BASIC ASSESSMENT REPORT

(For official use only)

File Reference Number:	
Application Number:	
Date Received:	

Basic assessment report in terms of the Environmental Impact Assessment Regulations, 2014, promulgated in terms of the National Environmental Management Act, 1998(Act No. 107 of 1998), as amended.

RIPPLEMEAD CITRUS PACK HOUSE

DEDEAT REFERENCE: EC/16/A/LN1,LN3/M15-12

DRAFT BAR FOR 30-DAY COMMENT PERIOD

CLOSURE FOR COMMENTS: 17h00 ON MONDAY 19th OCTOBER 2015

WRITTEN COMMENTS ONLY TO BE SUBMITTED TO:

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SECTION A: ACTIVITY INFORMATION

Has a specialist been consulted to assist with the completion of this section?	~~YES~~	**NO**

If YES, please complete form XX for each specialist thus appointed:

Any specialist reports must be contained in Appendix D.

1. ACTIVITY DESCRIPTION

Describe the activity, which is being applied for, in detail

The Ripplemead Citrus Pack House is situated on the remaining extent of the Farm Groet Place No. 4 in the Peddie area of the Ngushwa Municipality within the Amathole District Municipality and is approximately 37 km north west of Peddie adjacent to the Double Drift Game Reserve. The coordinates are: 33° 01.8468' S and 26° 58.8570'. The landowner is the Government of the Republic of South Africa and the Department of Rural Development and Land Reform are the custodians of the land. The applicant and funder of the project, is the Department of Rural Development and Agrarian Reform.

Citrus from the three neighbouring citrus farms (formerly Ulimico controlled) used to be packed in the existing Ripplemead Pack House but over time, the producers, due to stringent customer specifications, were forced to look at alternative pack houses as far away as Fort Beaufort as the Ripplemead Pack House is not suitable to packing soft citrus including Nartjies (easy pealers) and does not comply with EUROGAP standards, which requires bird and dust free conditions within the Pack House.

The existing pack shed originally constructed around 1927 and added to in the 1970-1980's, is not suitable for re-construction to meet Eurogap standards and a new pack house is to be constructed on land adjacent to the existing pack house. The existing pack house is to be utilised for storage of farm equipment and packing vegetables, where stringent standards are not required. The area of land where the new pack house is to be developed was previously cultivated, but has been fallow for a number of years.

The new pack house will be a steel structure with brick and cement walls and will measure 100 m x 31m. The same water source will be used as for the existing pack house and the quantity of effluent water / sewerage is calculated as 10.81 m³ per day, therefore Activity 25 of GN 983 is not triggered.

The pack shed will only operate for approximately 6-months of each year i.e. at harvest of the crop.

The project area is according to the Eastern Cape Biodiversity Conservation Plan located within:

i. terrestrial critical biodiversity area CBA 2 – field investigation proves however that the area is transformed by previous cultivation practices; and
ii. within 5 km of a proclaimed game reserve. However the site is not located within a watercourse, a development setback or within 32 m of a watercourse so Activity 14 of GN 985 is not triggered.

The EIA process originally implemented in 2013 by the Department Rural Development and Agrarian Reform (DRDAR) was shelved, as funding was required for other projects. The public participation was largely completed in 2013 as were the specialist reports in terms of Archaeology and Palaeontology.

The re-instatement of the EIA process was discussed at a meeting with Ms Ntsini on 23rd June 2015.

2. FEASIBLE AND REASONABLE ALTERNATIVES

"alternatives", in relation to a proposed activity, means different means of meeting the general purpose and requirements of the activity, which may include alternatives to—

(a) the property or site on which or location where it is proposed to undertake the activity;
(b) the type of activity to be undertaken;
(c) the design or layout of the activity;
(d) the technology to be used in the activity;
(e) the operational aspects of the activity; and
(f) the option of not implementing the activity.

2.1 CONSIDERATION OF "ALTERNATIVES"

2.1.1 The "Property or Site"

The project is located on the remaining extent of the Farm Groet Place No. 4 in the Peddie District. The registered owner of the property is the Government of the Republic of South Africa, represented by the Department Rural Development and Land Reform. The existing pack house is already located on this section of land with the area identified for the new pack house immediately adjacent to it. Alternative sites on this property, which can be considered, are:

(i) Construct a new pack house on the adjacent area indicated as S1 on Locality Map No. 2
(ii) Demolish the existing pack house and re-build to meet the required specifications indicated as S2 on Locality Map No. 2
(iii) Construct a new pack house on the adjacent area indicated as S3 on Locality Map No. 2

2.1.1.1 Alternative S1 – coordinates 33° 01.8015' S and 26° 58.9343' E

This alternative is situated on land adjacent to the existing site. The land was previously cultivated and there are no trees on this site apart from encroaching *Acacia karoo.* The vegetation consists primarily of *Digetaria, Eragrostis spp., Paspallum dilatatum, Cyndon dactyllon* and *Acacia karoo* – none of this vegetation is considered to be threatened or sensitive. The three farmer beneficiaries, representatives of the community, the Ngushwa Municipality and the Department Rural Development & Land Reform support the use of this site.

2.1.1.2 The existing pack house (S2) – coordinates 33° 01.8468' S and 26° 58.8570' E

We are advised that the original structure dates back to 1927, with subsequent improvements made by the early land users and the last addition/alteration dating mid-1970's – 1980's carried out by Ulimicor a parastatal of the former Ciskei. There is therefore heritage (SAHRA and EC PRHRA) legislation to be considered and a permit would be required to demolish this structure – see attached HIA Report. The local farmers have indicated that they wish to continue to use this building to store agricultural equipment and pack vegetables for delivery to markets. As a result of the heritage implications and the planned future use by the farmers', this alternative is not preferred as an option.

