

9/2/069/2

**HERITAGE IMPACT ASSESSMENT
PORTION OF FARM 739
KLAPMUTS**

Prepared for

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By

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**AUGUST
2001**

Executive summary

No archaeological or heritage remains were located during a heritage impact assessment of a portion of farm 739 in Klapmuts.

The proposed project envisages four land use categories, namely industrial, residential, open space and roads, on 11.4 ha of land.

Present development on the site comprises a small corrugated iron shack alongside the Klapmuts railway line.

A large portion of the site is severely disturbed and degraded. The remaining vacant land is predominantly covered with alien vegetation.

The impact of the proposed development on heritage remains is considered to be low to negligible.

The probability of locating significant heritage remains during implementation of the project is also considered to be low.

With regard to the proposed development of a portion of farm 739 in Klapmuts, the following archaeological recommendations are made.

- No archaeological mitigation is required.
- No further detailed studies are required.

The above recommendations are subject to the approval of the South African Heritage Resources Agency.

1.0 INTRODUCTION

1.1 Background

Doug Jeffery Environmental Consultants have requested that the Agency for Cultural Resource Management undertake a heritage impact assessment (HIA) of a portion of farm 739 in Klapmuts.

The proposed project envisages four land use categories, namely industrial, residential, open space and roads, on 11.4 ha of land.

The aim of the HIA is to locate, identify and map archaeological and historical remains that may be negatively impacted by the planning, construction and implementation of the proposed development, and to propose measures to mitigate against the impact.

2.0 TERMS OF REFERENCE

The terms of reference for the HIA were:

1. to determine whether there are likely to be any archaeological or historical sites of significance within the proposed site;
2. to identify and map any sites of archaeological and historical significance within the above area;
3. to assess the sensitivity and conservation significance of archaeological and historical sites potentially affected by the proposed development;
4. to assess the significance of any impacts resulting from the proposed development, and
5. to identify mitigatory measures to protect and maintain any valuable archaeological and historical sites that may exist within the site.

3.0 THE STUDY SITE

The study site for the proposed development is illustrated in Figure 1.

The site abuts the Old Paarl Road, about 2 km away from the intersection of the Stellenbosch Road and Old Paarl Road.

Present development on the site comprises a small, corrugated iron shack alongside the Klapmuts railway line.

A large portion of the site is severely disturbed and degraded. The remaining vacant land is predominantly covered with alien vegetation.

4.0 LEGISLATION

Archaeological sites and buildings and structures over 60 years of age are protected under the National Heritage Resources Act (No. 25 of 1999). The Act came into effect on 01 April 2000, and replaces the National Monuments Act (No. 28 of 1969).

It is an offence to destroy, damage, excavate, alter, or remove from its original position, or collect, any archaeological material or object, without a permit issued by the South African Heritage Resources Agency (SAHRA).

5.0 STUDY APPROACH AND DOCUMENTATION OF ARCHAEOLOGICAL SITES

The approach used in the HIA entailed a detailed ground survey of the property.

6.0 RESULTS OF THE ARCHAEOLOGICAL STUDY

No heritage remains were located during a study of the property.

The railway storage shack is not considered to be historically significant.

7.0 IMPACT STATEMENT

The impact of the proposed development on archaeological and historical sites/remains is considered to be low to negligible.

The probability of locating significant archaeological and historical sites during implementation of the project is also considered to be low.

8.0 CONCLUDING STATEMENT

In general, the receiving environment is not considered to be archaeologically or historically sensitive, vulnerable or threatened.

9.0 RECOMMENDATIONS

With regard to the proposed development of a portion of the farm 739 in Klapmuts, the following heritage management recommendations are made.

1. No immediate archaeological mitigation is required.
2. No further detailed studies are required.

The above recommendations are subject to the approval of the South African Heritage Resources Agency.

