THE PROPOSED DEVELOPMENT OF AN INSTREAM DAM ON PORTIONS 2 AND 3 OF FARM NO. 1100, BONATHABA, MALMESBURY, WESTERN CAPE

FINAL SCOPING REPORT
AND PLAN OF STUDY FOR COMMENT

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INDEPENDENCE & CONDITIONS

EnviroAfrica is an independent consulting firm that has no interest in the proposed activity other than fair remuneration for services rendered. Remuneration for services is not linked to approval by decision making authorities and EnviroAfrica has no interest in secondary or downstream developments as a result of this project. There are no circumstances that compromise the objectivity of this Scoping Report. The findings, results, observations, and recommendations given here are based on the author's best scientific and professional knowledge, as well as available information at the time of writing this report. EnviroAfrica reserves the right to modify aspects of this report, including the recommendations if new information becomes available which may have a significant impact on the findings of this report.

RELEVANT QUALITFICATIONS & EXPERIENCE OF THE EAP

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- Housing developments;
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- Auditing of water supply schemes, housing developments, warehouses, roads, bridges, and reservoirs

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The entire process and report were supervised by Bernard De Witt who has more than 30 years' experience in environmental management and environmental impact assessments.

Please refer to **Appendix 12** for the CV's of the EAPs.

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ACRONYMS

BGIS	Biodiversity Geographic Information System
CBA	Critical Biodiversity Area
DEA	Department of Environmental Affairs
DEA&DP	Department of Environmental Affairs and Development Planning
DWA	Department of Water Affairs
EAP	Environmental Assessment Practitioner
ECA	Environment Conservation Act (Act No. 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
NEMA	National Environmental Management Act (Act No. 107 of 1998)
NEMBA	National Environmental Management: Biodiversity Act (Act No. 10 of 2004)
NHRA	National Heritage Resources Act (Act No. 25 of 1999)
NID	Notice of Intent to Develop
NWA	National Water Act
OESA	Other Ecological Support Area
SAHRA	South African Heritage Resources Agency
SANBI	South African National Biodiversity Institute
WULA	Water Use Licence Application

1. INTRODUCTION

1.1 BACKGROUND

Agriculture is a major economic driver in the Swartland Local Municipality, contributing to the socioeconomic stability of the area. Black Orchid Farming proposes the development of an in-stream dam on Portion 2 and Portion 3 of Farm No. 1100, Bonathaba, located between Malmesbury and Wellington.

The Bonathaba Farm, as well as Zwartfontein Farm (located adjacent to Bonathaba), form part of a development plan to approximately double the productive hectares of the farm's agricultural output. This development plan aims to create a large-scale, sustainable citrus and grape operation, creating over 200 new employment opportunities while retaining over 600 jobs[1]. Environmental factors, namely soil and climatic conditions, along with the Cape Town Harbour being closely situated to the Farms (approximately 60km as the crow flies), provide suitable growing and export conditions for the grape and citrus production industry. The proposed Bonathaba Dam development is in line with the West Coast District Municipality's IDP with regards to sustaining and supporting primary and secondary sectors within the economy of the district, including the agriculture sector[2]. Moreover, the West Coast District's economy is dominated by both the manufacturing (20.3% in 2016) and the agricultural sector (at 20.2%, generating R 5 482 300 in 2016), highlighting the need to create sustainable agricultural practices within the District Municipality.

The proposed dam will have a gross storage capacity of one million cubic meters (1 000 000m^3) with a development footprint of approximately 19.2ha. The proposed dam will overlap both properties where the dam wall will be located on the eastern boundary of the two properties (Figure 1), most of which will impact existing vineyards and/or orchards. The proposed site is situated within Ward 12 of the Swartland Local Municipality, West Coast District Municipality, and is located at the following coordinates: 33°31'13.66"S; 18°55'17.53"E.

The Bonathaba Farming Venture has an Existing Water Use Right (Appendix 9) where water is abstracted from the Berg River, located approximately 720m east of the proposed site for the dam development (Figure 8). The proposed dam development will require a Water Use Authorisation (WUA) in terms of section 21 of the National Water Act (NWA), Act No. 36 of 1998, where applicable water use activities include;

- S21 (b) Storing of water
- S21 (c) Impeding or diverting the flow of the watercourse
- S21 (i) Altering the bed, bank, course, or characteristic of a watercourse

The applicant, Black Orchid Farming (Pty) Ltd, will undertake the activity should it be approved. EnviroAfrica CC has been appointed as the independent environmental assessment practitioner (EAP)

[1] https://uff.co.za/wp-content/uploads/2018/08/Bonathaba-Farm-deal-sheet.pdf
[2] http://westcoastdm.co.za/wp-content/uploads/2019/06/290519WCDM-IDP-2017-2022-Review-2-FINAL-1.pdf

responsible for undertaking the relevant EIA and the Public Participation Process required in terms of the National Environmental Management Act 107 of 1998, as amended (NEMA).

This Final Scoping Report (this report), which will be submitted to the Department of Environmental Affairs and Development Planning (DEA&DP) for consideration and approval, forms part of the EIA process. The purpose of the Draft Scoping Report (submitted on the **7th April 2021** and was made available for a minimum, 30-day comment period) was to describe the proposed project, the processes followed to date, alternatives under consideration, and to list issues identified for further study and comment by specialists. Interested and Affected Parties (I&APs) were given an opportunity (minimum of a 30-day comment period) to comment on the Draft Scoping Report. The Draft Scoping Report was submitted on the **7th April 2021** (comment period ended on the **10th May 2021**).

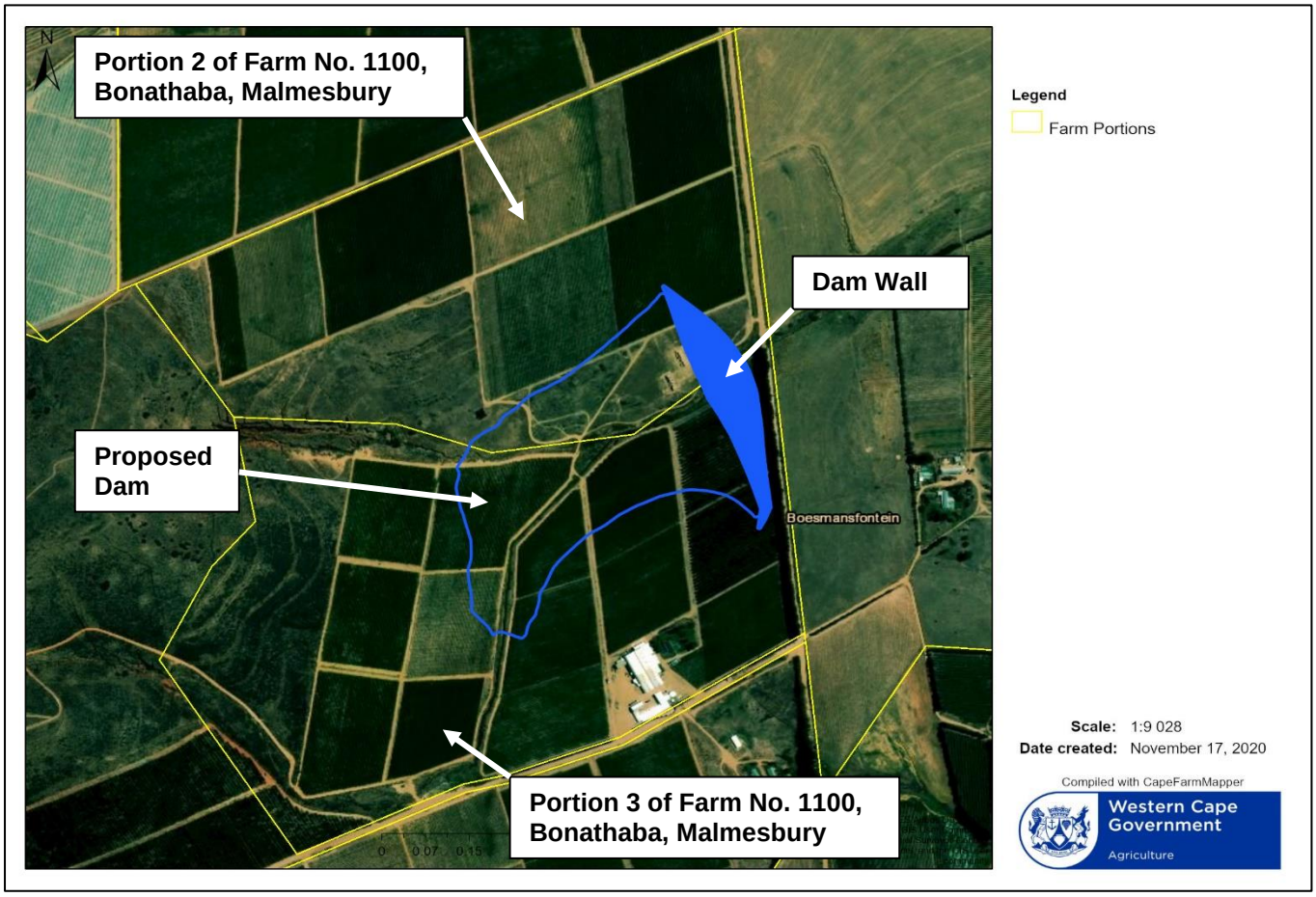


Figure 1. Proposed Dam Development on Portions 2 and 3 of Farm No. 1100, Bonathaba, Malmesbury (33°31'13.66"S; 18°55'17.53"E).

1.2 DESCRIPTION OF THE PROPOSED ACTIVITY

This application is for the proposed development of an in-stream dam on Portions 2 and 3 of Farm No. 1100, Bonathaba, Malmesbury, Western Cape (Figure 2). The proposed instream dam will have a development footprint of approximately 19.2ha and have a gross storage capacity of 1 000 000m^3. The dam wall will be 18m in height along with a spillway channel which will be created (Table 1; Figure 3; Appendix 2). The site has an existing water use rights, and the proposed dam will provide insurance of water supply for irrigation of the existing irrigation areas (see Appendix 9). Access to the proposed dam will be gained by existing farm roads and the construction of a 4m wide gravel road around the basin and embankment of the dam footprint. A new pump station with a footprint of 150m^2 is proposed and will be located within 32m of the watercourse (see Appendix 2.3). A new outlet pipe will be constructed and a pipeline from the proposed dam will be connected to an existing pipe from the Berg River (see Appendix 2.3) is also proposed. A spillway channel will be constructed and located on the left flank of the proposed dam boundary (Appendix 2.3). A dam safety and classification application will be submitted to the Dam Safety Office. In summary, the proposed development (including associated infrastructure) (Table 1; Appendix 2.3) will be comprised of:

- Construction of the proposed Bonathaba Dam (1 000 000m^3 storage capacity, 18m high embankment) with a spillway (spillway discharge channel – 10m wide) on its left abutment.
- A New 500mm dia HDPE outlet pipe will be constructed in reinforced concrete underneath the dam embankment and connected to a new pump station located at the downstream toe of the embankment.
- New 500mm dia PVC Class 8 pipeline (~600m long) from the pump station to tie into existing 400mm pipe which is connected to the pump station located on the banks of the Berg River.
- A 4m wide gravel access road will be constructed around the entire dam basin and embankment.
- Pump station (~150m^2)

The Bonathaba Dam will be established on approximately 10.4ha of areas currently under permanent crops (namely table grapes) whereas approximately 8.8ha of already disturbed vegetation (due to previous agricultural activities) will be impacted. The location was selected based on environmental sensitivity and to ensure the project life cycle costs are minimized (gravity feed vs. pumping cost etc.).

The proposed dam development will require a Water Use Authorisation (WUA) in terms of section 21 of the National Water Act (NWA), Act No. 36 of 1998. Applicable section 21 activities include;

- S21 (b) Storing of water
- S21 (c) Impeding or diverting the flow of the watercourse
- S21 (i) Altering the bed, bank, course, or characteristic of a watercourse

Table 1. Parameters for the proposed development of the Bonathaba Dam. Note, NOCL = Non-overspill crest level; FSL = Full supply level. Source: Ingerop.

