



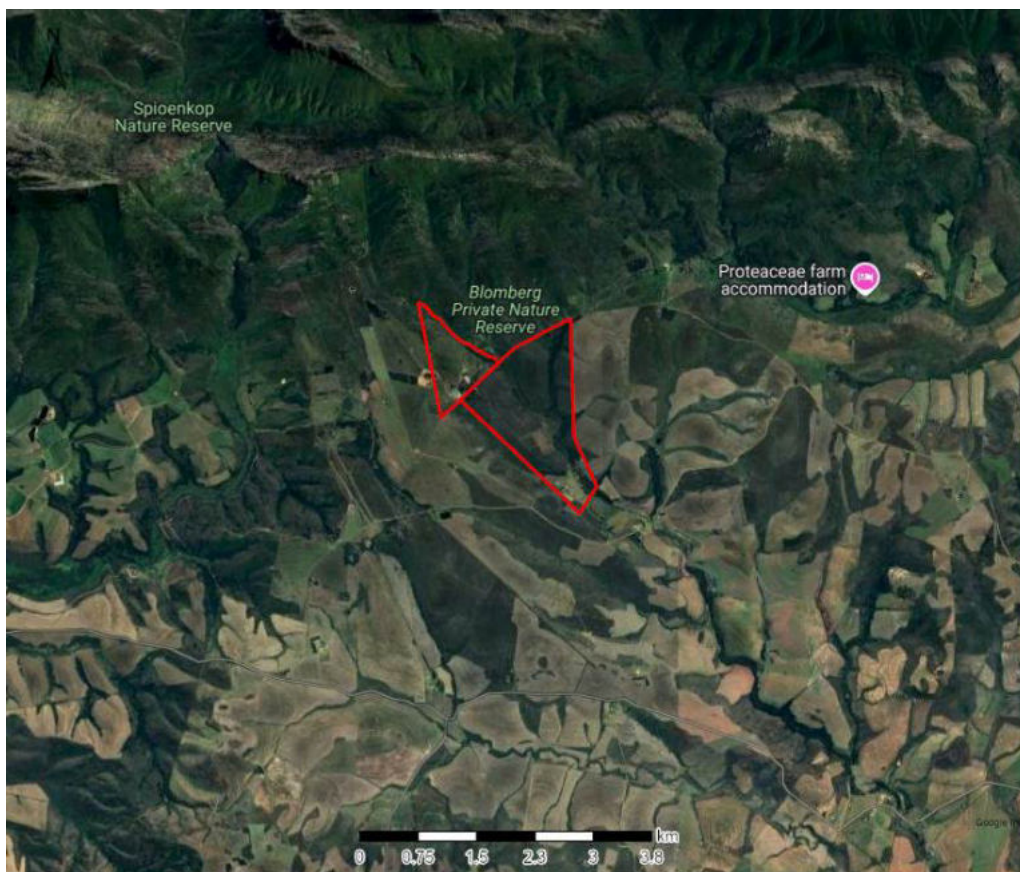
27 July 2026

DEADP Ref: 16/3/3/6/7/2/D5/8/0415/25

Document Version: Pre-Application Draft Scoping Report

Draft Scoping Report

THE PROPOSED CONSTRUCTION OF A DAM AND THE CLEARANCE OF INDIGENOUS VEGETATION FOR CULTIVATION ON PORTION 3 OF FARM AAN DE VALSCH RIVIER 186 AND FARM HOREB 149, RIVERSDALE, WESTERN CAPE.



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EXECUTIVE SUMMARY

A. INTRODUCTION:

Sion Capital PTY Ltd. (The Applicant) has appointed PHS Consulting as the Independent Environmental Assessment Practitioner (EAP), to undertake an Environmental Impact Assessment (EIA) Process, required by law, for the construction of a dam and the clearance of indigenous vegetation for cultivation on Portion 3 of Farm Aan De Valsch Rivier 186 and Farm Horeb 149, 20 km northeast of Riversdale, Western Cape (SG21 Code: C06400000000018600003 and C06400000000014900000) (34° 00' 30.74" S | 21° 27' 09.21" E).

The study area comprises two properties, Portion 3 of Farm Aan De Valsch Rivier 186 (±202.81ha) and Farm Horeb 149 (±61.86ha) (Figure 1) that covers an area of approximately 264.67 hectares. The site lies along the base of the Langeberg Mountains to the east of the town of Riversdale (Hessequa Municipality) which is approximately 20km away. The Vals Rivier flows through the site. No major roads occur in the area and a dirt road between Riversdale and Herbertsdale are the main access for the farms in this area. The current landuse of the farms are mostly undeveloped/ cultivated, with varying nodes of farm buildings. A number of small farm roads occur on the properties.

The application relates to the construction of a dam and the clearing of approximately 52.5 hectares of largely previously worked agricultural lands that have not been ploughed for more than ten years which is subject to Environmental Authorisation by Department of Environmental Affairs and Development Planning.

B. SITE ENVIRONMENTAL ATTRIBUTES:

According to the Vegetation Map of South Africa, Lesotho and Swaziland (SANBI, 2024) (VEGMAP), the main vegetation type occurring in the study area is Swellendam Silcrete Fynbos (ENDANGERED). South Langeberg Sandstone Fynbos is mapped in the far north part of the site but was not found within any of the proposed developments. However, elements, specifically the substrates, associated with the adjacent Garden Route Shale Fynbos (ENDANGERED) were found on the site. The greater part of all development components is mapped as a CBA 1 Terrestrial area, with limited CBA 2 Terrestrial portions indicated.

The vegetation on the site varies in condition from Transformed to Intact condition. However, the greater part of the site has been previously farmed. It appears that the study area has undergone periodic bush cutting and has likely been grazed extensively. The current condition of the vegetation on the site is difficult to determine in areas that have been recently bush-cut. However, in a number of places, adjacent vegetation appears to have been previously cut and provides a point of reference. There are some intact areas that have not been bush-cut and these suggest that the current farming practice has a slightly detrimental effect on the species diversity, and therefore also ecological integrity of the site. The greater part of the site supports Fynbos, and only the most southerly part of the site supports more typically renosterveld vegetation (not included in the proposed development components).

Three SCC and one protected tree species were recorded on the site during the site visit and screening phase. One of these species, the Near Threatened *Protea coronata* has since been re-classified as Least Concern.

Several wetlands including large hillslope seep and unchannelled valley-bottom wetland systems have been identified within the property boundaries, most of which are in a largely natural ecological condition. The wetlands are therefore of high biodiversity and ecological importance, particularly considering that they are mapped as CBAs and occur within a SWSA.

From a Faunal perspective several animal SCC flagged were assessed, namely:

- Six bird species:
 - Black Harrier (*Circus maurus*): High sensitivity
 - African Marsh Harrier (*Circus ranivorus*): High sensitivity
 - Denham's Bustard (*Neotis denhami*): High sensitivity
 - Martial Eagle (*Polemaetus bellicosus*): High sensitivity
 - Crowned eagle (*Stephanoaetus coronatus*): Medium sensitivity
 - Knysna Warbler (*Bradypterus sylvaticus*): Medium sensitivity
- Two insect species:
 - Yellow-winged Agile Grasshopper (*Aneuryphymus montanus*): Medium Sensitivity
 - Dickson's Sylph butterfly (*Tsitana dicksoni*): Medium Sensitivity

Several areas of faunal sensitivity were identified that included the river and associated wetland habitats, good quality fynbos habitat on the western ridge, and some northern and eastern areas on Farm 149. Most concern was associated with Denham's bustard, where parts of the upper ridge area of open habitat offered ideal habitat for this bird SCC, both in terms of foraging and breeding. This species was also seen flying over the project site and foraging in adjacent open areas. Low sensitivity areas were associated with low-lying historically disturbed areas and most of the eastern areas of the farm Aan De Valsch Rivier.

A portion of the site is also located in the Herbertsdale-Gouritsmond Protected Agricultural Area, demarcated in terms of the Preservation and Development of Agricultural Land Act (PDALA, Act 39 of 2024).

C. ACTIVITY PROPOSAL:

The preferred proposal involves the proposed expansion of the agricultural development within the site through the cultivation of virgin soil and the construction of a dam for agricultural purposes. The proposed cultivation areas total ± 52.5 hectares and involves:

- Pocket 1: (± 7ha) – Grazing
- Pocket 2: (± 8ha) – Grazing
- Pocket 3: (± 11.5ha) - Avocado orchard
- Pocket 4: (± 20 ha) - Mostly Avo Orchard and/ or other Fruit Trees / Cash Crops
- Pocket 5: (± 6ha) - Cover / Cash Crops

A new dam with a maximum ±34 235m³ storage capacity will be constructed. Numerous dam options are being considered:

Dam Option 1: (Applicant & Engineers Preferred Option)

- This position was chosen as it was the most suitable sub soil with a very high clay content. No additional sealing is required
- Cost to build this dam estimated: R2 320 000
- Water holding capacity: $\pm 33\,700\text{m}^3$; Wall height: 6.5m

Dam Option 2:

- This position has a high concentration of rock and stone. This dam must be sealed with a membrane.
- The cost of the: a) ground works will be: R2 797 180; b) membrane: R1 050 000
- Water holding capacity: $\pm 34\,235\text{m}^3$; Wall height: 8m

Dam Option 3:

- This position has also got a high volume of rock and very little Clay. This dam will have to be sealed with a membrane
- The cost of the a) ground works will be: R2 500 000; b) membrane: R1 050 000.00
- Water holding Capacity: $\pm 29\,500\text{m}^3$; Wall height: 8.5m

D. ENVIRONMENTAL REQUIREMENTS:

The NEMA makes provision for the identification and assessment of activities that are potentially detrimental to the environment and which require authorisation 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). According to the list of activities identified under the EIA Regulations, by Listing Notice 1 (GN. R. 327), Listing Notice 2 (GN. R. 325), and Listing Notice 3 (GN. R. 324), published in Gazette No. 40772 on the 07 April 2017. The following activities are triggered which requires environmental authorisation:

Listing Notice 1 (GN No. R327): BASIC ASSESSMENT

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;

(b) in front of a development setback; or

(c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse;

excluding—

(aa) the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour;

(bb) where such development activities are related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies;

- (cc) activities listed in activity 14 in Listing Notice 2 of 2014 or activity 14 in Listing Notice 3 of 2014, in which case that activity applies;
- (dd) where such development occurs within an urban area;
- (ee) where such development occurs within existing roads, road reserves or railway line reserves; or
- (ff) the development of temporary infrastructure or structures where such infrastructure or structures will be removed within 6 weeks of the commencement of development and where indigenous vegetation will not be cleared.

Listing Notice 2 (GN No. R325): SCOPING/ EIA

15 - The clearance of an area of 20 hectares or more of indigenous vegetation, excluding 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.

16 - The development of a dam where the highest part of 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 highwater mark of the dam covers an area of 10 hectares or more.

Listing Notice 3 (GN No. R324): BASIC ASSESSMENT

12 -The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan.

In the Western Cape

- i. Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004;
- ii. Within critical biodiversity areas identified in bioregional plans;
- iii. Within the littoral active zone or 100 metres inland from high water mark of the sea or an estuarine functional zone, whichever distance is the greater, excluding where such removal will occur behind the development setback line on erven in urban areas;
- iv. On land, where, at the time of the coming into effect of this Notice or thereafter such land was zoned open space, conservation or had an equivalent zoning; or
- v. On land designated for protection or conservation purposes in an Environmental Management Framework adopted in the prescribed manner, or a Spatial Development Framework adopted by the MEC or Minister.

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.

In the Western Cape [Outside urban areas]:

- (aa) A protected area identified in terms of NEMPAA, excluding conservancies;
- (bb) National Protected Area Expansion Strategy Focus areas;
- (cc) World Heritage Sites;
- (dd) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority;
- (ee) Sites or areas listed in terms of an international convention;
- (ff) Critical biodiversity areas or ecosystem service areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;
- (gg) Core areas in biosphere reserves; or
- (hh) Areas on the estuary side of the development setback line or in an estuarine functional zone where no such setback line has been determined.

E. PUBLIC PARTICIPATION PROCESS

Tasks to be undertaken as part of the Scoping Phase:

- Interested and Affected Parties (I&APs) will be identified throughout the process.
- Notification letters were posted to all identified I&APs informing them of the activity and the opportunity to comment. Neighbouring landowners were requested to inform all those residing on their farms of the application and the opportunity to comment.
- A site notice was erected at the entrance to the farm.
- An advertisement was placed in the Suid-Kaap FORUM.
- A copy of the Scoping Report was made available on our company website www.phsconsulting.co.za
- A 30-day commenting period was allowed.
- All comments received during this commenting period will be included in the Final Scoping Report which will be circulated to registered I&APs, Organs of State and State Departments for a further 30-day commenting period in the statutory process.
- A Comments and Response Table will also be maintained and included.

Tasks to be undertaken as part of the EIA Phase:

- Compile Draft Environmental Impact Report (EIR) for public comment based on specialist information;
- Submit copies of the Draft EIR to DEA&DP and relevant State Departments and Organs of State and notify them of the commenting period;
- Notify Registered I&APs of the opportunity to comment on the EIR;
- Make the EIR (including EMPr) available for a 30-day commenting period;
- Receive comments on the EIR;
- Preparation of the EIR for submission to DEA&DP - to include the proof of the Public Participation Process, comments received and our responses to these comments.

F. SPECIALIST STUDIES

The following Specialist Studies will be undertaken:

- Botanical (or Terrestrial Biodiversity) Impact Assessment (Including Plant Species Assessment)
- Aquatic Biodiversity (or Freshwater) Impact Assessment
- Faunal (or Animal Species) Impact Assessment
- Agricultural Compliance Statement
- Hydrological Study of Surface Water Runoff
- Geotechnical Study

G. CONCLUSION:

The Scoping exercise was undertaken in order to present concept proposals to all potential Interested and Affected Parties (I&AP's) and identify potential environmental issues and concerns regarding the proposed development. This Scoping Report summarises the process undertaken to date, and highlights further steps required to complete the Environmental Impact Assessment (EIA). The report presents and assesses the alternatives considered and uses the comprehensive baseline assessments as planning tools to guide the planning of the proposed development, in order to identify all potential opportunities and constraints onsite and ensure minimal impacts occur.

The proposed agricultural activities are located on an operational farm within an agricultural area, in fact, with a large portion of the site falling within the Herbertsdale-Gouritsmond Protected Agricultural Area, demarcated in terms of the Preservation and Development of Agricultural Land Act (PDALA, Act 39 of 2024). This application proposes expansion and intensification of agricultural land use and is thus in-line with this demarcation. Agriculture is standard practice within the area and therefore little impact will be caused to people's health and wellbeing (in terms of noise, odours, visual character, sense of place or socio-economic conditions) as a result of this activity. The location of the site also limits the impacts that the activity will have on people as the site is located within a rural setting.

The construction of the dam will assist with water security for the cultivation areas to ensure reliable irrigation supply, especially during dry periods. Water storage also helps farmers adapt to climate variability and reduced rainfall predictability. Sustained water supply would improve farm yields and income stability. Economic viability of farming operations in turn supports job creation in the form of seasonal and permanent farm labour.

According to the Hydrologist, the runoff estimated in this study shows that the demand of 210 000 m³ per annum represents some 7% of the estimated surface water discharge available at the farm. This will be sufficient to sustain the increased surface water requirement on the properties under discussion and allow for some 93% of the discharge to be still available to the downstream drainage system.

According to the Botanical Specialist, most of study area is characterized by vegetation that has been or is currently used for agriculture. The typical agricultural activities are bush-cutting the

Fynbos and livestock grazing. This type of land management favours species that respond well to cutting, including shrubs, graminoids and bulbs. Species that would not persist under these conditions are those that regrow from seeds only (i.e. non-resprouters) and require a few years to mature enough to produce seeds (e.g. reseeding proteas). This management regime therefore allows the indigenous vegetation to persist but reduces the species diversity.

The presence of threatened vegetation types on the site indicates that allowing some areas to remain natural is very important to ensure species and ecological processes persist on the subject properties. The numerous drainage lines and adjacent areas are all important and should be excluded from development, along with a suitable buffer. The subject properties are large and considering that the suggested No-Go areas have been observed, indigenous vegetation and ecological processes will persist on the site.

The Faunal Specialists identified several areas of faunal sensitivity that included the river and associated wetland habitats, good quality fynbos habitat on the western ridge, and some northern and eastern areas on farm 149. Most concern was associated with Denham's bustard, where parts of the upper ridge area of open habitat offered ideal habitat for this bird SCC, both in terms of foraging and breeding. This species was also seen flying over the project site and foraging in adjacent open areas. Low sensitivity areas were associated with low-lying historically disturbed areas and most of the eastern areas of the farm Aan De Valsch Rivier. It was suggested by Colville and Cohen (2025) that any agricultural expansion be focussed in the low sensitive areas considering the already high disturbance in several of these areas.

Overall, Colville and Cohen (2025) indicated that the proposed development is unlikely to generate significant negative impacts on any of the faunal SCC flagged, based on the condition that the sensitive areas (river and associated wetland habitat, western ridge and fynbos habitat, and northern fynbos areas of farm 149) are excluded.

From a freshwater perspective, several wetlands including large hillslope seep and unchannelled valley-bottom wetland systems have been identified within the property boundaries, most of which are in a largely natural ecological condition. The wetlands are therefore of high biodiversity and ecological importance, particularly considering that they are mapped as CBAs and occur within a SWSA. The study area falls at the head of an agriculturally intensive farming area. Existing cumulative impacts on water resources are significant and are related primarily to loss of wetland and riparian habitat, and nonpoint source pesticide and nutrient pollution. Agriculture in the area is primarily dryland and consequently there is not significant pressure on river flows in this part of the catchment. The proposed layout has avoided wetland habitat and 30 m buffers have been recommended to protect these wetland areas and mitigate against nonpoint source pollution.

XXX

1. INTRODUCTION

1.1 BACKGROUND

Sion Capital PTY Ltd. (The Applicant) has appointed PHS Consulting as the Independent Environmental Assessment Practitioner (EAP), to undertake an Environmental Impact Assessment (EIA) Process, required by law, for the construction of a dam and the clearance of indigenous vegetation for cultivation on Portion 3 of Farm Aan De Valsch Rivier 186 and Farm Horeb 149, 20 km northeast of Riversdale, Western Cape (SG21 Code: C06400000000018600003 and C06400000000014900000) (34° 00' 30.74" S | 21° 27' 09.21" E).

The study area comprises two properties, Portion 3 of Farm Aan De Valsch Rivier 186 (±202.81ha) and Farm Horeb 149 (±61.86ha) (**Figure 1**) that covers an area of approximately 264.67 hectares. The site lies along the base of the Langeberg Mountains to the east of the town of Riversdale (Hessequa Municipality) which is approximately 20km away. The Vals Rivier flows through the site. No major roads occur in the area and a dirt road between Riversdale and Herbertsdale are the main access for the farms in this area. The current landuse of the farms are mostly undeveloped/ cultivated, with varying nodes of farm buildings. A number of small farm roads occur on the properties.

The application relates to the construction of a dam and the clearing of approximately 52.5 hectares of largely previously worked agricultural lands that have not been ploughed for more than ten years which is subject to Environmental Authorisation by Department of Environmental Affairs and Development Planning.

According to the Vegetation Map of South Africa, Lesotho and Swaziland (SANBI, 2024) (VEGMAP), the main vegetation type occurring in the study area is Swellendam Silcrete Fynbos (ENDANGERED). South Langeberg Sandstone Fynbos is mapped in the far north part of the site but was not found within any of the proposed developments. However, elements, specifically the substrates, associated with the adjacent Garden Route Shale Fynbos (ENDANGERED) were found on the site. The greater part of all development components is mapped as a CBA 1 Terrestrial area, with limited CBA 2 Terrestrial portions indicated.

The vegetation on the site varies in condition from Transformed to Intact condition. However, the greater part of the site has been previously farmed. It appears that the study area has undergone periodic bush cutting and has likely been grazed extensively. The current condition of the vegetation on the site is difficult to determine in areas that have been recently bush-cut. However, in a number of places, adjacent vegetation appears to have been previously cut and provides a point of reference. There are some intact areas that have not been bush-cut and these suggest that the current farming practice has a slightly detrimental effect on the species diversity, and therefore also ecological integrity of the site. The greater part of the site supports Fynbos, and only the

most southerly part of the site supports more typically renosterveld vegetation (not included in the proposed development components).

Three SCC and one protected tree species were recorded on the site during the site visit and screening phase. One of these species, the Near Threatened *Protea coronata* has since been re-classified as Least Concern.

Several wetlands including large hillslope seep and unchannelled valley-bottom wetland systems have been identified within the property boundaries, most of which are in a largely natural ecological condition. The wetlands are therefore of high biodiversity and ecological importance, particularly considering that they are mapped as CBAs and occur within a SWSA.

From a Faunal perspective several animal SCC flagged were assessed, namely:

- Six bird species:
 - Black Harrier (*Circus maurus*): High sensitivity
 - African Marsh Harrier (*Circus ranivorus*): High sensitivity
 - Denham's Bustard (*Neotis denhami*): High sensitivity
 - Martial Eagle (*Polemaetus bellicosus*): High sensitivity
 - Crowned eagle (*Stephanoaetus coronatus*): Medium sensitivity
 - Knysna Warbler (*Bradypterus sylvaticus*): Medium sensitivity
- Two insect species:
 - Yellow-winged Agile Grasshopper (*Aneuryphymus montanus*): Medium Sensitivity
 - Dickson's Sylph butterfly (*Tsitana dicksoni*): Medium Sensitivity

Several areas of faunal sensitivity were identified that included the river and associated wetland habitats, good quality fynbos habitat on the western ridge, and some northern and eastern areas on Farm 149. Most concern was associated with Denham's bustard, where parts of the upper ridge area of open habitat offered ideal habitat for this bird SCC, both in terms of foraging and breeding. This species was also seen flying over the project site and foraging in adjacent open areas. Low sensitivity areas were associated with low-lying historically disturbed areas and most of the eastern areas of the farm Aan De Valsch Rivier.

A portion of the site is also located in the Herbertsdale-Gouritsmond Protected Agricultural Area, demarcated in terms of the Preservation and Development of Agricultural Land Act (PDALA, Act 39 of 2024).

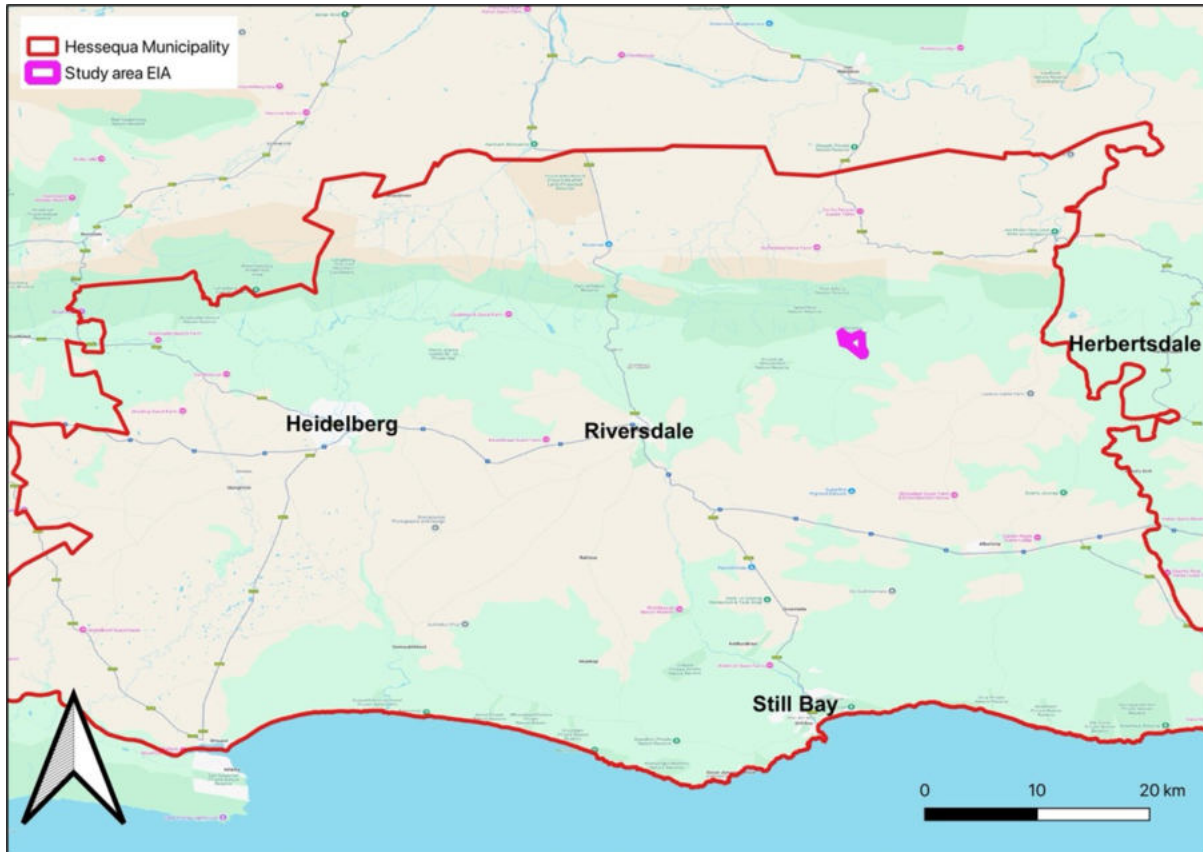


Figure 1: The location of the site (purple) within the context of Hessequa municipality and closest towns (Greg Nicolson, 2025).

1.2 TERMS OF REFERENCE

The scope of the study has been determined with reference to the requirements of the relevant legislation, namely the NEMA EIA Regulations. As this activity triggers a full EIA process the main responsibilities of the environmental consultant would include but not be limited to, the following:

- Submission of the required Application Form (s) to the relevant competent authority, in order to register the proposed project, and obtain the applicable reference number;
- Consultation with the relevant authorities and stakeholders, through the EIA public participation process, to ensure that identification of relevant issues or concerns are undertaken. Ensure the assessment of and response to the issues that are raised;
- Identify and co-ordinate the appointment of the relevant Specialists and their respective Impact Assessments;
- Compilation of the required Scoping (including the Plan of Study for the EIA) and Environmental Impact Reports, describing the proposed activity, the affected environment, the potential environmental impacts as well as the cumulative

impacts, the motivation behind the application (need and desirability), relevant policies and legislation, the detail of the public participation process followed, identified potential alternatives (including the advantages and disadvantages), aspects that require further study (Scoping) and the findings of the specialist studies and recommendations and/or mitigations measures to be implemented during construction and operation (EIA);

- Compilation of the required Environmental Management Programme (EMPr) which describes mitigation measures in detail, identifying specific individuals or organizations responsible for undertaking specific tasks to ensure that impacts on the environment are minimized during planning, construction, operational and decommissioning (where applicable) activities.
- Submission of the above-mentioned documents to the public for comment (through the advertisement of the application as per the EIA Regulations) and to the relevant competent authorities for a decision.