3.0 LOCAL CONTEXT

3.1 LOCALITY

The Site abuts the Old Paarl Road, see Figure 1.1, approximately 2km away from the intersection of the Stellenbosch Road (Main Road 27/ R44) and the Old Paarl Road (Main Road 19) in Klappmuts.

3.2 SURROUNDING LAND USE

The Site is currently unused, see Figure 3.1a, and is bordered by:

- medium income housing to the east,
- the Old Paarl Road (Main Road 19) to the north,
- the recently constructed waste transfer station to the west, and
- the railway line to the south.

The area north of the Site, Farm 736, the area south of the Site, south of the railway line (Rem 744/3) and the area east of the waste transfer station are undeveloped.

The area to the east of the Site in Klappmuts village, accommodating middle income housing, is developed, generally in accordance with its zoning. There is a police station abutting the eastern boundary.

The Site measures approximately 11,4ha and is the remainder of Farm 739 as a result of the alienation of the western portion of land for the recently constructed waste transfer station.

3.3 SURROUNDING ZONING

The Site is currently zoned Open Space, see Figure 3.1b, 1 and it is surrounded by:

- Single residential zone to the east,
- Open Space 1 to the north (Farm 736)
- Institutional Zone for waste transfer station to the west,
- Agriculture 1 and Subdivisional Area (Farm 744/3) to the south.

3.4 SURROUNDING OWNERSHIP

The Site, portion of Farm 739, along with Farm 736 to the north is owned by the Winelands District Council, see Figure 3.1c.

The Stellenbosch Municipality owns Farm 744/3 south of the railway line. A major portion of this has been developed as the extension of the Klappmuts township and is in individual title.

The area to the east accommodating the middle income housing component of Klappmuts is privately owned.

3.5 LOCAL AUTHORITY JURISDICTION

The Site currently falls within the boundary of the former Winelands District Council and abuts the former Stellenbosch Municipality boundary which formerly had jurisdiction over Klappmuts. It is intended that this site will be incorporated within the Municipal boundary.

4.0 SITE INVESTIGATION AND ANALYSIS

4.1 NATURAL SYSTEMS

4.1.1 Topography and Slopes (See Figure 4.1)

The Site has a gentle slope from 167m in the south western corner to its lowest point of 162m in the middle of the Site.

The Site is bordered to the south by the steep embankment of the main Cape Town to Gauteng railway line, see Photo 4.1.

4.1.2 Vegetation

The Site is predominantly covered with alien vegetation and scattered patches of indigenous vegetation.

The indigenous vegetation, especially that in the swampy areas, is worth retaining, where possible. The location of all of the indigenous vegetation is not clearly visible at first sight due to the densely populated alien vegetation. A number of Gum and Port Jackson trees are visible on Site, see Photo 4.2.

4.1.3 Geology and Soils

No geological investigation to determine the founding conditions was done for the Site. However, judging from surrounding developments, it is likely that the soils and geological conditions are suitable for proposed residential and industrial development. A geo-hydrological survey may be necessary prior to the creation of buildings.

4.1.4 Hydrology and Drainage

The Site has its lowest point at the 162m contour in the middle of the Site on its northern boundary.

Water flows from the southern dam through a culvert underneath the railway line and dams up on the northern portion of the Site, see Photo 4.5. This culvert is approximately 1.8 metres high and could offer potential as a pedestrian link between Weltevreden Park and the Site.

A swampy area of about 2,1ha, contained mainly by the 162m contour, was observed in July (mid rainy season). This appears to result from water that flows through from the dam south of the railway line in Weltevreden Park that has no escape route on the northern boundary of the Site. This water is dammed up at the Old Paarl Road at this point. See Photo 4.6. It will be necessary to ensure free passage of water when the site is developed.

4.1.5 Views

There are beautiful views towards "Klappmutskop" from this Site, see Photo 4.7.

4.2 BUILT ENVIRONMENT

4.2.1 Road Networks and Reserves

The railway line reserve has a gravel service road running next to the railway line abutting the southern side of the Site, see Photo 4.3.

