

SECTION E

**AGRICULTURAL POTENTIAL IMPACT
ASSESSMENT REPORT**

**The agricultural potential of the
Farm Brandwacht No. 1049,
Division of Stellenbosch**

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Contents

List of Tables	i
List of Figures	i
1 INTRODUCTION	1
1.1 Background.....	1
1.2 Problem statement.....	1
2 STATUS QUO ANALYSIS	4
2.1 Ownership arrangements:.....	4
2.2 Assessment of natural resources	4
2.2.1 Soil	5
2.2.2 Water	5
2.2.3 Climate	7
2.3 Assessment of potential farming activities.....	7
2.4 Assessment of farm infrastructure: fixtures & irrigation equipment	8
2.5 Bulk services supply	9
3 Conclusion and Recommendations.....	9

List of Tables

No table of figures entries found.

List of Figures

Figure 1: Location of the Farm Brandwacht No. 1049

Figure 2: Proposed north-south route

Figure 3: Letter from Helderberg Irrigation Board

1 INTRODUCTION

1.1 Background

OABS Development (Pty) Ltd is a company that specialises on agricultural business solutions and has been approached by the directors of Brandwacht Land Development (Pty) Ltd to assist them, as the owner of the Remainder of the Farm Brandwacht No. 1049, Stellenbosch, with an agricultural input on the Stellenbosch Municipality's proposed Municipal Spatial Development Framework.

1.2 Problem statement

The property is (in fact) located within existing urban environment of the Stellenbosch Municipality. The property's northern border is the Brandwacht residential area, to the west it is shielded by urban development next to R44 consisting of offices, a hotel and a hospital. The Stellenbosch Municipality owns land on the southern and eastern borders of the property (the Farm Grondves). Further south of the property is the Paradyskloof residential area.

Figure 1 illustrates the property's location graphically.

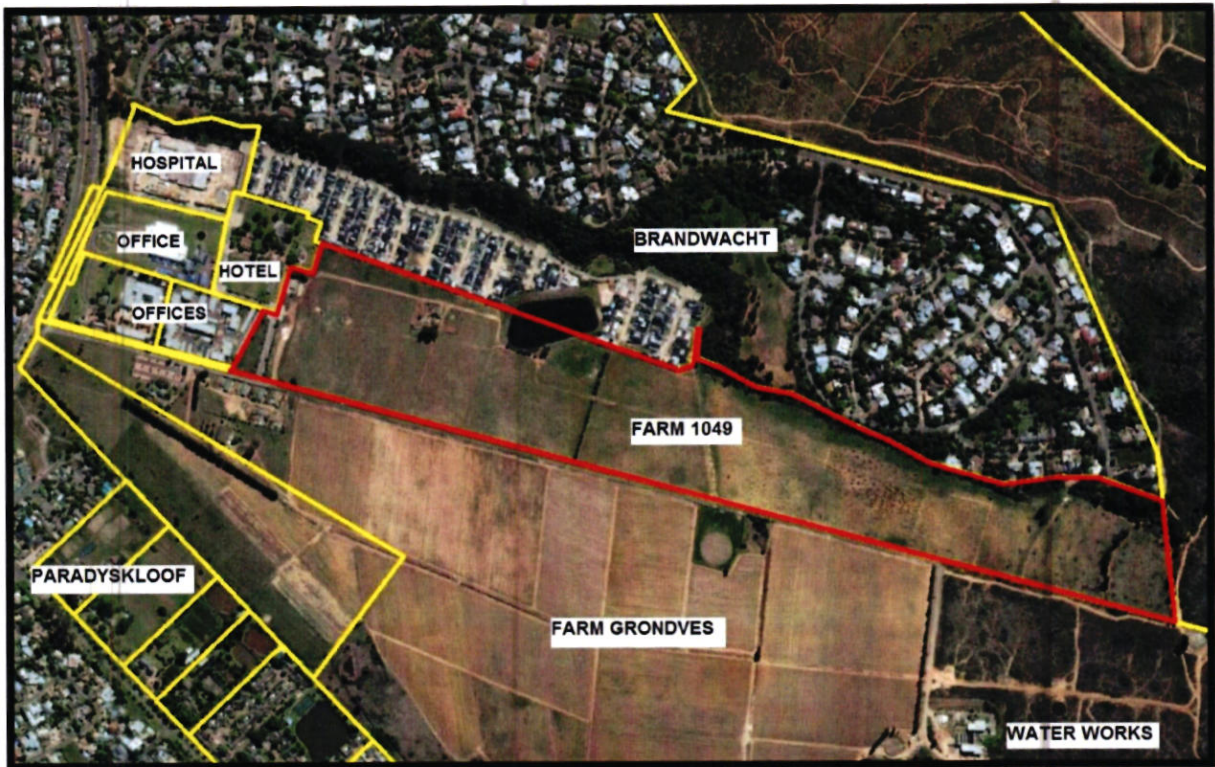


Figure 1: Location of the Farm Brandwacht No. 1049

Past experience indicate that the land owner has struggled to economically farm the property. This problem will now be exacerbated by the following:

- The property is 30ha in extent and only ± 20 ha of the property can effectively be planted with crops.
- The construction of the proposed north-south route – that will link the R44 with Stellenbosch central – will cut the subject property into two portions creating two smallholdings of ± 17.2 ha and ± 11.7 ha respectively. This will further diminish the subject property's agricultural potential.

Figure 2 illustrates the proposed north-south route's alignment.



Figure 2: Proposed north-south route

- The Stellenbosch Municipality is the owner of the abutting Farm 369. They are investigating the developing of an institutional village on a portion of Farm 369 (directly south of the subject property). The Municipality's proposed development will change the area's character from rural to urban and further complicate the successful farming of the subject property.
- The property is located in Stellenbosch between the existing residential areas of Brandwacht (to the north) and Paradyskloof (to the south). It has an urban character. Unfortunately, there is always a conflict between farming activities and urban activities; e.g. security, petty theft and vandalism of farming infrastructure and the negative impact on residents with the spraying of pesticides. The active farming of land located in an urban environment is logistically and practically challenging.
- Stellenbosch town is growing and if the subject property (which is located within the Stellenbosch urban environment) is not used for future urban development, then a farm located outside the Stellenbosch urban environment, will have to

be used for urban development in order to accommodate the town's urban expansion.

Against this background, the land owner approached OABS Developments (Pty) Ltd to provide them with an expert opinion on the existing agriculture development potential of the property, given these constraints.

Section 2 of this report will provide an analysis of the existing farming operations (and potential) and endeavour in concluding (Section 3) an agriculture opinion of potential future farming opportunities.

As a background study, the consultant relied on existing documentation regarding the subject and experience of similar situations or farming conditions.

2 STATUS QUO ANALYSIS

2.1 Ownership arrangements:

- Property: The property is described as the Remainder of the Farm Brandwacht No. 1049, Stellenbosch (in deed of transfer number T118189/1998).
- Location: Trumali Road, Stellenbosch.
- Local Authority: Stellenbosch Municipality.
- Ownership: Brandwacht Land Development (Pty) Ltd (Registration number: 1998/01165607)
- Extent: 30 hectares
- Servitudes: A notarial deed of servitude is registered (K746/1986S) for a pipeline in favour of the Stellenbosch Municipality.

2.2 Assessment of natural resources

This section will investigate and conclude on the available natural resources and infrastructure.

2.2.1 Soil

Stellenbosch holds the honour of being the most well-known and awarded wine region in South Africa. Rich soils and unique locations ideally suited to a variety of grape cultivars have ensured that Stellenbosch continues to dominate South African winemaking industry.

Studying the past performance of the Stellenbosch area the assessment is that the soil is conducive for wine production and probably a range of other cash crop varieties, however other site-specific factors result in utilizing the property for agricultural activities being unviable. These factors include the current limited available water supply, which makes the production of cash crops unviable, along with the black southeasterly winds, further inhibiting economic viability of crops, with the exception of vineyards and wine grapes. The size of the property however relinquishes economic vineyard production, being too small.

The black south easterly's potential harm can be mitigated using windbreakers, wind nets (which is visually undesirable) as well as the planting of trees (taking a lot of arable land due to its wide root structure and being a nesting place for birds).

2.2.2 Water

A critical element in any farming enterprise is the availability of quality and quantity of water to maintain or develop orchards in the long term. There are no short-term solutions, especially when one takes into account the current (and more frequent predicted occurrence of) drought conditions.

The property has no water allocation of any volume from any irrigation scheme. A letter from the Helderberg Irrigation Board dated, 26/10/1995, stated clearly that:

- *The farm Brandwacht is located outside the borders of the Irrigation scheme and that the farm therefore, cannot be incorporated into the scheme.*

See letter below (Figure 3).