The EIA process will look at the impacts of the proposals on the environment and assess the significance of these, as well as propose mitigation measures, as required, to either avoid certain impacts or reduce anticipated impacts to acceptable levels. This is to ensure that the development makes “equitable and sustainable use of environmental and natural resources for the benefit of present and future generations”.

1.3 Environmental Assessment Practitioners (EAPs)

The role of the EAP is to manage the EIA application on behalf of the Applicant. The EAP must adhere to all relevant legislation and guidelines, ensuring that the reports contain all the necessary and relevant information required by the competent authority to make a decision. It is the responsibility of the EAP to undertake the EIA process in an objective, appropriate and responsible manner.

PAUL SLABBERT (Managing Member) graduated from the Potchefstroom University in 1995 with an honours degree B Art Et Scien. His passion for environmental, heritage & land-use planning with knowledge of associated management strategies enables him to facilitate all role players and to implement workable policies. His experience in rural and urban conservation with the emphasis on environmental impact and management, focusing on sustainable development, enabled him to have various publications. He has hands-on expertise in heritage, conservation and recreation discipline with the emphasis on creating economic and employment opportunities. With sufficient practical experience in terms of the criteria of the Interim Certificate Board for Environmental Assessment Practitioners of South Africa (EAPASA) for registration, Paul was registered as an Environmental Assessment Practitioner. He is also a member of the International Association for Impact Assessment (IAIA), Corporate Member of the

South African Planning Institute (SAPI) and accredited with the Association of Professional Heritage Practitioners – Western Cape (APHP).

JENNA THERON (Senior Environmental Consultant) graduated from Stellenbosch University with a Bachelor's Degree in International Studies (2005) and a Master's Degree in Cultural Tourism and Heritage Studies (2007). Jenna has experience in the field of environmental and heritage planning since interning for the CoCT's Environmental and Heritage Department in 2008 and thereafter working as an Environmental Assessment Practitioner since 2009 to the present. With sufficient practical experience in terms of the criteria of the Interim Certificate Board for Environmental Assessment Practitioners of South Africa (EAPASA) for registration, Jenna was registered as an Environmental Assessment Practitioner. She is also a member of the International Association for Impact Assessment (IAIA) and an accredited Associate member with the Association of Professional Heritage Practitioners – Western Cape (APHP).

Please refer to **Appendix A** for EAP CV.

2. POLICY AND LEGISLATIVE CONTEXT

2.1 THE CONSTITUTION OF THE REPUBLIC OF SOUTH AFRICA

The “*environmental guarantee*” clause in the Bill of Rights section of the Constitution of the Republic of South Africa (Act No. 108 of 1996), Section 24, states that every person shall have the right to the following:

(a) An environment that is not harmful to their health nor well being; and

(b) To have that environment protected for the benefit of present and future generations, through reasonable legislative and other measures, which: prevents pollution and ecological degradation; promotes conservation; and secures justifiable economic and social development and use of natural resources while promoting justifiable economic and social development.

2.2 NATIONAL ENVIRONMENTAL MANAGEMENT POLICY FOR SOUTH AFRICA

South Africa has developed its national environmental policy through a comprehensive participatory process known as the Consultative National Environmental Policy Process (CONNEPP). CONNEPP’s purpose was to give all stakeholders in South Africa the chance to contribute to developing the new environmental policy.

The Draft White Paper on Environmental Management Policy for South Africa was submitted to Cabinet and Parliament in June and July 1997 and published in the Government Gazette on 28 July 1997 (No. 18164) for public comment. The final White Paper was published in the Government Gazette on 15 May 1998 (No. 18894) and the National Environmental Management Act (NEMA), 107 of 1998 was published in the Government Gazette on 27 November 1998 (No. 19519). NEMA was then amended by the National Environmental Management Amendment Act, 2008 (Act No. 62 of 2008), which was published in the Government Gazette on 9 January 2009 (No. 31789) and which came into effect on 1 May 2009.

The vision of this environmental management policy is one of a society in harmony with its environment. It emphasizes that integrated and sustainable management of the environment, now and in the future, is the essential basis of sustainable development in all areas of human activity. Department policies, plans, programmes and activities in all sectors that do not address environmental concerns, cannot claim to be sustainable. The Government’s goal is to lay the foundations for sustainable development based on integrated and holistic environmental management practices and processes.

2.3 NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT 107 OF 1998), AS AMENDED

The National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA), provides for co-operative environmental governance by establishing principles for decision making on matters affecting the environment, institutions that will promote co-operative governance and procedures for co-ordinating environmental functions exercised by organs of state; and to provide for matters connected therewith.

Section 23 (2) of NEMA refers to the general objectives of integrated environmental management and makes provision for regulations that should be followed in an environmental impact assessment process.

Sections 23 (2):

(a) promote the integration of the principles of environmental management set out in section 2 into the making of all decisions which may have a significant effect on the environment;

(b) identify, predict and evaluate the actual and potential impact on the environment, socio-economic conditions and cultural heritage, the risks and consequences and alternatives and options for mitigation of activities, with a view to minimising negative impacts, maximising benefits, and promoting compliance with the principles of environmental management set out in section 2;

(c) ensure that the effects of activities on the environment receive adequate consideration before actions are taken in connection with them;

(d) ensure adequate and appropriate opportunity for public participation in decisions that may affect the environment;

(e) ensure the consideration of environmental attributes in management and decisionmaking which may have a significant effect on the environment; and

(f) identify and employ the modes of environmental management best to ensuring that a particular activity is pursued in accordance with the principles of environmental management set out in section 2.

Section 2 of NEMA refers to the National Environmental Management Principles. The principles, set out below, amongst others, serve as the general framework within which environmental management and implementation plans must be formulated as well as to guide the interpretation, administration and implementation of this Act, and any other law concerned with the protection or management of the environment. Environmental principles guide all stakeholders in the manner in which they manage the environment. As stated in NEMA, “Environmental management must place people and their needs at the forefront of its concern, and serve their physical, psychological, developmental, cultural and social interests equitably.” However, development must at the same time be socially, environmentally and economically sustainable.

Sustainable development is therefore key to any EIA process and requires the consideration of various aspects including the following, as per the principles of environmental management, which have been kept at the forefront of this application:

Section 2 (4):

(a) Sustainable development requires the consideration of all relevant factors including the following:

(i) That the disturbance of ecosystems and loss of biological diversity are avoided, or, where they cannot be altogether avoided, are minimised and remedied;

(ii) that pollution and degradation of the environment are avoided, or, where they cannot be altogether avoided, are minimised and remedied;

(iii) that the disturbance of landscapes and sites that constitute the nation's cultural heritage is avoided, or where it cannot be altogether avoided, is minimised and remedied;

(iv) that waste is avoided, or where it cannot be altogether avoided, minimised and re-used or recycled where possible and otherwise disposed of in a responsible manner;

(v) that the use and exploitation of non-renewable natural resources is responsible and equitable, and takes into account the consequences of the depletion of the resource;

(vi) that the development, use and exploitation of renewable resources and the ecosystems of which they are part do not exceed the level beyond which their integrity is jeopardised;

(vii) that a risk-averse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions; and

(viii) that negative impacts on the environment and on people's environmental rights be anticipated and prevented, and where they cannot be altogether prevented, are minimised and remedied.

(b) Environmental management must be integrated, acknowledging that all elements of the environment are linked and interrelated, and it must take into account the effects of decisions on all aspects of the environment and all people in the environment by pursuing the selection of the best practicable environmental option.

(c) Environmental justice must be pursued so that adverse environmental impacts shall not be distributed in such a manner as to unfairly discriminate against any person, particularly vulnerable and disadvantaged persons.

(d) Equitable access to environmental resources, benefits and services to meet basic human needs and ensure human well-being must be pursued and special measures may be taken to ensure access thereto by categories of persons disadvantaged by unfair discrimination.

(e) Responsibility for the environmental health and safety consequences of a policy, programme, project, product, process, service or activity exists throughout its life cycle.

- (f) The participation of all interested and affected parties in environmental governance must be promoted, and all people must have the opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation, and participation by vulnerable and disadvantaged persons must be ensured.*
- (g) Decisions must take into account the interests, needs and values of all interested and affected parties, and this includes recognising all forms of knowledge, including traditional and ordinary knowledge.*
- (h) Community wellbeing and empowerment must be promoted through environmental education, the raising of environmental awareness, the sharing of knowledge and experience and other appropriate means.*
- (i) The social, economic and environmental impacts of activities, including disadvantages and benefits, must be considered, assessed and evaluated, and decisions must be appropriate in the light of such consideration and assessment.*
- (j) The right of workers to refuse work that is harmful to human health or the environment and to be informed of dangers must be respected and protected.*
- (k) Decisions must be taken in an open and transparent manner, and access to information must be provided in accordance with the law.*
- (o) The environment is held in public trust for the people, the beneficial use of environmental resources must serve the public interest and the environment must be protected as the people's common heritage.*
- (p) The costs of remedying pollution, environmental degradation and consequent adverse health effects and of preventing, controlling or minimising further pollution, environmental damage or adverse health effects must be paid for by those responsible for harming the environment.*
- (q) The vital role of women and youth in environmental management and development must be recognised and their full participation therein must be promoted.*
- (r) Sensitive, vulnerable, highly dynamic or stressed ecosystems, such as coastal shores, estuaries, wetlands, and similar systems require specific attention in management and planning procedures, especially where they are subject to significant human resource usage and development pressure.*

Furthermore, the NEMA makes provision for the identification and assessment of activities that are potentially detrimental to the environment and which require authorisation 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). According to the list of activities identified under the EIA Regulations, by Listing Notice 1 (GN. R. 327), Listing Notice 2 (GN. R. 325), and Listing Notice 3 (GN. R. 324), published in

Gazette No. 40772 on the 07 April 2017. The following activities are triggered which requires environmental authorisation:

Listing Notice 1 (GN No. R327): BASIC ASSESSMENT

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;

(b) in front of a development setback; or

(c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse;

excluding—

(aa) the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour;

(bb) where such development activities are related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies;

(cc) activities listed in activity 14 in Listing Notice 2 of 2014 or activity 14 in Listing Notice 3 of 2014, in which case that activity applies;

(dd) where such development occurs within an urban area;

(ee) where such development occurs within existing roads, road reserves or railway line reserves; or

(ff) the development of temporary infrastructure or structures where such infrastructure or structures will be removed within 6 weeks of the commencement of development and where indigenous vegetation will not be cleared.

Listing Notice 2 (GN No. R325): SCOPING/ EIA

15 - The clearance of an area of 20 hectares or more of indigenous vegetation, excluding 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.

16 - The development of a dam where the highest part of 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 highwater mark of the dam covers an area of 10 hectares or more.

Listing Notice 3 (GN No. R324): BASIC ASSESSMENT

12 -The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan.

Western Cape

- i. Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004;*
- ii. Within critical biodiversity areas identified in bioregional plans;*
- iii. Within the littoral active zone or 100 metres inland from high water mark of the sea or an estuarine functional zone, whichever distance is the greater, excluding where such removal will occur behind the development setback line on erven in urban areas;*
- iv. On land, where, at the time of the coming into effect of this Notice or thereafter such land was zoned open space, conservation or had an equivalent zoning; or*
- v. On land designated for protection or conservation purposes in an Environmental Management Framework adopted in the prescribed manner, or a Spatial Development Framework adopted by the MEC or Minister.*

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.

Western Cape - Outside urban areas:

(aa) A protected area identified in terms of NEMPAA, excluding conservancies;

(bb) National Protected Area Expansion Strategy Focus areas;

(cc) World Heritage Sites;

(dd) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority;

(ee) Sites or areas listed in terms of an international convention;

- (ff) Critical biodiversity areas or ecosystem service areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;*
- (gg) Core areas in biosphere reserves; or*
- (hh) Areas on the estuary side of the development setback line or in an estuarine functional zone where no such setback line has been determined.*

Lastly, section 28 (1) of NEMA (Duty of Care) states that: “Every person who causes, has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring...”

2.4 NATIONAL ENVIRONMENTAL MANAGEMENT: BIODIVERSITY ACT, 2004 (ACT 10 OF 2004)

The National Environmental Management Biodiversity Act, 2004 (Act No. 10 of 2004) as amended, provides for the management and conservation of South Africa’s biodiversity within the framework of the National Environmental Management Act, 1998; the protection of species and ecosystems that warrant national protection; the sustainable use of indigenous biological resources; the fair and equitable sharing of benefits arising from bio-prospecting involving indigenous biological resources; the establishment and functions of a South African National Biodiversity Institute; and for matters connected therewith.

In terms of Chapter 4 of the Above Act:

52. (1) (a) The Minister may, by notice in the Gazette, publish a national list of ecosystems that are threatened and in need of protection.

(b) An MEC for environmental affairs in a province may, by notice in the Gazette, publish a provincial list of ecosystems in the province that are threatened and in need of protection.

(2) The following categories of ecosystems may be listed in terms of subsection:

(a) critically endangered ecosystems, being ecosystems that have undergone severe degradation of ecological structure, function or composition as a result of human intervention and are subject to an extremely high risk of irreversible transformation;

(b) endangered ecosystems, being ecosystems that have undergone degradation of ecological structure, function or composition as a result of human intervention, although they are not critically endangered ecosystems;

(c) vulnerable ecosystems, being ecosystems that have a high risk of undergoing significant degradation of ecological structure, function or composition as a result of

human intervention, although they are not critically endangered ecosystems or endangered ecosystems; and

(d) protected ecosystems, being ecosystems that are of high conservation value or of high national or provincial importance, although they are not listed in terms of paragraphs (a), (b) or (c).

(3) A list referred to in subsection (1) must describe in sufficient detail the location of each ecosystem on the list.

53 (1) The Minister may, by notice in the Gazette, identify any process or activity in a listed ecosystem as a threatening process.

(2) A threatening process, identified in terms of subsection (1) must be regarded as a specified activity contemplated in section 24(2)(b) of the National Environmental Management Act and a listed ecosystem must be regarded as an area identified for the purpose of that section.

2.5 NATIONAL HERITAGE RESOURCES ACT, 1999 (ACT 25 OF 1999)

The National Heritage Resources Act, 2005 (Act 25 of 1999) (“NHRA”), provides for the management of national heritage resources, to set norms and maintain national standards for the management of heritage resources in South Africa, and to protect heritage resources of national significance, so that heritage resources may be bequeathed to future generations. Heritage Western Cape (HWC) is the provincial competent authority in this instance.

As the proposed development possibly triggered S38 (1) (c) “Any development or activity that will change the character of a site” – “(i) exceeding 5 000m² in extent” in terms of the NHRA, a Notice of Intent to Develop (NID) and Heritage Screener was submitted to HWC.

HWC noted that “*the proposed cultivation and dam installation on Farm 186 Portion 3 and Farm 149, Aan de Valsch Rivier and Horeb, Riversdale does not trigger Section 38 of the National Heritage Resources Act no. 25 (1999) and therefore not applicable in terms of impacts to the heritage resource*” (**Appendix B**).

2.6 THE NATIONAL WATER ACT, 1998 (ACT 36 OF 1998) AS AMENDED

National Water Act (NWA), 1998 (Act 36 of 1998) is the primary statute providing the legal basis for water management in South Africa and has to ensure ecological integrity, economic growth and social equity when managing and using water. The fundamental objective of the National Water Act (Act 36 of 1998) is to ensure the protection of the aquatic ecosystems of South Africa’s water resources. The NWA includes provisions requiring that a water use license be issued by the Department of Water & Sanitation

(DWS) before a landowner engages in any activity defined as a water use in terms of the NWA). The Breede-Olifants Catchment Management Agency (BOCMA) is the implementing agency within this region. It is necessary to authorize water use:

- To protect water resources;
- To promote equitable access to water;
- To facilitate social and economic development;
- To protect aquatic and associated ecosystems and their biological diversity; and
- To meet international obligations.

The proponent has initiated the water use license application (WULA) process regarding the proposed S21 (a) for the abstraction of surface water; S21 (b) for storing water; S21(c) and (i) for the proximity of infrastructure to regulated areas of wetlands and drainage lines.

As a WULA is required in terms of the NWA, the “One Environmental System” is applicable, specifically in terms of the synchronisation of the consideration of the application in terms of the NEMA and the NWA. The decision on the Environmental Authorisation and the decision on the WULA must all be made within the legislated timeframes in terms of the NEMA EIA Regulations. Furthermore, a parallel Public Participation Process must be undertaken in accordance with the requirements of the NEMA EIA Regulations advertising both the EIA as well as the WULA together.

Please note that no Dam Safety Assessment/ Registration is required as the Dam storage capacity is less than 50 000m³.

2.7 CONSERVATION OF AGRICULTURAL RESOURCES ACT, 1983 (ACT NO. 43 OF 1983), “CARA”

The mission of this Act is to provide for control over the utilization of the natural agricultural resources of the Republic in order to promote the conservation of the soil, the water sources and the vegetation and the combating of weeds and invader plants; and for matters connected therewith. The objects of this Act are to provide for the conservation of the natural agricultural resources of the Republic by the maintenance of the production potential of land, by the combating and prevention of erosion and weakening or destruction of the water sources, and by the protection of the vegetation and the combating of weeds and invader plants.

In order to achieve the objects of this Act the Minister may prescribe control measures which shall be complied with by land users to whom they apply. Such control measures may relate to:

a) the cultivation of virgin soil;

- b) the utilization and protection of land which is cultivated;*
- c) the irrigation of land;*
- d) the prevention or control of waterlogging or salination of land;*
- e) the utilization and protection of vleis, marshes, water sponges, water courses and water sources;*
- f) the regulating of the flow pattern of run-off water;*
- g) the utilization and protection of the vegetation;*
- j) the prevention and control of veld fires;*
- l) the control of weeds and invader plants;*
- m) the restoration or reclamation of eroded land or land which is otherwise disturbed or denuded;*
- n) the protection of water sources against pollution on account of farming practices;*
- o) the construction, maintenance, alteration or removal of soil conservation works or other structures on land; and*
- p) any other matter which the Minister may deem necessary or expedient in order that the objects of this Act may be achieved, and the generality of this provision shall not be limited by the preceding paragraphs of this subsection.*

An application will be submitted to the Department of Agriculture, Forestry and Fisheries (DAFF) for the 'Cultivation of Virgin Soil' in terms of Regulation 2 of CARA.

2.8 WESTERN CAPE BIODIVERSITY SPATIAL PLAN (WCBSP), 2024

The Western Cape Biodiversity Spatial Plan (WCBSP) is a spatial tool that forms part of a broader set of national biodiversity planning tools and initiatives that are provided for in national legislation and policy. It comprises the Biodiversity Spatial Plan Map of biodiversity priority areas, accompanied by contextual information and land use guidelines that make the most recent and best quality biodiversity information available for use in land use and development planning, environmental assessment and regulation, and natural resource management.

The main purpose of a biodiversity spatial plan is to ensure that the most recent and best quality spatial biodiversity information can be accessed and used to inform land use and development planning, environmental assessments and authorisations, natural resource management and other multi-sectoral planning processes. A biodiversity spatial plan achieves this by providing a map of terrestrial and freshwater areas that are important for conserving biodiversity pattern and ecological processes – these areas are called Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs). Refer to a summary of the 2023 WCBSP map categories and their meanings in **Table 1** below.

Table 1: Summary of 2023 WCBSP map categories and their meanings.

Map Category	Definition	Desired Management Objective	Sub-Category
Protected Area	Areas proclaimed as protected areas in terms of national or provincial legislation.	Must be kept in a natural state, with a management plan focused on maintaining or improving the state of biodiversity. A biodiversity benchmark.	
Critical Biodiversity Area 1	Areas in a natural condition that are required to meet biodiversity targets, for species, ecosystems or ecological processes and infrastructure.	Maintain in a natural or near- natural state, with no further loss of habitat. Degraded areas should be rehabilitated. Only low-impact, biodiversity- sensitive land-uses are appropriate.	River Estuary Wetland Forest Terrestrial
Critical Biodiversity Area 2	Areas in a degraded or secondary condition that are required to meet biodiversity targets, for species, ecosystems or ecological processes and infrastructure.	Maintain in a functional, natural, or near-natural state, with no further loss of natural habitat. These areas should be rehabilitated.	Degraded
Ecological Support Area 1	Areas that are not essential for meeting biodiversity targets but play an important role in supporting the functioning of PAs or CBAs and are often vital for delivering ecosystem services.	Maintain in a functional, near- natural state. Some habitat loss is acceptable, provided the underlying biodiversity objectives and ecological functioning are not compromised. Maintaining and improving protection of areas identified as ESA Water Source and Water Recharge important to secure water resources, particularly in Strategic Water Source Areas (SWSAs).	Fore-dune Forest Climate Adaptation Corridor Coastal Resource Protection Endangered Ecosystem River Estuary Wetland Watercourse Protection Water Source Protection Water Recharge Protection
Ecological Support Area 2	Areas not essential for meeting biodiversity targets but have an important role in supporting the functioning of PAs or CBAs. Often vital for delivering ecosystem services.	Restore and/or manage to minimise impact on ecological infrastructure functioning; especially soil and water-related service.	Restore from Non-Natural
Ecological Support Area: Species Specific Overlay	Terrestrial No Natural Remaining areas that provide a critical support function to a threatened or protected species e.g. cultivated land associated with nesting/roosting sites.	Maintain current land-use or rehabilitate to functional natural area.	Species Specific
Other Natural Areas: Natural to Near-Natural	Areas that have not been identified as a priority in the systematic biodiversity plan but retain most of their natural character and perform a range of biodiversity and ecological infrastructure functions. They are still an important part of the natural ecosystem.	Minimise habitat and species loss and ensure ecosystem functionality through strategic landscape planning. Offers flexibility in permissible land-uses, but authorisation required for high-impact land-uses.	Natural to Near-Natural Degraded
No Natural Remaining	Areas that have been modified by human activity to the extent that they are no longer natural nor contribute to biodiversity targets. These areas may still provide limited biodiversity and ecological infrastructure functions, even if not currently prioritised for conservation action.	Manage in a biodiversity- sensitive manner, aiming to maximise ecological functionality. Offers the most flexibility regarding potential land-uses, but authorization/s may still be required for high-impact land-uses.	No Natural Remaining

2.9 GUIDELINE DOCUMENTS

There are a number of guideline documents that must inform the work of both the environmental practitioner and the various specialists. The principles contained in these documents will be incorporated into the various aspects of the study and are not described in detail, but the relevant documents are noted below.

The following are 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 Need and Desirability
- Information Document on the Interpretation of the Listed Activities
- Information Document on Generic Terms of Reference for EAPs and Project Schedules

The following additional guidelines are to be considered:

- Guideline for involving visual and aesthetic specialists in the EIA process (June 2005)
- Guideline for involving social assessment specialists in the EIA process (February 2007).
- Guideline for involving economists in the EIA process (June 2005).
- Guideline for the review of specialist input in the EIA process, June 2005.
- Guideline for Environmental Management Plans (June 2005).
- Guideline for involving heritage specialists in the EIA process, June 2005.
- Western Cape Provincial Spatial Development Framework, November 2014 (as amended)
- General Guide to the EIA Regulations (DEA Guideline)
- Guidelines on Public Participation (DEA Guideline)
- Guideline on Assessment of Alternatives and Impacts (DEA Guideline)
- Guidelines for Determining the Scope of Specialist Involvement in EIA Processes (DEA&DP Guideline) (2005)
- Guideline on Need and Desirability (DEA Guidelines)

These Guidelines attempt to clarify a number of issues including: key principles and concepts underpinning the involvement of specialists in EIA processes; different roles of specialists in EIA processes; the generic approach that can be used to determine at which point in the EIA process the specialists should be involved and for what purpose; prerequisites for a specialist to be involved efficiently and effectively in EIA processes; elements to be considered when determining the scope of specialist inputs and when developing specialist Terms of Reference; information required by specialists; and the responsibilities of different role-players in the EIA process.

2.10 PLANNING CONTEXT

The proposed property is zoned Agriculture and the proposed activity (construction of a dam and the cultivation of land) is therefore permitted in terms of the land use rights of the property. No planning applications are therefore required in terms of rezoning or consent use. The legislative approvals are dealt with in terms of CARA, as mentioned above.

2.11 SUMMARY OF THE ENVIRONMENTAL PROCESS AND REQUIREMENTS:

SCOPING PHASE

1. Undertake the necessary specialist studies and compile a Site Sensitivity Verification Report;
2. Compile Draft Scoping Report and conduct initial Public Participation Process;
3. Submit the Application Form to the Competent Authority (CA);
4. DEA&DP acknowledge the application and provide a reference number;
5. The EAP has 44 days (from the receipt of the application) to submit the Final Scoping Report (FSR) to the CA which needs to include an additional 30-day comment period;
6. The CA must, within 43 days of receipt of a Scoping Report, accept or refuse the FSR.

EIA PHASE

1. The EAP has 106 days (from the acceptance of the FSR) or 156 days (if significant changes were made) to submit the Final Environmental Impact Assessment Report (EIAR) to the CA which needs to include a 30-day comment period;
2. Undertake the necessary (impact assessment phase) specialist studies, compile the Environmental Impact Assessment Report (EIAR) & conduct the initial Public Participation Process;
3. Submit the Final EIAR to the CA;
4. The CA must within 107 days of receipt of the EIAR grant or refuse Environmental Authorisation and an additional 5 days to notify the Applicant of the decision;
5. The applicant has 14 days to notify registered I&APs of the decision and there right to appeal.

According to Appendix 2 of the EIA Regulations 2017, as amended, the following information must be included in a Scoping Report.