The Old Paarl Road (main Road No. 19) from Muldersvlei, that becomes Ellinger Road through Klappmuts, borders the northern boundary of the Site.

4.3 DEVELOPABLE AREA

The Site can be divided into four parts with the following areas, see Figure 4.1:

- the western part : 6ha developable land
- the eastern part : 3ha developable land
- the Groenfontein Road reserve : 0.3ha possibly developable land
- the swampy area (in the middle): 2.1ha preferably not developable land

The total Site area amounts to 11.4ha. Should the Groenfontein Road not be extended into Klapmuts and this reserve became available for development another 0.3 hectares will become available.

4.4 SITE SUITABILITY : SUMMARY

The suitability of the site for development is summarised in terms of opportunities and constraints:

4.4.1 Opportunities

- Close to existing urban development and related facilities;
- Close to railway line, main road and N1 Freeway;
- Easy access off Old Paarl Road (Main Road 19);
- Readily available civil infrastructure;
- Publicly owned land;
- Industrial development is relatively close to existing labour force;
- Not a biophysical conservation worthy site
- No existing permanent structures on site.

4.4.2 Constraints

- Extremely swampy area in the middle of the site;
- A number of existing servitudes and reserves cutting across the site;
- Negative noise effect due to proximity to abutting the railway line;
- Possible extension of the Groenfontein Road across this site will, should it materialise, occupy 0,3ha;

8. PROPOSED DEVELOPMENT

8.1 DEVELOPMENT CONCEPT

As discussed under Section 7, four land use categories are proposed, namely Industrial, Residential, Open Space and Roads. The open space will serve as a buffer between the Industrial and Residential Components. Access to the entire development will be taken off the Old Main Road only, see Figure 8.2.

The proposed land use table, see Table 8.1, below, indicates that the industrial and residential components of the development utilises 5,53ha (48,51%) and 3,04ha (26,67%) respectively.

The average residential erf size, of the 79 residential plots that includes the plots possible in the Groenfontein Road Reserve, is 385m².

A total of 2,83ha (24,82%) of the site will be used for the open space and roads component.

Table 8.1 Proposed Land Use Table

KLAPMUTS INDUSTRIA AND RESIDENTIAL						
December 2000						
Use	Ptms	Size (ha)	%	Ave Res. Erf Size	Res. Density	
Industrial	1 – 11	5.53	48.51			
Residential (ave 385m ²) (including ptns 82 – 90 in Groenfontein Road reserve)	12 – 90	3.04	26.67			
POS	91	0.96	8.42			
Roads, Parking & Walkways	92 - 93	1.87	16.40			
TOTAL	43	11.40	100.00	385m²		19du/ha

8.1.1 Proposed Industrial Development

It is proposed that the industrial development be located on the western side of the open space component.

8.1.1.1 Erf Configurations, Frontages and Unit Sizes

This layout proposes an average of four different plots sizes for the industrial component. In this way the layout provides plot sizes in the following ranges: 750m², 1400m², 4000m² and 13 000m² plots. They can be developed as one site for a single large user or subdivided into smaller units. They can also be developed as security access complexes by a single developer.

To accommodate potential entrepreneurs it is proposed to have smaller industrial units in the form of factory flats. These 1400m² units have been designed to accommodate a factory flat configuration, see below, or be subdivided into two 700m² plots if need be.

It is proposed that the factory flat units be 7m deep, with varying widths. These factory flats will be similar to those as shown in Figure 5.2.

8.1.1.2 Access and Parking

It is proposed that a loop road network within an 18m wide road reserve should feed the industrial component of the development.

It is proposed that there be no vehicular linkage between the residential and industrial components of the development on Site.

The large industrial modules are proposed to taking access off the internal access road.

The factory flats located along the Old Paarl Road will have access directly off the internal service road and will have a 17m space in-between to provide for two rows of perpendicular parking.

8.1.1.3 Building lines

Buildings on properties along the northern boundaries will have to be set back to accommodate the powerline servitude. This space can be used as yards and parking.