Description	Size/ extent
NOCL	**108m**
FSL	**107m**
Freeboard	**1m**
Water Surface Area at FSL	**15.5ha**
Gross Capacity	**1 000 000m^3**
Crest length	**480m**
Crest width	**4m**
Wall height	**18m**
Upstream slope	**1V:3H**
Downstream slope	**1V:2H**
Minimum basin storage level	**92m**
Downstream toe level	**90m**
Loss of Citrus	**~2.84ha**
Loss of Table Grape	**~7.56ha**
Total Footprint area	**~19.2ha**

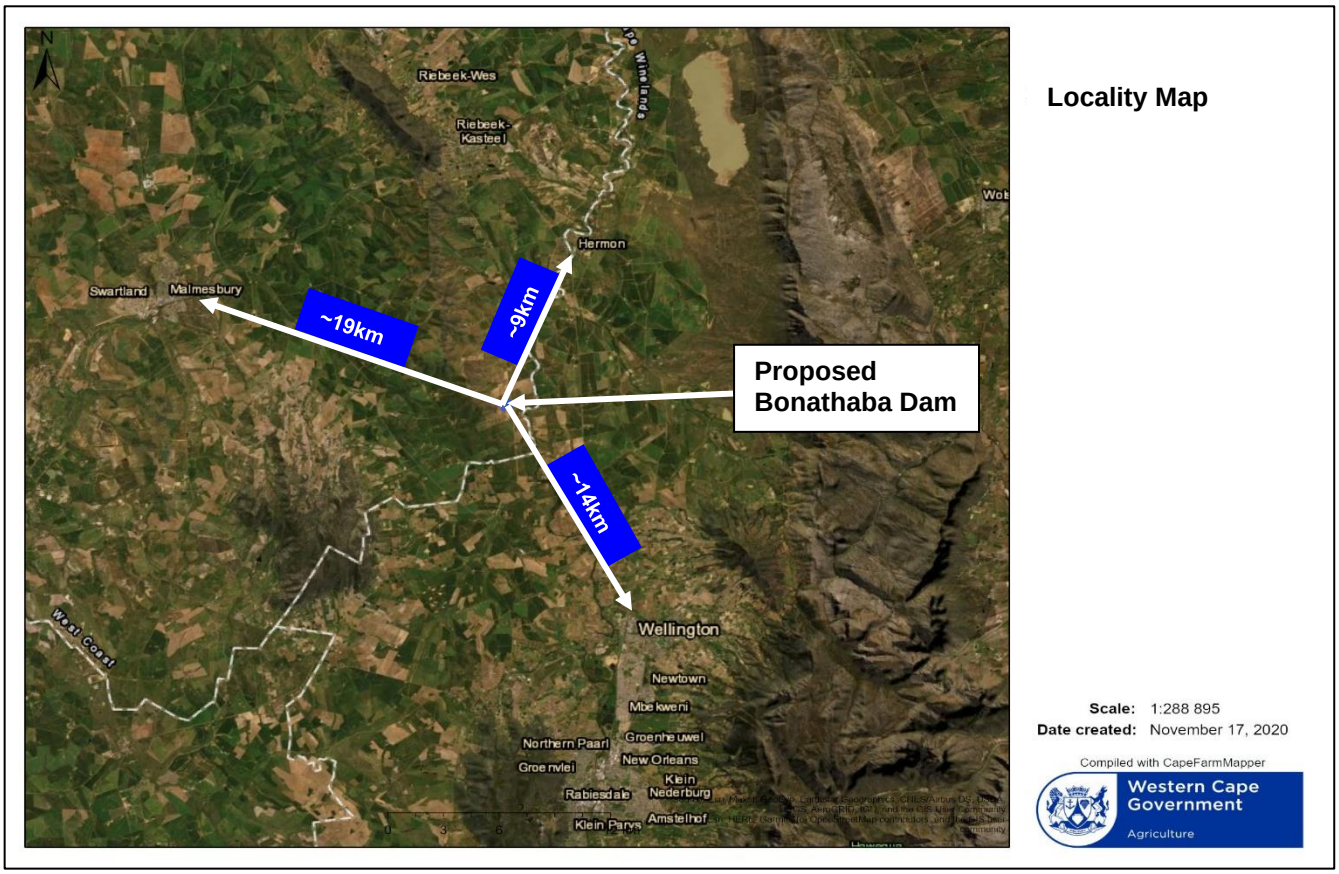


Figure 2. Location of proposed site for the Bonathaba Dam development.

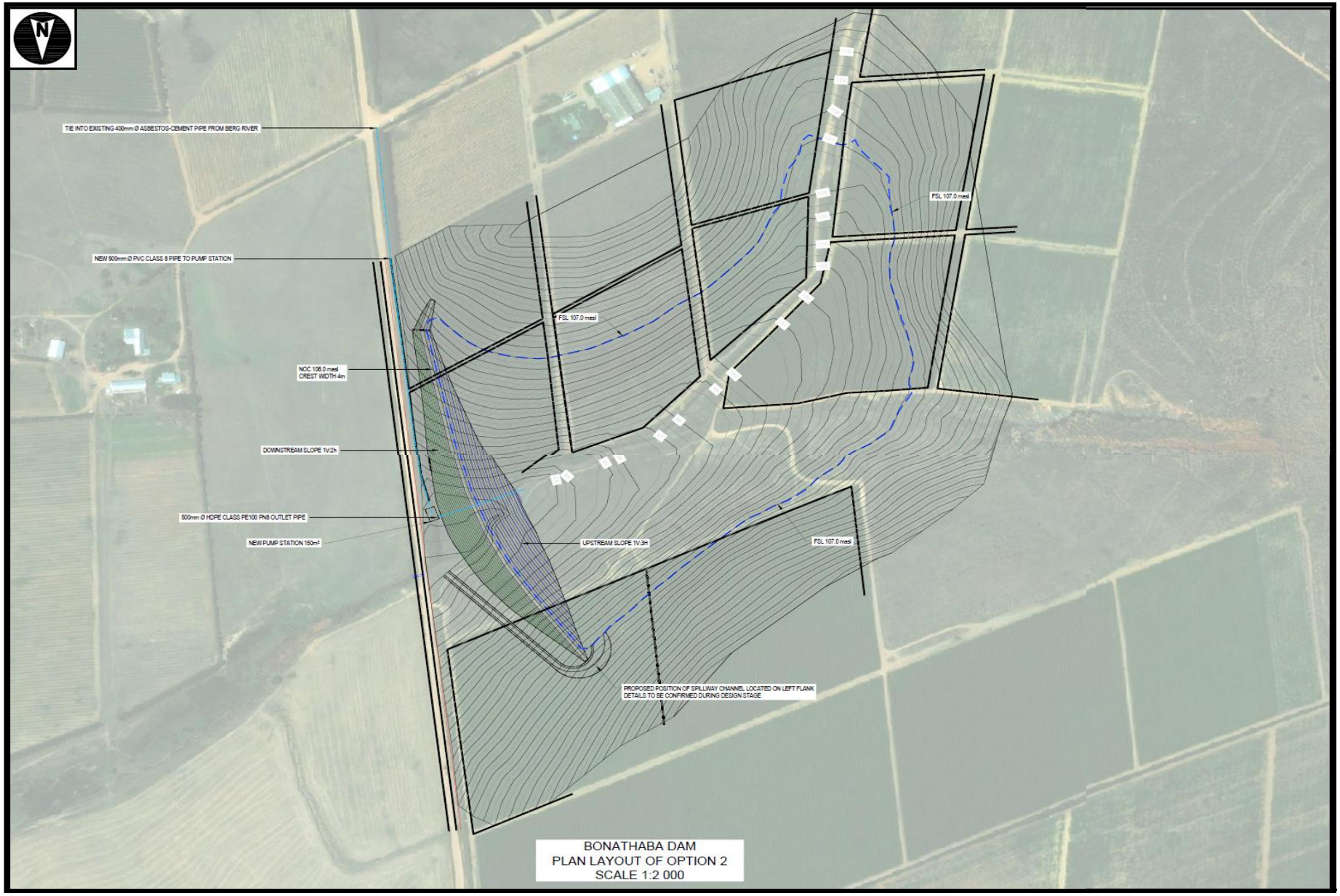


Figure 3. Proposed, preferred site plan layout. Source: Ingerop Consulting Engineers and Project Managers, (2020). Note, map direction (i.e. north direction). See Appendix 2 for more information.

2. NEED AND DESIRABILITY

In terms of the National Environmental Management Act, and EIA 2014 regulations, as amended, the Scoping/EIA report must describe the need and desirability of the proposed activity. The consideration of "need and desirability" in EIA decision-making processes requires the consideration of the strategic context of the development proposal along with the broader societal needs and the public interest.

While the concept of need and desirability relates to the *type* of development being proposed, essentially, the concept of need and desirability can be explained in terms of the general meaning of its two components in which *need* refers to *time* and *desirability* to *place* – i.e. is this the right time and is it the right place for locating the type of land-use/activity being proposed? Need and desirability can be equated to the *wise use of land* – i.e. the question of what is the most sustainable use of land.

2.1 NEED

This application is for the storage of an already existing water use (Appendix 9). This existing water use could never be potted before due to inadequate storage capacity on the property and thus, the water use was never utilized to its full potential. The proposed development is required to ensure the long-term economic viability and sustainability of the production of table grapes and citrus through a reliable water supply from the dam for irrigation.

The West Coast District Municipality's IDP and SDF identify and support efforts made to promote sustainability and growth within/ of the agricultural sector. One of the main issues highlighted by the West Coast Districts Spatial Development Framework (SDF)[3] is the recent drought and the negative implications of drought on the agricultural sector. Various climatic drivers, namely higher temperatures and drier conditions further exacerbate the impact of drought events on the agricultural sector[4], which require careful planning and adequate responses to sustain and grow the sector. In this area, the agricultural industry depends on water abstracted from the Bergrivier for irrigation. Due to the absence of rainfall during mid-summer when water is required (which is generally too little to sustain agricultural activities), water is generally abstracted during winter and subsequently stored in dams for irrigation during the summer months.

This is especially the case for the study area located within the Swartland Local Municipality – identified as the most prominent agricultural Local Municipal area within the West Coast District. This is highlighted by the Agricultural Sector being a major contributor to the District's economy (at 20.2%, generating R 5 482 300 in 2016).

Moreover, there is a need to promote socioeconomic development by creating employment opportunities. The proposed Bonathaba Dam (and Zwartfontein) development plan will create over two hundred (200) new employment opportunities while retaining over 600 jobs[5]. Therefore, there is a need

[3] http://westcoastdm.co.za/wp-content/uploads/2020/09/WCDM-SDF-2020-1.pdf
[4] Zscheischler, J., Martius, O., Westra, S., Bevacqua, E., Raymond, C., Horton, R.M., van den Hurk, B., AghaKouchak, A., Jézéquel, A., Mahecha, M.D. and Maraun, D. 2020. A typology of compound weather and climate events. *Nature reviews earth & environment*, pp.1-15.

for the proposed dam development to ensure agricultural productivity is sustained, along with creating employment opportunities, within the context of the study area, local, and district municipal areas.

2.2 DESIRABILITY

The following factors determine the desirability of the area for the proposed Bonathaba Dam.

2.2.1 LOCATION AND ACCESSIBILITY

The proposed location of the dam site is considered ideally suited for the construction of the Bonathaba Dam due to the (i) environmental (lower expected impact on indigenous vegetation and presence of favorable soil and climatic conditions) and (ii) proximity to Cape Town Harbour (situated approximately 60km as the crow flies). This provides the ideal location for the table grape and citrus industry to grow and contribute to socio-economic development within the area.

From an engineering perspective, the location was chosen to ensure the project life cycle costs are minimized where the decisive factors typically include basin characteristics with reference to available capacity versus demand, optimal costing of works, risk, etc, and thus, the location is preferred based on these factors. An access road will be constructed to gain access to the proposed site. Moreover, Sites 1-4 were initially identified and considered for the proposed location of the Bonathaba Dam however, based on the steep topography, expensive construction estimates, and the environmental impact of these sites on virgin land, it was decided that only the preferred layout (33°31'13.66"S 18°55'17.53"E; Figure 3 and Table 1) should be considered.

Locality maps are included in **Appendix 1,** Design Layout Plans **Appendix 2,** with site photographs in **Appendix 3.**

2.2.2 COMPATIBILITY WITH THE SURROUNDING AREA

The site is largely surrounded by agricultural activities (Figure 4; **Appendix 4** for Crop Census Map and site photographs in **Appendix 3**). The proposed activity will therefore not be "*out of character*" with the surrounding land use and is expected to have a negligible impact on the visual character of the area.

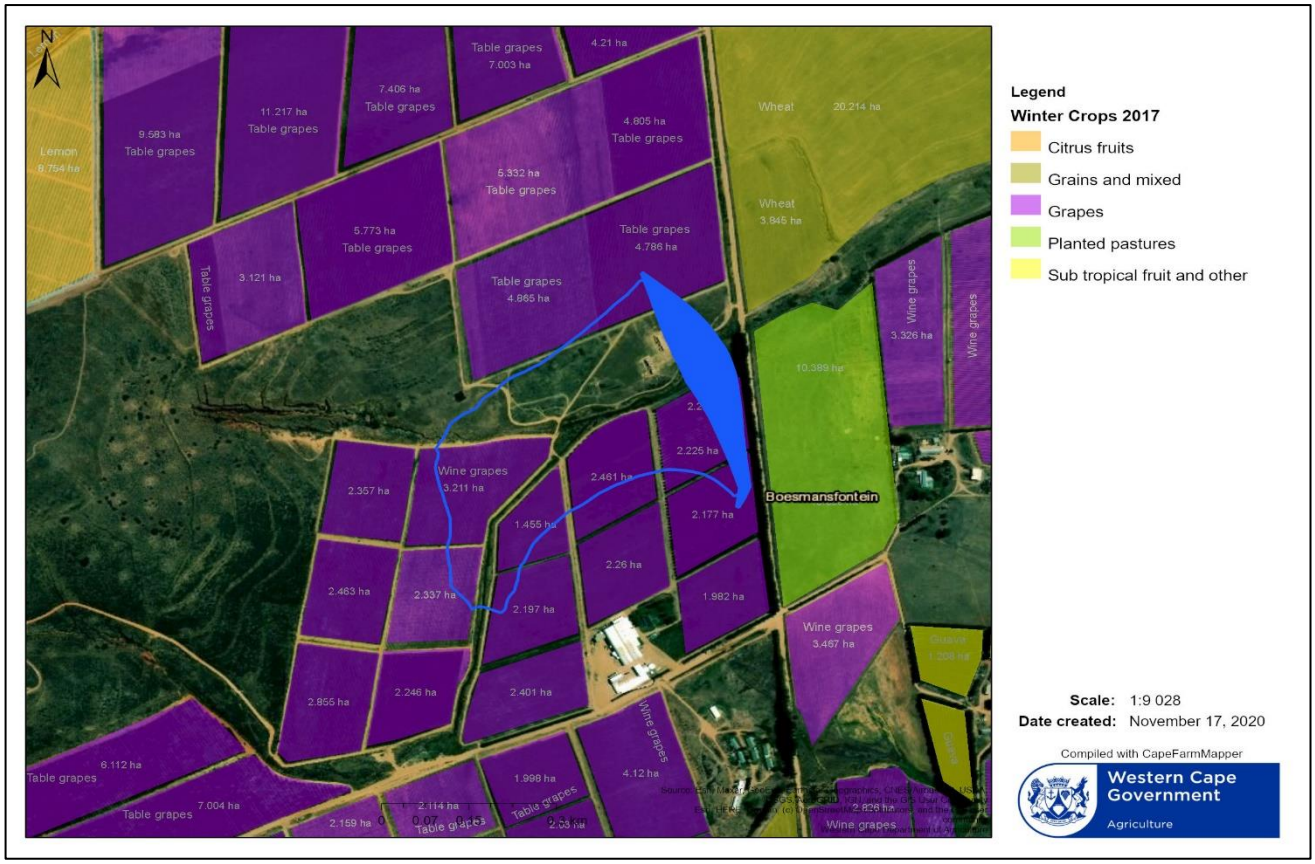


Figure 4. Crop census associated with the site for the proposed development of the Bonathaba Dam.