- a. Details of –
 - i. The EAP who prepared the report; and

- ii. The expertise of the EAP, including a curriculum vitae;*
- b. The location of the activity, including –*
 - i. The 21 digit Surveyor General code of each cadastral land parcel;*
 - ii. Where available, the physical address and farm name;*
 - iii. Where the required information in items (i) and (ii) is not available, the coordinates of the boundary of the property or properties;*
- c. A plan which locates the proposed activity or activities applied for at an appropriate scale, or, if it is –*
 - i. A linear activity, a description and coordinates of the corridor in which the proposed activity or activities is to be undertaken; or*
 - ii. On land where the property has not been defined, the coordinates within which the activity is to be undertaken;*
- d. A description of the scope of the proposed activity, including –*
 - i. All listed and specified activities triggered;*
 - ii. A description of the activities to be undertaken, including associated structures and infrastructure;*
- e. A description of the policy and legislative context within which the development is proposed including an identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks and instruments that are applicable to this activity and are to be considered in the assessment process;*
- f. A motivation for the need and desirability for the proposed development including the need and desirability of the activity in the context of the preferred location;*
- g. full description of the process followed to reach the proposed preferred activity, site and location of development footprint within the site, including –*
 - i. details of all the alternatives considered;*
 - ii. details of the public participation process undertaken in terms of regulation 41 of the Regulations, including copies of the supporting documents and inputs;*
 - iii. a summary of the issues raised by interest and affected parties, and an indication of the manner in which the issues were incorporated, or the reasons for not including them;*
 - iv. the environmental attributes associated with the alternatives focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects;*
 - v. the impacts and risks which have informed the identification of each alternative, including the nature, significance, consequence, extent, duration and probability of such identified impacts, including the degree to which these impacts–*
 - i. aa) can be reversed;*
 - ii. bb) may cause irreplaceable loss of resources; and*
 - iii. cc) can be avoided, managed or mitigated;*
 - vi. the methodology used in identifying and ranking the nature, significance, consequences, extent, duration and probability of potential environmental impacts and risks associated with the alternatives;*
 - vii. positive and negative impacts that the proposed activity and alternatives will have on the environment and on the community that may be affected focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects;*
 - viii. the possible mitigation measures that could be applied and level of residual risk;*
 - ix. the outcome of the site selection matrix;*
 - x. if no alternatives, including alternative locations for the activity were investigated, the motivation for not considering such and*
 - xi. a concluding statement indicating the preferred alternatives, including preferred location of the activity;*

- h. a plan of study for undertaking the environmental impact assessment process to be undertaken (details included in Section 8 of this report);*
- i. an undertaking under oath or affirmation by the EAP in relation to –
 - i. the correctness of the information provided in the report;*
 - ii. the inclusion of comments and inputs from stakeholders and interested and affected parties; and*
 - iii. any information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs made by interested or affected parties;**
- j. an undertaking under oath or affirmation by the EAP in relation to the level of agreement between the EAP and interested and affected parties on the plan of study for undertaking the environmental impact assessment;*
- k. where applicable, any specific information required by the competent authority; and*
- l. any other matter required in terms of section 24(4)(a) and (b) of the Act.*

3. SITE DESCRIPTION AND ATTRIBUTES

The study area comprises two properties, Portion 3 of Farm Aan De Valsch Rivier 186 (± 202.81 ha) and Farm Horeb 149 (± 61.86 ha) (**Figure 2**) that covers an area of approximately 264.67 hectares (SG21 Code: C06400000000018600003 and C06400000000014900000) ($34^{\circ} 00' 30.74''$ S | $21^{\circ} 27' 09.21''$ E). The site lies along the base of the Langeberg Mountains to the northeast of the town of Riversdale (Hessequa Municipality) which is approximately 20km away. The Vals Rivier flows through the site. No major roads occur in the area and a dirt road between Riversdale and Herbertsdale are the main access for the farms in this area. The current landuse of the farms are mostly undeveloped/ cultivated, with varying nodes of farm buildings. A number of small farm roads occur on the properties.

Please refer to **Appendix C** for Locality Maps.

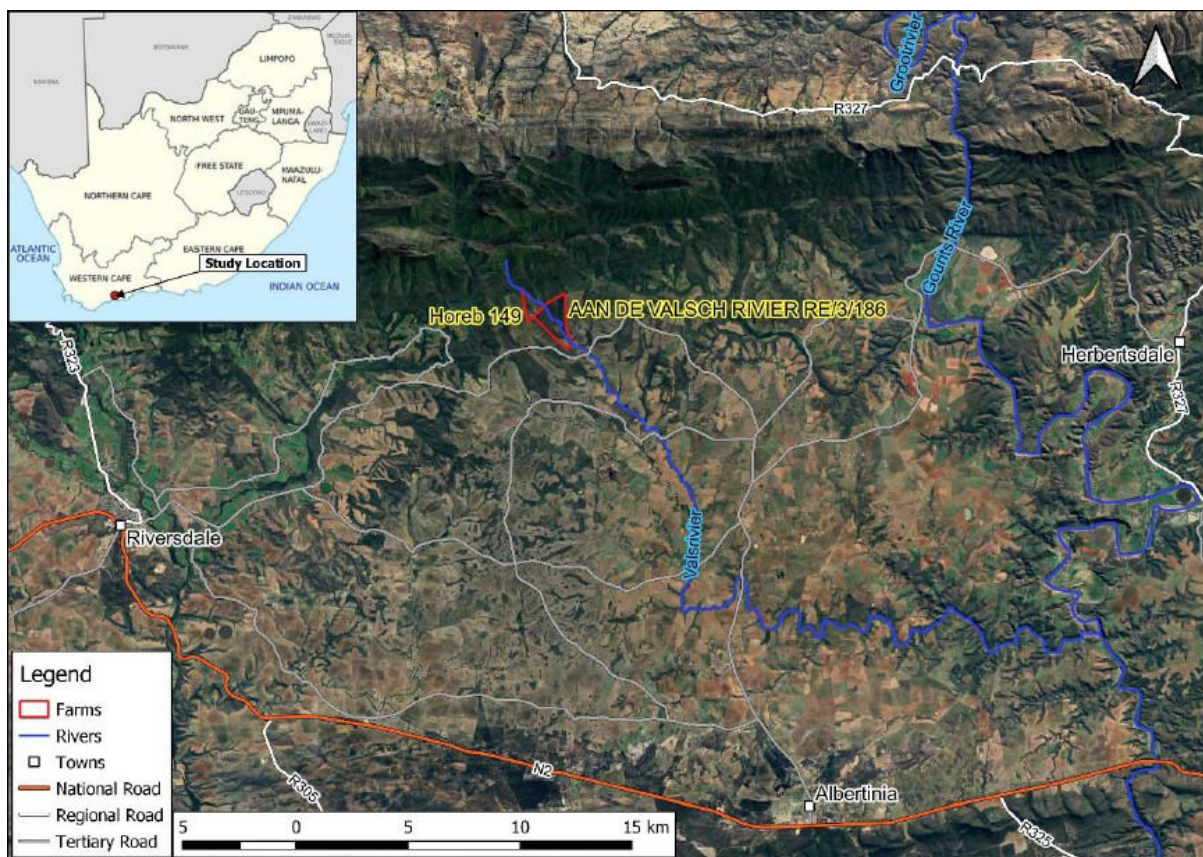


Figure 2: Locality of the two farms in terms of the topography (Creo, 2025).

3.1 CLIMATE

The region has a predominantly Mediterranean climate, characterized by hot, dry summers and mild, wet winters. The average annual maximum and minimum temperatures is 25°C and 11.6°C respectively.

The summer months of December, January and February are hot and dry, while the winter months of June, July and August are cold and rainy. The area is located in a

winter rainfall region; however, rainfall occurs throughout the year with the wetter months being March to November. The average rainfall is approximately 635 mm per annum with the maximum mean occurring in March and October and the minimum mean in December.

Mean annual precipitation for the catchment within the study area is approximately 450 mm per year and occurs all year-round, with peaks in October to November and March to April. Summers are mild to warm (mean daily maximum temperature of 22 to 28 °C) and winters are mild to cold (mean daily maximum temperature of 10 to 18 °C).

3.2 TOPOGRAPHY AND GEOLOGY

The topography of the catchment area ranges from very steep mountain slopes to rolling hills on the southern portion of the catchment area with well-incised river valleys occupied by almost exclusively non-perennial streams. These numerous drainage systems are tributary streams feeding the semi-perennial Vals River, a tributary of the Gouritz River (**Figure 2** above).

The site is characterized by low hills that form the foothills of the Langeberg Mountain. A number of ridges occur between the drainage lines that flow down from the mountains. The ridge is aligned in a predominantly north-south direction, and slopes down to the Vals River. A number of non-perennial drainage lines occur in the study area.

The regional geology of the area under investigation comprises of the Palaeozoic aged Cape Supergroup. The succession of sandstone, shale and minor conglomerate were deposited between ~500 Ma and ~330 Ma and unconformably overlies a Precambrian-Cambrian basement. Regionally the Cape Supergroup is overlaid by Cenozoic sediments of the Grahamstown Group.

The Cape Supergroup in the region comprise of the Table Mountain Group and the Bokkeveld Group. The older Table Mountain group is sandstone dominated with minor shale and is overlain by the Bokkeveld Group consisting of shale and sandstone. The Witteberg Group overlies the Bokkeveld Group and consist of sandstone and mudrock, however, it only outcrops in small areas to the north of the investigated area (Thamm & Johnson, 2006).

The local geology underlying the property under investigation comprise of rocks of the Table Mountain Group and Bokkeveld Group. Outcropping in the northern portion of the catchment area is the Peninsula Formation of the Table Mountain Group. The Peninsula Formation mainly consists of white, coarse-grained to fine-grained, quartzitic sandstone (Thamm & Johnson, 2006).

In the southern portion of the catchment, area rocks of the Ceres Subgroup of the Bokkeveld Group constitute the substrate geology. The Ceres Subgroup mainly consists of Mudrock, shale, siltstone, feldspathic arenite and wacke (Thamm & Johnson, 2006). The arenite and wacke units occur as well-defined sandstone layers interbedded in mudstone and shale units.

On the flatter parts on old land surfaces preserved on the plateau at the foot of the Langeberg between river valleys the rocks of the Cape Supergroup are overlain by Quaternary aged well-consolidated silcretes belonging to the Grahamstown Formation.

3.3 VEGETATION

The following information is extracted from the Botanical Study (including the Plant Species) undertaken by Greg Nicolson from CAPENSIS (Appendix E4).

3.1.1 National Vegetation Type:

According to the Vegetation Map of South Africa, Lesotho and Swaziland (SANBI, 2024) (VEGMAP), the main vegetation type occurring in the study area is Swellendam Silcrete Fynbos. South Langeberg Sandstone Fynbos is mapped in the far north part of the site but was not found within any of the proposed developments (**Figure 3**) (Nicolson, 2025). However, elements, specifically the substrates, associated with the adjacent Garden Route Shale Fynbos were found on the site, and this vegetation type is also described below as per Mucina and Rutherford, 2006:

Swellendam Silcrete Fynbos

“Mainly undulating hills on the coastal forelands, the remains of the old African surface. Structurally it is a medium tall evergreen shrubland or grass- land. Predominantly asteraceous fynbos, but graminoid fynbos on summits and northern slopes where disturbed. Proteoid fynbos occurs on southern slopes and ericaceous fynbos is found in wetter habitats. Afrotemperate forest occurs in fire- safe alluvial areas, such as along perennial rivers. It is uncertain whether proteoid fynbos, renosterveld or thicket was the dominant type in some of the eastern plateaus—it has all been converted to pasture”.

Garden Route Shale Fynbos

“Undulating hills and moderately undulating plains on the coastal forelands. Structurally this is tall, dense proteoid and ericaceous fynbos in wetter areas, and graminoid fynbos (or shrubby grassland) in drier areas. Fynbos appears confined to flatter more extensive landscapes that are exposed to frequent fires—most of the shales are covered with afrotemperate forest. Fairly wide belts of *Virgilia oroboides* occur on the interface between fynbos and forest. Fire-safe habitats nearer the coast have small clumps of thicket, and valley floors have scrub forest (Vlok & Euston- Brown 2002).”

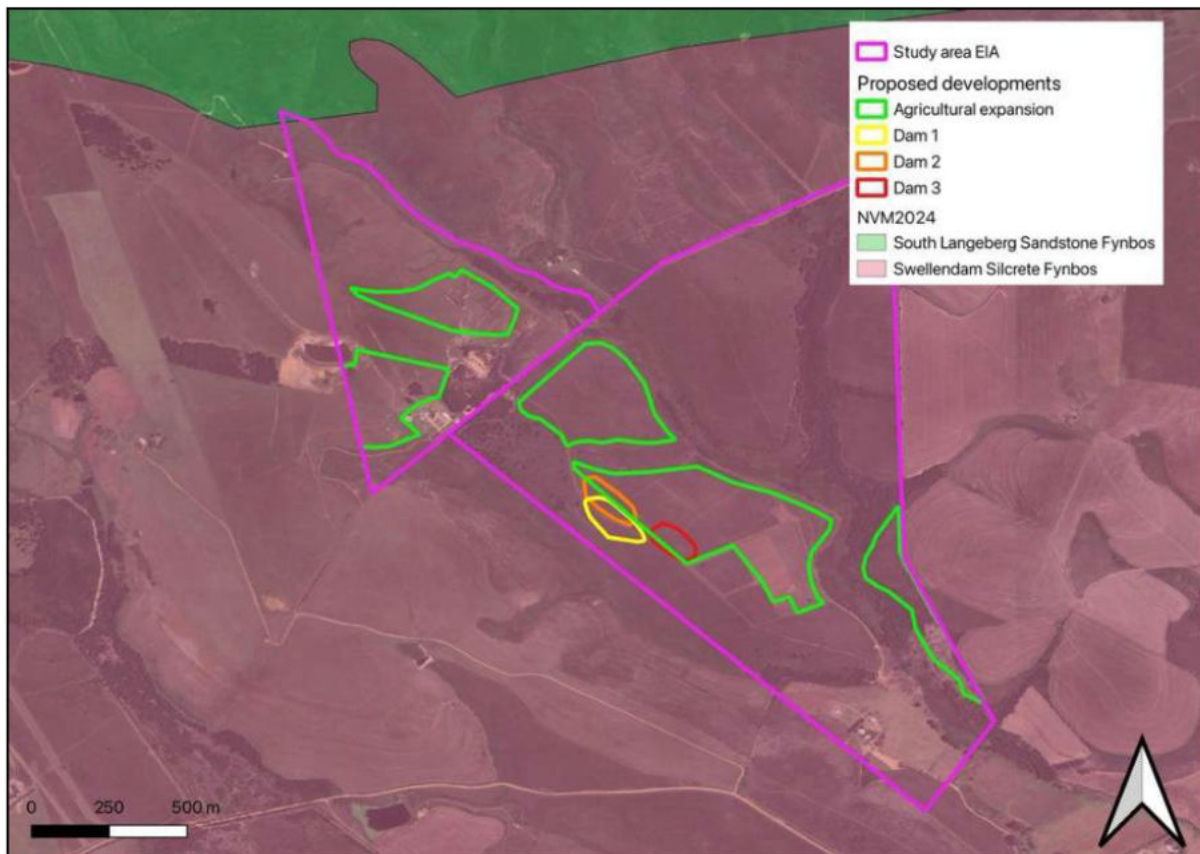


Figure 3: Vegetation Map: The study area superimposed on a portion of The Vegetation Map of South Africa, Lesotho and Swaziland (SANBI, 2018), overlaid on a Google Earth™ aerial image (Nicolson, 2025).

According to Cadman et al. (2016) the key ecological drivers in midland fynbos ecosystems include (1) the natural fire regimes and the interplay of fire and grazing, (2) edaphic conditions and underlying lithology, and (3) drainage and soil gradients (Nicolson, 2025).

3.1.2 A Vegetation Map for the Riversdale Domain (2007):

The vegetation within the study area was mapped at a fine scale by Vlok and de Villiers (2007) for the Succulent Karoo Ecosystem Project (SKEP). According to this map four vegetation units are found within the Study area: (1) Langeberg Mesic Proteoid Fynbos (2) Valsrivier Thicket-Renosterveld, (3) Cloetesberg Perennial Stream and (4) Gondwana River and floodplain (**Figure 4**).

The descriptions of the vegetation types (Vlok and de Villiers, 2007) are as follows:

*“The Langeberg Mesic Proteoid Fynbos is a large and heterogeneous unit that occurs along the mid southern slopes of the Langeberg. It is most similar to the Ruitersbos Mesic Proteoid Fynbos in being dominated by often very dense stands of *Leucadendron**

eucalyptifolium, *Leucadendron salignum*, *Leucadendron spissifolium*, *Leucospermum cuneiforme*, *Mimetes cucullatus*, *Protea eximia*, *Protea coronata* and *Protea neriifolia*, but differs in having localized endemic proteoid species such as *Leucospermum winteri* present. Ericoid shrubs are often prominent, with species such as *Berzelia intermedia*, *Erica versicolor*, *Erica vestita*, *Metalasia trivialis*, *Penaea cneorum*, *Phylica axillaris* and *Syncarpha paniculata* abundant. Distinctive localized endemic species include *Berzelia burchellii*, *Berzelia galpinii*, *Disa schlechteriana*, *Erica amicorum*, *Erica atropurpurea*, *Erica blenna*, *Erica garciae*, *Erica grata*, *Erica macilenta*, *Erica nematophylla*, *Erica rhodantha*, *Erica tetrahecoides* and *Erica winteri*.

The Valsrivier Thicket-Renosterveld is easily identified by the greater presence of Fynbos elements, such as *Leucadendron teretifolium*, in the Renosterveld. *Dicerotheramnus rhinocerotis* is present, but not dominant on south facing slopes, where it seems to be displaced by *Metalasia* and *Passerina* species. The uncommon, but characteristic *Erica cruenta* is also present on south facing slopes. The rare *Erica burchelliana* is a near endemic, shared only with adjacent units in which Fynbos is more abundant. Grasses are also prominent after fire and the unit is consequently not rich in geophyte species. In wet areas the Thicket patches become almost forest like, with species such as *Canthium inerme* and *Pittosporum viridiflorum* often abundant. This unit can be confused with the Plattekloof unit, but this unit is somewhat drier and the Thicket patches are better developed than in the Plattekloof unit.

The Cloetesberg Perennial Stream units drain into the Gourits River drainage system, but it contains species that are typical of both the eastern Moordkuils and western Goukou Perennial Stream units, e.g. *Leucadendron conicum* and *Leucadendron salicifolium*. Even in terms of its dynamics the Cloetesberg units seem to be intermediate between these two units, but despite lacking unique characteristics the Cloetesberg units cannot be united with confidence with either the Moordkuils or Goukou units. It differs from the Goukou Perennial Stream in rarely having *Prionium* dominated streambeds well-developed and from the Moordkuils Perennial Stream unit in having some differentiating species (such as *Leucadendron salicifolium*) present. It seems to represent an important changeover zone as certain widespread species such as *Psoralea aphylla* reach its easternmost distribution within this unit, while others such as *Agapanthus africanus*, *Corycium exisum* and *Protea speciosa* do so within its catchment area. No endemics are known, even from the upper seepage areas, but this may be an artifact of rather poor botanical collecting in the area.

Another rather distinctive unit within this habitat type is the Gondwana River and floodplain unit. It differs from all the other Gourits River related drainage areas in having the mainstream zone with rather deep sandy, quartzitic pebble beds originate from the upland Enon conglomerates. Surface water flows only seasonally. *Vachelia karoo* is

prominent in this unit, but is never dominant. Shrubs such as *Dodonaea angustifolia* and *Passerina obtusifolia* are often locally abundant, but in sites where these shrubs are not abundant grasses and sedges (e.g. *Cynodon dactylon*, *Cyperis marginatus*, *Cyperis textilis*, *Digitaria eriantha*, *Eragrostis capensis*, *Eragrostis curvula*, *Hyparrhenia hirta*, *Pennisetum macrourum*, *Pentasthesis colorata*, *Sporobolus africanus*, *Themeda triandra*, etc.) are abundant. The pebble-bed area is rich in geophytes (e.g. *Brunsvigia*, *Gethyllis*, *Gladiolus*, *Moraea*, *Tritonia*, etc. species). No endemic species are known to occur here, but a particularly odd aspect about this unit is the occurrence of hybrid swarms of species e.g. *Tritonia securigera* X *T. crocata*".

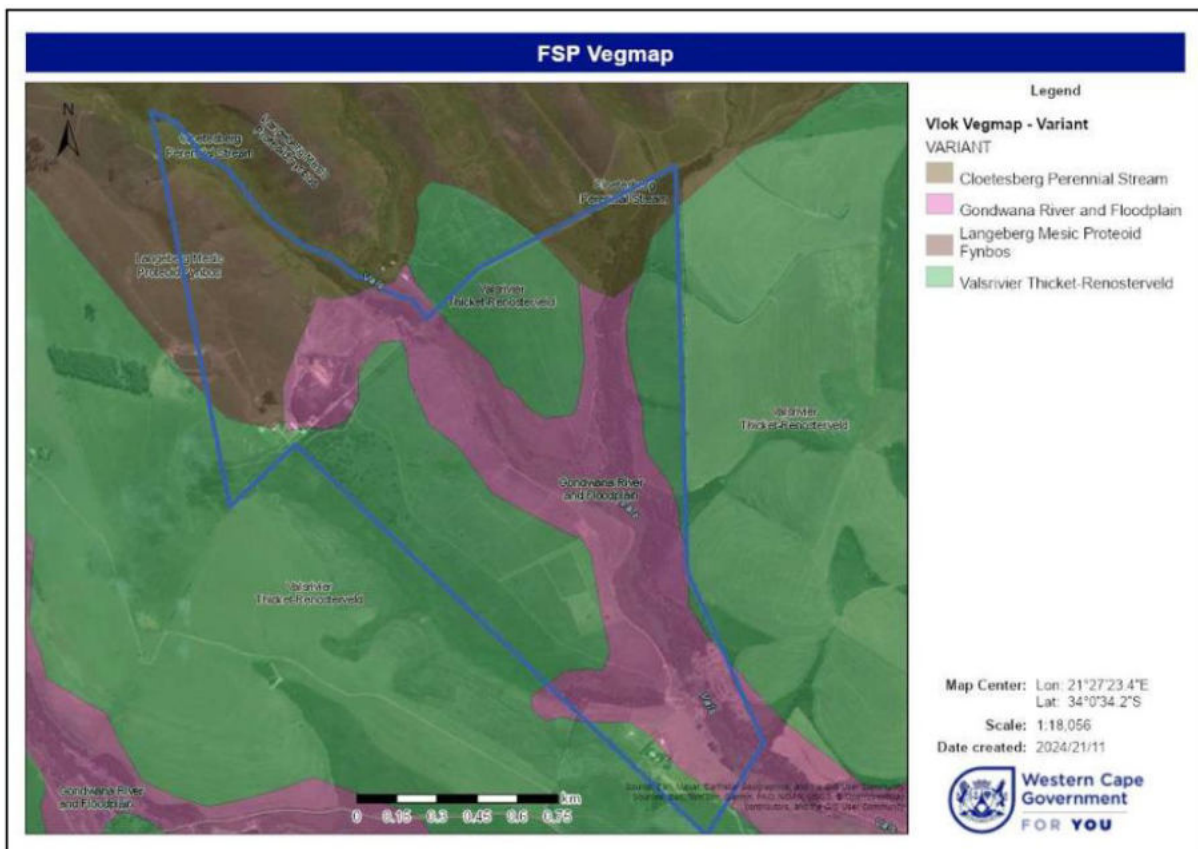


Figure 4: Fine-Scale Vegetation Map: The vegetation types within the site according to the Vegetation Map of the Riversdale Domain (Vlok et al. 2007) overlaid on an ESRI aerial image from CapeFarmMapper (Nicolson, 2025).

3.1.3 Ecosystem Threat Status

Ecosystem threat status is informed by the “Revised National List of Ecosystems that are Threatened and Need of Protection” (“RNLETNP”) (Government Gazette, 2022). Species information is not provided in the RNLETNP and is thus taken from “The National List of Ecosystems that are Threatened and in Need of Protection” (Government Gazette, 2011). The National Biodiversity Assessment 2018 (NBA) (SANBI 2019) has also been consulted.

Table 2 provides a summary of (a) the ecosystem status and reasons, (b) the remaining percentage of the ecosystem and the original (national) extent, (c) the proportion of ecosystem target protected, (d) the known number of species of conservation concern (Government Gazette 2011) and (e) the national conservation target from the two most relevant information sources.

Table 2. Ecosystem threat status.

SWELLENDAM SILCRETE FYNBOS	
Ecosystem threat status	ENDANGERED
Reason	B (RATE OF LOSS)
Remaining % of ecosystem	45% of 86855 ha
Conservation target	30%
Protected area	4.9%
Species of Concern	24 Redlisted and 1 endemic species
Pressures and Threats	This ecosystem has experienced a loss in natural habitat of approximately 78.74 km ² in the last 28 years (1990-2018). These spatial declines have been primarily driven by agriculture, especially pastures, with 346.47 km ² of the ecosystem now consisting of croplands and a further 95.38 km ² of old fields. Threatened plant species data indicate that alien species, overgrazing and altered fire regimes are important pressures (Red list of species 2018).
NOTES	Trigger Sub-Criteria: B1(i) - Swellendam Silcrete Fynbos is narrowly distributed with high rates of habitat loss in the past 28 years (1990-2018), placing the ecosystem type at risk of collapse. Scope: Global & national status (global extent assessed)
GARDEN ROUTE SHALE FYNBOS	
Ecosystem threat status	ENDANGERED
Reason	B (RATE OF LOSS)
Remaining % of ecosystem	44% of 56474 (ha)
Conservation target	23%
Protected area	5.7%
Species of Concern	N/A
Pressures and Threats	Agriculture has been a pressure to this ecosystem, in particular cultivation of pastures, with 131.24 km ² of the ecosystem consisting of croplands and a further 62.49 km ² of old fields. Plantations cover 79.19 km ² . This ecosystem is further degraded by erosion, overgrazing and invasions by <i>Hakea sericea</i> and various species of <i>Acacia</i> (Rebelo et al. 2006).
NOTES	Trigger Sub-Criteria: B1(i) - Garden Route Shale Fynbos is narrowly distributed with high rates of habitat loss in the past 28 years (1990-2018), placing the ecosystem type at risk of collapse. Scope: Global & national status (global extent assessed)

The threat status of Swellendam Silcrete Fynbos is described in the NBA as follows:

“The decline in natural area to 48 % (41 966 ha) (2014) of its original extent, has been driven primarily by agriculture, especially pastures, with 36 889 ha (42 %) (2014) of the ecosystem type consisting of croplands and a further 5968 ha (7 %) (2014) of old fields (Rebelo et al. 2006; HBMOD 2018). Swellendam Silcrete Fynbos is also degraded due to invasions by Acacia cyclops and erosion (Rebelo et al. 2006). Additionally, there are 56 plant species that are threatened mainly as a result of alien species (42 species), overgrazing (31 species) and altered fire regimes (20 species) (Red List of Species 2018)”.

3.1.4 Conservation Plans & Protected Areas:

The Western Cape Spatial Biodiversity Plan (WCBSP)(CapeNature, 2024) is linked to the Western Cape Biodiversity Act 6 of 2021 (WCBA), which *“identifies a province-wide network of biodiversity priority areas defined as Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs)”* designed to meet conservation objectives. The WCBSP includes a map composed of multiple layers that *“provides the relevant spatial data crucial to advise planning decisions that will result in both sustainable development and the conservation of important biodiversity and ecological infrastructure.”*

The greater part of all development components is mapped as a CBA 1 Terrestrial area, with limited CBA 2 Terrestrial portions (**Figure 5**). The management objectives for each map category is provided in **Table 1** [refer to “Section 2: Policy and Legislative Context” above].