Figure 3: Letter from Helderberg Irrigation Board

The property relies on the existing storage dam with a holding capacity of 34 000 m³ litre of water. The dam feeds from storm water and rain water downflow during the winter months and runs (occasionally) dry during the summer months.

Without a consistent reliable water supply (like from an irrigation scheme) the prospects for long term crop production (e.g. vine orchards) or cash crop production

(e.g. vegetables) is very limited and not advisable. Even if the dam is at full capacity during the summer months (which is highly unlikely) the prospects of an economically viable entity is in question.

The current drought conditions in the Western Cape emphasises the dilemma, where water supply from irrigation schemes cannot longer be guaranteed.

2.2.3 Climate

The Western Cape (Stellenbosch) is known for its Mediterranean winter rainfall climate and its conducive attributes for vine and cash crop production. The location of the property is also susceptible to the harmful effects of the black south-easterly winds, also known as the Cape doctor, which brings severe weather conditions such as very high wind speeds and heavy rainfall, resulting in flash floods.

2.3 Assessment of potential farming activities

This section will elaborate of potential farming activities for the area, taken into account the limited water resources (storage dam).

- The general accepted rule for a financially viable wine production unit (2016) is in the order of 40 – 50 ha unit. This number is disputable and can be argued lengthily. Point is, that if a producer has to establish 30 ha (size of the property) of orchards at R250 000+/ha and has to wait 3-4 years until full bearing, he will not survive financially. The wine industry commodity organization, Vinpro (2016 statistics) elaborates extensively on the subject.
 - Given the unfortunate water situation on the farm such an enterprise is not advisable at all. The Department of Environmental – & Water affairs (Worcester) allocated a water requirement of $\pm 6500 \text{ m}^3/\text{ha}/\text{annum}$. The unreliable inflow of water into the storage capacity of $34\,000 \text{ m}^3$ water will allow for 5.23 ha of vine orchards, which is much less than the 40+ ha requirement for an economically viable entity.

- Cash crops (vegetables) can be an option during the winter rainfall months, however it would be impractical and economically challenging, as these crops would not be an option at all during the summer months, which would result in unproductive months and high seasonal unemployment for farm labourers. Vegetable crops require regular irrigation/ water, which could also be challenging given the current drought conditions. Further factors reducing the viability of vegetable crops on the subject property include the use of fertilizers (unwanted odours), probable theft being in close proximity to residential environments.
- Low density livestock/cattle farming could be used for keeping the grass short to prevent possible veld fires, but would not be considered an economically viable farming practice. High density livestock farming (dairy, piggery, broilers and layers) is also in serious doubt due to environmental impacts and water shortage.

The potential division of the property into two portions (due to proposed eastern link road) will hamper farming activities to a large extent. Daily farming activities will cross the road on numerous occasions, causing traffic hazards and potential loss of life. A farming subway will be a requirement for the town planners and civil engineers at additional public costs.

2.4 Assessment of farm infrastructure: fixtures & irrigation equipment

Due to its location and water constraints, no active farming activity takes place on the property, a part of a small herd of cattle grazing on weeds and natural grazing. The fencing seems to be in good conditions keeping the animals at bay.

The property has no farm infrastructure and irrigation equipment.

2.5 Bulk services supply

The property has access to road infrastructure. Due to its location electricity -, sewerage – and drinking water connections can be established within a relative short period of time.

3 Conclusion and Recommendations

Considering the abovementioned analysis of the “current situation” the following can be **concluded as an opinion on the agriculture potential of the farm:**

- Brandwacht is already succumbed by Stellenbosch over the past years. The expansion developments actually defined Brandwacht’s future to be part of the local authority.
- From a pure Agriculture perspective – as piece of land without any water allocations and stripped from its location and neighbourhood environment – the agricultural value will be low.
 - Guaranteed water is the key driver of any farming development. Brandwacht lacks in this regard and will not obtain any economy of scale doesn’t matter which farming enterprise of choice they follow.
 - The lack of water rules any financially viable farming activities out of the equation.
- Dividing the property into two portions will escalate the inability to execute farming practices successfully.

Finally, the assessment is that Brandwacht farm is a prime property stripped from its original purpose as a productive farm with financial viability. City expansion / urbanisation onto the farm’s borders – on three sides – accompanied by a proposed road across the property define (logically) its future to become an integral part of Stellenbosch Municipality.

It is OABS (Pty) Ltd **recommendation** that the owners and their advisors proceed with all possible actions to be incorporated into the Stellenbosch Municipality’s urban edge.

Dr Daan Louw & A Hugo
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