2.1.1.3 Alternative S3 – coordinates 33° 01.7743' S and 26° 58.7957' E

This alternative is situated on a section of land, which can be classified as being "natural". The area is located in close proximity to a watercourse and due to the narrow shape of the available area construction would impact on the watercourse. When thicket vegetation is overgrazed the succulent species are often the first to disappear and isolated natural bush clumps remain as in this case where indigenous *Euphorbia triangularis* and *Pappea capensis* trees and shrubs such as *Scutia myrtina* are present. Use of this area as a site would necessitate the removal of these trees and it is highly unlikely that they would be successfully re-established. This is considered to be a fatal flaw and this alternative is therefore not preferred.

2.1.2 Type of activity

The type of activity is the construction of a citrus pack house for the grading and packaging of citrus primarily for the overseas market. There is no alternative to provide the required service to meet the requirements of the overseas markets.

2.1.3 Design or layout of the activity

The layout plan has been developed in consultation with the Department Rural Development & Agrarian Reform Engineering Directorate and other citrus pack house operators' who are approved to pack produce for the overseas markets as a result there is no alternative design..

2.1.4 Technology to be used for the activity

This is a citrus pack house, where citrus is packaged for the overseas market. There are no alternative technology methods to be considered.

2.1.5 Operational aspects of the activity

The completed activity (project) will be a citrus pack house for the handling and packaging of citrus for the overseas market. No alternative operational aspects can be considered.

2.1.6 Option of not implementing the activity

The option of not implementing the activity will result in the status quo where the emerging citrus producers' will not have direct access to a pack house for the packaging of their produce for the overseas market. The result is ever increasing transport costs to other pack sheds thus impacting severely on the farmers' profit margins. In addition if

the existing pack house is used the farmers' can only sell their produce on the local market and thus will lose all financial incentives and benefits associated with meeting EUROGAP requirements and marketing the produce overseas.

2.1.7 Summary of alternatives considered

There are no alternatives that could accomplish the purpose and need of the proposed activity other than the construction of a new pack house to meet the requirements demanded by the overseas markets.

NOTE: Paragraphs 5 -13 hereunder are completed for the footprint of the preferred alternative viz. the construction of a new citrus pack houses on the area marked as S1 on Map No. 2.

2.2 LISTED NEMA ACTIVITIES CONSIDERED

ACTIVITY	DESCRIPTION
GN R.983 8: The development and related operation of hatcheries or agri-industrial facilities outside industrial complexes where the development footprint covers an area of 2000 square meters or more.	The project entails the construction of a agri-industrial facility for the packaging of citrus, where the development footprint covers an area exceeding 2 000 m² but not more than 53 600 m² (5,36 ha)
GN R.983 27: The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation	The development entails the clearance of an area greater than 1 ha but not exceeding 3,65 ha of indigenous vegetation
GN R.983 28(ii): Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture or afforestation on or after 01 April 1998 and where such development: (ii) will occur outside an urban area, where the total land to be developed is bigger than 1 hectare	The project entails the construction of a agri-industrial facility for the packaging of citrus, on land, which was used for agriculture on or after 01 April 1998 and where such development occurs outside an urban area, where the total land to be developed is bigger than 1 hectare but will not exceed 3,65 ha
GN R.985 12(ii): The clearance of an area of 300 square meters or more of indigenous vegetation - within (ii) critical biodiversity areas identified in bioregional plans	The development entails the clearance of an area greater than 300 m² indigenous vegetation but will not exceed 3,65 ha within a Terrestrial Critical Biodiversity Area (CBA 2) identified in the Eastern Cape Biodiversity Conservation Plan

3. ACTIVITY POSITION

NOTE:
The Ripplemead Citrus Pack House project encompasses a number of NEMA activities, all relating to the same project footprint. The information in Paragraphs 5 to 13 is applicable to the preferred project area. There is no a significantly different environment across the development footprint.

PROJECT SITE:

Alternative:	**Latitude (S):**		**Longitude (E):**	
Alternative S1[1] (preferred or only site alternative)	33°	01.8015‘	26°	58.9343‘
Alternative S2 (if any)	33°	01.8468‘	26°	58.8570‘
Alternative S3 (if any)	33°	01.7743‘	26°	58.7957‘

LINEAR ACTIVITIES: NOT APPLICABLE

	Latitude (S):		**Longitude (E):**	
• Starting point of the activity				
• End point of the activity				

4. PHYSICAL SIZE OF THE ACTIVITY

Indicate the physical size of the preferred activity/technology as well as alternative activities/technologies (footprints):

Alternative:		**Size of the activity:**
Alternative A1[2] (preferred activity alternative)		3 100 m²
Alternative A2 (if any)	**NONE**	3 100 m²
Alternative A3 (if any)	**NONE**	3 100 m²

[1] “Alternative S..” refer to site alternatives.
[2] “Alternative A..” refer to activity, process, technology or other alternatives.

or, for **linear activities:**

Alternative:		**Length of the activity:**
Alternative A1 (preferred activity alternative)		- m
Alternative A2 (if any)	**NONE**	- m
Alternative A3 (if any)	**NONE**	- m

Indicate the size of the alternative sites or servitudes (within which the above footprints will occur):

Alternative:		**Size of the site/servitude:**
Alternative A1 (preferred activity alternative)		36 500 m^2
Alternative A2 (if any)	**NONE**	9 600 m^2
Alternative A3 (if any)	**NONE**	12 800 m^2

5. SITE ACCESS

Does ready access to the site exist?	**YES**	~~NO~~
If NO, what is the distance over which a new access road will be built	m	

Describe the type of access road planned:

None planned

6. SITE PLANS

i. Locality Map
ii. Alternative sites
iii. ECBCP CBA Map
iv. Topographical Survey

7. SITE PHOTOGRAPHS

See Appendix B.