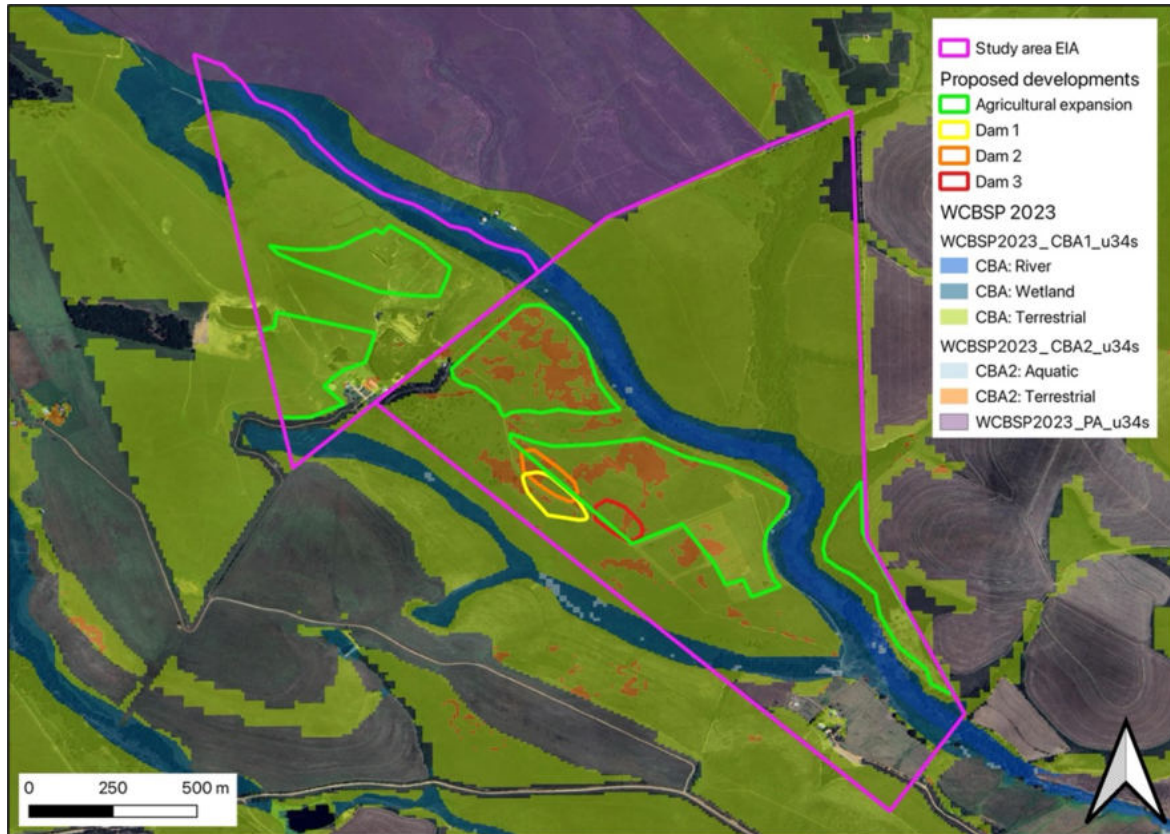


Figure 5: Conservation Planning Map - The study area in relation to the 2023 WCBSP [PA stands for Protected Area (Langeberg-East Mountain Catchment Area)] (Nicolson, 2025).

3.1.5 The Vegetation of the Study Area:

The vegetation is described with the aid of habitat and survey maps (**Figure 6**) and vegetation condition categories defined in **Table 3**. The vegetation on the site varies in condition from “Transformed” to “Intact” condition. However, the greater part of the site has been previously farmed. It appears that the study area has undergone periodic bush cutting and has likely been grazed extensively. The current condition of the vegetation on the site is difficult to determine in areas that have been recently bush-cut. However, in a number of places, adjacent vegetation appears to have been previously cut and provides a point of reference. There are some intact areas that have not been bush-cut and these suggest that the current farming practice has a slightly detrimental effect on the species diversity, and therefore also ecological integrity of the site. The greater part of the site supports Fynbos, and only the most southerly part of the site supports more typically renosterveld vegetation (not included in the proposed development components). A number of habitats have been mapped on the site, these are as follows:

1. Transformed
2. Highly degraded (Fynbos)
3. Degraded to Highly degraded Fynbos

4. Degraded Fynbos
5. Semi-intact to Degraded Fynbos
6. Semi-intact Fynbos
7. Semi-intact Renosterveld
8. Intact Fynbos
9. Wetland
10. Drainage line
11. Dam

Note that due to the highly variable condition of vegetation on the site, it was necessary to combine some habitat condition classes to represent a relatively homogenous area. For example, Degraded to Highly degraded Fynbos has been mapped for areas that are mostly highly degraded but contain some smaller patches of Degraded vegetation within this. These smaller patches cannot be mapped accurately as they are so patchy.

Table 3: The habitat condition descriptions used for the vegetation on the site.

Habitat category	Description	Indigenous vegetation
Intact vegetation	A true representation of the original vegetation type in terms of structure and species makeup. Minimal soil disturbance. Unlikely to have ever been ploughed. Disturbance may be evident.	Yes
Semi-intact	Resembles the original vegetation type in terms of structure and species makeup but has lower species diversity than intact vegetation. Dominated by disturbance-resilient species. Soils may have been heavily disturbed in the past. Restoration potential is high.	Yes
Degraded	Only a few species representative of the original vegetation type are present. The vegetation has undergone heavy disturbance. Restoration potential is either low or moderate.	Yes
Highly degraded	The original vegetation is usually absent and has been removed in the past. Only a few remnant or pioneer species are present. Soils usually ploughed in the past. Restoration potential is very low.	*No (not naturally occurring as per the NEMA definition)
Transformed	No remnant species exist anymore. The landscape is altered irreversibly with no restoration potential. Examples include cultivated farmland and the built environment.	*No (not naturally occurring as per the NEMA definition)

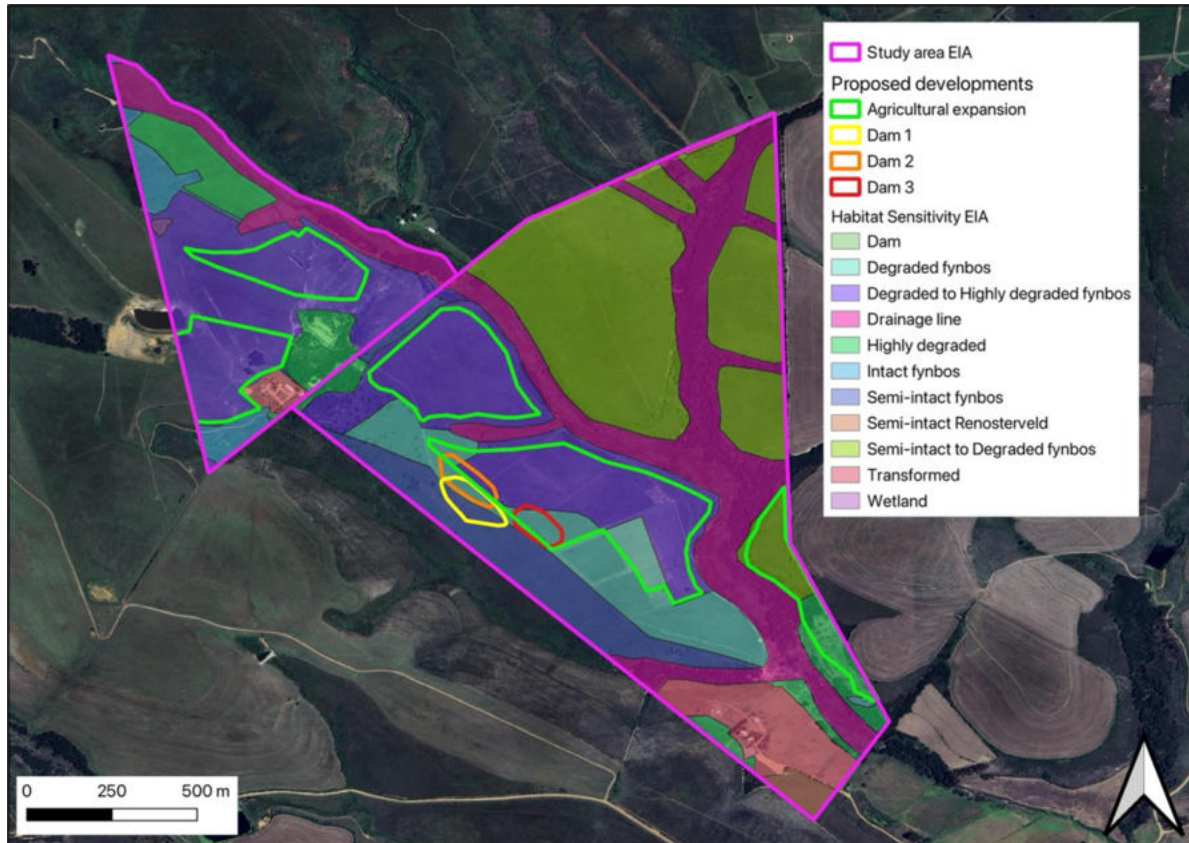


Figure 6: Habitat Map - The study area with ground-truthed habitat categories (Nicolson, 2025).

Transformed (includes existing dams) AND HIGHLY DEGRADED VEGETATION (part of pocket 5)

These two habitats have been modified to such a degree that they no longer represent indigenous vegetation. Transformed areas are those that have already been developed for buildings, farm infrastructure or orchards. The Highly degraded habitat is dominated by a dense stand of gum trees *Eucalyptus* sp. where some earth moving has taken place. Refer to **Figure 7 – 8** below.



Figure 7: The dense stand of gum trees and cleared area in front of them that make up the Highly degraded habitat (Photo: Nicolson, 2025).



Figure 8: The Highly degraded habitat from inside the stand of gums. Some earth moving can be clearly seen (Photo: Nicolson, 2025).

Degraded To Highly Degraded Fynbos (Pockets 1- 3 and part of 4 and Dam 2)

This habitat occupies extensive portions of the north-west part of the site. There is a long history of agricultural activities here, mostly bush cutting and grazing of livestock. The vegetation is comprised of mostly indigenous species, however, species diversity is low, and dominated by a few hardy disturbance tolerant species. Typical species noted in this habitat include common coppice kolkol *Berzelia intermedia* which is typically an indicator of wet soils some heath *Erica quadrangularis*, cube heath *Erica cubica*, golden yellowwort *Sebaea aurea*, finestem Caperose *Cliffortia filicaulis*, *Helichrysum* sp., Slangbos *Stoebe plumosa* and katstert *Anthospermum aethiopicum*. Grasses (such kikuyu *Cenchrus clandestinus*, kweek *Cynodon dactylon*, weeping lovegrass *Eragrostis curvula*), sedges and restios such as wheat Capereed *Restio triticeus*, all occur in this habitat, with sedges more dominant in the slightly wetter areas.

Other Fynbos species recorded for this habitat include the common sunshine conebush *Leucadendron salignum*, eastern blombush *Metelasia trivialis*, eastern kalossie *Ixia orientalis*, two-tone heath *Erica versicolor* and white satin *Geissorhiza inflexa*.

A number of listed invasive alien plants species (IAPs) occurs either in concentrated areas or scattered in the site. Those identified include black wattle *Acacia mearnsii*, gum trees *Eucalyptus* sp., pines *Pinus* sp. Refer to **Figure 9-11** below.



Figure 9: Extensive areas have been bush-cut over many years and grazed with livestock. The result is a Highly degraded habitat with grassy and Fynbos elements (Photo: Nicolson, 2025).



Figure 10: One of the Degraded areas within this habitat, contains a low diversity of indigenous species, but is dominated by typical Fynbos species such as the white flowered *Berzelia intermedia* and pink *Erica* sp. (Photo: Nicolson, 2025).



Figure 11: An extensive area of recently bush-cut Fynbos on the western ridge of the study area. Species diversity here is low due to many years of use for agriculture, however, mostly indigenous species area present (Photo: Nicolson, 2025).

Degraded Fynbos (Dam 3 and part of Pocket 4)

The Degraded Fynbos habitat is similar to the Degraded to Highly degraded Fynbos habitat as described above, however, the species diversity is slightly higher and the impact of bush cutting is slightly less severe. Additional species noted include: wartstem pincushion *Leucospermum cuneiforme*, seeroogblom *Boophone disticha*, needle everlasting *Helichrysum teretifolium*, gwarrie *Euclea* sp. Refer to **Figure 12 -13**.



Figure 12: The Degraded Fynbos habitat has been partially cut. The uncut areas show a moderate diversity of Fynbos elements (Photo: Nicolson, 2025).



Figure 13: Towards the southern part of the western ridge some of the Degraded Fynbos showing some renosterveld elements such as the renosterbos and slangbos with restios and ericas.

Semi-Intact to Degraded Fynbos (Part of Pocket 5)

This habitat occurs predominantly on the central ridge and eastern side of the study area. It consists of historically brush cut areas. Species diversity is moderate and includes typical Fynbos elements of emergent tall proteas with a dominant low asteraceous shrub layer. Some bulbs are present, suggesting that the land has not been ploughed. The dominant species in this habitat are: *Metalasia trivialis*, lambstail *Lanaria lanata*, *Cliffortia filicaulis*, spiderweb purplegorse *Muraltia ciliaris*, *Erica* sp. *Helichrysum* sp. *Anthospermum aethiopicum*, *Restio triticeus*, *Berzelia intermedia*, noughts and crosses *Penaea mucronata*, and *Leucadendron salignum*. Bulbs include large brown Afrikaner *Gladiolus liliaceus*, coastal watsonia *Watsonia laccata*, *Geissorhiza inflexa*, *Eriospermum capense* and Chinkerinchee *Ornithogalum thyrsoides*. Refer to **Figure 14 – 16** below.

Three species of conservation concern (SCC) or importance include the Near Threatened green sugarbush *Protea coronata*, The Near Threatened fluffy hardleaf *Phyllica velutina* and the Endangered linearleaf sugarbush *Protea decurrens*. Another noteworthy find here is a range extension for the Fynbos sorrel *Oxalis truncatula*. The lower slopes of this habitat close to the rivers contain scattered individuals of black wattle, and the higher elevations contain silky hakea *Hakea sericea*.



Figure 14: The Semi-intact to Degraded habitat has been recently bush-cut on the central ridge. The cut areas appear to be in very poor in condition, however, the uncut areas show the true habitat condition and diversity. This kind of Fynbos can recover fairly well from such bush cutting if it is not undertaken too often (Photo: Nicolson, 2025).



Figure 15: Some of this habitat has not been recently cut but the diversity is fairly low on the lower slopes. The drainage lines can be easily identified by the large concentration of black wattle (Photo: Nicolson, 2025).



Figure 16: The Semi-intact to Degraded habitat on the eastern ridges of the site have a moderate diversity of species dominated by typical Fynbos elements such as ericas, restios and *Metalasia trivialis*. The Endangered linearleaf sugarbush *Protea decurrens* occurs on this ridge (Photo: Nicolson, 2025).

Semi-Intact Fynbos (Dam 1)

This habitat occurs on the south-western part of the study area on a west-facing slope that contains some exposed silcrete. The area with exposed silcrete has not been brush-cut and contains some good condition vegetation. It is similar in composition to the habitat described above. There are high numbers of *Protea coronata* and *Protea decurrens* in this habitat. The Langeberg bobbejaantjie *Babiana fourcadei* also occurs here in large numbers. Part of this area has been recently bush-cut, however, the historical imagery suggests the historical extent of this habitat. Refer to **Figure 17 – 19**.



Figure 17: There is some exposed silcrete in this area under this Fynbos. It has therefore not been brush-cut and is in good condition, however, it is only a small isolated area that has not been cut. Diversity is high and the Near Threatened *Protea coronata* and the Endangered *Protea decurrens* occur here (Photo: Nicolson, 2025).



Figure 18: The vegetation lower on the west-facing slope has been partially cut but is in good condition (Photo: Nicolson, 2025).



Figure 19: The Endangered *Protea decurrens* is a resprouter and can survive the periodic cutting (Photo: Nicolson, 2025).

Semi-Intact Renosterveld

This habitat occurs only in the small patch of vegetation close to the farm entrance in the far south-west part of the site. The vegetation has more renosterveld and thicket elements than the rest of the site and is likely to be more representative of Mossel Bay Shale Renosterveld (SANBI Vegmap) or Valsrivier Thicket-Renosterveld (Vlok Vegmap). Typical renosterveld species include renosterbos *Elytropappus rhinocerotis*, *Oedera* sp., *Helichrysum* sp., common gonna *Passerina corymbosa*, and thatching grass *Hyparrhenia hirta*. One SCC was found here, the NT *Phylica velutina*.

Thicket elements include dune curranthrus *Searsia laevigata*, glossy curranthrus *Searsia lucida*, poison starapple *Diospyros dichrophylla*, common spikethorn *Gymnosporia buxifolia*, crossberry *Grewia occidentalis* and bitter aloe *Aloe ferox*. A protected tree species, the cheesewood *Pittosporum viridiflorum* was found in the site and is associated with the thicket elements. IAPs found here include prickly pear *Opuntia ficus indica*, black wattle and rooikrans *Acacia cyclops*. Refer to **Figure 20**.

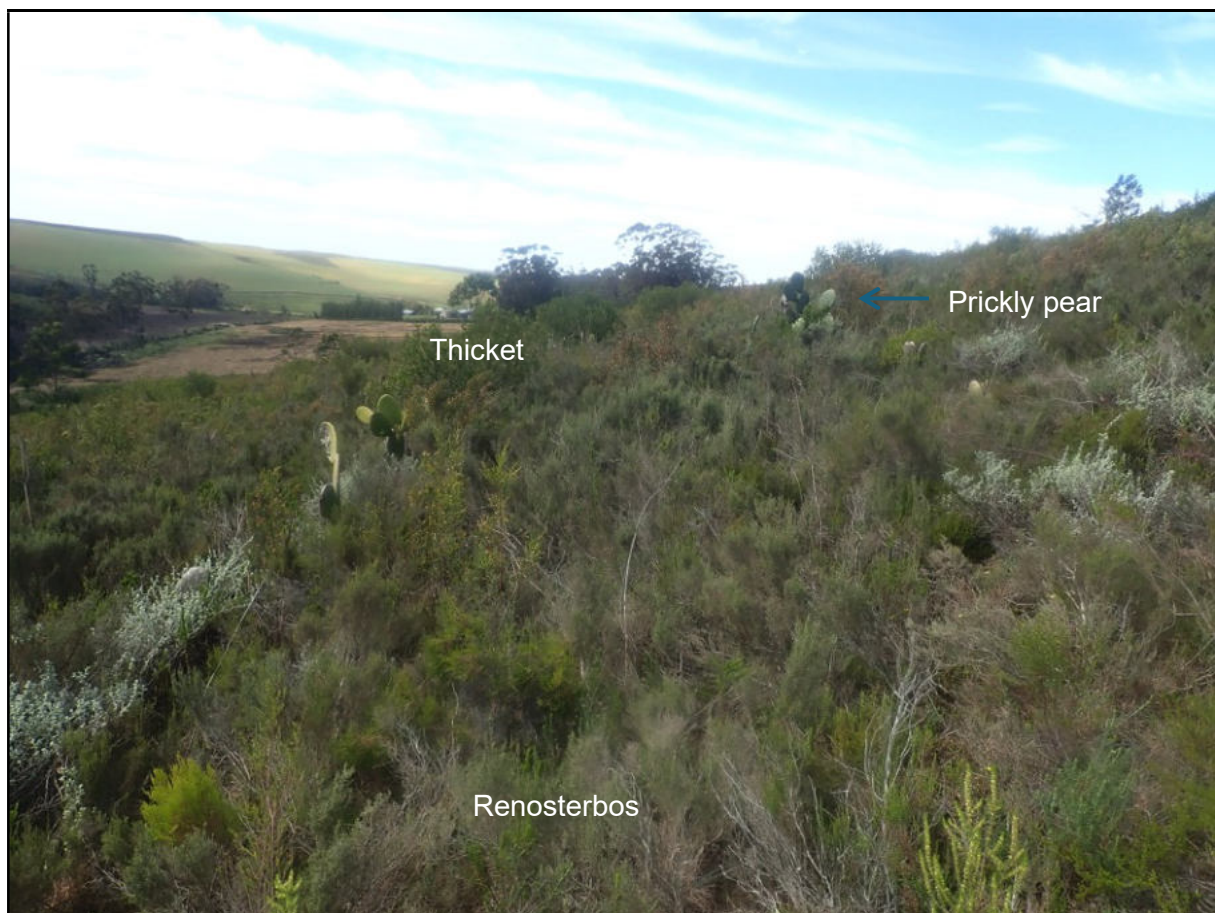


Figure 20: This habitat has thicket elements such as large shrubs and renosterveld elements such as renosterbos (Photo: Nicolson, 2025).

Intact Fynbos

The only parts of the Study area that appear to be previously undisturbed are two areas on the western side of the site. These areas contain higher species diversity than the other parts of the site, and especially the northern patch which appears to be seasonally wet and occurring on a relatively steep slope. This is likely the reason that it has not been previously cultivated. Additional species noted here include the common pagoda *Mimetes cucullatus*, blackbeard sugarbush *Protea neriifolia*, hairy Cape sweetpea *Podalyria burchelli*, *Elegia fistulosa* (in wetter areas), braken fern *Pteridium aquilinum*, broom thatchreed, *Thamnochortus fruticosus*, foxy purplegorse *Muraltia alopecuroides* and a *Moraea* sp. Refer to **Figure 21 – 22** below.



Figure 21: The Intact Fynbos near the north of the site contains a very high diversity of species. The Valsrivier can be seen in the middle of the image (Photo: Nicolson, 2025).



Figure 22: The edge of the Intact habitat where it meets with the Highly degraded areas (Photo: Nicolson, 2025).

Wetland and Drainage Lines

The major drainage line that runs through the site is the Vals Rivier. Another perennial stream joins the Vals Rivier, and both of these have a number of non-perennial tributaries that flow into them. The tributaries are mostly cleared of vegetation, but some still contain indigenous species. The major drainage lines contain a high density of invasive black wattle, especially in the lower reaches.

Wet areas occur throughout the site, and the only wetland that has been mapped is a wet area that is surrounded by cultivated lands. However, there are a number of wet indicator species such as *Berzelia intermedia* that occurs throughout the site. There are likely to be wetlands within the Intact Fynbos habitat. The mapped wetland is dominated by two restios, broom anglereed *Restio paniculatus* and pipe goldreed *Elegia fistulosa*, along with the sedge hairy hippo sedge *Fuirena hirsuta*. Refer to **Figure 23-24** below.



Figure 23: A view of the east facing slope of the central ridge. The tributaries of the Valsrivier have not been completely transformed in this area (Photo: Nicolson, 2025).

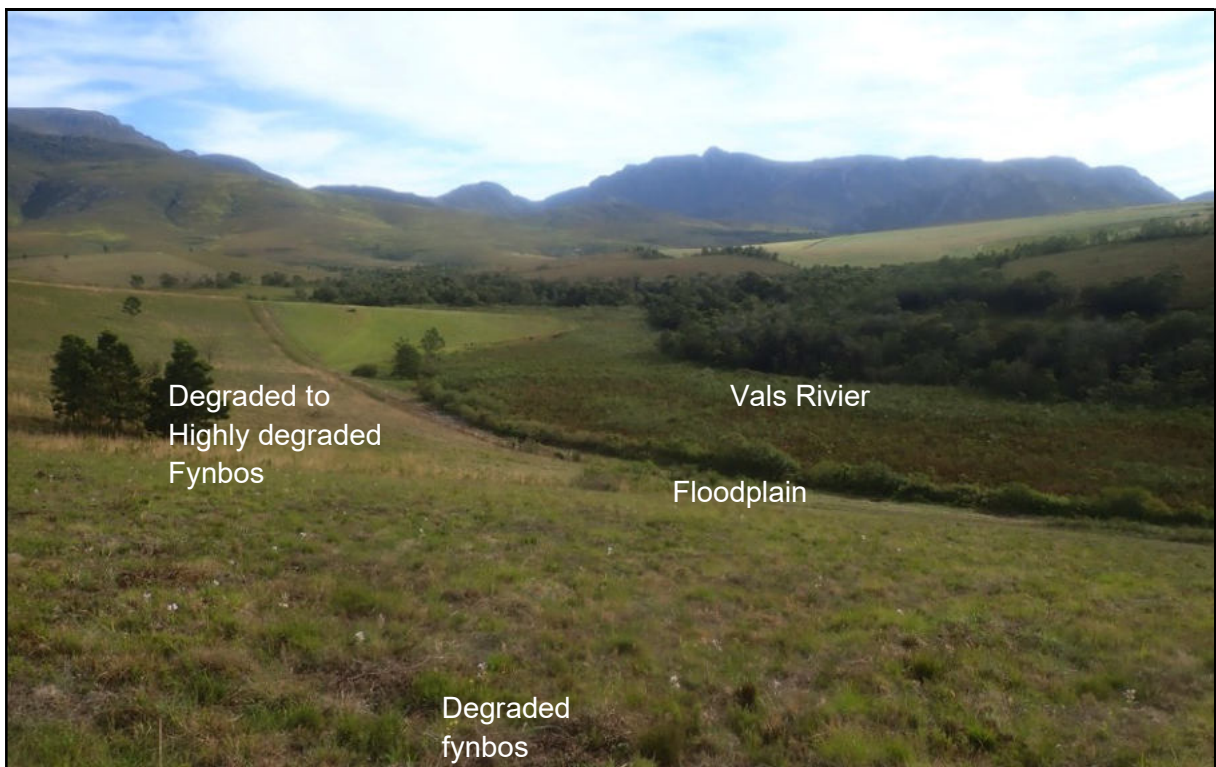


Figure 24: The Vals Rivier is dominated by the mature black wattles. The adjacent floodplain can be seen. The foreground shows the recently cut Degraded Fynbos habitat. Further away on the habitat becomes Degraded to Highly degraded (Photo: Nicolson, 2025).

3.1.6 Sensitivity:

In the case of the study area, a **High** sensitivity applies to the **Intact fynbos, Semi-intact fynbos, Semi-intact renosterveld** and **Drainage line** habitats for the following reasons:

1. The vegetation types present are Endangered and are representative of the original ecosystems.
2. The areas are classified as a valid CBA 1 in the WCBSP 2023.
3. At least one SCC occur in the Semi-intact fynbos habitat (*Protea deccurens*). One SCC was also recorded in the Semi-intact renosterveld habitat (*Phyllica velutina*). [Note: The Near Threatened *Protea coronata* has since been re-classified as Least Concern.]
4. The protected cheesewood *Pittosporum viridiflorum* is found in the Semi-intact renosterveld habitat.
5. The Riverine habitat is inherently sensitive as it supports wetland species and ecological processes. However, no threatened or sensitive plant species were identified in this habitat.