3. SITE DESCRIPTION

3.1 LOCATION

The proposed Bonathaba dam will be located on Portions 2 and 3 of Farm No. 1100, Bonathaba, Malmesbury (Figure 1 and Figure 3). The site is located within Ward 12 of the Swartland Local Municipality, West Coast District Municipality. The study area is located approximately 9km south of Hermon, 14km from Wellington, and 19km from Malmesbury (as the crow flies) (Figure 2).

The site coordinates for the proposed Bonathaba dam are 33°31'13.66"S; 18°55'17.53"E.

The SG code for the proposed site is:
Portion 2 of Farm No. 1100 (property extent = 48.76ha): C04600000000110000002
Portion 3 of Farm No. 1100 (property extent = 60.57ha): C04600000000110000003

Access to the farm is from the Porseleinberg Road (entrance to the site at 33°31'25.62"S; 18°55'29.12"E), the site can be accessed via existing farm roads on the property.

Please refer to **Appendix 1** for Locality maps (Figure 5). Please refer to **Appendix 3** for Site Photographs.

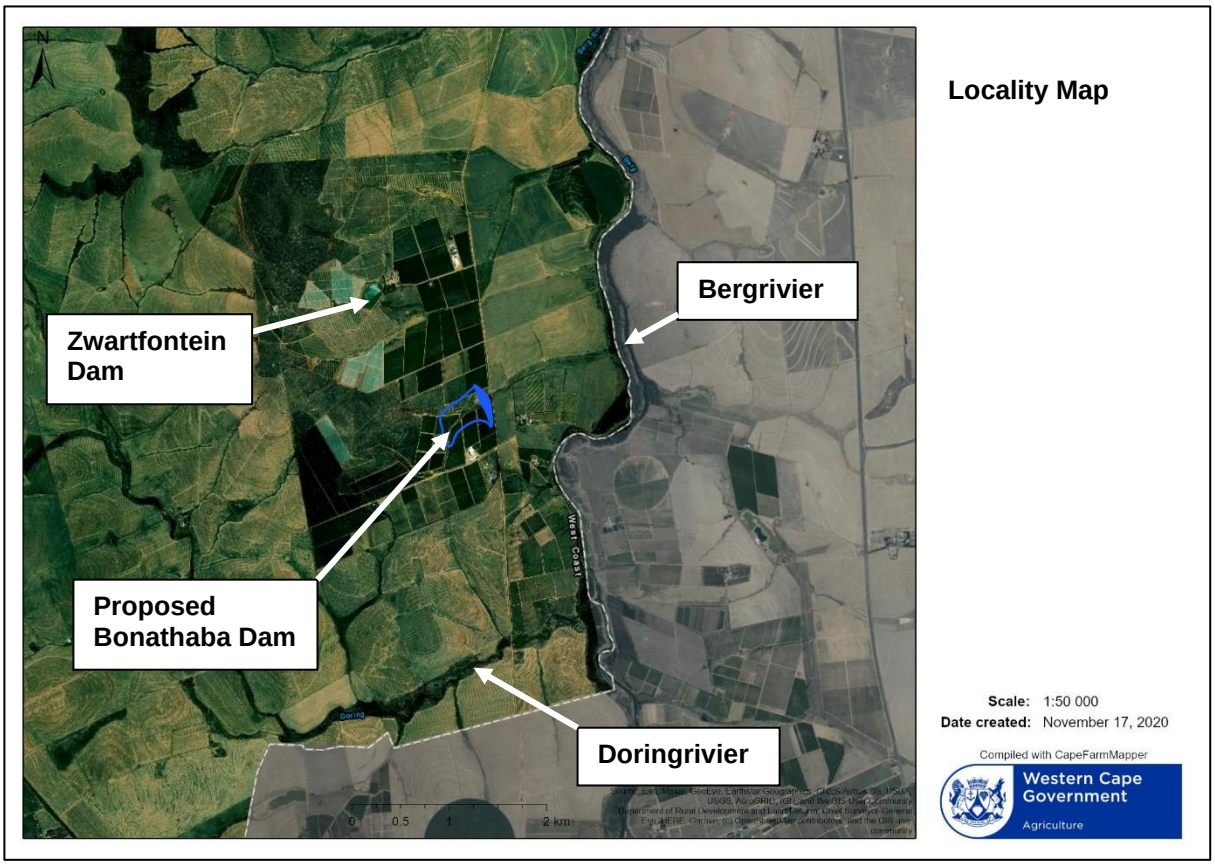


Figure 5. Locality map (1: 50 000) showing the location of the proposed Bonathaba Dam.

3.2 VEGETATION

The site is situated within the Swartland Shale Renosterveld (Figure 6)[5], classified as a critically endangered (CR) vegetation type in terms of "List of ecosystems that are threatened and in need of protection" (GN 1002, December 2011), promulgated in terms of the National Environmental Management Biodiversity Act, Act 10 of 2004, as well as the more recent (2018) National Biodiversity Assessment (Skowno *et. al*., 2019)[6]. The Swartland Shale Renosterveld, as described by Mucina and Rutherford (2006)[5], supports low-to-moderately tall leptophyllous[7] shrubland of varying canopy cover as well as low, open shrubland dominated by renosterbos. The vegetation type typically occurs on moderately undulating plains and valleys. Heuweltjies, which are generally associated with stunted trees and thicket, is a very prominent local feature of the environment, forming 'hummockveld' near Piketberg and the Tygerberg Hills. Disturbed areas are dominated by *Athanasia trifurcata* and *Otholobium hirtum*, whereas patches of *Cynodon dactylon* or 'grazing lawn' are often encountered.

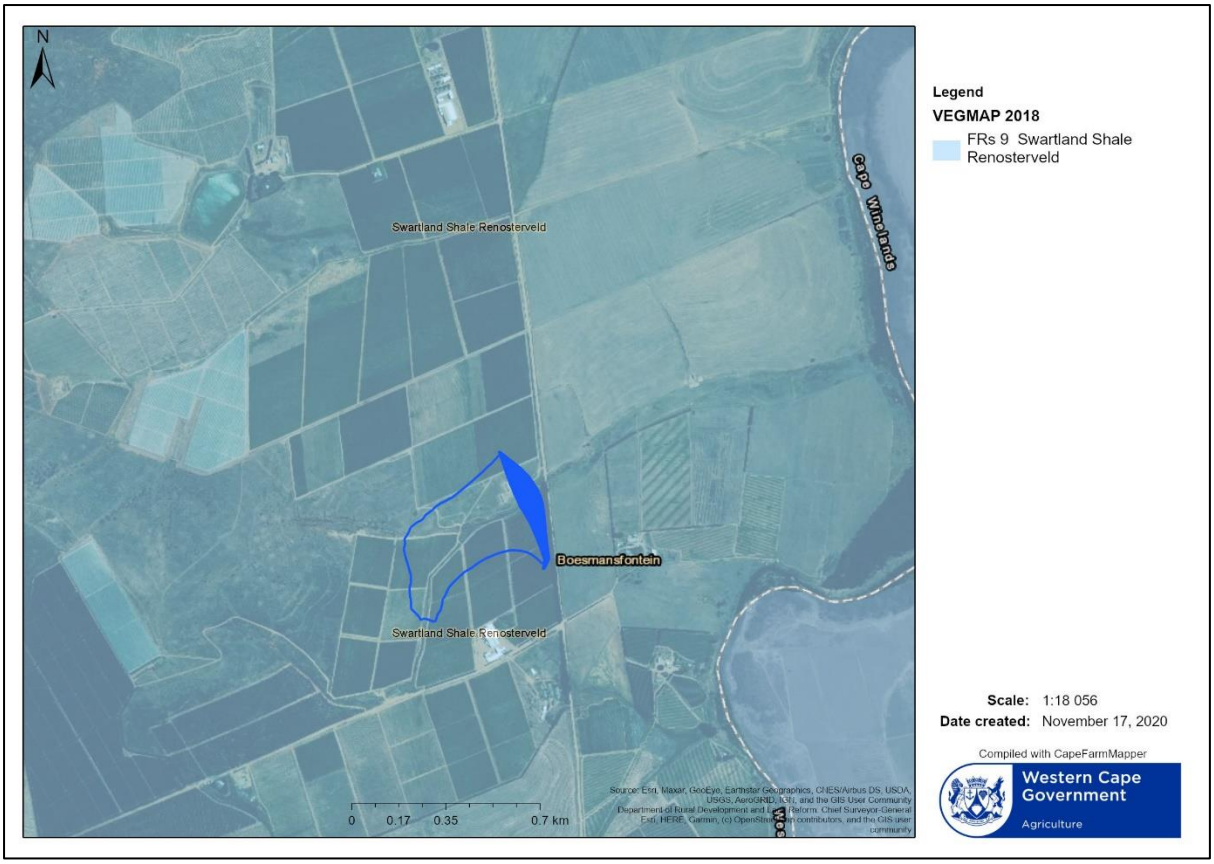


Figure 6. Vegetation type, namely Swartland Shale Renosterveld (classified as critically endangered), is associated with the proposed site for development.

As per the Botanical Assessment (Appendix 8.1), the largest portion of this footprint will overlap areas currently under permanent crops (namely table grapes) whereas the northern portion of the proposed dam footprint will impact an area of virgin soil. According to the foreman of the farm, this area used to be under wheat cultivation, which was confirmed by historic Google images (please refer to Figure 7 of Appendix 8.1). The site was cultivated at least until 2006, while the next available Google image (from 2009) shows the site lying fallow. No protected or red-listed plant species were observed during the site

[5] Mucina, L., Rutherford, M.C. and Powrie, L.W., 2006. *Vegetation Atlas of South Africa, Lesotho and Swaziland. The Vegetation of South Africa, Lesotho and Swaziland'*.(Eds L. Mucina and MC Rutherford.) pp, pp.748-789.
[6] Skowno, A.L., Raimondo, D.C., Poole, C.J., Fizzoti, B., Slingsby, J. (eds.) 2019. South African National Biodiversity Assessment 2018 Technical Report Volume 1: Terrestrial Realm. South African National Biodiversity Institute, Pretoria. http://hdl.handle.net/20.500.12143/6370
[7] Defined as plants which possess long, slender leaves

investigation. The most significant botanical feature identified by the Botanical Specialist was the presence of a few indigenous *Olea europaea* trees, located within the development footprint. However, *Olea* trees can be transplanted, and it is recommended that these trees are carefully removed and transplanted, next to the new dam.

The specialist concluded that the proposed dam development will have a low impact on any remaining natural veld, as the site and its surroundings are already disturbed and/ or transformed. As per the specialist, it is considered highly unlikely that the development had or will contribute significantly to:

- Significant loss of vegetation type and associated habitat.
- Loss of ecological processes (e.g. migration patterns, pollinators, river function, etc.) due to construction and operational activities.
- Loss of local biodiversity and threatened plant species.
- Loss of ecosystem connectivity.

The Botanical Assessment (Appendix 8.1) findings will be discussed in detail in the Draft Environmental Impact Report (EIR).

3.3 CRITICAL BIODIVERSITY AREAS AND ECOLOGICAL SUPPORT AREAS

The 2017 Western Cape Biodiversity Spatial Plan (WCBSP) is comprised of a systematic biodiversity plan which delineates Critical Biodiversity Areas (CBA) and Ecological Support Areas (ESA). These areas require safeguarding to ensure they are sustained and maintain their ecosystem functioning (Pool-Stanvliet, 2017)[8]. According to the Biodiversity Overlay Map from Cape Farm Mapper (Figure 7; **Appendix 4)**, a non-perennial watercourse, classified as an Ecological Support Area (ESA) will be impacted by the proposed Bonathaba Dam development. Although areas classified as ESA2 are recognized as being degraded, such areas should be protected from further impact and ideally restored to a more natural state to support some ecological processes/ function(s). As per the botanical specialist, very little or only remnants of the expected riparian vegetation were observed during the botanical assessment. The proposed site for development does not fall within any CBA.