8. FACILITY ILLUSTRATION

i. Appendix C1 – Plan
ii. Appendix C2 – Elevations

9. ACTIVITY MOTIVATION

9(a) Socio-economic value of the activity

What is the expected capital value of the activity on completion?	R 26 mil	
What is the expected yearly income that will be generated by or as a result of the activity?	R6.4million added to R24 million existing income	
Will the activity contribute to service infrastructure?	~~YES~~	**NO**
Is the activity a public amenity?	~~YES~~	**NO**
How many new employment opportunities will be created in the development phase of the activity?	30	
What is the expected value of the employment opportunities during the development phase?	R 800,000	
What percentage of this will accrue to previously disadvantaged individuals?	100%	
How many permanent new employment opportunities will be created during the operational phase of the activity?	8 New Permanent + 94 Seasonal	
What is the expected current value of the employment opportunities during the first 10 years?	R 5.4 mil.	
What percentage of this will accrue to previously disadvantaged individuals?	100%	

9(b) Need and desirability of the activity

Motivate and explain the need and desirability of the activity (including demand for the activity):

Citrus from the three neighbouring citrus farms (formerly Ulimico controlled) used to be packed in the existing Ripplemead Pack House but over time, the producers, due to stringent customer specifications, were forced to look at alternative pack houses as far away as Fort Beaufort as the Ripplemead Pack House is not suitable to packing soft citrus including Nartjies (easy pealers) and does not comply with EUROGAP standards, which requires bird and dust free conditions within the Pack House. The result is ever increasing transport costs to other pack sheds thus impacting severely on the farmers' profit margins. The construction of a new pack shed meeting the stringent EUROGAP requirements will allow the farmers' access to the financial incentives and benefits associated with marketing their produce overseas..

Indicate any benefits that the activity will have for society in general:

It is envisaged that additional farms in the area will be established with citrus and this pack shed will serve these new producing areas when they come into production. This will result in greater employment opportunities within the Ngushwa municipal area.

Indicate any benefits that the activity will have for the local communities where the activity will be located:

It is envisaged that additional farms in the area will be established with citrus and this pack shed will serve these new producing areas when they come into production. This will result in greater employment opportunities within the Ngushwa municipal area.

10. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

List all legislation, policies and/or guidelines of any sphere of government that are applicable to the application as contemplated in the EIA regulations, if applicable:

Title of legislation, policy or guideline:	Administering authority:	Date:
National Environmental Management Act 107 of 1998 as amended	Department Economic Development, Environmental Affairs & Tourism	1998
National Water Act 36 of 1998	Department Water Affairs	1998
National Heritage Resources Act 25 of 1999	South African Heritage Resources Authority; and Eastern Cape Province Heritage Resources Agency	1999
Conservation of Agricultural Resources Act 43 of 1983	Department of Agriculture	1983

11. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

11(a) Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?	**YES**	~~NO~~
If yes, what estimated quantity will be produced per month?	**0.5 m^3**	

How will the construction solid waste be disposed of (describe)?

Solid waste will be placed in skips at the construction site and then removed to the Peddie Solid Waste Site. Off-cuts of wood can be made available to the local community for use.

Where will the construction solid waste be disposed of (describe)?

At the Peddie Solid Waste Site

Will the activity produce solid waste during its operational phase?	~~YES~~	**NO**
If yes, what estimated quantity will be produced per month?	0 m^3	

How will the solid waste be disposed of (describe)?

NOT APPLICABLE

Where will the solid waste be disposed if it does not feed into a municipal waste stream (describe)?

NOT APPLICABLE

If the solid waste (construction or operational phases) will not be disposed of in a registered landfill site or be taken up in a municipal waste stream, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Can any part of the solid waste be classified as hazardous in terms of the relevant legislation?	~~YES~~	**NO**

If yes, inform the competent authority and request a change to an application for scoping and EIA.

Is the activity that is being applied for a solid waste handling or treatment facility?	~~YES~~	**NO**

If yes, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

11(b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?	**YES**	~~NO~~
If yes, what estimated quantity will be produced per month?	215.97 m^3	
Will the activity produce any effluent that will be treated and/or disposed of on site?	**YES**	~~NO~~

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Will the activity produce effluent that will be treated and/or disposed of at another facility?	~~YES~~	**NO**

If yes, provide the particulars of the facility: **NOT APPLICABLE**

Facility name:			
Contact person:			
Postal address:			
Postal code:			
Telephone:		Cell:	
E-mail:		Fax:	

Describe the measures that will be taken to ensure the optimal reuse or recycling of waste water, if any:

The pack shed will operate for 8 months of a year. The total annual effluent is 1727.8 m³ per annum.

The Ngushwa Municipality will pump out the septic tank when required and remove the contents to the Peddie WWTW.

Waste water from washing the citrus will be re-used for watering of the gardens surrounding the pack shed. A Waste Management Report is included in Appendix D.