A **High-Medium** sensitivity applies to the **Semi-intact to Degraded Fynbos** habitat and the **Degraded to Highly degraded thicket (with SCC)** for the following reasons:

1. The vegetation type present is Endangered and is partially representative of this ecosystem.
2. The areas are classified as a valid CBA 1 in the WCBSP 2023.
3. At least one SCC occur in the Semi-intact fynbos habitat (*Protea deccurens*). [Note: The Near Threatened *Protea coronata* has since been re-classified as Least Concern.]

A **Medium** sensitivity applies to the **Degraded fynbos** habitat or the following reasons:

1. The vegetation type present is Endangered and is partially representative of this ecosystem.
2. The areas are classified as a valid CBA 1 or CBA 2 in the WCBSP 2023.
3. One SCC was found in the habitat, namely *Protea deccurens*.

A **Medium-Low** sensitivity applies to the **Degraded to Highly degraded fynbos** habitat or the following reasons:

1. The vegetation type present is Endangered and is partially representative of this ecosystem.
2. The areas are classified as a valid CBA 1 or CBA 2 in the WCBSP 2023.
3. No SCC were found in the habitat.

A **Low** sensitivity applies to the **Highly degraded** habitat for the following reasons:

1. The vegetation types present is Endangered, however, it does not represent indigenous vegetation and is not a valuable ecological area due to the level of transformation.
2. The areas are classified as CBA 1 or CBA 2 in the WCBSP 2023, however, CBA 2 or ESA 2 are more appropriate classifications.
3. No SCC were found in this habitat, and none are likely to be present.

A **Very low** sensitivity applies to the **Transformed** habitats for the following reasons:

1. The vegetation type present is Endangered, however, it does not represent indigenous vegetation and is not a valuable ecological area due to the level of transformation.
2. These areas are mostly excluded from the WCBSP 2023.
3. No SCC were found in this habitat, and none are likely to be present.

The sensitivity map is presented below in **Figure 25**.

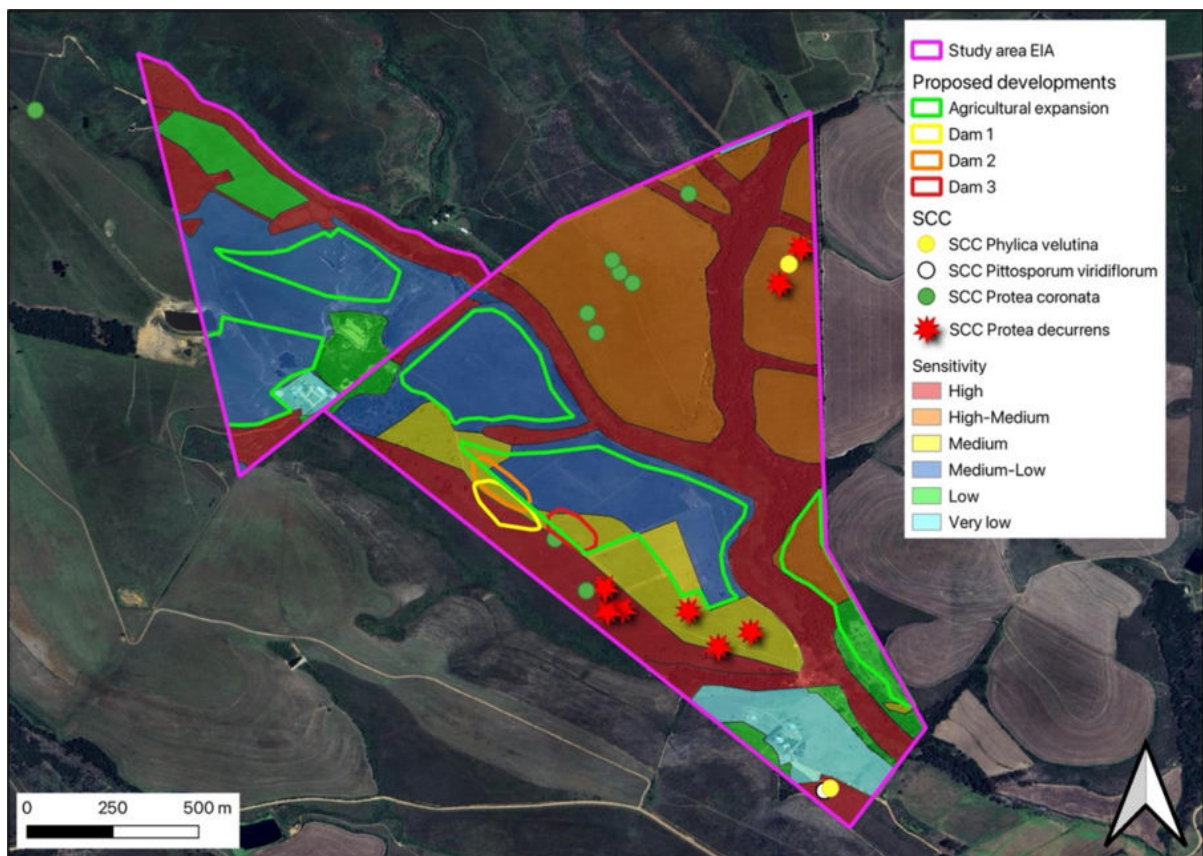


Figure 25: Botanical Sensitivity Map - Google Earth™ image showing the sensitivities and SCC mapped within the study area (Nicolson, 2025). [Note: The Near Threatened *Protea coronata* has since been re-classified as Least Concern.]

Please refer to **Appendix D** for Environmental Sensitivity Maps.

3.4 HYDROLOGY

The following information is extracted from the Hydrological Study of Surface Runoff undertaken by Dr. Johan Hattingh & Riaan Zeeman from Creo Design (**Appendix E3**).

The total estimated surface area of the catchment was determined to be 13 225 141.07 m² (1322.5ha). Figure 26 indicates the watershed boundaries and extent of the catchment area. The extent of the catchment area feeding the site is indicated in Figure 2. The total discharge of the catchment area in cubic meters per year (m³/year) is 2 939 287,6 m³. This discharge figure represents the total annual runoff after factoring in annual evapotranspiration and groundwater infiltration into the soil as well as the effect vegetation and catchment area slope have on overall infiltration.

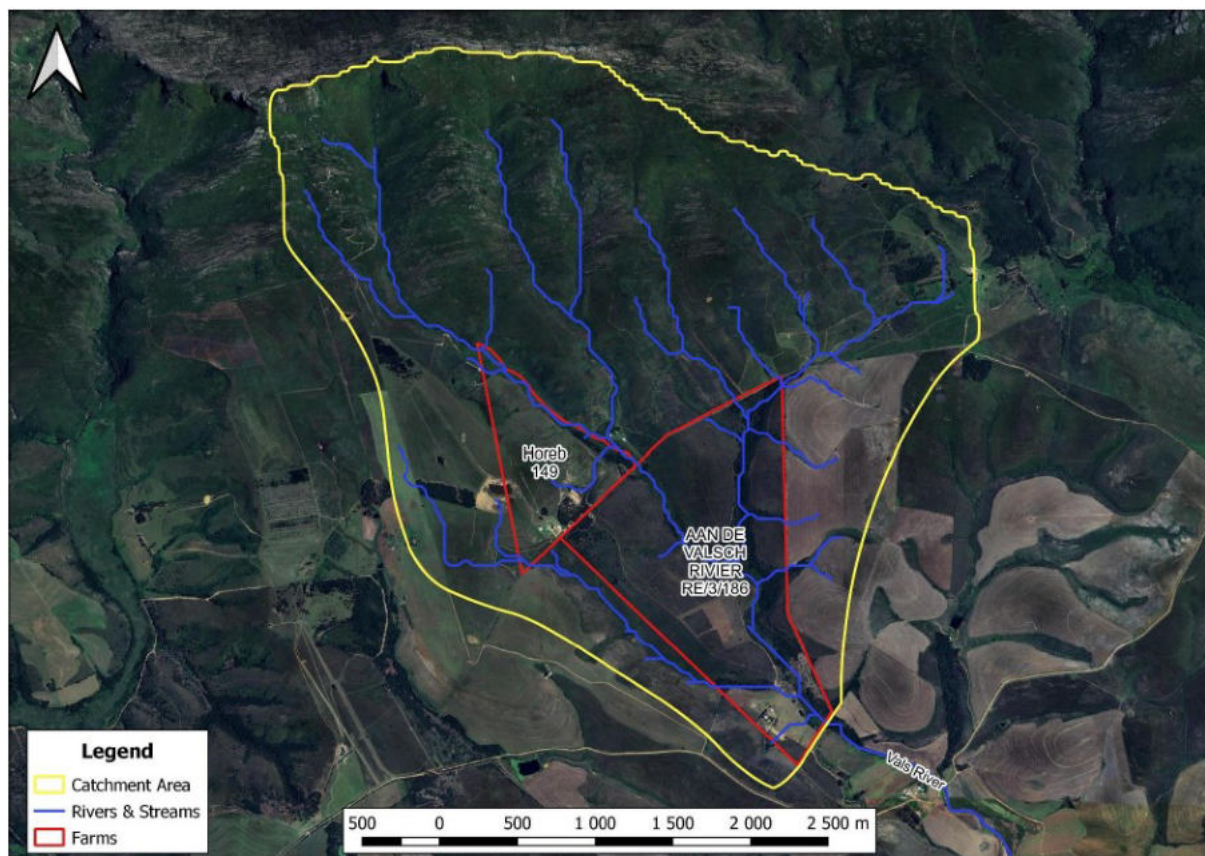


Figure 26: Map indicating the extent of the catchment area feeding the properties.

3.5 AQUATIC ECOSYSTEMS

The following information is extracted from the Freshwater/ Aquatic Biodiversity Study undertaken by James Dabrowski from Confluent Environmental (**Appendix E5**).

The properties are located in the foothills of the Langeberg Mountains in between Riversdale (to the west) and Herbertsdale (to the east) in quaternary catchment J40D of the Gouritz Primary Catchment (**Figure 27**). The Vals River runs through the properties and flows in a south-easterly direction through an intensively farmed agricultural area

(predominantly lucerne, wheat and canola) before joining the Gouritz River in the lower section of the catchment. The properties fall within the Southern Coastal Belt (22) Level 1 ecoregion (22.02 Level 2 Ecoregion), which is characterised by moderately undulating plains with altitude ranging from 0 to 300 m above mean sea level.

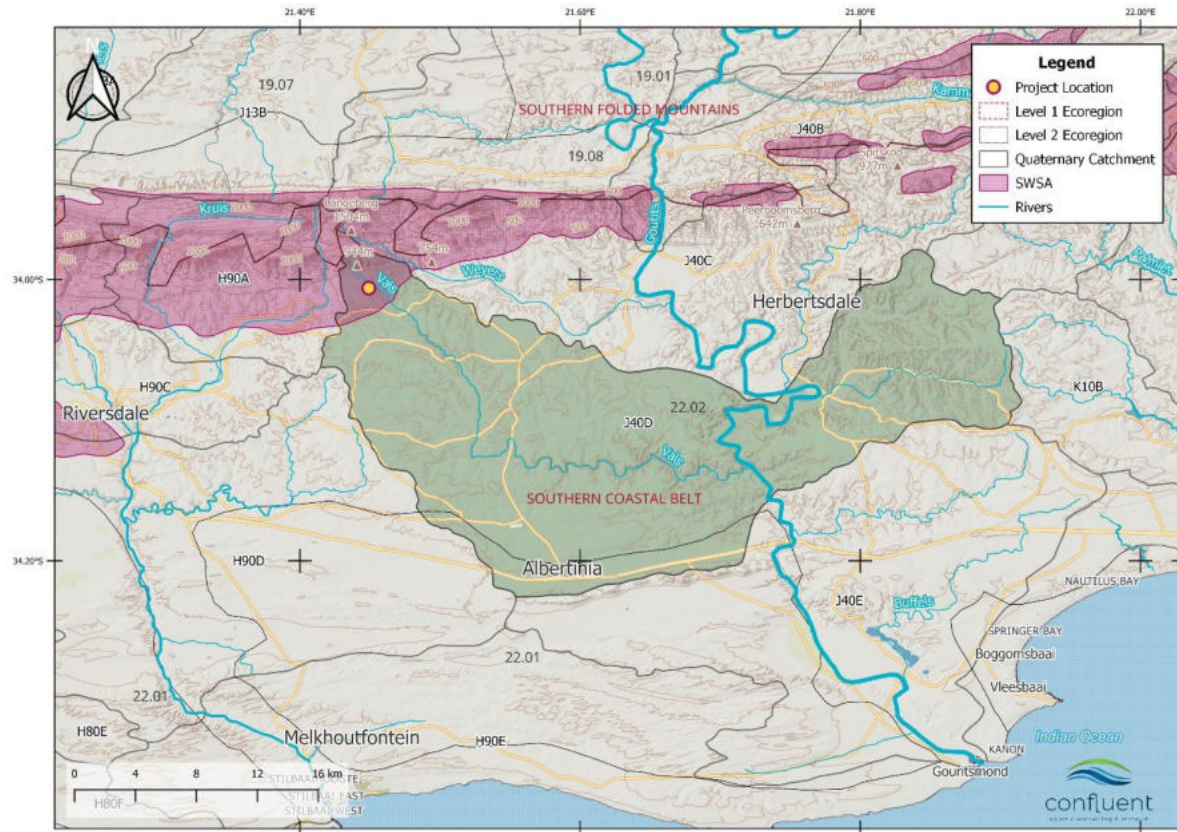


Figure 27: Location of the property in quaternary catchment J40D (Dabrowski, 2025).

3.5.1 Watercourses

Watercourses mapped within the property boundaries include the Vals River and its tributaries which run along confined, low gradient valleys and are mapped as channelled valley-bottom wetlands (**Figure 28**). A hillslope seep wetland and non-perennial drainage lines are mapped along the east facing slopes of Farm 149 and several non-perennial streams drain the west facing slopes of Portion 3 of Farm 186. An extensive seep wetland network drains the mountains to the north and meets the Vals River in the north-eastern corner of Portion 3 of Farm 186.



Figure 28: Map indicating mapped watercourses associated with the properties (Dabrowski, 2025).

3.5.2 National Freshwater Ecosystem Priority Areas (NFEPA)

Freshwater Ecosystem Priority Areas (FEPAs) are sub-quaternary catchments (SQC) that are prioritised for conserving freshwater ecosystems and associated biodiversity. The selection of FEPAs is determined through a process of systematic biodiversity planning using data on freshwater ecosystem types, species and ecological processes. FEPAs should be maintained in a good condition to manage and conserve freshwater ecosystems and to protect water resources for human users. The property falls within sub-quaternary catchment (SQC) 9185, which, according to the National Freshwater Ecosystem Priority Atlas (NFEPA, Nel et al., 2011), has not been classified as a FEPA. The SQC is therefore not considered important from a freshwater conservation perspective and is not located upstream of any SQCs that have been designated as FEPAs.

3.5.3 Strategic Water Source Area

Strategic Water Source Areas (SWSAs) are defined as areas of land that either:

- a) Supply a disproportionate (i.e. relatively large) quantity of mean annual surface water runoff in relation to their size and so are considered nationally important;
- or

- b) Have high groundwater recharge and where the groundwater forms a nationally important resource; or
- c) Areas that meet both criteria (a) and (b).

The properties occur within the Langeberg SWSA which is considered to be of national importance (**Figure 27** above). The SWSAs are vital for water and food security in South Africa and also provide the water used to sustain the economy. Given this context, management and implementation guidelines have been developed with the objective of facilitating and supporting well-informed and proactive land management, land-use and development planning in these nationally important and critical areas (Le Maitre, et al., 2018). The primary principle behind this objective is to protect the quantity and quality of the water they produce by maintaining or improving their condition.

With respect to agriculture, the main impacts that affect watercourses are inputs of fertilisers and agro-chemicals, soil erosion and associated sediment input and destabilisation of the bed and banks of watercourses because of the failure to maintain uncultivated buffer strips along the banks of watercourse. It is therefore important that the establishment and production of new cultivated fields is done in a sensitive manner so as to prevent degradation of water resources through the impacts described above. This can primarily be achieved by implementing adequately sized buffers in between watercourses and agricultural fields.

3.5.4 Western Cape Biodiversity Spatial Plan (WCBSP)

The main purpose of a biodiversity spatial plan is to ensure that the most recent and best quality spatial biodiversity information can be accessed and used to inform land use and development planning, environmental assessments and authorisations, natural resource management and other multi-sectoral planning processes. The WCBSP plan achieves this by providing a map of terrestrial and freshwater areas that are important for conserving biodiversity pattern and ecological processes – these areas are called Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs).

All wetlands indicated to occur within each of the property boundaries have been mapped as Aquatic CBA1 (**Figure 29**). These are wetlands that are considered to be in a relatively natural condition and are important for meeting provincial biodiversity targets. Management objectives require minimal, low impact development so that the natural state of the watercourses are maintained. Adjacent terrestrial areas have been largely mapped as terrestrial CBA1.

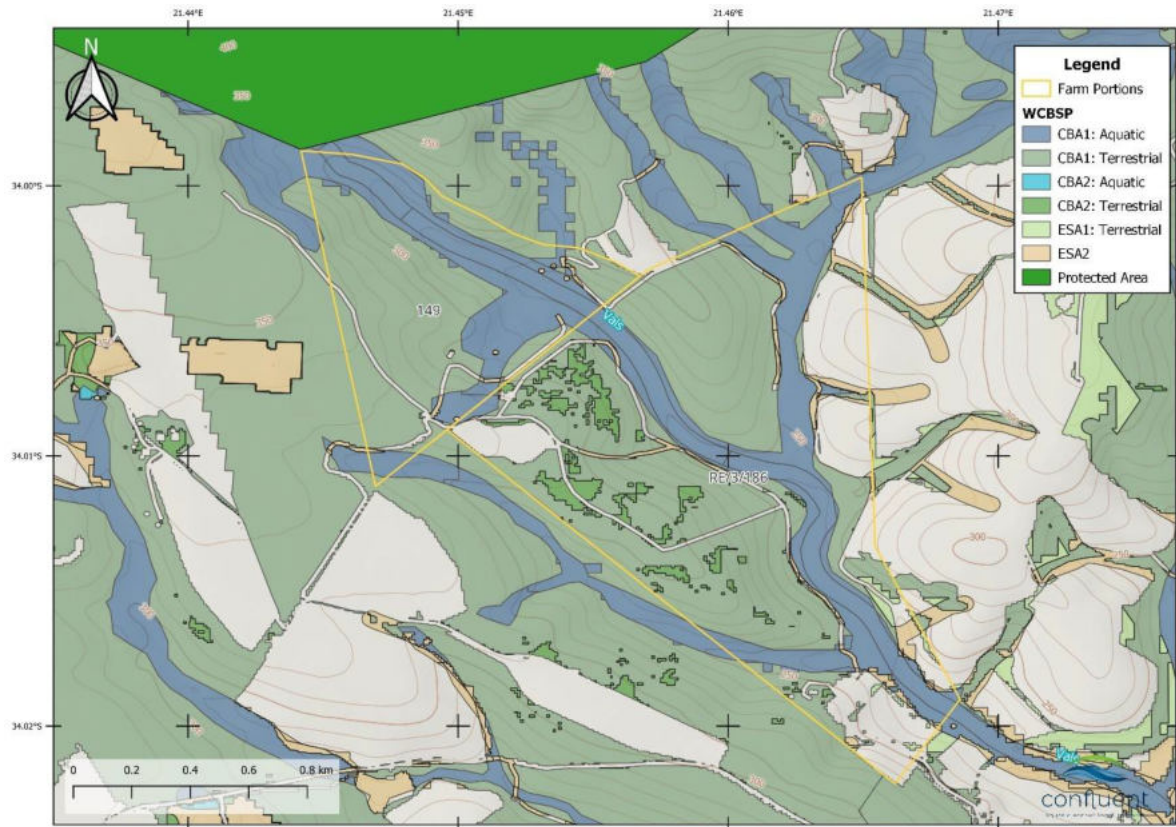


Figure 29: Map of the dams and road crossings in relation to the Western Cape Biodiversity Spatial Plan (WCBSP) (Dabrowski, 2025).

3.5.5 Site Specific Aquatics

Watercourse Classification –

The properties were visited on the 8th of November 2024, during which time the presence of watercourses was verified and mapped. The watercourses were classified according to discrete hydro geomorphic units (HGMs – see **Figure 30**) and are described in more detail in the sections below.

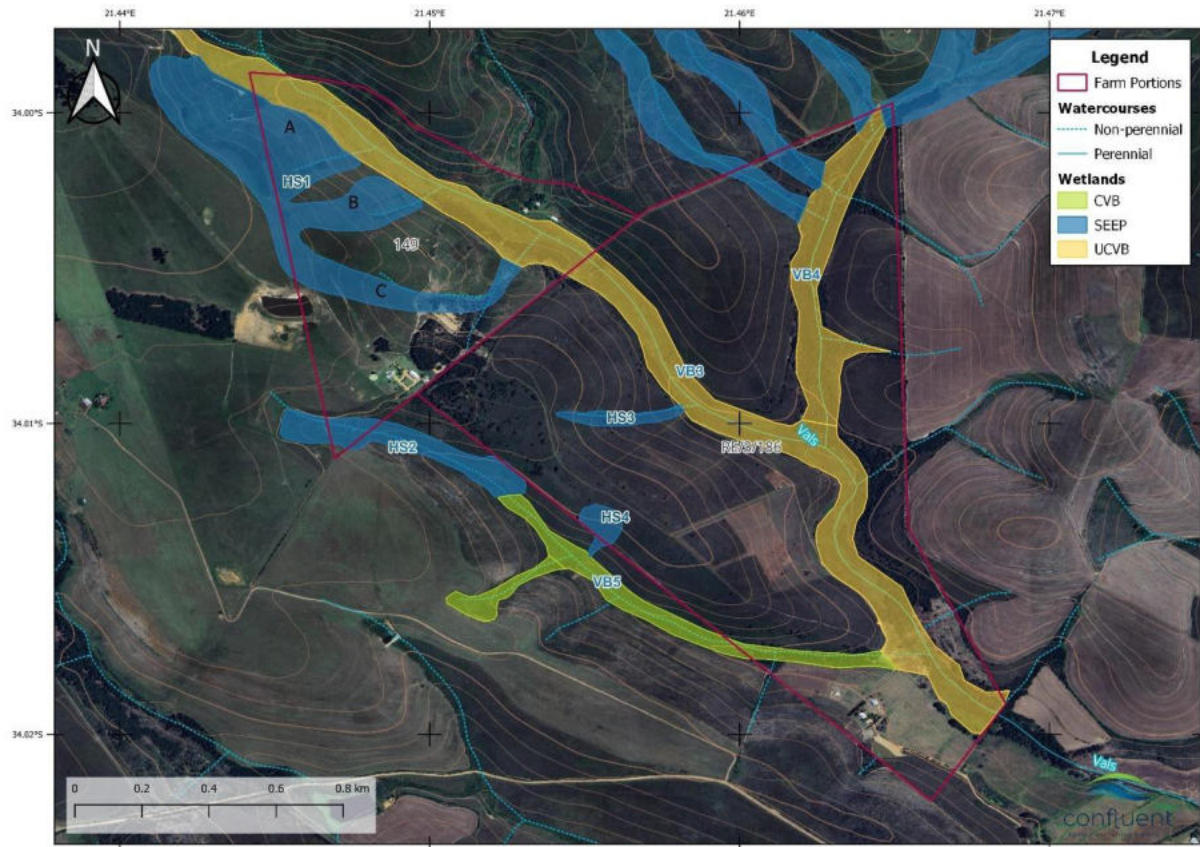


Figure 30: Map showing wetlands delineated and classified on Portion 3 of Farm Aan de Valsch Rivier 186 and Farm Horeb 149 (Dabrowski, 2025).

Valley-Bottom Wetlands

As the name implies, these wetlands are located along the valley bottoms of both properties. VB3 follows the Vals River and is the most prominent HGM (**Figure 30** above). It is an unchanneled valley-bottom wetland located along a low gradient valley, which favours diffuse (as opposed to channelled) streamflow, ultimately resulting in prolonged saturation levels and deposition of high levels of organic matter and sediment. VB3, is broad and well vegetated by a variety of wetland plant species that include *Carpha glomerata*, *Watsonia angusta* and *Elegia capensis* (**Figure 31**) While the wetland is heavily invaded by *Black Wattle* (*Acacia mearnsii*) in some sections, most of the wetland remains free of invasion.



Figure 31: Examples of common wetland plant species observed including *Carpha glomerata* (left) and *Eligia capensis* and *Watsonia angusta* (right) (Photo: Dabrowski, 2025).

The western tributary of the Vals River (VB5) also has low levels of invasion. This tributary has a distinct channel and is associated with a channelled valley bottom wetland, which is fed by lateral surface and subsurface flows and periodic flooding of the main river channel. The eastern tributary of the Vals River (VB4 - an unchannelled valley bottom wetland) is heavily invaded along most of its length, which has caused higher levels of invasion in the lower reaches of the Vals River.

Immediately downstream of the boundary of Portion 3 of Farm 186, the condition of VB3 wetland deteriorates rapidly and has become severely eroded, leading to the formation of a deep, heavily incised channel with banks actively collapsing into the river. This headcut erosion has moved upstream into the lower reaches of the Vals River on Portion 3 of Farm 186, leading to loss of wetland habitat. This erosion has potentially serious consequences for the wetland. Channelisation of the wetland will result in the localised drawdown of water levels leading to a drop in the water table and gradual loss of wetland habitat adjacent to the channel.