[8]Pool-Stanvliet, R. 2017. Western Cape Biodiversity Spatial Plan Handbook. CapeNature Scientific Services Land Use Team, Jonkershoek, Stellenbosch

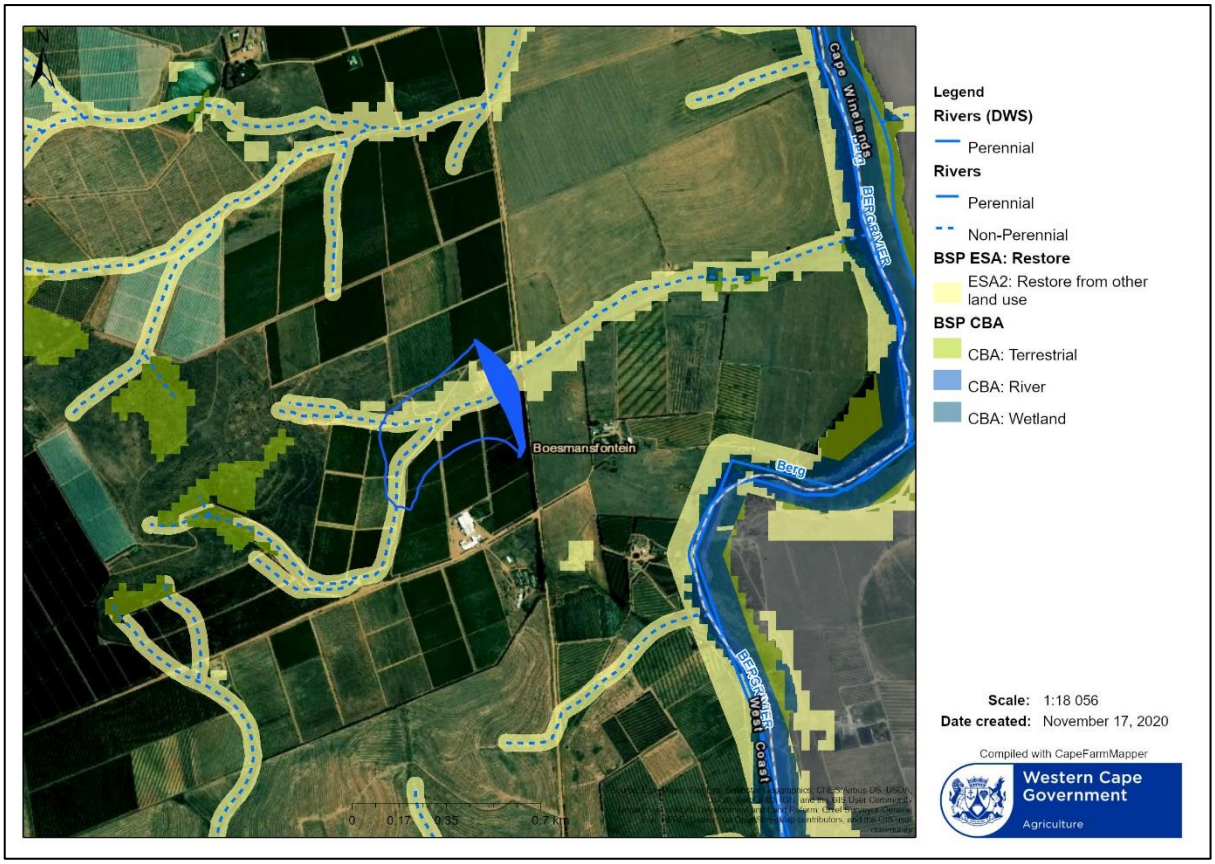


Figure 7. Biodiversity Spatial Plan (BSP) and Ecological Support Area (ESA) are associated with the proposed site for the development of the Bonathaba Dam.

3.4 FRESHWATER

According to the Freshwater resources map from Cape Farm Mapper (Figure 8; **Appendix 4)**, the proposed Bonathaba Dam will intercept two non-perennial watercourses (namely drainage lines). As per the Freshwater Assessment (Appendix 8.2; *please refer to Appendix 3 for photos*), the proposed site is located within the G10D quaternary catchment, situated within a sub-catchment with an extent of approximately 140ha. The drainage line (approximately 3.3km in length) associated with the site drains into the Bergrivier and is mostly dry. Water would be present within these drainage lines shortly after winter rainfall events. Steep slopes associated with the proposed site for development may have a high erosion potential and therefore, is susceptible to erosion. Lower down the slope, the drainage line has been straightened into irrigation return flow channels where sections of the channel have eroded. As per Figure 8, the nearest NFEPA wetland is located approximately 640m east of the proposed development and is associated with the Bergrivier.

The Bonathaba Farming Venture has an Existing Water Use Right (Appendix 9). The proposed dam development will require a Water Use Authorisation (WUA) in terms of section 21 of the National Water Act (NWA), Act No. 36 of 1998, where applicable water use activities include;

- S21 (b) Storing of water
- S21 (c) Impeding or diverting the flow of the watercourse
- S21 (i) Altering the bed, bank, course, or characteristic of a watercourse

The findings and potential impacts identified from the Freshwater Assessment will be discussed in detail in the Draft Environmental Impact Report (EIR).

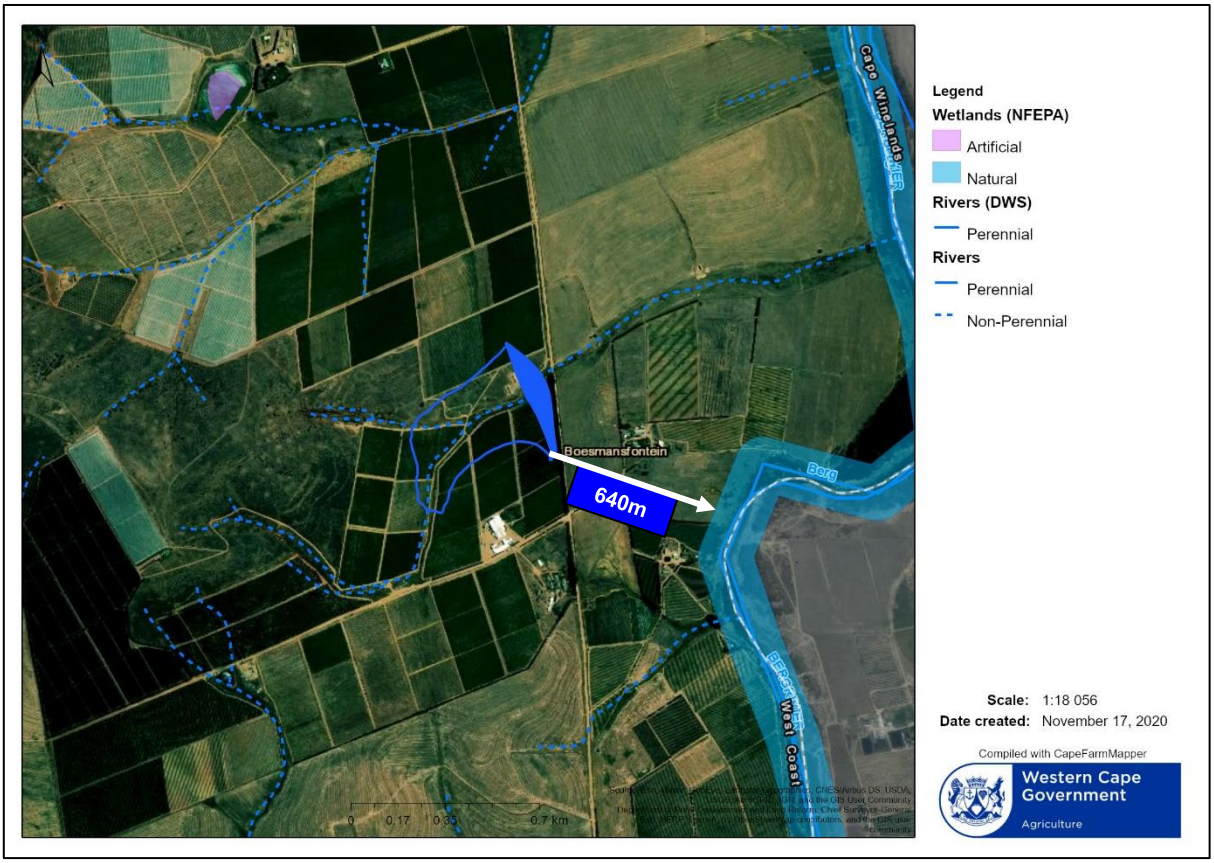


Figure 8. Freshwater Resources Map associated with the proposed development of the Bonathaba Dam.

3.5 CLIMATE

Climate information from Hermon, the closest town, is presented. Hermon is located approximately 9km away from the proposed site for the development of the Bonathaba Dam (Figure 3). Hermon normally receives approximately 471mm of rain per year of which most of this rainfall is received during winter. Hermon receives an average, monthly minimum of 9mm of rainfall in January and a maximum of 84mm in June, whereas minimum and maximum average midday temperatures range from 17.3°C (July) to 30.2°C (February), respectively[9].

3.6 SOCIO-ECONOMIC CONTEXT

According to the Department of Social Development's projections, the West Coast Municipality has a population of 450 610 (2018) which has been expected to increase by an estimated 530 860 people by 2024 (equating to a 2.8% average annual growth over this period)[10,11]. These figures place the West Coast District Municipality in the middle of other Districts, with the City of Cape Town, Cape Winelands, and Garden Route being bigger, whereas the Overberg and Central Karoo Districts have smaller populations.

[9] http://www.saexplorer.co.za/south-africa/climate/hermon_climate.asp
[10] West Coast District Municipality Social Economic Profile (SEP), 2018.
[11] http://westcoastdm.co.za/wp-content/uploads/2019/06/290519WCDM-IDP-2017-2022-Review-2-FINAL-1.pdf

In terms of education, the grade 12 drop-out rate for learners within the West Coast District declined marginally from 28.8 % in 2015 to 28.4 % in 2016; decreasing further to 26.9 % in 2017. Within the West Coast District, the grade 12 drop-out rate was highest in Cederberg, at 37.9 % in 2015, declining to 33.0 % in 2017, while the lowest was for the Swartland municipal area, which increases slightly from 20.1 % in 2015 to 20.2 % in 2017. The Swartland rate was also the lowest in the Province. Drop-outs are influenced by a wide array of socioeconomic factors including unemployment, poverty, and teenage pregnancies.

Over the last decade, the West Coast District's unemployment rate has been rising steadily; it increased from 9.0 % in 2015 to 10.1 %in 2016 and 11.1 % in 2017. The West Coast District's unemployment rate in 2017 is considerably below that of the Province's 18.2 % and is one of the lowest District's rates in the Province. This unemployment rate may have increased due to the current COVID-19 conditions as seen in other countries[12].

The local economy of the West Coast District municipal area is dominated by the manufacturing (R5 513.7 million; 20.3% in 2016) closely followed by the agriculture, forestry, and fishing sector (R5 482.3 million; 20.2%), wholesale and retail trade, catering and accommodation sector (R4 169.8 million; 15.3%), finance, insurance, real estate and business services (R3 093.7 million; 11.4%) and general government (R2 839.2 million; 10.5%). Combined, these top five sectors contributed R21.1 billion (77.7%) to the West Coast District Municipality's economy, which was estimated to be worth R27.2 billion in 2016. Moreover, the agriculture, forestry, and fishing sector contributed the most jobs in the West Coast District municipal area in 2016 (69 711; 39.3%), followed by the wholesale and retail trade, catering, and accommodation sector (28 433; 16.0%); community and social services (19 020; 10.7%); general government (17 432; 9.8%) and manufacturing (16 001; 9.0%). Combined, these top five sectors contributed 150 598 (84.8%) of the 177 604 jobs in 2016. This highlights the integral contribution of the agricultural sector within the context of job creation and contribution to the local and provincial economy and the need to sustain and grow the agricultural sector within the District Municipality.

3.7 HERITAGE FEATURES

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

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

A Notice of Intent to Develop (NID) was submitted to Heritage Western Cape (HWC) by the Heritage Specialist (Agency for Cultural Resource Management). The area has a low SAHRIS palaeo-sensitivity. The specialist concluded that the anticipated impact of the proposed Bonathaba Dam development on heritage resources is anticipated to be very low and recommended that a heritage impact assessment is not required. Comment received from HWC (Appendix 8.3) states that "*since there is no reason to believe that the proposed Bonathaba Dam on Ptn 2 & 3 of Farm 1100 Bonathaba, Malmesbury will impact on heritage resources, no further action under Section 38 of the National Heritage Resources Act (Act 25 of 1999) is required".*

[12] Blustein, D.L. and Guarino, P.A., 2020. Work and unemployment in the time of COVID-19: the existential experience of loss and fear. *Journal of Humanistic Psychology*. 60(5): 702-709.

4. LEGAL REQUIREMENTS

The current assessment is being undertaken in terms of the National Environmental Management Act (Act 107 of 1998, NEMA), to be read with section 24 (5): NEMA EIA Regulations 2017, as amended. However, the provisions of various other Acts must also be considered within this EIA.

The legislation that is relevant to this study is briefly outlined below.

4.1 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 that reasonable measures are applied to protect the environment. This includes preventing pollution and promoting conservation and environmentally sustainable development while promoting justifiable social and economic development.

4.2 NATIONAL ENVIRONMENTAL MANAGEMENT ACT (ACT 107 OF 1998)

The National Environmental Management Act (Act 107 of 1998) (NEMA), as amended, 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 (DEA). These powers are delegated in the Western Cape to the Department of Environmental Affairs and Development Planning (DEA&DP).

On 4 December 2014 the Minister of Environmental Affairs promulgated regulations in terms of environmental impact assessments, under sections 24(5) and 44 of NEMA, namely the EIA Regulations 2014 (GN No. R 326) these regulations were amended in April 2017, and include:

- GN No. R. 327 (Listing Notice 1);
- GN No. R. 325 (Listing Notice 2); and
- GN No. R. 324 (Listing Notice 3).

Listing Notice 1 and 3 are for a Basic Assessment and Listing Notice 2 requires a full Environmental Impact Assessment (i.e. Scoping and Environmental Impact Report).

According to the 2014 EIA regulations, as amended in 2017, the following potentially listed activities may be triggered (refer to Table 2)

Table 2. Activities listed in GN No. R. 983, GN No. R. 984, and GN No. R. 985 that are associated with the proposed project are provided below.