Toxicological, ecological and environmental effect of fungicides/pesticides (extract from Waste Management Report)

Fungicide / Pesticide	Toxicological Effect	Ecological Effect	Environmental Fate
Imazalil (fungicide) Toxicity class II – moderately toxic	Moderately toxic by ingestion – rapidly absorbed, distributed, metabolized and excreted by rats and accumulation in fatty tissue did not occur.	• Mallard duck and Japanese quail are relatively insensitive • moderately toxic to fish • non-toxic to bees	• Soluble in water, strongly bound in soils and unlikely to pose a risk to groundwater. • No significant effect on vegetation with limited quantities in the pulp
Thiabendazole (pesticide) Toxicity class III – slightly toxic	Elimination appears to be rapid in humans and other species	• No data on birds • Low toxicity to fish • Non-toxic to bees • Earthworms are sensitive	• Binds to soil particles, slightly soluble in water and not expected to leach readily from the soil. • Absorbed by roots and translocated to all parts of the plant, but predominately to the leaf margins
Pyrimethanil (fungicide) NOHSC – Non hazardous Packing group III Minor danger Class 9	Low toxicity - Unlikely to pose a carcinogenic risk to humans	Toxic to aquatic organisms	• Field studies indicate rapid degradation. • Low potential for leaching to groundwater

11(c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere?	~~YES~~	**NO**
If yes, is it controlled by any legislation of any sphere of government?	~~YES~~	~~NO~~

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

If no, describe the emissions in terms of type and concentration:

Usual emissions from construction vehicles will be generated during the construction phase. There are no air emissions associated with the operational phase. No heating or burning takes place in the packaging process. Air is blown over the citrus to dry it after washing.

11(d) Generation of noise

Will the activity generate noise?	**YES**	NO
If yes, is it controlled by any legislation of any sphere of government?	~~YES~~	**NO**

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

If no, describe the noise in terms of type and level:

Noise during the development phase is associated with general construction/building noise, such as machinery, hammers and workmen etc. After construction any noise will be associated with usual machinery and equipment, which is already in use in the existing adjoining pack shed and on-going farming operations.

12. WATER USE

Please indicate the source(s) of water that will be used for the activity by ticking the appropriate box(es)

Municipal	water board	groundwater	**river, stream, dam or lake** **X**	other	the activity will not use water

If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate

the volume that will be extracted per month:	**16 500 m³**	
Does the activity require a water use permit from the Department of Water Affairs?	**YES**	~~NO~~

Water Use Certificate 28067537 is included in Appendix G.

13. ENERGY EFFICIENCY

Describe the design measures, if any, that have been taken to ensure that the activity is energy efficient:

None

Describe how alternative energy sources have been taken into account or been built into the design of the activity, if any:

None

SECTION B: SITE / AREA / PROPERTY DESCRIPTION

Important notes:

1. For linear activities (pipelines, etc) as well as activities that cover very large sites, it may be necessary to complete this section for each part of the site that has a significantly different environment. In such cases please complete copies of Section C and indicate the area, which is covered by each copy No. on the Site Plan.

Section C Copy No. (e.g. A): [ ]

2. Paragraphs 1 - 6 below must be completed for each alternative.

3. Has a specialist been consulted to assist with the completion of this section?

~~YES~~	**NO**

If YES, please complete form XX for each specialist thus appointed:

All specialist reports must be contained in Appendix D

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1:

~~Flat~~	**1:50 – 1:20**	~~1:20 – 1:15~~	~~1:15 – 1:10~~	~~1:10 – 1:7,5~~	~~1:7,5 – 1:5~~	~~Steeper than 1:5~~

Alternative S2 (if any):

~~Flat~~	**1:50 – 1:20**	~~1:20 – 1:15~~	~~1:15 – 1:10~~	~~1:10 – 1:7,5~~	~~1:7,5 – 1:5~~	~~Steeper than 1:5~~

Alternative S3 (if any):

~~Flat~~	**1:50 – 1:20**	~~1:20 – 1:15~~	~~1:15 – 1:10~~	~~1:10 – 1:7,5~~	~~1:7,5 – 1:5~~	~~Steeper than 1:5~~

2. LOCATION IN LANDSCAPE

Indicate the landform(s) that best describes the site:

Landform	Alternative S1	Alternative S2	Alternative S3
2.1 Ridgeline			
2.2 Plateau			
2.3 Side slope of hill/mountain			
2.4 Closed valley			
2.5 Open valley – flat alluvial terrace			
2.6 Plain			
2.7 Undulating plain / low hills	**Undulating plain / low hills**	**Undulating plain / low hills**	**Undulating plain / low hills**
2.8 Dune			
2.9 Seafront			

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

Is the site(s) located on any of the following (tick the appropriate boxes)?

	Alternative S1:		Alternative S2 (if any):		Alternative S3 (if any):	
Shallow water table (less than 1.5m deep)	~~YES~~	**NO**	~~YES~~	**NO**	~~YES~~	**NO**
Dolomite, sinkhole or doline areas	~~YES~~	**NO**	~~YES~~	**NO**	~~YES~~	**NO**
Seasonally wet soils (often close to water bodies)	~~YES~~	**NO**	~~YES~~	**NO**	~~YES~~	**NO**
Unstable rocky slopes or steep slopes with loose soil	~~YES~~	**NO**	~~YES~~	**NO**	~~YES~~	**NO**
Dispersive soils (soils that dissolve in water)	~~YES~~	**NO**	~~YES~~	**NO**	~~YES~~	**NO**
Soils with high clay content (clay fraction more than 40%)	~~YES~~	**NO**	~~YES~~	**NO**	~~YES~~	**NO**
Any other unstable soil or geological feature	~~YES~~	**NO**	~~YES~~	**NO**	~~YES~~	**NO**
An area sensitive to erosion	~~YES~~	**NO**	~~YES~~	**NO**	~~YES~~	**NO**

4. GROUNDCOVER

Indicate the types of groundcover present on the site:

	Alternative S1:		Alternative S2 (if any):		Alternative S3 (if any):	
4.1 Natural veld – good condition [E]	~~YES~~	**NO**	~~YES~~	**NO**	~~YES~~	**NO**
4.2 Natural veld – scattered aliens [E]	**YES**	~~NO~~	~~YES~~	**NO**	**YES**	~~NO~~
4.3 Natural veld with heavy alien infestation [E]	~~YES~~	**NO**	~~YES~~	**NO**	~~YES~~	**NO**
4.4 Veld dominated by alien species [E]	~~YES~~	**NO**	~~YES~~	**NO**	~~YES~~	**NO**
4.5 Gardens	~~YES~~	**NO**	~~YES~~	**NO**	~~YES~~	**NO**
4.6 Sport field	~~YES~~	**NO**	~~YES~~	**NO**	~~YES~~	**NO**
4.7 Cultivated land	~~YES~~	**NO**	~~YES~~	**NO**	~~YES~~	**NO**
4.8 Paved surface	~~YES~~	**NO**	~~YES~~	**NO**	~~YES~~	**NO**
4.9 Building or other structure	~~YES~~	**NO**	**YES**	~~NO~~	~~YES~~	**NO**
4.10 Bare soil	~~YES~~	**NO**	~~YES~~	**NO**	~~YES~~	**NO**

The location of all identified rare or endangered species or other elements should be accurately indicated on the site plan(s).

Natural veld - good condition[E]	**Natural veld with scattered aliens[E] – S1 & S3**	Natural veld with heavy alien infestation[E]	Veld dominated by alien species[E]	Gardens
Sport field	Cultivated land	Paved surface	**Building or other structure S2**	Bare soil

If any of the boxes marked with an "[E] "is ticked, please consult an appropriate specialist to assist in the completion of this section if the environmental assessment practitioner doesn't have the necessary expertise.

NATURAL VELD WITH SCATTERED ALIENS[E]
The vegetation unit along the Keiskamma River is AT11 Great Fish Thicket (L Mucina and C Rutherford) and the conservation status is *least threatened*. The vegetation comprises of short, medium and tall thicket types, where both the woody trees and shrubs and the succulent component are well developed, with many spinescent shrubs. The vegetation in the study area has been transformed through past agricultural practices namely clearing for cultivation and the establishment of residential rural villages with associated infrastructure. Overgrazing of areas close to the residential areas has also altered the vegetation type.

Alternative S1:
This alternative site was previously cultivated but has been fallow for a number of years and the vegetation consists primarily of grassland *Digetaria, Eragrostis spp., Paspallum dilatatum, Cyndon dactyllon* and *Acacia karoo* – none of this vegetation is considered to be threatened or sensitive. Scattered jointed cactus plants are noted.

Alternative S3:
This alternative is situated on a section of land, where the ground cover is sparse - there is notable indigenous vegetation with *Euphorbia triangularis* and *Pappea capensis* trees and shrubs such as *Scutia myrtina* present. Use of this area as a site would necessitate the removal of these trees and it is highly unlikely that they would be successfully re-established. This is considered a fatal flaw and this alternative is therefore not recommended. Jointed cactus is quite prolific in this area.

5. LAND USE CHARACTER OF SURROUNDING AREA

Indicate land uses and/or prominent features that currently occur within a 500 m radius of the site and give description of how this influences the application or may be impacted upon by the application:

5.1 **Natural area**
5.2 Low density residential
5.3 **Medium density residential**
5.4 High density residential
5.5 Informal residential
5.6 Retail commercial & warehousing
5.7 Light industrial
5.8 Medium industrial [AN]
5.9 Heavy industrial [AN]
5.10 Power station
5.11 Office/consulting room
5.12 Military or police base/station/compound
5.13 Spoil heap or slimes dam[A]
5.14 Quarry, sand or borrow pit
5.15 **Dam or reservoir**
5.16 Hospital/medical centre
5.17 **School**
5.18 Tertiary education facility
5.19 **Church**
5.20 Old age home
5.21 Sewage treatment plant[A]
5.22 Train station or shunting yard [N]
5.23 Railway line [N]
5.24 Major road (4 lanes or more) [N]
5.25 Airport [N]
5.26 Harbour
5.27 Sport facilities
5.28 Golf course
5.29 Polo fields
5.30 Filling station [H]

5.31 Landfill or waste treatment site
5.32 Plantation
5.33 **Agriculture**
5.34 **River, stream or wetland**
5.35 Nature conservation area
5.36 Mountain, koppie or ridge
5.37 Museum
5.38 Historical building
5.39 Protected Area
5.40 **Graveyard**
5.41 Archaeological site
5.42 Other land uses (describe)

If any of the boxes marked with an "N "are ticked, how will this impact / be impacted upon by the proposed activity.
None marked with an "N "

If any of the boxes marked with an "An" are ticked, how will this impact / be impacted upon by the proposed activity.
None marked with an "A" or "AN"

If any of the boxes marked with an "H" are ticked, how will this impact / be impacted upon by the proposed activity.
None marked with an "H"

If YES, specify:

DISCUSSION ON LAND USE OR PROMINENT FEATURES WITHIN 500 METERS OF THE PLANNED DEVELOPMENT – APPLICABLE TO S1, S2 and S3

LAND USE OR FEATURE	COMMENTS
Natural area	The study area according to the ECBCP is within CBA 2. Field investigation reveals that the area is transformed, by previous cultivation practices. The project does not impact on the pristine adjacent CBA 1, CBA 2 and formal protected area.
Medium density residential	The local community live adjacent to the project area. The local workers are mostly employed from this community. The new pack shed will not impact negatively on this residential area.
Dam or reservoir	A stock dam is located below the project site
School	A school is located within the residential area adjacent to the project site, the pack shed will not adversely affect the school
Church	A Church is located within the residential area adjacent to the project site, the pack shed will not adversely affect the school
Agriculture	The arable lands where citrus produced are adjacent to the project site
River, stream or wetland	Water is abstracted from the Keiskamma River to irrigate the citrus orchards and provide water to the pack house. The project will not have a negative impact on the river system. A permit has been issued by DWA – see Appendix G
Historical building	A number of sites in close proximity to the project area are identified in the AIA, which recommends that these be barricaded off with safety netting during the construction phase
Graveyard	Located north of the project site. The AIA recommends that this site be barricaded off with safety netting during the construction period