Hillslope Seep Wetlands

A large hillslope seep wetland was confirmed along the eastern slopes of Farm 149. Water was actively seeping down the slope, feeding the unchannelled valley bottom wetland (VB3) below (**Figure 32**). For ease of reference discrete sections of the wetland have been labelled from A to C (**Figure 30** above). Section C is a prominent section of the wetland characterised by higher levels of saturation and a diverse assemblage of fynbos species on the upper slopes. Steeper small valleys within the larger seep, where saturation is more pronounced, comprised a number of typical obligate wetland species that included *Utricularia bisquamata*, *Elegia capensis*, *Cliffortia strobilifera* and *Berzelia galpinii* (which frequently occurs in extensive stands in high altitude wetlands along the Langeberg mountains). *Erica cubica* and *Penaea cneorum* were common around the margins of these areas. Soil auger samples from these areas indicated

saturated soil conditions. The lower section of this seep is less saturated and more seasonal in nature. It is also actively mowed but included species such as *Fuirena hirsuta* and *Caryx* sp. Section B lies further to the south and was characterised by a prominent saturated zone dominated by *Eligia* cf *fistulosa*. The broader extent of this section of the seep is more seasonal in nature and was dominated by species that included *Fuirena hirsuta* and *Erica* cf. *quadrangularis*. Further downslope of seepage areas A and B, a cut off channel runs along a contour along the entire length of the slope presumably to capture water from the slopes and convey it to a small dam in between Section B and C. This channel was dominated by species that included *Berzelia galpinii*, *Eligia capensis* and *P. cneorum*. While *P. cneorum* is not a typical wetland indicator it does favour moist, damp areas and its noticeable presence along the margins of the channel suggests that this species appears to be a prominent indicator of more saturated soil conditions within this seep area.



Figure 32: View of the HS1 seep in the foreground, leading down to VB3 (Photo: Dabrowski, 2025).

Section C lies furthest to the south and is confined to a shallow valley. While this area is also actively mowed, obligate wetland species (e.g. *Cliffortia strobilifera*) were observed resprouting. At its lowest elevation the valley narrows and the wetland becomes more confined, passing through an old *Eucalyptus* plantation, whereafter it

meets the unchannelled valley bottom wetland and was characterised by species that included *Juncus capensis* and *Isolepis prolifera*. Refer to **Figure 33** and **34**.



Figure 33: Typical wetland plant species observed in Section A and B of HS1, including *Caryx* sp. (A); *Eligia* cf. *fistulosa* (B); *Penaea* *cneorum* (C); *Berzelia* *galpinii* (D); *Erica* cf. *cubica* (E); *Erica* cf. *quadrangularis* (F); *Eligia* *capensis* (G) and *Fuirena* *hirsuta* (H) (Photo: Dabrowski, 2025).

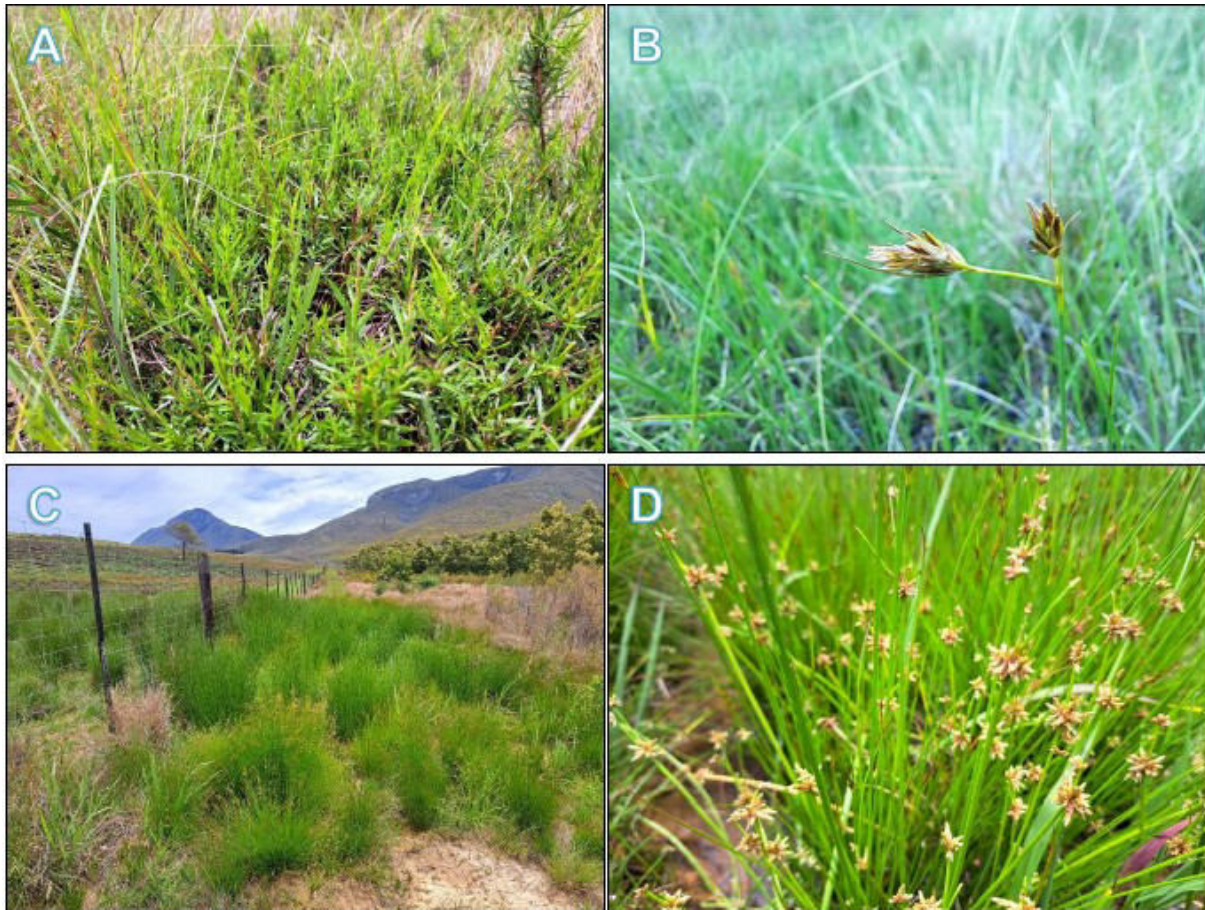


Figure 34: Typical wetland plant species observed in Section C of HS1 including *Clifortia strobilifera* (A); *Caryx* sp. (B); *Juncus capensis* (C) and *Isolepis prolifera* (D) (Photo: Dabrowski, 2025).

Another three smaller wetland seeps were delineated within Portion 3 of Farm 186:

- HS2 was identified and delineated by Day (2020) and forms the source zone of VB5.
- HS3 is a narrow seep wetland that extends down the east facing slope of the property. This seep occurs adjacent to an area that was actively farmed. Water was actively seeping from the top of the seep during the site visit (**Figure 35**). Vegetation along the seep was not as dense as observed elsewhere on the property and soil is more exposed (and thus vulnerable to erosion). The seep would benefit from the establishment of a protective buffer that would allow typical wetland species to re-establish
- HS4 is located along the western boundary of the property and originates from a shallow bowl at the top of the hill and extends down the slope to the channelled wetland at the bottom of the valley. The upper reaches of the wetland have also been actively mowed, however obligate wetland species including *Carpha*

glomerata and *Berzelia galpinii* characterised this wetland as well as other moisture loving species such as *Helichrysum cymosum* (Figure 36).



Figure 35: View of HS3 from its source down to the valley below (Photo: Dabrowski, 2025).



Figure 36: Wetland plant species observed in HS4, including *Carpha glomerata*, *Helichrysum cymosum* (left) and *Berzelia galpinii* (right) (Photo: Dabrowski, 2025).

Threat & Protection Status –

The threat and protection status of different wetland types within broad vegetation bioregions has been classified as part of the 2018 National Biodiversity Assessment. Based on vegetation characteristics, the wetland type, threat and protection status can be categorised as follows:

- Southern Fynbos hillslope seeps (HS1, HS2, HS3 and HS4) - Least Concern & Well Protected.
- Southern Fynbos unchanneled valley bottom wetlands (VB3 and VB4) - Critically Endangered and Poorly Protected.
- Southern Fynbos channelled valley bottom wetlands (VB5) - Critically Endangered and Poorly Protected.

Present Ecological State (PES) –

Present Ecological State (PES) is a measure of aquatic ecosystem condition, compared to that of the system in its natural or “reference” condition. The PES of each wetland was assessed and is described below.

Seep Wetlands

HS1 is a relatively large wetland and provides significant surface and sub-surface flows into the valley bottom wetland below. Impacts to the wetland are currently relatively limited. Vegetation in the less saturated areas is periodically cut (presumably for supplemental feed). Vegetation in the more saturated areas (mainly Section A) is not cut and supports a wide diversity of fynbos species. The road running along higher slopes of the seep (along the western boundary of Farm 149) intercepts shallow sub-surface flows to an extent, leading to daylighting of sub-surface flows and more concentrated flows down the slopes from discrete low points down the road. The impact of the road is however relatively minor and has not resulted in any noticeable erosion on the down slope. The channel running along the mid-slope of the seep intercepts shallow sub-surface and surface flows, leading to noticeably drier conditions further downslope. Grazing of animals within these seep areas does occur but does not appear to have caused major disturbance to the larger portion of the wetland and there is no visible erosion. Only the more southern extent of HS1 (Section C) is invaded by *Eucalyptus sp.* Based on these impacts the PES of the wetland is **B (Largely Natural)**.

HS2, as described by Day (2020) has been closely edged and possibly reduced in extent by a surrounding access road as well as by upslope impacts such as the new dam which potentially reduce throughflows that would naturally feed the wetland. Day

(2020) assessed the PES as **B (Largey Natural)** with localised disturbance as a result of road fragmentation and possible impacts to seepage inflows.

HS3 has been impacted by adjacent agricultural activities, the lack of a protective buffer and minor invasion by *A. mearnsii*. The PES of the wetland is **C (Moderately Modified)**.

Apart from mowing of vegetation in the uppermost reaches **HS4** is relatively unimpacted. Minor modifications due to roads and cutting of vegetation have occurred. The PES is **B (Largey Natural)**.

Unchannelled Valley Bottom Wetlands

Main impacts to **VB3** are associated with roads and road crossings and invasion by *A. mearnsii*. Road crossings are currently unprotected low-level crossings along the river bed. While these cause a localised disturbance across the wetland, the main diffuse flow characteristics of the wetland are maintained and no erosion or channelisation of the wetland has occurred as a result of these crossings. Invasion by *A. mearnsii*, is relatively limited to isolated patches and much of the natural extent of the wetland remains uninvaded. As described above, the lower most reach of the wetland is eroding in the neighbouring Portion 2 of Farm 186 and in more recent times, this erosion has extended into the wetland within Portion 3 of Farm 186. This erosion presents a serious threat to the remaining extent of the wetland and rehabilitation of the seep with a view to limiting further headcut erosion is highly recommended. The PES is **B (Largey Natural)**.

VB4 is heavily invaded by *A. mearnsii*, which dominates almost the entire extent of the wetland. Natural wetland vegetation has therefore been replaced and the comparatively high water use by invasive plant species affects base flows and increases erosion in the wetland. The PES is **D (Largey Modified)**.

VB5 is relatively unimpacted apart from the lower most reaches, just upstream of its confluence with VB3. Here, the road crossing causes a small area of inundation upstream of the road. Below the crossing, extensive clearing of *A. mearnsii* has occurred and there are indications of recovering wetland habitat in this area. A channel has however been excavated to divert flows from upstream of the road directly into VB3 which essentially diverts diffuse flows out of the lower most section of the wetland. The PES is **B (Largey Natural)**.

Ecological Importance & Sensitivity (EIS) –

The EIS of each wetland varies according to its hydrogeomorphic characteristics and size. In terms of the hillslope seep wetlands, HS1 is a large wetland, with a high diversity of plant species. It is located within an endangered vegetation type and there

is a high probability of red data plant species occurring within this wetland. By comparison HS3 and HS4 are much smaller wetlands, offering limited diversity of habitat and lower likelihood of threatened and/or unique biota. Due to their unique characteristics, seep wetlands are not particularly sensitive to changes in flow or water quality. Given its size and more prominent permanent saturation levels, HS1 does offer good hydro-functional attributes in terms of regulating stream flows and assimilating pollutants. These attributes are less pronounced in HS3 and HS4 due to their smaller size and more seasonal hydroperiod. HS1 offers some important direct human benefits in terms of grazing as well as recreational opportunities (e.g. general scenic beauty, bird-watching etc.). The **EIS of the seep wetlands** has been determined as follows:

- **HS1: High**
- **HS3 and HS4: Low**

The valley-bottom wetlands are also relatively large systems and provide a greater diversity of habitat (across a range of permanently saturated and inundated flowing sections to seasonally saturated margins) and given their presence in an endangered vegetation type have a high likelihood of hosting red listed and unique biota. These systems are sensitive to changes in hydrology in particular, and offer important ecosystem services that include flood attenuation, streamflow regulation and assimilation of pollutants. These wetlands offer direct human benefits that include water abstraction for irrigation as well as recreational opportunities (e.g. general scenic beauty, bird-watching etc.). The **EIS of all valley-bottom wetlands** is **High**.

Please refer to **Appendix D** for Environmental Sensitivity Maps.

3.6 FAUNAL & AVI-FAUNAL SPECIES

*The following information is extracted from the Faunal Study undertaken by Jonathan Colville from Terrestrial Ecologist & Faunal Surveys and Callan Cohen from Birding Africa (**Appendix E6**).*

The project site falls close to Important Bird Areas (IBA) (e.g. Overberg Wheatbelt IBA) or marginally within (Langeberg Mountains IBA) (**Figure 37**).

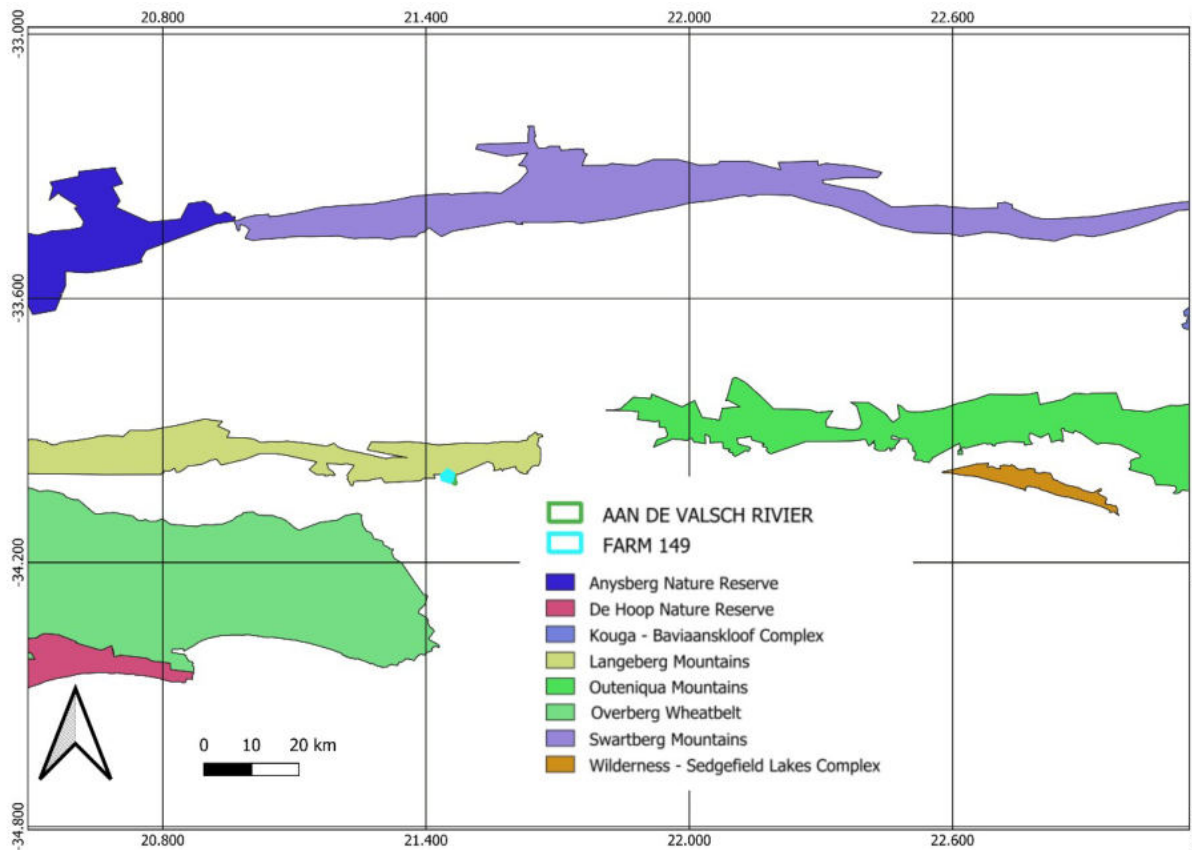


Figure 37: The project area (blue dot) in relation to Important Bird Area identified for South Africa (Marnewick et al., 2015) (Colville & Cohen, 2025).

3.6.1 BIRDS SCC

Circus maurus (Temminck 1828) Black Harrier

- This species of harrier is endemic to southern Africa and has an IUCN Red List Category and Criteria of **Endangered** C2a(ii).
- This species occurs widely in South Africa, but fewer than 1000 birds are thought to occur, and habitat transformation is a major threat.
- This species breeds on the ground in low, shrubby vegetation in spring, mainly in the Western Cape, before undertaking complex and variable post breeding movements that can take birds to the Drakensberg.
- Prey is mainly rodents and birds.
- Even though no Black Harriers were seen on the site visit, the open, relatively undisturbed habitat at the site is suitable for this species for foraging and potentially breeding, although the wetland edge areas that might be most suitable for breeding are heavily disturbed by alien invasive vegetation.

Circus ranivorus (Daudin 1800) African Marsh Harrier

- This species of harrier is endemic to Africa and has an IUCN Red List Category and Criteria of **Least Concern**.

- This species is associated with aquatic habitats and often nests in extensive marshes. Prey included rodents, as well as birds and amphibians.
- Although this species occurs in the general region, the small amount of wetland habitats associated with this site mean that it is not an important site for this species

Neotis denhami (Children & Vigors, 1826) *Denham's bustard*

- This species of bustard is endemic to Africa and has a Regional Red List Status of **Vulnerable** however in the global context an IUCN Red List Category and Criteria of Near-Threatened.
- This species inhabits and breeds in open vegetation types in this area of the South Coast. It can also occur in recovering vegetation that has been previously disturbed. Denham's Bustard shows local movements and are more common as breeders after fires have made the vegetation more open.
- The upper ridge area of open habitat offers ideal habitat for this bird SCC, both in terms of foraging and breeding. This species was seen flying over the project site and foraging in adjacent open areas. **Figure 38 - 40.**



Figure 38: Open habitats such as this near the western ridge are suitable for Denham's bustard SCC (Photo: Colville & Cohen, 2025).



Figure 39: Western areas of farm Aan De Valsch Rivier have good quality fynbos habitat; a Denham's bustard was sighted near here on the neighbouring upper ridge area of open habitat (Photo: Colville & Cohen, 2025).



Figure 40: Open brush cut slopes (note the parallel lines made by the brush cutter) on the north-eastern parts of farm Aan De Valsch Rivier. These areas may be used by Denham's bustard but would depend on the frequency of brush cutting disturbance and on the quality of the habitat related to fire cycles as the birds can be locally nomadic (Photo: Colville & Cohen, 2025).

Polemaetus bellicosus (Heine, 1890) Martial Eagle

- This species of eagle is endemic to Africa and has an Regional Red List Status of **Vulnerable**, however in the global context an IUCN Red List Category and Criteria of Endangered.
- The species is wide-ranging and likely hunts over the site from time to time, but there are no known nesting sites at the project site and the site is not considered of significance for the species.

Stephanoaetus coronatus (Linnaeus, 1766) Crowned eagle

- This species of raptor is widely distributed in Africa and Eurasia has an IUCN Red List Category of Near Threatened, but in South Africa its regional Red List Status is **Vulnerable**.
- This species is localised in the forests of the eastern and southern parts of South Africa (mostly the eastern coastal forests) and 800 adults are thought to occur.
- Natural prey is mainly mammals such as antelope, monkeys, and hyraxes, but birds such as Hadedas can also be taken.
- This species was not seen at the site and is not known to breed at the site, although it might occasionally pass through the area and use the forested parts of the site.

Bradypterus sylvaticus (Sundevall, 1860) Knysna Warbler

- This species of warbler is endemic to South Africa occurring patchily along the southern coast from Cape Town to Mbumbazi Nature Reserve, KwaZulu-Natal, and even being recorded more recently near Durban.
- It has an IUCN Red List Category and Criteria of Vulnerable.
- It creeps around in thick undergrowth and tangles in forest, forest edges, and coastal thickets
- When a forest becomes overshadowed by too many trees, this species will vacate the habitat as it prefers dense bush, which cannot grow in low light conditions. In recent years it has resorted to living in woodlands invaded by alien plants.
- This species was not recorded and is very localised in this area. It might occur dense forest edge tangles but the amount of habitat is not considered significant for this species on the site.

3.6.2 INVERTEBRATE SCC

GRASSHOPPER SCC

Aneuryphymus montanus (Brown 1960) Yellow-winged Agile Grasshopper

- This species of grasshopper is endemic to South Africa and has an IUCN Red List Category and Criteria of Vulnerable B2ab.

- Within South Africa, the species has a broad distribution occurring across mountainous habitats of the “Cape Region” from the north-western winter-rainfall areas near Clanwilliam, eastwards until just before East London. The species appears to be associated with several fynbos vegetation types (e.g., Leipoldtville Sand Fynbos, Kogelberg Sandstone Fynbos) and “south-facing cool slopes” .
- It has a large, estimated extent of occurrence of 172463km² and its estimated geographic range overlaps the project area.
- The species has not been historically recorded from near the project area; the closest known record is approximately 91 kms north-east for a collection record from South Swartberg Sandstone Fynbos.

BUTTERFLY SCC

Tsitana dicksoni (Evans, 1956) Dickson’s Sylph

- This species of butterfly is endemic to South Africa and has an IUCN Red List Category and Criteria of Least Concern (Rare).
- The species is relatively widespread and is known from the Eastern Cape and Western Cape Provinces, from Franschhoek in the west to Baviaanskloof near Patensie in the east, widespread on the Langeberg and its foothills.
- It has an estimated extent of occurrence of 50 000 km², and although widespread, it is considered generally rare.
- It favours habitat associated with grassy spots in montane fynbos vegetation.
- A species of grass is known as a larval host plant: *Pseudopentameris macrantha* (Schrader.) Conert (Poaceae).
- The species has been historically recorded relatively close to the project area; a known record is approximately 15 km south-westwards of the project site from Eastern Ruens Shale Renosterveld.

The site appears in poor to good ecological condition and some areas of the site offer habitat suitable for bird and insect SCC. The sensitivity themes are considered mostly inaccurate for the animal theme assessed, with most areas considered a low sensitivity, except for three areas that are considered as higher sensitivity, owing to river and associated wetland habitat, and mostly intact fynbos habitat (**Figure 41**) and sighting of Denham's bustard on the western ridge above the project area.

Based on the faunal survey undertaken, the project area is classed as mostly Low, with two areas classed as higher faunal sensitivity, mostly based on the sighting of the Denham’s Bustard, intact fynbos habitat, and falling within an IBA.

Refer to **Figure 42 – 45**.



Figure 41: Constraints map for the project area: The upper western ridge is considered as higher sensitivity owing to the sighting of Denham's Bustard. The northern parts are considered higher sensitivity owing to the intact fynbos vegetation and the area falling within an IBA (Colville & Cohen, 2025).



Figure 42: The area bordering the two farms is heavily disturbed with eucalyptus gums (Photo: Colville & Cohen, 2025).



Figure 43: Eastern areas of farm Aan De Valsch Rivier are heavily infested with Black Wattle (Photo: Colville & Cohen, 2025).



Figure 44: Clearing activities of Black Wattle trees is on-going at the project site. The dense stands of these invasive trees are a major disturbance at the project site (Photo: Colville & Cohen, 2025).



Figure 45: The northern areas of farm 149 are considered as medium to high sensitivity from a faunal perspective (Photo: Colville & Cohen, 2025).

3.7 SOIL INFORMATION & LAND CAPABILITY

The following information is extracted from the Site Sensitivity Verification and Agricultural Compliance Statement undertaken by Francois Knight from Agri Informatics (Appendix E2).

Land Type Gb21 (Figure 46)

Proposed Field 2 and the upper parts of Fields 1, 3 and 4 do occur in this Land Type. The Land Type is characterised by the presence soils with a diagnostic ferrihumic horizon.

The geology is indicated as Tertiary terrace gravel mainly overlying shale of the Bokkeveld Group. The dominant soils on the crest areas of this Land Type is deep (>1100 mm) fine to medium sandy loam soils of the Houwhoek soil from. Subdominant area deep (>900 mm) fine to medium sandy loam soils of the Clovelley soil from or less deep (<500 mm) fine sandy loam soils of the Sterkspruit soil from. Coarse deposits and rock also do occur.

Land Type Gb21 (Figure 46)

Proposed Field 5 and the lower parts of Fields 1, 3 and 4 do occur on the mid slopes of this Land Type.

The geology is indicated as shale and siltstone of the Bokkeveld and Witteberg Groups, occasionally overlain by Tertiary silcrete and terrace gravel. The dominant soils on the mid slopes of this Land Type are shallow (<350 mm) clay soils of the Swartland soil form, shallow (<450 mm) fine to medium sandy loam soils of the Glenrosa soil form or medium deep (300 – 600 mm) clay (>60%) soils of the Sterkspruit soil form.

This information suggests that effective soil depth could be limiting, especially for the lower parts of proposed Fields 3 and 4, where orchard establishment of perennial crops is proposed. Deep soil preparation and ridging, or possibly terracing may be required to ensure sufficient effective soil depth for perennial tree crops.

