without mitigation</th>
<th>Significance With mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heritage</td>
<td>Site</td>
<td>Short term</td>
<td>Medium</td>
<td>Medium</td>
<td>Negative</td>
<td>High</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Loss of indigenous plant sp.</td>
<td>Site</td>
<td>Long term</td>
<td>Medium</td>
<td>High</td>
<td>Negative</td>
<td>High</td>
<td>Medium</td>
<td>Low</td>
</tr>
<tr>
<td>Loss of vegetation type</td>
<td>Local</td>
<td>Permanent</td>
<td>Medium</td>
<td>Definite</td>
<td>Negative</td>
<td>High</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Loss of habitat</td>
<td>Site</td>
<td>Long term</td>
<td>Medium</td>
<td>High</td>
<td>Negative</td>
<td>High</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Loss of ecological processes</td>
<td>Site</td>
<td>Long term</td>
<td>Medium</td>
<td>High</td>
<td>Negative</td>
<td>High</td>
<td>Medium</td>
<td>Low</td>
</tr>
<tr>
<td>Socio-economic</td>
<td>Regional</td>
<td>Long term</td>
<td>Medium</td>
<td>Definite</td>
<td>Positive</td>
<td>High</td>
<td>Medium</td>
<td>Medium</td>
</tr>
<tr>
<td>Agriculture</td>
<td>Site</td>
<td>Long term</td>
<td>Medium</td>
<td>Definite</td>
<td>Positive</td>
<td>High</td>
<td>Medium</td>
<td>Medium</td>
</tr>
<tr>
<td>Erosion</td>
<td>Site</td>
<td>Medium term</td>
<td>Medium</td>
<td>Probable</td>
<td>Negative</td>
<td>Medium</td>
<td>Medium</td>
<td>Low</td>
</tr>
<tr>
<td>Visual</td>
<td>Site and surroundings</td>
<td>Short term</td>
<td>Low</td>
<td>Improbable</td>
<td>Negative</td>
<td>High</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Noise</td>
<td>Site and surroundings</td>
<td>Short term</td>
<td>Low</td>
<td>Probable</td>
<td>Negative</td>
<td>Medium</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Dust</td>
<td>Site and surroundings</td>
<td>Short term</td>
<td>Low</td>
<td>High</td>
<td>Negative</td>
<td>Medium</td>
<td>Low</td>
<td>Low</td>
</tr>
</tbody>
</table>
14. CONCLUSIONS AND RECOMMENDATIONS

Upon approval of the Scoping Report and Plan of Study for EIA, various information were gathered, site visits conducted and specialists input incorporated in addressing, resolving and/or mitigating potential impacts identified during the scoping phase. No further specialist Agricultural, Faunal, Botanical/Ecological or Heritage/Archaeological studies were required during the EIA phase, as the most relevant assessments were already conducted during the Scoping Phase. This Draft EIR reflects all aspects and findings of the various investigations and assessments for the proposed project.

This report shows that the proposed cultivation of virgin soil (40 ha) on Farm 756/1, Rondo will not have a significant impact on the surrounding environment, provided that the mitigation measures outlined in Section 12 are implemented.

The Draft EIR is available for public comment for a 40 day period. By incorporating all comments and recommendation as received by the I&APs and commenting authorities, the Draft EIR will be updated to a Final EIR, which will be submitted to DEA&DP for a decision.

Please submit any comments you may have on or before the 7th of June 2010 to the Department of Environmental Affairs and Development Planning (DEADP) and BolandEnviro – addresses below:

Boland Environmental Consultants
Attention: Nik Wullschleger
P.O. Box 250, Worcester, 6849
Tel: (023) 347 0336 Fax: (023) 347 0336
Email: work@Bolandenviro.co.za

The Head of Department
Department of Environmental Affairs and Development Planning
Private Bag X9086, CAPE TOWN, 8000
Tel: (021) 483 3696 / 5113 Fax: (021) 483 3633
Email: losborne@pgwc.gov.za