6. CULTURAL / HISTORICAL FEATURES

Are there any signs of culturally or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including Archaeological or palaeontological sites, on or close (within 20m) to the site?	**YES**	~~NO~~
If YES, explain:	Colonial Period farmstead ruins and the existing pack shed which is greater than 60 years old	

NOTE - An AIA and PIA were commissioned

The specialist reports listed hereunder, have been submitted to the EC PHRA APM-Unit and are included in Appendix D.

i. Phase 1 Archaeological Impact Assessment (AIA) - Karen van Ryneveld [MSc Archaeology], ArchaeoMaps cc;
ii. Paleontological Impact Assessment (PIA) - Dr. Lloyd Rossouw, PO Box 38806, Langenhovenpark, Bloemfontein

Briefly explain the findings of the specialist:	**Archaeological Impact Assessment (Appendix D)** Three archaeological and cultural heritage resources, as defined and protected by the NHRA 1999, were identified during the field assessment, including: i. The RPM1 cemetery, an Iron Age cemetery of contemporary age, situated approximately 0.5km north-north-west of the study site; ii. The RPM2 Ripplemead pack house, a Colonial Period structure believed to have been built in 1927, but with renovations and extensions thereto dating to 1970-1980 – The Site RPM2, the Colonial Period Ripplemead pack house, comprises of a structure pre-dating 60 years of age, the site is thus formally protected by the NHRA 1999 and receives automatic SAHRA / EC PHRA heritage site status as a *Grade 2 Provincial Heritage Resource* of *High Significance*. iii. The RPM3 Colonial Period farmstead ruins with the site proper situated just south of the study site but with related later period addition scattered in the vicinity and the later Feature 3.4 situated within the study site. **Recommendation:** It is recommended that the existing Ripplemead pack house (S2), a structure older than 60 years and formally protected by the NHRA 1999, be conserved and that a new facility be constructed within the proposed study site, to the east of the access road (S1). Conservation of Site S2 accommodates continued use of the structure itself as well as machinery, many of which can be classed as 'heritage objects'. The developer and farmers' are reminded, that future alteration to the existing pack house (S2) would need to be undertaken under an EC PHRA Built Environment Unit permit. Site S1 is recommended for the new pack house. **Paleontological Impact Assessment (Appendix D** There is no major palaeontological reason to halt the proposed development at the site. The adjoining area identified as a possible site for a new pack shed (S1) does not pose any problems in terms of palaeontological impact. The site is underlain by potentially fossil-bearing Middleton Frm. sediments, but it is unlikely that the proposed development will affect palaeontological heritage.

Will any building or structure older than 60 years be affected in any way?	~~YES~~	**NO**
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?	~~YES~~	**NO**

If yes, please submit or, make sure that the applicant or a specialist submits the necessary application to SAHRA or the relevant provincial heritage agency and attach proof thereof to this application if such application has been made.

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SECTION C: PUBLIC PARTICIPATION

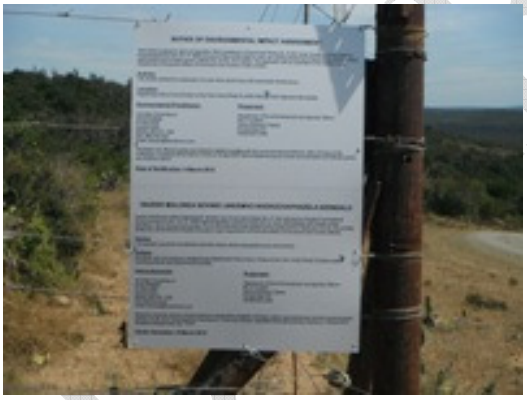
NOTE:
See Comments and Responses Report, copies of advertisement, site notices, attendance registers, and correspondence in Appendix E

1. PRE-NEMA 2014 AMENDMENT

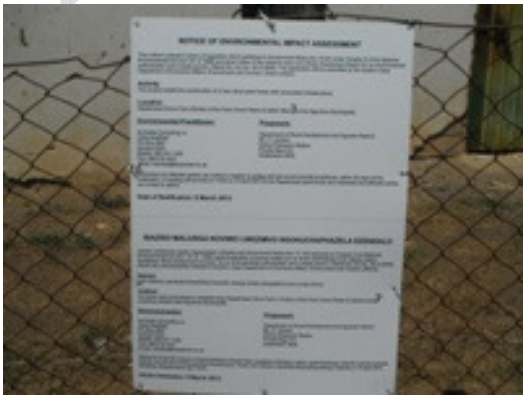
1.1 ADVERTISEMENT & NOTICES

(a) A notice was placed in the Daily Dispatch on the 8th March 2013 allowing a 30 day registration and comment period (see copy in Appendix E);

(b) Notice boards were fixed at strategic places on 8th March 2013 - Notices allowed a 30-day registration/comment period (see copy in Appendix E).



At junction on main road



On site

(c) Written notice was delivered by hand on 8th March 2013 to residents/land users adjacent to the development area (See Appendix E) allowing a 30-day registration and comment period.

(d) Written notices was delivered by hand on 8th March 2013 to the Ngushwa Municipality for the attention of the Municipal Manager and the Ward Councillor (See Appendix E) allowing a 30-day registration and comment period.

1.2 COMMUNITY / PUBLIC MEETING

A meeting was held at the existing Ripplemead Pack Shed on 10th April 2013 – agenda, attendance register and recorded of proceedings is included in Appendix E. Problems raised were of a personal nature viz, farmer / employer matters and it was decided that DRDLR and the Ngushwa Municipality would address these issues which are not of an environmental nature. Meeting agreed that the project should proceed for the benefit of the area.