8.1.2 Proposed Residential Development

The following are proposed for the residential component:

8.1.2.1 Erf Configurations, Frontages and Unit Sizes

This layout provides for residential plots measuring approximately 350m² in size with an average frontage of approximately 12m. A total of 70 middle income residential units are proposed excluding those possible in the Groenfontein Road reserve.

Should the Groenfontein Road not be constructed an extra nine residential portions could be included.

It is proposed to have a single row of housing facing onto the open space, and not to turn its back onto it, to provide added surveillance on this open space and to maximise its use.

For services purposes, the residential layout will drain in a north westerly direction towards the open space that will double as a stormwater channel.

8.1.2.2 Access and Parking

It is proposed to take access from the Old Paarl Road and Old Main Road in Klappmuts.

Four culs-de-sac providing individual plot access to about 6 - 8 residential units each link to this main feeder road.

It is proposed to have 10m wide road reserves for this part of the development that could double up as play areas for children especially in the quieter culs-de-sac.

A square containing existing trees is proposed at the entrance from the Old Paarl Road that should be appropriately landscaped and paved to create a community gathering point which also gives access to the open space along the river.

Portions 58 - 69 will take access off a service road to be constructed parallel to the Old Paarl Road, in the powerline servitude. (Not shown on Figure 8.1)

Should the Groenfontein Road become a reality or should the residential component become a private, security single access township then the Main Road connection will have to be severed. Access will then only be possible from the Old Paarl Road (Main Road No. 19).

8.1.2.3 Building lines

The following building lines are proposed for the residential precinct:

- Railway Reserve Building Line - 5 metres
- Old Main Road Building Line - 5 metres
- Rear Building Lines - 2 metres
- Groenfontein Road Building Line - 2 metres

8.1.2.4 Densities

The gross residential density is 19,28du/ha. The industrial density is not calculated as a range of units are possible, depending on the final subdivision configuration.

8.1.3 Proposed Public Open Space

Portion 91 is proposed as public open space. This area measures approximately 0,96ha. Access is to be taken off Old Paarl Road and pedestrian access under the railway line if feasible.

It will serve a number of functions including:

- Interface between residential and industrial area;
- Landscaped riparian corridor.

It should be landscaped similar to the treatment of the Klappmuts River and pedestrian walkways. See Photos 8.1 and 8.2.

A possible pedestrian link should be investigated through the culvert under the railway line containing the stream forming the backbone of the open space. See Photo 8.3.

Photo 8.4 shows how the pedestrian link was achieved at the Klappmuts River culvert under the railway line.

8.2 PROPOSED SUBDIVISIONS

See figure 8.2

8.3 PROPOSED PHASING

It is proposed to phase the development in two phases for both the Residential and Industrial components, see Figure 8.2:

8.3.1 Proposed Residential Phases

It is proposed that the following units comprise phase 1 of the residential precinct, see Figure 8.2:

Portions: 24 and 25, 31-34, 42-45, 51-54, 58-81 and possibly 82 to 86 in the Groenfontein Road Reserve. The remainder of the residential units will comprise Phase 2.

8.3.2 Proposed Industrial Phases

It is proposed that the units indicated as portions 1-8 comprise phase 1. Portions 9, 10 and 11 should comprise phase 2 of the industrial development.

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FAX MESSAGE

TO: Agency for Cultural Resource Management
ATTENTION: Jonathan Kaplan
DATE: 20 August 2001
FAX NO: 461 2755
FROM: Dave Turner
PAGES: including this one: 2

Dear Jonathan

SUBJECT: HIA quote for Klapmuts Industria

As discussed earlier, please find attached a site map of the following proposed development:

Klapmuts Industria and Residential. Proposed Rezoning to Subdivisional Area (Residential, Industrial and Open Space) on Portion of Farm 739, Klapmuts.

Should you require any further information, please do not hesitate to contact me.

Regards

Dave Turner