GN R327	Short description of relevant Activity(ies) in terms of Listing Notice 1	Description of specific portion of the development that might trigger the listed activity.
9	"The **development** of **infrastructure** exceeding 1000 metres in length for the **bulk transportation of water or storm water**; (i) **with an internal diameter of 0,36 metres or more**; or (ii) with a peak throughput of 120 litres per second or more; excluding where; (a) such infrastructure is for the bulk transportation of water or storm water drainage inside a road reserve; or (b) where such development will occur within an urban area."	**The pipes associated with the proposed dam have diameters exceeding 0.36m.**
12	"The development of - (i) **dams** or weirs, where the dam or weir, including infrastructure and water surface area, exceeds 100 square metres; or (ii) **infrastructure or structures with a physical footprint of 100 square metres or more**; where such development occurs - (a) within a watercourse; (c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse;"	**The proposed dam is located within a watercourse and will have a development footprint of more than 100m².**
19	"The **infilling** or d**epositing** of any material of more than **10 cubic metres** into, or the dredging, excavation, removal or moving of soil, sand, shell grit, pebbles or rock of more than 10 cubic metres from a watercourse;"	**The proposed dam is located within a non-perennial stream, material will be excavated and used to increase the dam wall height**.
27	"**The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation**, except where such clearance of indigenous vegetation is required for – (i) the undertaking of a linear activity; or (ii) maintenance purposes undertaken in accordance with a maintenance management plan."	**The proposed activity will enable the clearance of approximately 19.2 ha of disturbed vegetation.**
GN R325	**Short description of relevant Activity(ies) in terms of Listing Notice 2**	**Description of specific portion of the development that might trigger the listed activity.**
16	"The development of a dam where the dam wall, as measured from the outside toe of the wall to the highest part of the wall, is 5 metres or higher or where the high-water mark of the dam covers an area of 10 hectares or more."	**The proposed dam will have a wall height of 18m and cover an area of approximately 19.2ha.**

GN R324	Short description of relevant Activity(ies) in terms of Listing Notice 3	Description of specific portion of the development that might trigger the listed activity.
4	The development of a road wider than 4 meters with a reserve less than 13,5m (i) Western Cape (ii) Areas outside urban areas	It is proposed that a > 4m wide, 1600m long access road be constructed around the proposed dam footprint.
12	Clearance of an area of more than 300 m² of indigenous vegetation (i) Western Cape (i) Within any **critically endangered** or endangered **ecosystem listed in terms of Section 53 of the NEMBA** or prior to the publication of such a list, within an area that has be identified as critically endangered in the National Spatial Biodiversity Assessment 2004; (ii) within a CBA identified in a bioregional plan.	**The proposed activity will result in the clearance of more than 300m² of transformed/ disturbed vegetation within an ESA2 and Critically Endangered Vegetation Type (namely the Swartland Shale Renosterveld).**
14	"The development of – (i) **dams** or weirs, where the dam or weir, **including infrastructure and water surface area exceeds 10 square metres**; or (ii) **infrastructure or structures with a physical footprint of 10 square metres or more**; where such development occurs - (a) **within a watercourse**; (b) in front of a development setback; or (c) if no development setback has been adopted, within 32 metres of a watercourse, measured from the edge of a watercourse; excluding the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour. **i. Western Cape** i. Outside urban areas: (ff) **Critical biodiversity areas** or ecosystem service areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;"	**The proposed development of a dam will have a water surface area exceeding 10m² within an ESA2.**
Activity No(s):	Provide the relevant **Category A Waste Management Activity(ies)** as set out in **List of Waste Management Activities** (GN No. R. 921)	
N/A		
Activity No(s):	Provide the relevant **Category B Waste Management Activity(ies)** as set out in **List of Waste Management Activities** (GN No. R. 921)	
N/A		

An Application Form was submitted to the DEA&DP on the **7th April 2021**. A Draft Scoping Report (submitted on the **7th April 2021**) was undertaken to identify potential issues and impacts associated with the proposed development of the Bonathaba Dam. The Final Scoping Report (*this report*) will be submitted for approval / acceptance on condition.

The principles of environmental management as set out in section 2 of NEMA have been taken into account. The principles pertaining to this activity include:

- People and their needs will be placed at the forefront while serving their physical, psychological, developmental, cultural, and social interests. The activity seeks to provide additional employment and economic development opportunities, which are a local and national need – *the proposed activity is expected to have a beneficial impact on people, especially developmental and social benefits, as well as providing additional employment and economic development opportunities.*
- The development will be socially, environmentally, and economically sustainable. Where disturbance of ecosystems, loss of biodiversity, pollution, and degradation, and landscapes and sites that constitute the nation's cultural heritage cannot be avoided, are minimized and remedied. The impact that the activity will potentially have on these will be considered, and mitigation measures will be put in place - *potential impacts have been identified and considered, and any further potential impacts will be identified during the public participation process. Mitigation measures will be included in the EMP*.
- Where waste cannot be avoided, it will be minimized and remedied through the implementation and adherence of the Environmental Management Programme (EMPr) – *this will be included in the EIR*.
- The use of non-renewable natural resources will be responsible and equitable.
- The negative impacts on the environment and people's environmental rights will be anticipated, investigated, and prevented, and where they cannot be prevented, will be minimized and remedied.
- The interests, needs, and values of all interested and affected parties will be taken into account in any decisions through the Public Participation Process.
- The social, economic, and environmental impacts of the activity will be considered, assessed, and evaluated, including the disadvantages and benefits.
- The effects of decisions on all aspects of the environment and all people in the environment will be taken into account, by pursuing what is considered the best practicable environmental option.

4.3 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 has, 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 activities are relevant:

- *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 authority of the responsible resource. 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 authority of the responsible resource.

A Notice of Intent to Develop (NID) was submitted to Heritage Western Cape (HWC) by the Heritage Specialist (Agency for Cultural Resource Management). The area has a low SAHRIS palaeo-sensitivity. The specialist concluded that the anticipated impact of the proposed Bonathaba Dam development on heritage resources is anticipated to be very low and recommended that a heritage impact assessment is not required. Comment received from HWC (Appendix 8.3) states that "*since there is no reason to believe that the proposed Bonathaba Dam on Ptn 2 & 3 of Farm 1100 Bonathaba, Malmesbury will impact on heritage resources, no further action under Section 38 of the National Heritage Resources Act (Act 25 of 1999) is required".*

4.4 EIA GUIDELINE AND INFORMATION DOCUMENT SERIES

The following are the latest guidelines that form part of the DEA&DP's *Environmental Impact Assessment Guideline and Information Document Series (Dated: October 2011)*:

- ✓ *Guideline on Transitional Arrangements*
- ✓ *Guideline on Alternatives*
- ✓ *Guideline on Public Participation*
- ✓ *Guideline on Exemption Applications*
- ✓ *Guideline on Appeals*
- ✓ *Guideline on Need and Desirability*
- ✓ *Information Document on the Interpretation of the Listed Activities*
- ✓ *Information Document on Generic Terms of Reference for EAPs and Project Schedules*

Other guidelines which were considered include;

- Guideline for Environmental Management Plans (June 2005).
- Guideline on Alternatives (March 2013).
- Guideline on Need and Desirability (March 2013).

4.5 NATIONAL WATER ACT

Apart from the provisions of NEMA for this EIA process, the proposed dam also requires authorizations under the National Water Act (Act No. 36 of 1998). The Department of Water Affairs, who administer that Act, will be a leading role-player in the EIA.

The Bonathaba Farming Venture has an Existing Water Use Right (Appendix 9) where water is abstracted from the Berg River, located approximately 720m east of the proposed site for the dam development (Figure 8). The proposed dam development will require a Water Use Authorisation (WUA) in terms of section 21 of the National Water Act (NWA), Act No. 36 of 1998. Applicable section 21 activities include;

- S21 (b) Storing of water
- S21 (c) Impeding or diverting the flow of the watercourse
- S21 (i) Altering the bed, bank, course, or characteristic of a watercourse

In terms of Chapter 12 of the National Water Act, the proposed dam is considered a dam with a safety risk. The dam, therefore, requires a permit to construct from the Dam Safety Office of the Department of Water Affairs. The design and construction must conform to the conditions of the Dam Safety Regulations as set out in Government Notice R139 in Government Gazette No. 35062 of 24 February 2012. Regulations 10 and 15 will apply to the proposed dam. A license to construct application will only be submitted after an application for the safety classification of the proposed dam has been submitted, and only after the NEMA process has been concluded.

4.6 NATIONAL ENVIRONMENTAL MANAGEMENT: BIODIVERSITY ACT

The National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004) (NEMBA) is part of a suite of legislation falling under NEMA, which includes the Protected Areas Act, the Air Quality Act, the Integrated Coastal Management Act, and the Waste Act. Chapter 4 of NEMBA deals with threatened and protected ecosystems and species and related threatened processes and restricted activities. The need to protect listed ecosystems is addressed (*Section 54*).

5. ALTERNATIVES

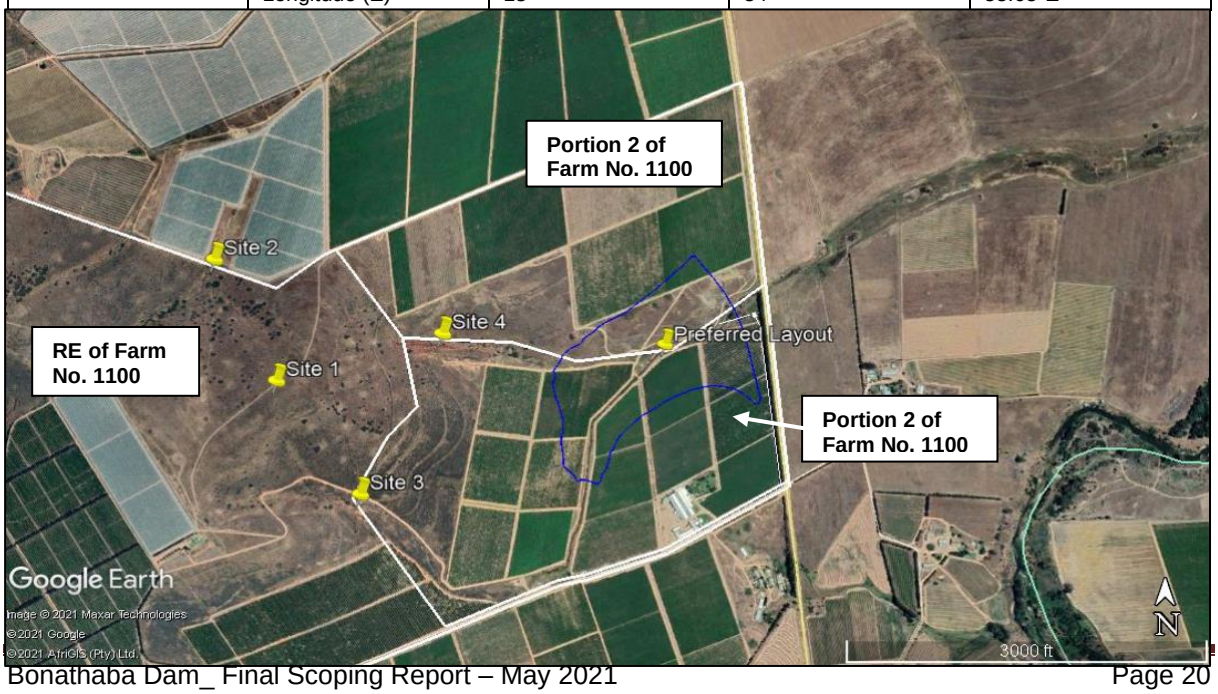
Alternatives have been considered during the Scoping phase and are described below.

5.1 LOCATION ALTERNATIVES FOR THE PROPOSED DAM

The proposed site for the development of the Bonathaba Dam is considered the best and most economically feasible site (Alternative 1) relative to the existing conditions (i.e. disturbed vegetation, gravitational benefits, etc) of the area-to-be-developed. Sites 1-4 were initially identified and considered for the proposed location of the Bonathaba Dam however, based on the steep topography, expensive construction estimates, and the environmental impact of these sites on virgin land, it was decided that only the preferred layout (**33°31'13.66"S 18°55'17.53"E**; Figure 3 and Table 1) should be considered. It must be noted that these alternative site locations also fall within another property, namely RE of Farm No. 1100 (Table 3).

Table 3. Location and graphical representation of initially considered site locations.

Considered Alternatives				
Alternative Site 1	Latitude (S)	33°	31'	16.95"
	Longitude (E)	18°	54'	39.33"
Alternative Site 2	Latitude (S)	33°	31'	6.33"
	Longitude (E)	18°	54'	33.23"E
Alternative Site 3	Latitude (S)	33°	31'	26.89"S
	Longitude (E)	18°	54'	47.57"E
Alternative Site 4	Latitude (S)	33°	31'	12.83"S
	Longitude (E)	18°	54'	55.65"E



It must also be noted that no feasible alternatives were identified on Portions 2 and 3 of Farm No. 1100 due to (i) contours associated with the remainder of the site are not suitable for the development of a dam, and (ii) level of already transformed land (namely crops and processing facility) where an alternative location will impact a greater proportion of land under cultivation. Thus, the proposed location is the only available site on the two properties owned by the applicant for the proposed development. As per the Botanical Assessment (Appendix 8.1), most of the proposed developmental footprint will overlap areas currently under permanent crops (mostly table grapes) whereas approximately 8.8ha of already disturbed vegetation will be impacted [as the area was previously under wheat cultivation (see Figure 7 of Appendix 8.1) until 2006 and subsequently left lying fallow]. Few indigenous plant species were observed with most plants observed being weeds or pioneer species. The specialist also noted that the small watercourse associated with the study area has been previously impacted – the nature of the impact characteristic of intensive agricultural landscape practices.

Therefore, no other site alternatives were considered and investigated.