2. POST NEMA 2014 AMENDMENT

2.1 STAKEHOLDER MEETING (DRDAR & FARMERS')

A meeting was held with the Department Rural Development & Agrarian Reform, the three farmers' (beneficiary group) and Lukhozi Consulting Engineers and the EAP on 20th May 2015 to discuss the re-implementation of the project – Attendance register included in Appendix E.

2.2 MEETING WITH DEDEAT

Consultation with Ms H Ntsini on 23rd June 2015 - Ms Ntsini advised the EAP that the prior public participation strategy of 2013 s described in point 1 supra, will be acknowledged. The EAP is expected to meet with community representatives, officials of the Ngushwa Municipality and the Department Rural Development and Agrarian Reform (Stakeholders) to advise that the project is to be re-instated.

2.2 STAKEHOLDER/COMMUNITY MEETING

A meeting was held with community representatives, officials of the Ngushwa Municipality and the Department Rural Development and Agrarian Reform on 25th May 2015 to advise that the project is to be re-instated - Attendance register included in Appendix E.

2.3 DRDLR/COMMUNITY MEETING

The Department Rural Development and Land Reform (custodians of the land on behalf of the RSA) held a meeting with the community on 6th August 2015 to discuss and finalise the allocation of the project site. Copy of attendance register and resolution is included in Appendix E.

3. AUTHORITY PARTICIPATION

List of authorities informed:

1. Department Economic Development, Environmental Affairs & Tourism
2. Department of Water Affairs
3. Department of Rural Development and Land reform
4. Department of Rural Development and Agrarian Reform
5. Eastern Cape Provincial Heritage Resources Authority
6. Ngushwa Local Municipality

List of authorities from whom comments have been received:

1. Department of Rural Development and Land Reform
2. Department Water Affairs

4. CONSULTATION WITH STAKEHOLDERS

Has any comment been received from stakeholders?	**YES**	~~NO~~

If "YES", briefly describe the feedback below (also attach copies of any correspondence to and from the stakeholders to this application): **SEE APPENDIX E FOR CORRESPONDENCE**

1. Department of Rural Development and Land Reform – submitted a resolution from the community meeting confirming that the project can proceed
2. Department of Water Affairs – will submit comments and requirements based on Draft BAR

SECTION D: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2010, and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts.

1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

List the main issues raised by interested and affected parties.

None

Response from the practitioner to the issues raised by the interested and affected parties (A full response must be given in the Comments and Response Report that must be attached to this report):

None

1. IMPACTS THAT MAY RESULT FROM THE PLANNING AND DESIGN, CONSTRUCTION, OPERATIONAL, DECOMMISSIONING AND CLOSURE PHASES AS WELL AS PROPOSED MANAGEMENT OF IDENTIFIED IMPACTS AND PROPOSED MITIGATION MEASURES

List the potential direct, indirect and cumulative property/activity/design/technology/operational alternative related impacts (as appropriate) that are likely to occur as a result of the planning and design phase, construction phase, operational phase, decommissioning and closure phase, including impacts relating to the choice of site/activity/technology alternatives as well as the mitigation measures that may eliminate or reduce the potential impacts listed.

NOTE – Decommissioning and closure phases are not considered as the associated activities are implemented for the construction of a pack shed, which will be utilised for the foreseeable future as theer are on-going plans to plant new orchards in the area and promote citrus growing.

DISCUSSION ON IMPACTS RELATING TO RATING AND MITIGATION

IMPACT	SIGNIFICANCE	MITIGATION
Direct impacts		
Disturbance and removal of natural vegetation	Low	The preferred site is located on an area that was previously cultivated. The vegetation consists primarily of *Digetaria, Eragrostis spp., Paspallum dilatatum, Cyndon dactyllon* and *Acacia karoo* – none of this vegetation is considered to be threatened or sensitive.
Presence of fungicides/pesticides in effluent water	Moderate	The three fungicides/pesticides discussed in the Waste Management Report have a low toxicological and environmental rating. The ecological rating is low to high – Pyrimethanil is toxic to fish. It is suggested that the risk of water used to irrigate the gardens reaching the Keiskamma River (500 m away) is considered low as the chemicals are said to bind to the soil and the risk of movement within the soil is low. The site gradient is "flat" with little run-off from site.
Management of effluent water	Low	Effluent water will be contained in lined underground tanks and re-used to water the grounds within the project area. The Ngushwa Municipality will pump the septic tank on a regular basis and remove contents to the Peddie WWTW. The Waste Management Report (Appendix D) lists the n the herbicide/fungicides used on the fruit and which will be washed off and be part of the effluent water. The report
Noise and dust from construction vehicles	Low	This will be a short-term impact during the construction phase. Work times to be controlled on weekdays only between 07h00 to 17h00 and dust suppression measures implemented on the gravel roads e.g. use of a water cart if necessary.
Disposal of waste related to construction activities	Low	Construction waste will be removed to the Municipal solid waste site.
Indirect impacts		
Cultural/heritage/visual aesthetics	Low	A number of sites in close proximity to the project area are identified in the AIA, which recommends that these be barricaded off with safety netting during the construction phase. There is no medium of long term impact on these sites
ECBCP	Low	The ECBCP indicates the project site is located in a CBA 2

		(near natural landscape) – field investigation proves that the area has been cultivated in the past and impacted upon by agricultural activities – the project site is therefore already "transformed" – there is no additional impact on the adjoining CBA 1 area
Housing of construction staff	Low	Construction staff to be housed within the community.
Cumulative impacts		
Removal of natural vegetation	Low	Field investigation proves that the area has been cultivated in the past and impacted upon by agricultural activities, the project site is therefore already "transformed" – the community support the use of the project site and the project should lead to additional employment opportunities.
Management of effluent water containing fungicides and herbicicides	Moderate	It is suggested that the risk of water used to irrigate the gardens reaching the Keiskamma River (>500 m away) is considered low as the chemicals are said to bind to the soil and the risk of movement within the soil is low. The site gradient is "flat" with little run-off.