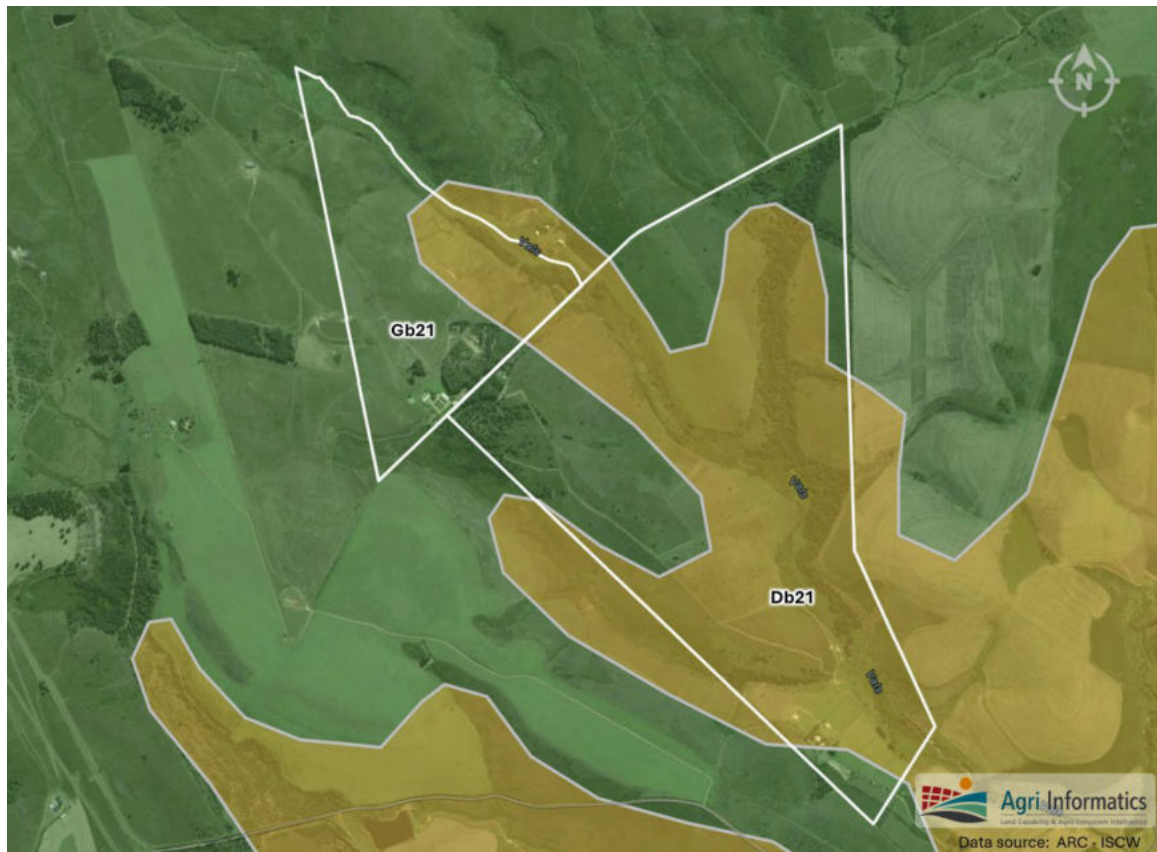


Figure 46: Land Types of the study area.

Land Capability

The term “land capability” refers to the suitability of land for agricultural activities. Various independent but similar Land Capability classification systems have been developed or used internationally to classify land. Most systems put strong emphasis on soil properties, but other factors such as climate and topography can also play a role. In an attempt to provide more detailed input to the Preservation and Development of Agricultural Land Bill (PDALB), the former National Department of Agriculture, Forestry and Fisheries (DAFF), expanded the earlier 8-class Land Capability

classification of the RSA, to a 15-class Land Capability Map, based on national datasets on Soil, Climate and Terrain capability, with a weighted reference of:

Soil capability = 30%; Climate capability = 40% and Terrain capability = 30%.

The Land Capability for the proposed development areas is indicated as Low (5) to Low-Moderate (07) for all Fields except Field 2 which includes an area with Moderate (08) Land Capability, as shown in **Figure 47**.

The relatively low Land Capability is combination of mostly Low-Moderate Soil Capability in combination with limitations induced by the Terrain Capability. The other component of Land Capability, namely Climate Capability is Moderate-High. This emphasises the importance to consider the impact of the steep slopes on cultivation carefully, while also confirming the suitability of the soils with a soil survey.

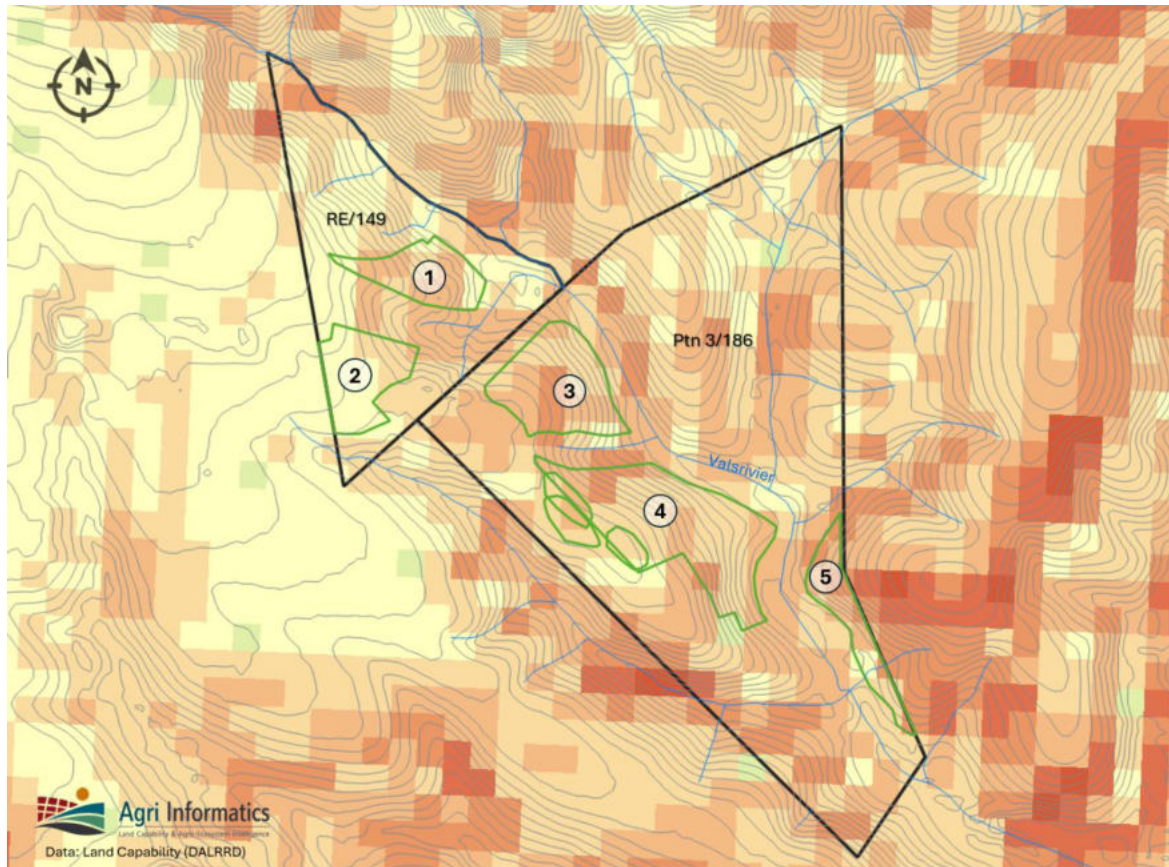


Figure 47: Land Types of the study area.

3.8 SOCIO ECONOMIC

The following information is extracted from: “The 2024 Socio-Economic Profile - Hessequa Municipality” (Western Cape Government).

The site falls within the Hessequa Local Municipality (LM) which is found within the Garden Route District Municipality (DM), in the Western Cape. The municipality covers

an area of 5,733 square kilometres between the Langeberg mountains and the Indian Ocean, stretching from the Breede River in the west to the Gourits River in the east. The largest town in the municipality is Riversdale, which is also where the municipal headquarters are located.

3.8.1 Demographics

Population Growth

Hessequa Municipality recorded a population of 55 104, making it the second smallest in the Garden Route, following Kannaland, which has 21 852 residents (2024). Projections indicate that this population will grow to 55 369 by 2029, representing an average annual growth rate of 0.1 per cent. This rate suggests a slow pace of population increase, often associated with an aging demographic. Such a trend places increasing pressure on social security systems and pension frameworks, as a smaller proportion of working-age individuals supports a growing number of dependents. This shift underscores the importance of policies that address demographic challenges, promote economic resilience, and foster sustainable growth to ensure a balanced socio-economic environment for all residents.

Gender, Age and Race Dynamics

In economic terms, the sex ratio provides a measure of the proportion of males to females in a given population. The available data suggests that in the Hessequa municipal area, there is a lower representation of males compared to females, with a distribution of 48 per cent for males and 52.0 per cent for females.

In terms of age representation, the largest share of the population, consist of the working age population (15 - 64 years) at 62.1 per cent, followed by the young children (0-14 years) aged cohort at 21.3 per cent and the elderly 16.6 per cent. Hessequa's age distribution suggests that the working-age population may have a significant influence on consumption patterns and market demand. Businesses may need to adapt to cater to the preferences of this demographic. Intergovernmental policy should allocate resources to strategically address the needs of both the younger and older age cohorts, balancing investments in education, healthcare and social services.

Population density

Within the framework of the persistent urbanisation trend in the Western Cape, the utilisation of population density data emerges as a critical instrument for public sector policymakers. This data proves instrumental in tackling environmental considerations, individual health metrics, and streamlining service provision. Notably, as of 2022, the Hessequa municipal area exhibited a population density of 9.6 individuals per square kilometer, denoting a notable degree of population concentration.

3.8.2 Education

Education is one of the primary resources of change, a powerful driver of development and one of the strongest instruments for reducing poverty and improving health, gender equality, peace and stability. Its role is to help people acquire knowledge and skills, which can, in turn be used to acquire jobs, start businesses and produce goods and services.

Learner enrolment

From 2020 to 2023, Hessequa witnessed a steady increase of student enrollment representing an annual average increase of 0.01 per cent. While increased enrollment is generally positive, it may also pose challenges related to increased demand for schools as well as teacher recruitment and training. A growing student population signals a youthful demographic that can contribute to future economic activity, enhancing long-term economic sustainability, capacity of schools, teacher-student ratios, and the quality of education. A surge in learner enrollment results in increased demand for educational services, leading to economic opportunities in the education sector.

Education infrastructure and facilities

Within the Hessequa municipal area, there are a total of 18 schools, of which 66.7 per cent operate as no-fee schools. This noteworthy statistic holds significant socio-economic implications, particularly in light of the fact that 24 per cent of students in 2021 cited financial constraints as the reason for discontinuing their education, as per the General Household Survey of 2021.

Learner Retention Rate

The learner retention rate increased from 69.4 per cent in 2020 to 72.2 per cent in 2021. There was a decline in 2022, dropping to 66.4 per cent. The rate recovered slightly in 2023 to 70.3 per cent, but it has not reached the 2021 peak. This suggests some fluctuations in learner retention, potentially influenced by external factors such as socio-economic conditions, school policies, or other educational challenges.

Learner teacher ratio

In the context of South African schools, the prescribed learner-to-teacher ratio typically falls within the range of 35:1 to 40:1; nonetheless, this standard is not consistently adhered to in the majority of Western Cape schools. It is worth noting that the learner-to-teacher ratio remained slightly below 30 between 2020 and 2022 and 27.7 in 2023, indicating slight improvement. This positive shift has set in motion a ripple effect, encompassing reduced dropout rates, heightened academic performance, and other favorable outcomes.

Education outcomes

Education continues to serve as a pivotal channel through which the government participates in the economy. The policymaking and strategic determinations made in the realm of education carry significant weight in shaping the level to which forthcoming economic objectives and poverty alleviation initiatives can be actualised. Notably, Hessequa's matriculation pass rate, consistently improved from 92.4 per cent in 2020, to 95.4 per cent in 2023. This improvement underscores the potential socio-economic benefits of a well-performing education system.

3.8.3 Health

Healthcare facilities & Emergency Services

In the fiscal year 2022, the Hessequa municipal area was endowed with a total of three fixed primary healthcare facilities. Additionally, the region featured six mobile/satellite clinics, with six dedicated Antiretroviral Treatment (ART) sites, and eight clinics exclusively designated for tuberculosis (TB) treatment. Noteworthy is the absence of a regional hospital, with only one district hospital serving the area.

In 2023, the Hessequa municipal area had a total of 0.7 ambulances, while the Garden Route District had 0.4 ambulances per 10 000 people during the same period. It's essential to note that this calculation exclusively pertains to provincial ambulances and does not encompass the presence of private service providers. This difference in ambulance provision has implications for emergency healthcare accessibility in the respective regions.

Maternal & Child health

The maternal mortality ratio for Hessequa slightly rose to 173.6 maternal deaths per 100 000 live births in 2024 which are above the Garden Route's average of 70.2. On the other hand, the percentage of babies born to mothers between the ages of 10-19 years in Hessequa (19.3) also slightly exceeded the district average of 11.5. The termination of pregnancy rate for Hessequa is slightly lower at 0.2 whereas the district average is 0.6. Addressing maternal health issues involves a comprehensive approach, including improving healthcare access, promoting education, and addressing social determinants of health. Such efforts contribute not only to the health of mothers but also to the overall socio-economic development and resilience of communities.

The neonatal mortality rate, measuring deaths per 1,000 live births within 28 days, displays a growing trend between 2023 and 2024. Furthermore, the rate of low-birth-weight infants, those born under 2,500 grams, within Hessequa slightly increased, indicating an improvement in food insecurity, public health and social welfare.

HIV/AIDS & Tuberculosis

The Hessequa municipal area recorded a significant increase in the number of registered individuals receiving antiretroviral treatment (ART), with patient numbers rising by 126 between 2022/23 and 2023/24. Similarly, the same period saw a growth of 19 in newly enrolled ART patients, which could stem from factors such as reduced new HIV infections, improved early diagnosis, or a possible decrease in testing rates. In contrast, the region experienced an average annual decline of 13.9 per cent in the number of registered tuberculosis (TB) patients, dropping from 404 in 2022/23 to 348 in 2023/24. These fluctuations underscore the socio-economic complexities shaping the region's healthcare landscape, including resource allocation, public health interventions, and community health awareness efforts.

3.8.4 Poverty

In 2023, the Hessequa Municipality exhibited a real GDP per capita of R55 331, surpassing the Garden Route District's figure of R53 875. The decline in Hessequa's GDP per capita reflects declining living standards for residents of Hessequa, particularly for lower-income households. This economic trajectory holds socio-economic implications, reflecting the municipality's evolving economic landscape and potential disparities in wealth distribution.

South Africa contends with some of the most pronounced income disparities globally. This inequality manifests through a skewed distribution of income, disparities in access to opportunities, and regional economic discrepancies. In pursuit of mitigating this issue, the National Development Plan (NDP) has set a target to reduce income inequality in South Africa, aiming to decrease the Gini coefficient from 0.7 in 2010 to 0.6 by 2030. In the Garden Route District, income inequality was slightly below the national target, registering at 0.54 in 2023 with Hessequa Municipality holding a Gini coefficient of 0.57. Notably, within Hessequa, conspicuous income disparities are evident among different racial communities. These variations in income distribution carry significant socio-economic ramifications, reflecting the broader impact of unequal economic conditions within the region.

The Upper Bound Poverty Line (UBPL) headcount ratio reflects the percentage of the population unable to afford a minimum standard of living, which includes both essential food and non-food items. In South Africa, the UBPL is set at R1,227 per person per month (April 2019 prices). Poverty exerts profound socio-economic impacts on communities, including reduced life expectancy, malnutrition, food insecurity, increased susceptibility to crime and substance abuse, lower educational attainment, and inadequate living conditions. Aligned with the National Development Plan's (NDP) goal to eradicate poverty by 2030, addressing these challenges remains a critical

priority. However, in Hessequa, poverty levels have worsened, with 66.6 per cent of the population living below the UBPL in 2023.

3.8.5 Basic Service Delivery

The Constitution stipulates that every citizen has the right to access to adequate housing and that the state must take reasonable legislative and other measures within its available resources to achieve the progressive realisation of this right. Access to housing also includes access to services such as potable water, basic sanitation, safe energy sources and refuse removal services, to ensure that households enjoy a decent standard of living.

Within the Hessequa municipal area encompassing 21 450 households, 95.9 per cent had access to formal housing, surpassing the Garden Route District's mean of 89.4 per cent. Hessequa exhibited a diminished share of informal dwellings, constituting 3.9 per cent, in contrast to the district-wide average of 10.4 per cent for informal housing. Service access levels within the Hessequa municipal area exceeded the access to formal housing in certain cases. Approximately 99.5 per cent of households had access to piped water either inside the dwelling/yard or through communal/neighbor's taps. An impressive 97.3 per cent had access to flush toilets or chemical toilets, and 98.5 per cent had access to electricity (including generators) for lighting. Additionally, local authorities removed refuse at least weekly for 93.8 per cent of households in the area.

Municipalities extend a suite of essential services without charge to households grappling with financial adversity and struggling to meet service-related expenses. In the Hessequa municipal area, there has been a slight decline in the count of households availing themselves of free basic services, from 5 359 in 2019 to 5 160 in 2023.

3.8.6 Safety and Security

In the Hessequa municipal area, there has been a decline in the actual count of murders and, calculated per 100 000 people, exhibited a downward trend to 10 in 2023/24. It is pertinent to highlight that this rate is below the murder rate of 27 per 100 000 people recorded in 2023/24 for the Garden Route District.

In 2023/24, there were 57 sexual offenses reported in the Hessequa area, up from 31 reported in 2022/23. The incidence of sexual offenses per 100 000 people in the Hessequa municipal area (80) was lower than that of the District (111) in 2023. It's noteworthy that South Africa is among the top 5 countries globally in terms of reported rape cases, underscoring the magnitude of this issue, which necessitates addressing. In response, a National Strategic Plan on gender-based violence and femicide has been developed.

In the Hessequa area, drug-related crimes increased from 577 cases in 2022/23 to 909 cases in 2023/24. When considering the rate per 100 000 people, Hessequa had 1 264 drug-related offenses per 100 000 people in 2023/24, which is higher than the Garden Route District's rate of 868 per 100 000 population.

The number of DUI cases in the Hessequa area increased from 80 in 2022/23 to 139 in 2023/24. This translates to a rate of 194 cases per 100 000 people in 2023/24, which is lower than the Garden Route District's rate of 207 cases per 100 000 people.

The number of residential burglaries in the Hessequa area remained at 313 between 2022/23 and 2023/24. The Hessequa municipal area's rate of 435 residential burglaries per 100 000 population exceeded the District's rate of 421 in 2023/24. These crime trends have significant socio-economic implications for the community's safety and well-being.

3.8.7 GDPR Performance

The Garden Route District contributed R46.17 billion to the Western Cape's Gross Domestic Product (GDP), representing 7.6 per cent of the province's total. Hessequa Local Municipality contributed R4.04 billion (8.8 per cent) of the total contribution.

Top industries driving GDP:

- Finance, insurance, real estate, and business services: 30 %
- Wholesale and retail trade, catering, and accommodation: 14%
- Manufacturing: 14% Agriculture, forestry, and fishing: 12%
- Transport, storage, and communication: 11%
- Community, social, and personal services: 10%

Most industries showed positive job growth, with transport, storage, and communication leading GDP growth with several sectors experiencing a decline, notably finance, real estate, and agriculture. GDP growth within the Hessequa LM is expected to grow reaching 1.3 per cent by 2026.

Total imports amounted to R39.5 million and total exports to R55.7 million in 2023. The top imported products being agricultural and horticultural goods.

3.8.8 Labour Market Performance

The Garden Route District's labour market in 2023 reflects a mix of progress and challenges, highlighting key trends in employment, wage distribution, and sectoral shifts.

The labour force participation rate saw a slight increase, indicating a growing number of individuals actively seeking employment. The labour absorption rate (the proportion of employed individuals relative to the working-age population) also improved, demonstrating a moderate expansion in job opportunities. However, the proportion of the working-age population not economically active remained relatively high at 61.0 per cent, suggesting ongoing structural barriers to employment access.

The majority of the workforce (41.1 per cent) is semi-skilled, with a significant portion engaged in low-skilled (34.6 per cent) and informal (24.3 per cent) work. The low proportion of skilled workers (31.4 per cent) underscores a need for targeted interventions in education and vocational training to enhance workforce capabilities and improve job quality.

Hessequa exhibited a lower unemployment rate, dropping from 14.9 per cent to 12.8 per cent, reflecting a relatively more stable local labour market. Despite this progress, unemployment remains a critical socio-economic concern, requiring sustained efforts in job creation, skills development, and economic diversification.

The majority of wage earners fall within the R3,200 – R12,800 range, with relatively few workers earning above R51,200 per annum. Wage disparities persist across municipal areas, with varying income distributions reflecting local economic structures and sectoral strengths.

Agriculture remains a key employer, with job gains in mixed farming, cereal and oilseed cultivation, and vegetable production. Public sector employment also contributed to job creation, particularly in local government administration. Utility construction indicates continued investment in infrastructure. The manufacturing sector experienced significant job losses, particularly in bakery products and pharmaceuticals. Retail trade in fresh produce and tree/bush fruit cultivation also faced employment declines, potentially due to shifting market demands and environmental factors. Civil engineering projects job losses highlight volatility in the construction industry, which could impact future economic stability.

Mixed farming continues to be the dominant employment sector, reinforcing agriculture's crucial role in the regional economy. Government administration across local and provincial levels highlights the importance of public sector employment. Retail and vegetable farming remain significant but face challenges due to economic shifts and market conditions.

3.8.9 Risk and Vulnerability Factors

Sea-level rise and Storm Surges

Although we expect fewer storm systems to reach the Western Cape in future, increased sea temperatures could mean increased storm activity and slightly stronger winds. At the same time the thermal expansion of the oceans will result in 0.25m – 0.75m of sea level rise by 2050, with associated swash run up of roughly 3.0m – 3.5m above the mean sea level (excluding tidal influence). Sandy shores are most affected – some areas in the Garden Route have seen beaches retreat landward at a rate of 0.6 m per year. This directly affects infrastructure and detracts from the amenity value of the coastline. Hessequa faces moderate increase in short-term coastal flooding exposure as well as very low to low potential increase in exposure to flooding in settlements.

However, Riversdale specifically is approximately 40km inland from the coast.

Drought

According to the CSIR Green Book, Hessequa has a High potential exposure to an increase in drought. Currently 1.9 years per decade are at risk of drought, and this will increase to 3.1 out of every 10 years by 2050. Water, and related sanitation services, is a key ingredient for socioeconomic development, food security and healthy ecosystems, and is vital for reducing the burden of disease and improving the health, welfare and productivity of populations. A deteriorating water catchment system, through ecosystem loss (transformation or land use change) and alien infestation, or watercourse and wetland modification, will lead to lower inputs into the water supply systems, and a lower overall water security due to lower natural retention and lower quality of water. During extended drought periods, even end users far from major source areas are likely to experience shortages as the overall system runs low.

Vegetation Fires

Although critical for a healthy ecosystem, fire is a significant threat to human lives, food security, socio-economic activities and livelihoods, as well as infrastructure and other assets. Furthermore, in many areas land has been converted from natural vegetation to other land-cover types - some of which significantly modify the fuel loads (e.g. the establishment of forest plantations and the spread of several introduced tree species such as pines, hakea, wattles and eucalypts). Fires in vegetation with high fuel loads increase soil erosion and run-off, which negatively affects ecosystem services and increases the impact of floods, among other factors. Where severe fires have occurred due to high fuel loads, resulting soil erosion leads to the sedimentation of rivers and dams and therefore declining water quality (and increased water treatment costs). Hessequa is subject to possible wildfires occurring in wildland-urban interface with settlements, with low to moderate potential increase in exposure to wildfires.

Floods

Floods result in millions or billions of Rands' damage to built structures or lost productivity, the loss of livelihoods and in some cases the loss of lives. A 2016 report calculated that four severe weather events between 2011 and 2014 caused more than R1.6 billion worth of damage in the Western Cape, and in the recent September 2023 severe weather event, flood-related infrastructure damage alone amounted to R2 billion.

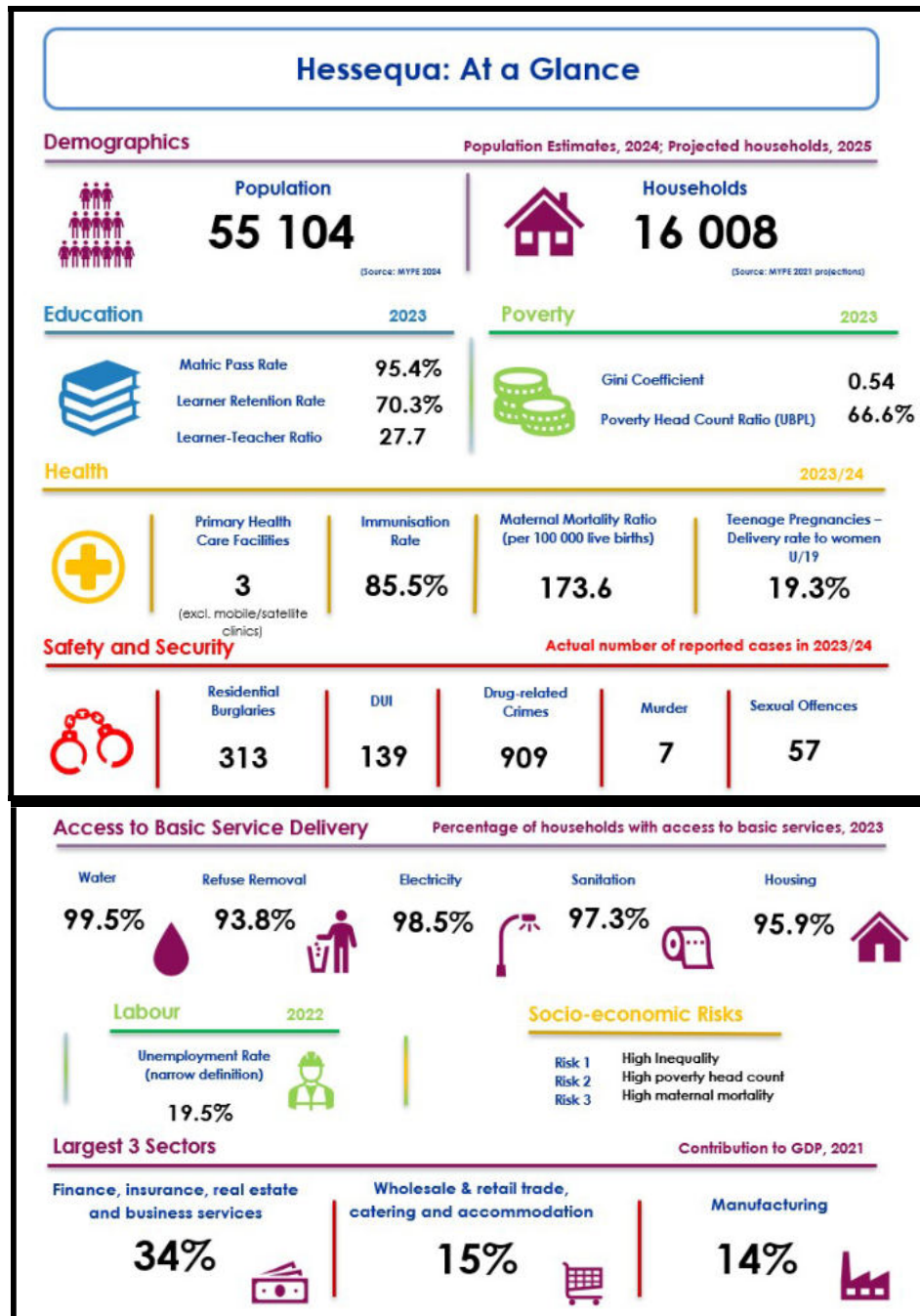


Figure 48: #KnowYourMunicipality: The 2024 Socio-Economic Profile - Hessequa Municipality (Western Cape Government).