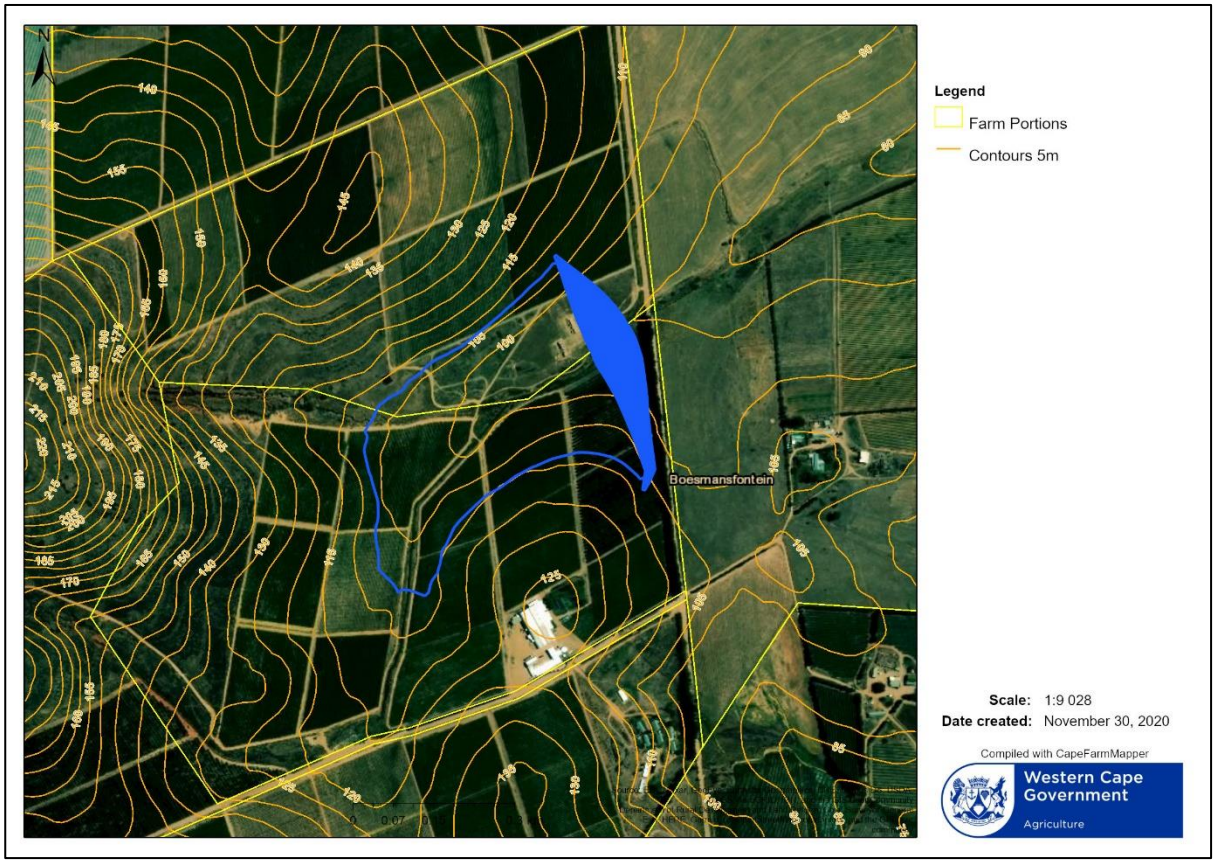


Figure 9. Physical constraints (i.e. topographic features) associated with the selection of a feasible site.

5.2 LAYOUT ALTERNATIVES FOR THE PROPOSED DAM

The purpose of the proposed dam is to provide Bonathaba Farm with enough water for its irrigation requirements. Two storage capacity (i.e. layout) alternatives, relative to the size of the dam were investigated and are presented below (Appendix 2):

Table 4. General specifications of proposed dam storage capacity alternatives (Appendix 2).

Description	Alternative 1 (Not preferred)	Alternative 2 (Preferred)
	Refer to Appendix 2.1	Refer to Appendix 2.2
Wall length (m)	450	480
Crest RH (m)	106	108
Waltoon (m)	90	90
Maximum wall height (m)	16	18
Overflow RH (m)	105	107
Total Free Board (m)	1.0	1.0
Bottom RH (m)	92	92
Maximum Water Depth (m)	13	15
Full Surface Area (m^2)	125 000	155 800
Total Dam Surface Area (ha)	16.2	19.2
Total Capacity (m^3)	715 000	1 000 000
Water Embankment Ratio	6.3:1	5.51:1
Loss of Citrus (ha)	2.4	2.84
Loss of Table Grape (ha)	5.4	7.56

Although Alternative 2 will result in a larger footprint, the cost/storage ratio is considered viable under the circumstances relative to the (i) irrigational requirements of the Bonathaba Farm and (ii) site conditions. Therefore, Alternative 2 is the preferred layout.

5.3 ACTIVITY ALTERNATIVES

The purpose of the proposed dam is to provide storage capacity for the storage of existing water use rights. No activity alternatives were considered.

5.4 NO-GO ALTERNATIVE

The no-go alternative will result in no further development, which will mean that there will be no impact on the environment. The 'status quo' will persist and the site will remain as is, transformed, and disturbed. Although this no-go option will not result in potential negative environmental impacts, the potential socio-economic benefits from implementing the activity would not be achieved/realized. As per the Botanical Assessment, the no-go alternative will result in a slow degradation of the site due to the surrounding land uses namely agricultural activities which directly and indirectly impact biotic factors. More example, faunal diversity changes through space and time and is directly influenced by anthropogenic activities. Such activities include the transformation of land (Chapin *et al*., 2000[13]). Direct impacts are typically associated with urban expansion, leading to land cover changes (and consequent loss of natural areas) and edge effects, whereas indirect impacts include impacts associated with the generation of waste and its management (McDonald *et al*., 2020)[14]. Edge effects have diverse impacts on biodiversity and ecological functioning (Razafindratsima *et al*., 2018)[15]. Such effects contribute to a disturbance factor, which is likely to have driven most wild animals away from the proposed site for development. As the site is currently under intensive agriculture, these activities are likely to persist should the no-go alternative be 'implemented'.

[13] Chapin Iii, F.S., Zavaleta, E.S., Eviner, V.T., Naylor, R.L., Vitousek, P.M., Reynolds, H.L., Hooper, D.U., Lavorel, S., Sala, O.E., Hobbie, S.E. & Mack, M.C., 2000. Consequences of changing biodiversity. *Nature*, 405(6783), pp.234-242.

[14] McDonald, R.I., Mansur, A.V., Ascensão, F., Crossman, K., Elmqvist, T., Gonzalez, A., Güneralp, B., Haase, D., Hamann, M., Hillel, O. and Huang, K., 2020. Research gaps in knowledge of the impact of urban growth on biodiversity. *Nature Sustainability*, 3(1), pp.16-24.

[15] Razafindratsima, O.H., Brown, K.A., Carvalho, F., Johnson, S.E., Wright, P.C. and Dunham, A.E., 2018. Edge effects on components of diversity and above-ground biomass in a tropical rainforest. *Journal of Applied Ecology*, 55(2), pp.977-985.

6. ENVIRONMENTAL IMPACT ASSESSMENT, SIGNIFICANCE AND MITIGATION METHODOLOGY

The following impact rating approach used by EnviroAfrica CC is a basic exponential rating system to assess actual and potential negative and positive environmental impacts.

Environmental activities or aspects are identified, based on:

- the phases of the project,
- the nature (or description) of the actual and potential impacts of the activities.

For every project activity or aspect, various environmental impacts are listed. Every negative impact is allocated a negative (-) value as per each of the following criteria:

- Probability (Likelihood)
- Extent
- Duration (Frequency)
- Consequence (Receiving Environment)
- Magnitude (Intensity/severity)

Every positive impact is allocated a positive (+) value as per each of the following criteria:

- Probability (Likelihood)
- Extent
- Duration (Frequency)
- Magnitude (Intensity/severity)

Once a value is allocated for each of the criteria, the scores are averaged to determine the final impact rating see Table 5 below.

EnviroAfrica then further assesses environmental significance[16], based on the nature of the impact, as per the score and color key which forms part of Table 6 below. This results in impacts having either a low (indicated in green), medium (indicated in yellow) or high (indicated in orange and red) negative significance, and a low (light blue), medium (blue), or a high (dark blue) positive significance

[16] As a baseline, impact rating values/scores are allocated taking the worst-case scenario into account i.e. with no mitigation. The baseline rating is compared with those after mitigation has been considered i.e., the post-mitigation rating. Post mitigation rating is used for the actual impact assessment.

Table 5. Criteria will be used to determine the significance of impacts identified by the EAP, Specialists, and stakeholders.

SIGNIFICANCE CRITIERIA	Very High	High	Medium	Low	Negligible (very-low)
Value	**16**	**8**	**4**	**2**	**1**
Probability (likelihood) **(P)**	Definite. Impact will definitely occur (impact will occur regardless of any prevention measures)	Highly probable. Very likely for impact to occur.	Probable. Impact may likely occur.	Improbable. Impact may occur. Distinct Possibility	Improbable. Low likelihood/unlikely for impact to occur.
Extent (E)	Impact potentially reaches beyond national boundaries	Impact has definite provincial/potential national consequences	Impact confined to regional area/ town	Impact confined to local region and impact on neighbouring properties	Impact confined to project property / site
Duration (D)	Permanent The impact is expected to have a permanent impact, with very little to no rehabilitation possible	Long-Term The impact is expected to last for a long time after construction with rehabilitation expected to be 15-50 years. Impact is reversible but only with long-term mitigation	Medium-term The impact is expected to last for some time after construction with rehabilitation expected to be 5 - 15 years. Impact is reversible but only with on-going mitigation	Short-term The impact is expected to last for a relatively short time with rehabilitation expected to be 2-5 years. The impact is reversible through natural process and/or some mitigation.	Very short/ temporary The impact is expected to be temporary and last for a very short time with rehabilitation expected to be less than 2 years. The impact is easily reversible through natural process and/or some mitigation.
Magnitude (Intensity/ Severity) **(M)**	It is expected that the activity will have a very severe to permanent impact on the surrounding environment. Functioning irreversibly impaired. Rehabilitation often impossible or unfeasible	It is expected that the activity will have a severe impact on the surrounding environment. Functioning may be severely impaired and may be temporarily cease. Rehabilitation will be needed to restore system integrity	It is expected that the activity will have an impact on the surrounding environment, but it will maintain its function, even if moderately modified (overall integrity not compromised). Rehabilitation easily achieved	It is expected that the activity will have a perceptible impact on the surrounding environment, but it will maintain its function, even if slightly modified (overall integrity not compromised). Rehabilitation easily achieved	It is expected that the impact will have little or no effect on the integrity of the surrounding environment
Receiving environment (Consequence): **(RE)**	Very sensitive, pristine area – protected site or species permanently or seasonally present	Unused area containing only indigenous fauna / flora species	Unused area containing indigenous and alien fauna / flora species	Semi-disturbed area already rehabilitated / recovered from prior impact, or with moderate alien vegetation	Disturbed area/ transformed/ heavy alien vegetation

ENVIRONMENTAL RATING SIGNIFICANCE KEY:

Negative Impacts

SIGNIFICANCE	RATING	Final rating score / value range
Very Significant	Very High	-11 to -16
Significant	High	-7 to <-11
Increasing Significance	Medium	-4 to <-7
Insignificant	Low	-2 to <-4
	Very Low	-1 to <-2

Positive Impacts

SIGNIFICANCE	RATING	Final rating score / value range
Significant	High	10 to 16
Increasing Significance	Medium	4 to <10
Insignificant	Low	1 to <4

Table 6: Environmental Significance Rating Methodology (rating criteria and significance key)

6.1 ENVIRONMENTAL SIGNIFIGANCE RISK RATING

Please refer to **Appendix 10** for the Environmental Impact Risk rating matrix. The matrix aims to identify potential impacts of the proposed development on the receiving environment, based on a desktop study. The following table is a summary of all the potential impacts assessed based on the two design/ layout alternatives as discussed above. Please note that specialist findings were not considered in this risk assessment. Specialist findings and recommendations will be addressed in detail in the Environmental Impact Report.

In addition to determining the individual impacts against the various criteria, the element of mitigation, where relevant, will also be brought into the EIR. In such instances, the impact will be assessed with a statement on the mitigation measure that could/should be applied. Specialist recommendations and mitigation measures will also be included. A more detailed assessment will be carried out in the EIR phase considering specialist findings.

Table 7. Identified impacts associated with the proposed development of the Bonathaba Dam on Portions 2 and 3 of Farm No. 1100, Bonathaba, Malmesbury.

- Layout Alternative 1 (Not preferred) – 715 000 m^3

Aspect	Impact	Significance No mitigation	Significance With Mitigation
Botanical	Loss of Swartland Shale Renosterveld (CR)	High Significance	Low Significance
	Loss of ESAs	Medium Significance	Low Significance
	Soil Contamination	Low Significance	Very Low Significance
Water	Loss of Riparian Habitat	Medium Significance	Very Low Significance
	Alternation of Hydrology of the drainage line	Medium Significance	Very Low Significance
	Impact on downstream users.	Medium Significance	Low Significance
	Surface water & groundwater contamination	Very Low Significance	Very Low Significance
	Erosion & Sedimentation	High Significance	Low Significance
Heritage	Loss of Heritage Resources	Low Significance	Very Low Significance
Dust	Dust from site topsoil removal; construction, rehabilitation	Very Low Significance	Very Low Significance
Visual	The negative visual impact of the proposed development	Low Significance	Low Significance

- Layout Alternative 2 (Preferred) – 1 000 000 m^3

Aspect	Impact	Significance No mitigation	Significance With Mitigation
Botanical	Loss of Swartland Shale Renosterveld (CR)	High Significance	Low Significance
	Loss of ESAs	Medium Significance	Low Significance
	Soil Contamination	Low Significance	Very Low Significance
Water	Loss of Riparian Habitat	Medium Significance	Very Low Significance
	Alternation of Hydrology of the drainage line	Medium Significance	Very Low Significance

	Impact on downstream users.	Medium Significance	Low Significance
	Surface water & groundwater contamination	Very Low Significance	Very Low Significance
	Erosion & Sedimentation	High Significance	Low Significance
Heritage	Loss of Heritage Resources	Low Significance	Very Low Significance
Dust	Dust from site topsoil removal; construction, rehabilitation	Low Significance	Very Low Significance
Visual	The negative visual impact of the proposed development	Low Significance	Low Significance

7. ENVIRONMENTAL ISSUES AND POTENTIAL IMPACTS

Environmental issues were raised through informal discussions with the project team, specialists, and authorities. Based on a baseline assessment and these informal discussions, specialists were appointed to conduct assessments for the proposed development of the Bonathaba Dam. Specialist findings and recommendations will be addressed in detail in the Environmental Impact Report.