SIGNIFICANCE STATEMENT IN RESPECT OF CUMULATIVE IMPACTS

(i) Removal of natural vegetation (The preferred site is already transformed – previously cultivated). There is thus no risk of impacting on the Great Fish Thicket Vegetation Unit

RATING		Temporal Scale		Spatial Scale		Severity of Impact		Risk or Likelihood		Total
	Without Mitigation	Permanent	4	Localised	1	Moderate	2	Unlikely	1	8
	With Mitigation	Transformed	2	Localised	1	Slight	1	Unlikely	1	5
Overall Significance without mitigation										Moderate
Overall Significance with mitigation										Low

(ii) Management of effluent water (Contained in "lined" tanks placed underground)

RATING		Temporal Scale		Spatial Scale		Severity of Impact		Risk or Likelihood		Total
	Without Mitigation	Permanent	4	Study area	1	Moderate	2	May Occur	2	11
	With Mitigation	Permanent	4	Study area	1	Slight	1	Unlikely	1	7
Overall Significance without mitigation										Moderate
Overall Significance with mitigation										Low

2. ENVIRONMENTAL IMPACT STATEMENT

Taking the assessment of potential impacts into account, please provide an environmental impact statement that summarises the impact that the proposed activity and its alternatives may have on the environment after the management and mitigation of impacts have been taken into account, with specific reference to types of impact, duration of impacts, likelihood of potential impacts actually occurring and the significance of impacts.

Alternative A (preferred alternative) – S1

Considering the mitigating factors the change in land use is of low significance, although it will be permanent. There are no physical environmental, social or cultural issues of any significance affected if this site is used.

No cropping is currently taking place and the land use is informal grazing, although no livestock is noted on the area. The vegetation species which returned after cessation of cultivation are not listed as being sensitive or threatened and are not typical of the Great Fish Thicket veld type.

The correct management of the effluent water regime is important and efforts must be made to limit run-off. The temporary storage in lined tanks will prevent contamination.

The new pack shed will not impact on the environment to any greater degree than the existing structure on the adjoining area. The custodian of the land DRDLR supports the project. The construction of the new pack shed will lead to increased employment opportunities in the area as the new pack shed will conform to Eurogap standards thus allowing the farmers to market their crop overseas.

Alternative – S2

There is (EC PRHRA) legislation to be considered and a permit would be required to demolish this structure and re-build it – see attached HIA Report. **This is noted as a fatal flaw.** The local farmers have indicated that they wish to continue to use this existing building to store agricultural equipment and pack vegetables for delivery to markets. As a result of the heritage implications and the planned future use by the farmers', this alternative is not preferred as an option.

Alternative – S3

This alternative is situated on a section of land, which can be classified as being "natural" although impacted upon by grazing. The area is located in close proximity to a watercourse and due to the narrow shape of the available area construction would impact on the watercourse. When thicket

vegetation is overgrazed the succulent species are often the first to disappear and isolated natural bush clumps remain as in this case where indigenous *Euphorbia triangularis* and *Pappea capensis* trees and *Scutia myrtina* shrubs amongst others are present. Use of this area as a site would necessitate the removal of this vegetation and it is highly unlikely that they would be successfully re-established. **This is considered to be a fatal flaw and this alternative is therefore not considered.**

No-go alternative (compulsory)

Not implementing this development will retain the status quo where the emerging citrus producers' continue to use the existing structure with its associated inadequate drainage and effluent control systems and non-compliance with EUROGAP standards. On-going use may necessitate expansion or improvements which will be affected by SAHRA legislation.

The emerging citrus producers' will not have direct access to a pack house for the packaging of their produce for the overseas market. The result is ever increasing transport costs to other pack sheds thus impacting severely on the farmers' profit margins.

If the existing pack house is used the farmers' can only sell their produce on the local market and thus will lose all financial incentives and benefits associated with meeting EUROGAP requirements and marketing the produce overseas.

SECTION E: RECOMMENDATIONS OF PRACTITIONER

Is the information contained in this report and the documentation attached hereto sufficient to make a decision in respect of the activity applied for (in the view of the environmental assessment practitioner)?	**YES**	~~NO~~
Is an EMPr attached?	**YES**	~~NO~~

The EMPr must be attached as Appendix F.

If "NO", indicate the aspects that should be assessed further as part of a Scoping and EIA process before a decision can be made (list the aspects that require further assessment):

NONE

If "YES", please list any recommended conditions, including mitigation measures that should be considered for inclusion in any authorisation that may be granted by the competent authority in respect of the application:

1. The environmental authorization is conditional to any legislative requirements as prescribed by DWA
2. The environmental authorization is conditional to the temporary conservation of the heritage areas as recommended in the Heritage Impact Assessment.
3. The applicant is to appoint an independent Environmental Control Officer (ECO). Monthly compliance audits are to be submitted to DEDEAT and a close-our report upon completion of construction – see Draft EMPr.

SECTION F: APPENDICES

The following appendixes are attached:

Appendix A: Site plan(s)

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports

- Heritage Impact Assessment (Archaeology & Palaeontology)
- Engineering Preliminary Design Report
- Waste Management Report

Appendix E: Comments and responses report & PPP documentation

Appendix F: Environmental Management Programme (EMPr)

Appendix G: Other information

- Correspondence with DWA (Water Permit)
- Correspondence with EC PRHRA