The following specialists were appointed:

- Botanical specialist
- Freshwater specialist
- Heritage specialist

The following potential issues have been identified from a baseline assessment and the DEA Screening Tool (Appendix 7):

7.1 BIODIVERSITY

The site is located within the Swartland Shale Renosterveld (Figure 6)[17], classified as a critically endangered (CR) vegetation type in terms of "List of ecosystems that are threatened and in need of protection" (GN 1002, December 2011), promulgated in terms of the National Environmental Management Biodiversity Act, Act 10 of 2004, as well as the more recent (2018) National Biodiversity Assessment (Skowno *et. al*., 2019)[18]. It was anticipated that a more detailed botanical assessment, in addition to the high-level desktop study was required to be undertaken. Therefore, a site-based assessment by a specialist has been conducted to ground-truth the initial desktop assessment and determine if there is any sensitive or endangered vegetation on the proposed site. The findings of the Botanical Assessment will be discussed in detail in the EIR but are summarised below for ease of reference.

According to the Biodiversity Overlay Map from Cape Farm Mapper (Figure 7; **Appendix 4)**, a non-perennial watercourse, classified as an Ecological Support Area (ESA2) will be impacted by the proposed Bonathaba Dam development. Areas classified as ESA2 are recognized as being degraded, but that they should be protected from further impact and ideally restored to a more natural state to support some ecological processes/ function. As per the botanical specialist, very little or only remnants of the expected riparian vegetation were observed during the botanical assessment. The proposed site for development does not fall within any CBA. The objective is to restore and/or manage to minimize the impact on ecological processes and functioning.

Effectively designed and managed farm dams can attract a variety of birds, insects, and animals to the area which can contribute to the conservation of biodiversity. For example, the proposed dam may provide avifauna (water species) with habitat for breeding and nesting sites[19]. Because of the proximity to intensively cultivated areas, it is not expected that the proposed dam location will have a significant impact on fauna species. The impact on reptiles and amphibians is likely to be localized and may result in species being displaced (snakes and lizards) but no significant and irreversible impact on these species is expected. Mitigation measures to reduce any potential direct and acute impact on reptilian and amphibian species, such as conducting phased earthworks over time to allow various fauna to move away from the site of development, must be implemented.

[17] Mucina, L., Rutherford, M.C. and Powrie, L.W., 2006. *Vegetation Atlas of South Africa, Lesotho and Swaziland. The Vegetation of South Africa, Lesotho and Swaziland'*.(Eds L. Mucina and MC Rutherford.) pp, pp.748-789.
[18] Skowno, A.L., Raimondo, D.C., Poole, C.J., Fizzoti, B., Slingsby, J. (eds.) 2019. South African National Biodiversity Assessment 2018 Technical Report Volume 1: Terrestrial Realm. South African National Biodiversity Institute, Pretoria. http://hdl.handle.net/20.500.12143/6370
[19] Sangode, V.K. and Rajkumar, B., 2020. Khairbandha Dam: a potential hotspot of avifaunal diversity and its socioeconomic impact on local communities in Gondia District, Maharastra. *Journal of Experimental Zoology*, India, 23(2), pp.1531-1533.

7.1.1 TERMS OF REFERENCE - BOTANICAL IMPACT ASSESSMENT:

The terms of reference for this appointment were to:

- Give a short statement on the vegetation and its conditions encountered at the site and its immediate surroundings.
- Determine and record the position of any plant species of special significance (e.g. protected tree species, or rare or endangered plant species) that should be avoided or that may require “search & rescue” intervention.
- Make recommendations on impact minimization should it be required

7.1.2 SUMMARY - BOTANICAL SPECIALIST FINDINGS:

The Botanical Report has been appended as Appendix 8.1. The findings and recommendations will be discussed in detail in the EIR. The specialist’s findings are summarized below:

- The vegetation structure associated with the proposed site for development could have historically been characterized as Swartland Shale Renosterveld, which is now considered critically endangered and not protected (Skowno *et al*., 2019).
- As described by the Botanical Specialist, *the proposed footprint is bordered by permanent crop to the north, south, and by the Porseleinberg Road to the east. The remaining fallow land which is still connected to potential remaining natural veld (west of the fallow land) can be found to the west. However, this area was also under cultivation at least up till 2006.*
- No plant species of conservational significance (i.e. protected or red-listed plant species) were observed by the Specialist. However, the most significant botanical feature associated with the site is the presence of indigenous *Olea* trees. The Specialist recommended that these trees be transplanted outside the dam footprint.
- The Specialist stated that the proposed Bonathaba Dam development will have a low impact on any remaining natural veld, as the site and its surroundings are already disturbed and/or transformed.
- In conclusion, the Specialist stated that it is highly unlikely that the development will contribute significantly to any:
    - Significant loss of vegetation type and associated habitat.
    - Loss of ecological processes (e.g. migration patterns, pollinators, river function, etc.) due to construction and operational activities.
    - Loss of local biodiversity and threatened plant species.
    - Loss of ecosystem connectivity.

The Botanical Specialist concluded that “*with the available information it is recommended that project be approved, with the proposed mitigation actions*”.

7.2 FRESHWATER

A Freshwater Impact Assessment was proposed and was undertaken as the dam is considered an instream dam which is likely to contain remaining elements of riparian vegetation.

7.2.1 TERMS OF REFERENCE - FRESHWATER IMPACT ASSESSMENT:

- A description of the area, its climate, rainfall, catchment, and aquatic habitat.
- A description of the project
- The legal framework, as it pertains to the project.
- Assessment of the Water Quality, if there is any water in the watercourses at the time of field visits. This entails analytical water quality testing in a SANAS accredited laboratory and SASS5 biomonitoring.
- The Present Ecological State of the affected aquatic habitat, as outlined by Kleinhans (1999) and as has been described in various DWS publications. This applies to both the instream and riparian habitat.
- The Ecological Importance of the affected aquatic habitat must be established.
- The Ecological Sensitivity must be determined.
- The possible impacts of the farm dams on the aquatic habitat must be described.
- Mitigation Measures must be added.
- This is followed by an Impact Assessment. This is a measurement of the envisaged success of the mitigation measures. The Mitigation Measures and Impact Assessment are specifically to satisfy the WULA requirements.
- A Risk Matrix is required, as published on the DWS webpage. This is specifically to assess the environmental risks of the envisaged project. This methodology is specifically a tool to decide if a General Authorisation or a License is required for these two dams.
- The Resource Economics or the environmental goods and services of the aquatic habitat must be assessed, according to the methodology of Kotze, G., G. Marneweck, A. Batchelor, D. Lindley & Nacelle Collins. 2009. A technique for rapidly assessing ecosystem services supplied by wetlands. Water Research Commission, Pretoria.
- The drivers of the aquatic systems must be described and how these pertain to the envisaged project, according to the methodology outlined in various DWS documents.
- The Freshwater Report should contain adequate information to aid DWS decision-makers if a letter of consent, a General Authorisation, or a License is required

7.2.2 SUMMARY- FRESHWATER IMPACT REPORT:

The Freshwater Impact Assessment Report is available in Appendix 8.2. The findings and recommendations will be discussed in detail in the EIR. Specialist findings based on the proposed location for the development of the Bonathaba Dam are summarized below:

- The drainage line, associated with the proposed site for development, is mostly dry and does not offer any services relative to water supply, food, tourism, and cultural contributions whereas some ecosystem services offered by the drainage line include sediment trapping.
- The following impacts were identified by the Freshwater Specialist;
    1. Earthworks associated with the construction of the dam may result in the sedimentation of the watercourse downstream of the proposed site for development;
    2. Operation of the dam (including the abstraction of water from the Bergrivier and the dam for irrigation purposes) may result in the seepage through the dam wall, into the watercourse and subsequently increasing return flow;
    3. Construction of erosion control structures; and
    4. Maintenance of the drainage line.
- Mitigation measures proposed by the Specialist includes;

1. Construction during the dry season (i.e. summer), keeping the construction footprint to the designated footprint, preventing material entering the watercourse;
2. Preventing over-irrigation of crops, measuring return-flow, and pumping return-flow back into the dam.
3. Rehabilitation and landscaping of the site along with construction erosion control structures during the dry season and keeping the construction footprint as small as possible;
4. Conserve the ecological functioning of the ESA2 area where possible.

- These proposed mitigation measures/ recommendations will be discussed in more detail in the EIR and the EMPr.
- As stated by the Freshwater Specialist, an anthropogenic activity can impact any ecosystem driver(s) or response(s) which can have a snowball effect (i.e. knock-on-effect) on other ecosystem drivers/functions. The driver of the Bonathaba Dam would be seepage from the dam which will predictably be higher when the dam wall height is higher, along with runoff and return flow from agricultural areas.
- The drainage line is heavily impacted and thus, risks associated with the impact on the watercourse are low where the specialists stated that the incremental impact of the larger dam wall would not make much of a difference.
- One of the main drivers of the Bergrivier's ecological structure is the variability in flow conditions which fluctuates through seasons (i.e. dry periods during summer and flooding conditions due to winter rainfall events). However, as the incremental demand for water from various dam establishments relying on the Bergrivier for water, the Freshwater Specialists stated that it is not foreseen that the proposed Bonathaba Dam would have any significant impacts on the Bergrivier as the demands on the Bergrivier have long been discounted against the minimum flow requirements and the Ecological Reserve.
- Impact on downstream users due to the proposed construction and operation of the Bonathaba Dam have also been identified as a potential impact. As per the Freshwater Report, there is no need for ecological maintenance releases from the new dam. The original ecological functioning of the drainage line has been entirely altered, with little conservation value left.

7.3 HERITAGE

A Notice of Intent to Develop (NID) was submitted to HWC by the Heritage Specialist (Agency for Cultural Resource Management). The area has a low SAHRIS palaeo-sensitivity. The specialist concluded that the anticipated impact of the proposed Bonathaba Dam development on heritage resources is anticipated to be very low and recommended that a heritage impact assessment is not required. Comment received from HWC states that "*since there is no reason to believe that the proposed Bonathaba Dam on Ptn 2 & 3 of Farm 1100 Bonathaba, Malmesbury will impact on heritage resources, no further action under Section 38 of the National Heritage Resources Act (Act 25 of 1999) is required".* Please see Appendix 8.3 for comment received by HWC.

7.3.1 TERMS OF REFERENCE - HERITAGE IMPACT ASSESSMENT (IF REQUIRED):

- To submit a Notice of Intent to Develop (NID) to obtain comment from the HWC and determine whether a Heritage/ Palaeontological / Archaeological Assessment(s) is/ are required.
- Should an HIA, PIA, or AIA be required by HWC, the following will be undertaken:
    - A Heritage, Palaeontological, and/ or Archaeological field assessment(s) of the area proposed for development to ensure that any archaeological or palaeontological resources that may be impacted are identified and impacts mitigated. The results of these field assessments are integrated into a Heritage Impact Assessment with an integrated set of recommendations pertaining to impacts to heritage resources.
    - To identify and map heritage sites/remains that might be impacted by the proposed development;

- To assess the sensitivity and conservation significance of archaeological sites/remains in the inundation area;
- To assess the status and significance of any impacts resulting from the proposed development;
- To identify measures to protect any valuable heritage sites/remains that may exist within the estimated inundation area.

7.4 VISUAL IMPACT

The potential impact on the sense of place of the proposed dam has also been considered. The surrounding area is characterized by agricultural activities, as well as many farm dams in the local area. Thus, the proposed dam development will be '*within the character of the area'*. The sense of place is not expected to be altered by the proposed dam, and therefore, no further studies are envisaged to be required.

7.5 SAFETY

Due to the size of the dam and dam wall, the proposed dam is a safety risk in terms of Chapter 12 of the National Water Act and will require authorization from the Department of Water Affairs. As mentioned in Section 3 above, a license to construct application will only be submitted after an application for the safety classification of the proposed dam has been submitted, and only after the NEMA process has been concluded and Environmental Authorisation has been issued. This will therefore not form part of the Environmental Impact Report.

7.6 LOSS OF AGRICULTURAL LAND

Due to the location of the proposed dam, a large part of the proposed Bonathaba Dam will inundate existing agricultural lands (namely Table Grapes). The total development footprint will be approximately 19.2ha of which, approximately 8.8ha of disturbed, indigenous vegetation, and approximately 10.4ha of the existing crop (namely table grapes) will be cleared for the proposed Bonathaba Dam development. In the context of the entire farm, the clearance of approximately 10.4ha of the agricultural crop will not significantly impact the agricultural potential of the farm. Moreover, the cost/storage ratio is considered viable under the circumstances relative to the (i) irrigational requirements of the Bonathaba Farm and (ii) site conditions. Therefore

7.7 SOCIO-ECONOMIC IMPACT

Although the construction of the proposed dam will create jobs during the construction phase of the activity, the dam will indirectly secure additional jobs during the operational phase. The Bonathaba Farm, as well as Zwartfontein Farm (located adjacent to the Bonathaba Farm – Figure 5), form part of a development plan to approximately double the productive hectares of the farm's agricultural output. This increase in productive hectares aims to create a large-scale, sustainable citrus and grape operation, creating over 200 new employment opportunities while retaining over 600 jobs[20].

[20] https://uff.co.za/wp-content/uploads/2018/08/Bonathaba-Farm-deal-sheet.pdf

7.8 OTHER ISSUES IDENTIFIED

Any further issues raised during the public participation process or by the Competent Authority not mentioned in this section will be dealt with during the EIA phase.

8. PLAN OF STUDY FOR THE EIA

To adequately address the environmental issues raised and highlighted above the following plan of study will employ:

8.1 PRE-APPLICATION PHASE

In terms of the 2014 EIA requirements, this application is now in what is termed the "Pre-Application Phase", which included the following steps:

- Project preparation, site visits, and meetings with the client;
- Preparation of draft background information document;
- The Preparation of the "Notification of Intent" (**Appendix 6** for Proof of submission)
- Initial public participation was done (Refer to **Appendix 5**);
- Register of interested and affected parties was compiled (Refer to **Appendix 5**):
- A comment and response report was established (**Appendix 5**):
- Specialists were appointed;
- Preparation of Pre-App Scoping Report for Comment, December 2020 (*this report*)

The Draft Scoping Reports was made available for a 30-day comment period (comment period ended on the **10th May 2021**). Comments received on the Pre-Application Scoping Report and Draft Scoping Report have been captured and addressed in the Comments and Response Report. Original comments were also included. Comments received during the Public Participation Process will be incorporated into, and addressed, in the Draft Environmental Impact Report (EIR).

8.2 APPLICATION PHASE

The Pre-Application phase has been completed and the process has entered the formal application process. The NEMA EIA (2014) as amended, process prescribes the following tasks (Table 7):

Table 7: Summary of the NEMA EIA (2014) process that will be followed

TASKS	NUMBER OF DAYS	PROJECTED DATES
1. PRE-APPLICATION PHASE	90	
1.1. *Notice of Intent* (NOI): Prepare & Submit		25/06/2020
1.2. Specialist Appointments – Botanical, Freshwater, Heritage		20/02/2020
1.3. ***PPP*** (1st round): Advertisement, Posters, mail drops, Register I&AP's	30	03/07/2020 – 03/09/2020
1.4. Submit **Pre-Application Scoping Report (SR)** to competent authority & I&APs for comment	30	December 2020
***NB: Post-App SR**: Prepare for comment + update EMP and C&R report*		
2. **APPLICATION PHASE**	**43**	
2.1. **Application document: Prepare & Submit to competent authority (*CA have 10 days to respond*)**		April 2021
2.2. Submit ***Post-App SR*** to CA + IAP's for comments	30	April 2021
2.3. **Submit *Post-App SR* to CA for approval**	**43**	May 2021
3. **IMPACT REPORT (***Timeframe starts on decision from CA on SR***)**	**106**	
3.1. Submit ***EIR*** to CA & IAP's for comment (PPP on IR)	30	June 2021
3.2. **Submit *Final EIR* to CA for approval**	**20**	July 2021
CA to provide decision within 107 days		
Total for NON-SUBSTANTIVE EIA Application (90 + 43 +44 + 106 + 107 days)		

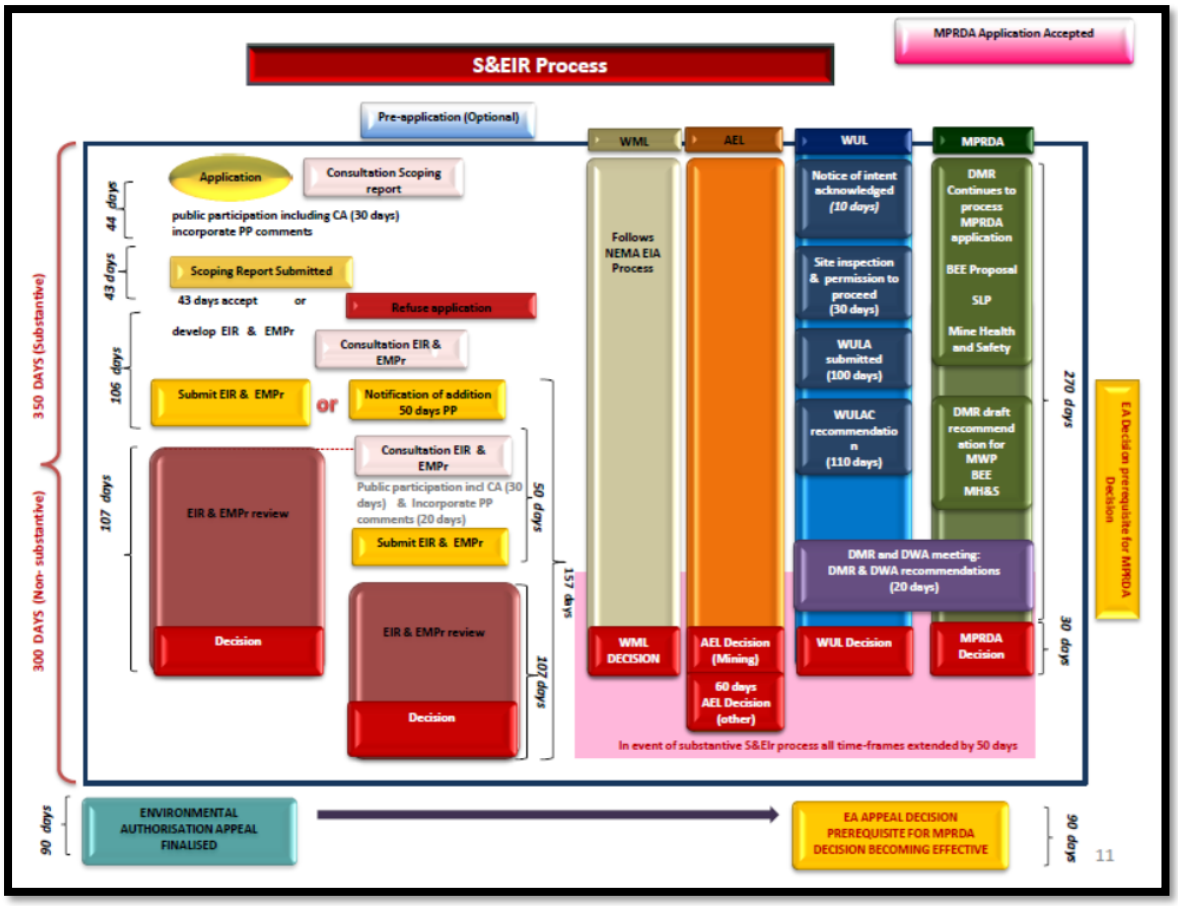


Figure 10: Summary of the Scoping and EIA 2014 Process

8.3 PUBLIC PARTICIPATION AND INTERESTED AND AFFECTED PARTIES

Please refer to Figure 10 above to see where the public participation process is present in the environmental impact assessment. The Interested and Affected Parties will be given the opportunity to view and comment on reports that are submitted to DEA&DP. Figure 10 also indicates what timeframes are applicable to each stage of the process. If required, meetings with key stakeholders will be held.

At the end of the comment period for the Draft Scoping Report (i.e., **10th May 2021**), the Draft Scoping Report 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 Scoping Report (*this report*) which will be submitted to the DEA&DP who will then have 43 days to accept/accept on condition(s) the Final Scoping Report and Plan of Study. Once the Final Scoping Report has been accepted by the Department, the Draft Environmental Impact Report (EIR) will be compiled. The Draft EIR will address comments raised by I&APs during the Scoping Report phase. The Draft EIR will also include any outstanding specialist reports. The Draft EIR (for comment) will then be sent out to I&APs for comment. After the 30-day commenting period, comments from I&APs and state organizations will be included, and addressed, in the Final EIR. This report will be submitted to the DEA&DP for final decision-making.

Correspondence with I&APs will be via post, telephone, email, and/or newspaper advertisements.

Should it be required, this process may be adapted depending on input received during the on-going process and / or as a result of public input. The DEA&DP will be informed of any changes in the process.

8.3.1 DETAILS OF THE PUBLIC PARTICIPATION PROCESS UNDERTAKEN

Interested and Affected Parties (I&APs) were identified throughout the process. Landowners adjacent to the proposed site, relevant organs of state, organizations, ward councilors, and the Local and District Municipality were added to this database. A complete list of organizations and individual groups identified to date is shown in **Appendix 5.**

Public Participation was conducted for this proposed dam following the requirements outlined in Regulations 41, 42, 43, and 44 of the NEMA EIA Regulations 2014 as amended, as well as the Department of Environmental Affairs and Development Planning's guideline on Public Participation 2011. Any issues and concerns raised during the scoping phase will be addressed in the EIR phase of this EIA application.

As such, each subsection of Regulation 54 contained in Chapter 6 of the NEMA EIA Regulations will be addressed separately thereby demonstrating that all potential I&AP's were notified of the proposed development.

Table 6: Summary of the public participation process (Please see Appendix 5 for more information).

R41	**Posters, Advertisement & Notification letters**
(2) (a) (i)	Posters were displayed on Portions 2 and 3 of Farm No. 1100, Bonathaba including on the gate as viewed from Porseleinberg Road. Posters were also placed on: • Notice boards within the Bonathaba Offices • Notice Board at AgriMark in Hermon; • Notice Board at AgriMark in Wellington; • Placed on the wall at the entrance of Agrico in Wellington.
(ii)	N/A No feasible alternative site
(2) (b) (iii)	Notification letters were sent to the municipal ward councilor at the Swartland Municipality. Please see Appendix 5.2
(iv)	Notification letters were sent to the West Coast District Municipality and Swartland Local Municipality. Please see Appendix 5.2
(v)	Notification letters were sent to the following organs of state: • Department of Environment and Development Planning • BGCMA • Cape Nature • Heritage Western Cape • WC Department of Agriculture and Land Use Management Please see Appendix 5.2
(vi)	Notification letters were sent to neighbors Please see Appendix 5.2
(2) (c) (i)	An advert was placed in the Swartland Gazette on 28th July 2020. Please see Appendix 5.1
R42 & 34	**Register of I&AP**
(a), (b), (c), (d)	A register of interested and affected parties was opened and maintained and is available to any person requesting access to the register in writing.
R43	**Registered I&AP entitled to comments**
3	Potential I&APs were given 30 days to register and/ or comment during the initial public participation phase
R44	**I&AP to be recorded**
	A summary of issues raised by I&AP is addressed in the Comments and Response Report (C&R Report).

9. CONCLUSION AND RECOMMENDATIONS

A Scoping/ EIR process is being followed. Currently, the Application Form and Draft Scoping Report were submitted to the DEA&DP on the **7th April 2021**. The Draft Scoping Report was undertaken to present a description of proposed activities and to identify potential environmental and socioeconomic issues. Comments raised by I&APs will be presented during and incorporated in, the Scoping Phase (namely the Final Scoping Report) and will subsequently be addressed in the EIR phase. Comments raised by I&APs, authorities, the project team, as well specialists, based on baseline studies undertaken, will be included as part of the scoping phase.

This Final Scoping Report, being undertaken in terms of NEMA, summarises the process undertaken, considered alternatives, and comments raised by stakeholders. Positive and negative impacts of the proposed dam development can be summarised as follows:

Positive:

- The proposed dam development will contribute to the efficient use of a scarce resource as well as the existing water use right (Appendix 9);
- Creation of new employment opportunities and retainment of existing jobs;
- As per the Botanical Assessment, the proposed site for development has been previously disturbed/transformed by the previous cultivation of table grapes. Thus, vegetation associated with the site is not characteristic of the critically endangered Swartland Shale Renosterveld vegetation type and is therefore disturbed.
- The Botanical Specialist concluded that the proposed *development will have a low impact on any remaining natural veld, as the site and its surroundings are already disturbed and/ or transformed* (Appendix 8.1).
- The drainage lines present within the proposed development footprint is also considered disturbed due to intensive agricultural activities surrounding the two watercourses (namely non-perennial drainage lines);
- The proposed site for development does not fall within any CBA, however, the watercourses present within the proposed site for development are classified as an Ecological Support Area (ESA2). ESA2 are described as areas that are degraded but should be protected from further impact and ideally restored to a more natural state to support some ecological processes/ function. As per the Botanical Specialist, *very little or only remnants of the expected riparian vegetation were observed during the botanical assessment.* As per the Freshwater Assessment, the watercourses have low ecological functioning.
- As per the Botanical Assessment, it is considered highly unlikely that the development had or will contribute significantly to any of the following:
    - Significant loss of vegetation type and associated habitat.
    - Loss of ecological processes (e.g. migration patterns, pollinators, river function, etc.) due to construction and operational activities.
    - Loss of local biodiversity and threatened plant species.
    - Loss of ecosystem connectivity.
- The proposed dam development will fit into the visual character of the area.
- Effectively designed and managed farm dams can attract a variety of birds, insects, and animals to the area which can contribute to the conservation of biodiversity[15].

Negative:

- Loss of Agricultural land (approximately 10.4ha of existing crops) for the establishment of the proposed Bonathaba Dam;
- Loss of disturbed, indigenous vegetation (approximately 8.8ha) within the critically endangered Swartland Shale Renosterveld vegetation type;
- Loss of ESA2 functionality as two non-perennial watercourses (i.e. drainage lines) will be impacted;
- Further impact on the structural integrity and functioning of the particular type of watercourse, namely a non-perennial drainage line.

As a result of the above, the need for the following specialist studies was identified and was subsequently undertaken/ commenced:

- Botanical Assessment
- Freshwater Assessment
- NID

Any further issues raised during the Public Participation Process will be incorporated into the subsequent Final Scoping Report and will be addressed during the EIR phase. Findings from specialist studies will be detailed in the EIR, integrating the findings of the assessment phase of the EIA.

Based on the significance of the listed activities triggered and issues raised during the ongoing Public Participation Process, Pre-Application Scoping Phase, and Draft Scoping Phase, it is evident that an Environmental Impact Assessment (EIA) is required. ***In accordance with Regulation 22 of the NEMA EIA Regulations, 2014 (as amended) the competent authority (DEA&DP) must, within 43 days of receipt of the scoping report, accept the scoping report (with or without conditions) and advise the applicant to proceed with the tasks stipulated in the Final Scoping Report / Plan of Study, or refuse environmental authorization.*** Should the EIA process be authorized, significant issues identified and raised in the process to date will be addressed.