4. THE NEED AND DESIRABILITY

The consideration of ‘need and desirability’ in EIA decision-making requires the consideration of the strategic context of the development proposal along with the broader societal needs and the public interest. According to the Guidelines on Need and Desirability, issued in DEA&DP’s Environmental Impact Assessment Guideline and Information Document Series, 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 also be equated to wise use of land – i.e. the question of what is the most sustainable use of land.

Although the proposed activity will offer a relatively small benefit to society in general and may not be considered a societal priority, it will still have a positive benefit for the local community. The proposal to increase workable agricultural land will result in positive impacts for the local community as additional employment opportunities will be created and the economic development of the area will benefit which in turn stimulates economic growth. An indirect impact of the proposal is an increase in agricultural produce which is not only beneficial to the local area but to South Africa as well in the form of food security.

Food insecurity has emerged as a global crisis and is driven by high unemployment and poverty; rising food prices; climate variability; and inequitable access to land and resources. South Africa particularly is weighed down by poverty and unemployment and as a result of steep food and fuel prices, severe pressure has been placed on ordinary South Africans already struggling to meet their basic household needs. Climate change is furthermore intensifying food insecurity in South Africa through reduced rainfall reliability; increased frequency of droughts or flooding and pressure on water resources. The construction of a dam and the cultivation of crops would directly contribute to food security within the local context as well as in South Africa.

Furthermore, the site is zoned for Agriculture and the farm has been successfully farmed in the past. The sites are surrounded by agricultural land/operating farms consisting of agricultural fields (grazing/ cultivation), dams, agricultural outbuildings and dwellings. The proposed development will therefore be consistent with the existing land use on the farm as well as the surrounding areas and will enhance efficient use of arable land. The proposed application also supports rural development objectives through the alignment with municipal and provincial goals regarding agricultural development, rural economic growth and job creation. No negative socio-economic impacts are therefore expected should this proposal be approved. In addition, no significant cultural or heritage impacts will result from the proposed clearing activities.

The site is located on an operational farm located within an agricultural area – the sense of place and history of the area will not be affected. A large portion of the site falls within the Herbertsdale-Gouritsmond Protected Agricultural Area, demarcated in terms of the Preservation and Development of Agricultural Land Act (PDALA, Act 39 of 2024). This application proposes expansion and intensification of agricultural land use and is thus in-line with this demarcation.

Agriculture is standard practice within the area and therefore little impact will be caused to people's health and wellbeing (in terms of noise, odours, visual character and sense of place) as a result of this activity. The location of the site also limits the impacts that the activity will have on people as the site is located outside any towns.

The construction of the dam will assist with water security for the cultivation areas to ensure reliable irrigation supply, especially during dry periods. Water storage also helps farmers adapt to climate variability and reduced rainfall predictability. Sustained water supply would improve farm yields and income stability. Economic viability of farming operations in turn supports job creation in the form of seasonal and permanent farm labour.

According to the Hydrologist, the existing surface water use allowance is set at 49 280 m³ for the farm Aan de Valsch Rivier 186. A requirement for an additional 160 720 m³ per annum surface water for planned irrigation development on the farm will bring the total surface water demand to 210 000 m³ per annum. The runoff estimated in this study shows that this demand of 210 000 m³ per annum represents some 7% of the estimated surface water discharge available at the farm. This will be sufficient to sustain the increased surface water requirement on the properties under discussion and allow for some 93% of the discharge to be still available to the downstream drainage system.

According to the Botanical Specialist, most of study area is characterized by vegetation that has been or is currently used for agriculture. The typical agricultural activities are bush-cutting the Fynbos and livestock grazing. This type of land management favours species that respond well to cutting, including shrubs, graminoids and bulbs. Species that would not persist under these conditions are those that regrow from seeds only (i.e. non-resprouters) and require a few years to mature enough to produce seeds (e.g. reseeding proteas). This management regime therefore allows the indigenous vegetation to persist but reduces the species diversity.

The presence of threatened vegetation types on the site indicates that allowing some areas to remain natural is very important ensure species and ecological processes persist on the subject properties. The numerous drainage lines and adjacent areas are all important and should be excluded from development, along with a suitable buffer. The subject properties are large and considering that the suggested No-Go areas have been observed, indigenous vegetation and ecological processes will persist on the site.

Cumulative impacts from a botanical perspective are those impacts linked but not limited to (a) increased loss of vegetation type or the ecosystems listed in the Revised National List of Ecosystems that are threatened and in need of protection (Government Gazette, 2022) and (b) other local developments taking place in the region. The area that would be lost is approximately 54 ha, depending on which dam option is used. The loss represents 0.13% of the remaining Swellendam Silcrete Fynbos (39084 ha) Ecosystem. Considering that the greater part of the area to be developed is Degraded to Highly degraded, the impact is rated as Low negative.

The Faunal Specialists identified several areas of faunal sensitivity that included the river and associated wetland habitats, good quality fynbos habitat on the western ridge, and some northern and eastern areas on farm 149. Most concern was associated with Denham's bustard, where parts of the upper ridge area of open habitat offered ideal habitat for this bird SCC, both in terms of foraging and breeding. This species was also seen flying over the project site and foraging in adjacent open areas. Low sensitivity areas were associated with low-lying historically disturbed areas and most of the eastern areas of the farm Aan De Valsch Rivier.

It was suggested by Colville and Cohen (2025) that any agricultural expansion be focussed in the low sensitive areas considering the already high disturbance in several of these areas. One concern noted by Colville and Cohen (2025) related to the fact that cumulative impacts may become high if the entire area of the two farms was developed.

Overall, Colville and Cohen (2025) indicated that the proposed development is unlikely to generate significant negative impacts on any of the faunal SCC flagged, based on the condition that the sensitive areas (river and associated wetland habitat, western ridge and fynbos habitat, and northern fynbos areas of farm 149) are excluded.

From a freshwater perspective, several wetlands including large hillslope seep and unchannelled valley-bottom wetland systems have been identified within the property boundaries, most of which are in a largely natural ecological condition. The wetlands are therefore of high biodiversity and ecological importance, particularly considering that they are mapped as CBAs and occur within a SWSA. The study area falls at the head of an agriculturally intensive farming area. Existing cumulative impacts on water resources are significant and are related primarily to loss of wetland and riparian habitat, and nonpoint source pesticide and nutrient pollution. Agriculture in the area is primarily dryland and consequently there is not significant pressure on river flows in this part of the catchment. The proposed SDP has avoided wetland habitat and 30 m buffers have been recommended to protect these wetland areas and mitigate against nonpoint source pollution. Consequently, the cumulative impacts (with mitigation) are not anticipated to increase cumulative impacts relative to the No Go alternative.

5. ACTIVITY AND ALTERNATIVES

5.1 DESCRIPTION OF ACTIVITY:

The study area comprises two properties, Portion 3 of Farm Aan De Valsch Rivier 186 (± 202.81 ha) and Farm Horeb 149 (± 61.86 ha) that covers an area of approximately 264.67 hectares. The site lies along the base of the Langeberg Mountains to the east of the town of Riversdale (Hessequa Municipality) which is approximately 20km away. The Vals Rivier flows through the site. No major roads occur in the area and a dirt road between Riversdale and Herbertsdale are the main access for the farms in this area. The current landuse of the farms are mostly undeveloped/ cultivated, with varying nodes of farm buildings. A number of small farm roads occur on the properties.

The application relates to the construction of a dam ($\pm 34\,235\text{m}^3$) and the clearing of approximately ± 52.5 hectares of largely previously worked agricultural lands that have not been ploughed for more than ten years and it is the intention of the Applicant to cultivate the land and operate a working farm.

5.2 SITE SELECTION MATRIX

The Applicant appointed Greg Nicolson from Capensis in 2023 to undertake a Botanical Constraints Analysis for the proposed agricultural development within the property. This report provided a constraints analysis of no-go areas (red) and potentially developable areas (green). Refer to **Figure 49** below. The Applicant initially utilised this constraints analysis to plan the cultivation areas.

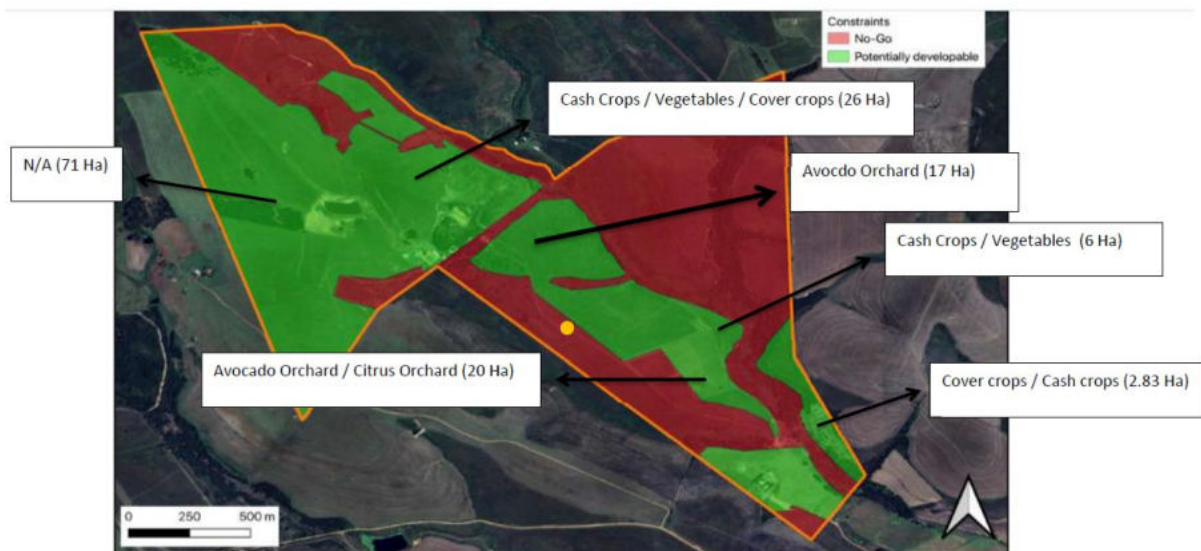


Figure 49: The initial botanical constraints analysis overview which provided no-go areas in red and developable areas in green (2023).

The property for the proposed development was selected as the Applicant owns the land and intends to utilise the agricultural potential of the farm. Most of study area is characterized by vegetation that has been or is currently used for Agriculture. The

typical agricultural activities are bush-cutting the Fynbos and livestock grazing. This type of land management favours species that respond well to cutting, including shrubs, graminoids and bulbs. Species that would not persist under these conditions are those that regrow from seeds only (i.e. non-resprouters) and require a few years to mature enough to produce seeds (e.g. reseeding proteas). This management regime therefore allows the indigenous vegetation to persist but reduces the species diversity.

Since then it was identified that Aquatic features on site play a major role in the proposed development resulting in the appointment of a Freshwater Specialist who provided a constraints map from a freshwater perspective to further adjust the proposal going forward. A faunal and avifaunal specialist were also appointed and each specialist provided input into the agricultural development proposal resulting in the following Alternatives.

5.3 ALTERNATIVES:

The proposal involves the cultivation of virgin soil and the construction of a new dam for agricultural purposes.

Alternative 1

A new dam with a maximum storage capacity of 39 900m³ and ±71.83 hectares of land was proposed for cultivation in the form of:

±37 ha Avocado Orchard / Citrus Orchard

± 34.83 ha Cash Crops / Vegetables / Cover crops

This was based on **Figure 49** above showing the dam location (orange) and the proposed cultivation areas in green.

Alternative 2 (Preferred Alternative)

The proposal involves the proposed expansion of the agricultural development within the site through the cultivation of virgin soil and the construction of a dam for agricultural purposes as follows:

- The proposed cultivation of ± 52.5 hectares:
 - Pocket 1: (± 7ha) – Grazing
 - Pocket 2: (± 8ha) – Grazing
 - Pocket 3: (± 11.5ha) - Avocado orchard
 - Pocket 4: (± 20 ha) - Mostly Avo Orchard and/ or other Fruit Trees / Cash Crops
 - Pocket 5: (± 6ha) - Cover / Cash Crops

- A new dam with a maximum 34 235m³ storage capacity will be constructed.

Dam Alternatives:

Dam Option 1: (Applicant & Engineers Preferred Option)

- This position was chosen as it was the most suitable sub soil with a very high clay content. No additional sealing is required
- Cost to build this dam estimated: R2 320 000
- Water holding capacity: 33 700m³; Wall height: 6.5m

Dam Option 2:

- This position has a high concentration of rock and stone. This dam must be sealed with a membrane.
- The cost of the: a) ground works will be: R2 797 180; b) membrane: R1 050 000
- Water holding capacity: 34 235m³; Wall height: 8m

Dam Option 3:

- This position has also got a high volume of rock and very little Clay. This dam will have to be sealed with a membrane
- The cost of the a) ground works will be: R2 500 000; b) membrane: R1 050 000.00
- Water holding Capacity: 29 500m³; Wall height: 8.5m

The Preferred Alternative with all three dam alternatives will be assessed by the Specialists to determine which is the Preferred Dam Alternative in terms of location and design. **Figure 50** below shows the Preferred Alternative along with all three dam alternatives. Only 1 Dam Alternative will be selected as the Preferred Alternative.



Figure 50: The proposed area to be cultivated (green) and the three Dam Alternatives.

No-Go Alternative

This alternative is the “no-development alternative”. The no-development option will result in the status quo of the property being maintained. This alternative constitutes the existing rights on the property in terms of the current zoning of Agriculture Zone 1. However, as the majority of the site has not been cultivated in the past 10 years, this would result in the majority of the site being un-usable from an agricultural perspective (due to authorisation being required in terms of NEMA). This is not a viable option from a socio-economic perspective, for the Applicant or the local community. The Applicant purchased the property with the intention to farm the lands in order to make a living.

The ‘No-Go’ or ‘leave as is’ option would potentially see any good-quality fynbos habitat, and especially aquatic habitat associated with the river, of the project area becoming transformed through cultivation, and/or overgrown with invasive alien trees if no alien plant management plan is earmarked for future implementation. The encroachment of alien plants would continue to have significant long-term negative impacts for a range of faunal groups.

The 'No Go' or no development scenario takes into consideration the impacts associated with the no construction option. It is a prediction of the future state of the affected area in the event of no construction activities taking place and is based on the current and/or anticipated future land use. If no construction were to take place and the status quo would remain the same, there would be continued bush cutting and livestock grazing, along with potential spread of IAPs. This would have a Low negative impact rating from a botanical perspective.

A large portion of the site falls within the Herbertsdale-Gouritsmond Protected Agricultural Area, demarcated in terms of the Preservation and Development of Agricultural Land Act (PDALA, Act 39 of 2024). This application proposes expansion and intensification of agricultural land use and is thus in-line with this demarcation.

6. TYPE AND SCALE OF POSSIBLE ENVIRONMENTAL IMPACTS

The following potential impacts and their associated mitigation were put forward from the results of the baseline studies and initial investigations. These potential impacts and their assessed level of severity will be assessed, where applicable, in the EIA phase of the project.

6.1 ENVIRONMENTAL IMPACTS

6.1.1 Botanical

Direct Impacts: The direct impacts are considered separately for the two following components:

1. Loss of vegetation type and ecological processes – including indigenous vegetation ecologically important species and ecological connectivity.
2. Loss of species of conservation concern (SCC).

The direct impact would be loss of and disturbance to indigenous vegetation and the associated ecological processes. The proposed developments will impact the following vegetation:

High sensitivity (Dam Option 1): 0.9 ha

High – Medium sensitivity (Pocket 5): 3.5 ha

Medium sensitivity (Dams and Pocket 4) – varies depending on dam option used, approximately

4 ha plus the dam amount.

- Option 1: 0.8ha
- Option 2: 1.03ha
- Option 3: 1.2 ha

Medium – Low (Pockets 1 – 4): 42.3ha (varies slightly depending on dam option used)

Low (Pocket 5): 2.6 ha

The loss of this vegetation is Medium negative without mitigation, and can be reduced to Medium-Low negative with mitigation. Mitigation proposed is to avoid the High sensitivity vegetation in Dam 1 Option, and reduce disturbances to a natural vegetation adjacent to the construction area by careful management of construction phase activities.

Three SCC and one protected tree species were recorded on the site during the site visit and screening phase. One of these species, the Near Threatened *Protea coronata* has

since been reclassified as Least Concern. The remaining SCC and protected tree species have been avoided under the current development proposal. Dam Option 3 and Pocket 4 occur in close proximity to an SCC. The SCC is the Endangered *Protea deccurrens*. This species can be avoided with careful mitigation, but there is potential for loss of some individuals during construction. The impact is rated as Low negative without mitigation, and Very low negative if mitigation is successfully applied.

Indirect Impacts: Indirect impacts occur mostly at the operational stage and are less obvious. Examples include loss of diversity due to loss of connectivity between vegetation remnants and associated loss of pollination. Spray drift from crop spraying and nutrification from fertilizer runoff can have a negative impact on the surrounding natural vegetation.

Potential Mitigation: The recommendations of the botanical study and associated mitigation measures will be assessed during the EIA Phase of the project and mitigation measures included into the EMP. Mitigation options are generally considered in terms of the following mitigation hierarchy: (1) avoidance, (2) minimization, (3) restoration and (4) offsets. A distinction is also made between essential mitigation (non-negotiable mitigation measures that lower the impact significance) and non-essential mitigation (best practise measures that do not lower the impact significance).

In this instance, avoidance/minimization mitigation has been incorporated into the constraints phase of the project. The development layout has avoided most of the high sensitivity areas on the subject properties, and has avoided all SCC. Furthermore, avoidance and minimization are all proposed to reduce the impact as far as possible in this phase of the project. Rehabilitation of the areas disturbed during construction is also required.

The following are the essential mitigation measures:

- Avoid Dam Option 1. The preferred dam option from a Botanical perspective is Option 3 as it avoids High sensitivity vegetation and SCC.
- Mark off the construction areas prior to undertaking any works, and ensure that no unnecessary loss of adjacent vegetation occurs.
- Marking off of all SCC must be undertaken by a botanist and Environmental Control Officer (ECO).
- Sites for construction material stocks, vehicles, toilets etc must be clearly marked and restricted to the building footprint, existing roads or existing disturbed areas.
- Monitoring of the disturbed areas adjacent to construction areas must be undertaken every 6 months for three years post construction. The purpose is to identify and remove any exotic, weedy or invasive species from this area. If it is

determined that these areas are not recovering well and representing natural vegetation, rehabilitation may be required.

- The monitoring and rehabilitation must be undertaken by an experienced and qualified rehabilitation contractor.
- The best practice mitigation measures include removal and control of all listed invasive species from the study area.

6.1.2 Freshwater Ecosystems

The impact assessment follows the principles of the mitigation hierarchy which states that the next step along the hierarchy should only be followed once the previous step is no longer viable, and with valid reason. The SDP addresses the primary step (Avoidance) in the mitigation hierarchy by almost entirely avoiding any agricultural development within any delineated aquatic features as well as within their buffers. Impacts can potentially occur during the construction and operational phases, and the focus of the impact assessment is therefore mainly aimed at minimizing these impacts.

Construction phase: impacts are largely related to the establishment of agricultural fields and construction of the dam. This will require clearing of vegetation, excavation and stockpiling of soil and rock and suitable access to these areas.

Impact 1: Disturbance of wetland habitat during the establishment of orchards

Direct disturbance to wetlands has been avoided in the SDP. Wetland habitat could still however be impacted when designated land pockets are cleared for the establishment of orchards.

Impact 2: Disturbance of wetland habitat during the construction of the dam

Three potential dam locations have been provided. Dam 1 overlaps entirely with the buffer of HS4 and slightly extends into the delineated area of the wetland. The area of disturbance is likely to be greater than depicted in Figure 15 and it is likely that a greater extent of HS4 would be disturbed. Dam 2 and Dam 3 avoids HS4 and its buffer.

Operational Impacts:

Impact 3: Pollution of watercourses caused by surface runoff of sediments, pesticides and nutrients from orchards.

Cultivated fields will be established on relatively steep slopes which could mobilise nonpoint source pollution of sediments, nutrients and pesticides via surface runoff into watercourses. The implementation of a 30 m buffer is designed to protect wetlands from this pollution source. Buffers are however only effective if the vegetative integrity is maintained so as to facilitate the retention of surface runoff and filtering of pollutants.

Impact 4: Pollution of watercourse caused by spray drift during pesticide application.

Drift of pesticides into sensitive non-target areas during spraying can result in high concentrations of toxic pesticides being deposited in watercourses. While contamination is likely to be short-term, the high concentrations typically associated with spray drift events can lead to chronic and/or acute toxicological effects aquatic and other biota inhabiting watercourses. The most effective measure to reduce drift deposition in watercourses is a) to increase the distance between the closest point of application and the watercourse through the establishment of a buffer and b) encourage growth of vegetation within the buffer which effectively intercepts spray droplets and minimises deposition in the watercourse.

Impact 5: Reduced instream flows caused by abstraction of water for irrigation

The applicant will apply to abstract an additional 170 000 m³ of water from the Vals River to meet the irrigation demand of the farm – this is over and above 50 000 m³ that forms part of the properties existing lawful entitlement (i.e. 220 000 m³ in total). The Vals River is associated with unchannelled valley-bottom wetland habitat which is sensitive to changes in flow. According to Hattingh and Zeeman (2025), the mean annual runoff at the southern limit of the farm Aan de Valsch Rivier 186 is 2 939 287 m³/annum. Proposed abstraction volumes are therefore approximately 7 % of the total runoff available. This represents a small proportion of the total water available. Instream flows will however vary month to month and it is important that over-abstraction during base flow conditions is avoided to ensure that a minimum ecological flow is maintained in the river downstream of the abstraction point and that sufficient water is available for downstream users. This requires a good understanding of the local hydrology and implementing operational rules that prioritize environmental flow requirements, especially during dry conditions.

Potential Mitigation:

Construction phase -

Impact 1:

- Implementation of a 30 m buffer to protect the watercourse during the establishment of the agricultural. The outer edge of the buffer must be clearly demarcated and activities within the buffer must be avoided;
- No clearing of vegetation within designated wetland buffers;
- No equipment, construction materials, excavated soil/rock or vegetation may be stored or stockpiled in the wetland buffers;
- No heavy machinery to operate within wetland buffers;

- No new roads to be established within wetland buffers or across delineated wetlands – only existing roads may be used.

Impact 2:

- Implementation of a 30 m buffer to protect the watercourse during the construction of dams. The outer edge of the buffer must be clearly demarcated and activities within the buffer must be avoided;
- No dams are to be established within the buffer;
- No equipment, construction materials, excavated soil/rock or vegetation may be stored or stockpiled in the buffer;
- No heavy machinery to operate within buffer; and
- No new roads to be established within the buffer or across delineated wetlands – only existing roads may be used.

Operational Phase -

Impact 3:

- Planting rows must be planted along the contours as opposed to perpendicular to the contours;
- A permanent cover crop must be cultivated on the orchard rows (underneath the trees) and in work rows (rows between the trees) which will improve water retention and soil structure and control unwanted weeds and also minimise transport of soil, nutrients and pesticides in surface runoff; and
- Control of alien invasive plant species must be carried out within buffer areas to encourage recolonisation by indigenous vegetation and improve the structural integrity of the buffer.

Impact 5:

- Operational abstraction rules must be formulated based on a more detailed analysis of monthly hydrology, minimum environmental flow requirements and anticipated crop irrigation demand.
- Ideally instream abstraction infrastructure must be designed to meet the operational abstraction rules with a minimum of manual intervention (e.g. infrastructure should be designed in such a manner that allows minimum environmental flows to bypass the intake).

6.1.3 Faunal

Overall, the proposed project description for the cultivation of cultivation pockets of Avo/fruit/crops and grazing mostly excludes sensitive faunal areas. In addition, the

proposed cultivation pockets only cover approximately 20% of the site and mostly avoids areas of high botanical sensitivity.

The three dam alternatives all fall close, or marginally over (Dam Option 1) sensitive faunal habitat and therefore they are considered to have equal impacts. All the dam footprints are relatively small, and potential negative impacts should be mostly associated with the construction phase. Small farm dams usually only provide marginal habitat gains and generally have an overall low ecological value. They are also not necessarily “neutral” for birds, and they can create habitat for disturbance-tolerant species (e.g. generalist waterbirds such as Egyptian Goose, Red-knobbed Coot, Yellow-billed Duck). Mitigation measures around dam design to improve ecological value should be the focus.

Overall, the impact significance during the different phases of the proposed agricultural developments is considered low (-), particularly when mitigation is considered. It should only have a small and localised impact on populations of the SCC and their long-term viability and persistence in the area. Removal of alien plants and from the river and wetland habitats on the farms would have a high positive impact on local faunal SCC populations. This is a key point, and to prevent further degradation of natural fynbos and riparian habitats, alien invasive plant species need to be cleared. Clearing and control of alien invasive plant species is considered as a mandatory mitigation measure for both the construction and operational phases of the development. An Alien Invasive Plant Management Plan needs to be compiled and incorporated into the Environmental Management Programme (EMPr). The Plan should provide for the removal of invasive alien plants, as well as procedures for monitoring, follow-up clearing, and prevention of re-establishment and secondary spread.

Construction Impacts –

Mostly low-sensitive areas of faunal SCC habitat (disturbed natural vegetation) will be negatively affected during the construction phase of the proposed cultivation pockets. Disturbance during Mostly low-sensitive areas of faunal SCC habitat (disturbed natural vegetation) will be negatively affected during the construction phase of the proposed cultivation pockets. Disturbance during construction will likely be short-term but of high intensity (earthworks, heavy machinery noise and human presence) and may cause temporary avoidance of the site by birds and other faunal groups (e.g. small mammals). As most of the cultivation pockets will occur in areas already experiencing agricultural activities (existing orchards, brush cutting) impacts will likely be low. With the implementation of standard construction-phase mitigation measures, the overall significance of this impact is assessed as low.

The dam construction may disturb Denham’s Bustard from using the western parts of the project area, but this will likely be only a short-term disturbance. Construction of

the dam outside of the breeding period (September to December) could also be considered, if practical, as a mitigation measure.

The 'No-Go' or 'leave as is' option would potentially see any good-quality fynbos habitat, and especially aquatic habitat associated with the river, of the project area becoming transformed through cultivation, and/or overgrown with invasive alien trees if no alien plant management plan is earmarked for future implementation. The encroachment of alien plants would continue to have significant long-term negative impacts for a range of faunal groups. The mitigation measure of removal and future monitoring of these alien plants would solve this issue and an Alien Invasive Plant Management Plan needs to be compiled and incorporated into the EMPr.

Operational Impacts –

The impact significance during the operational phase of the proposed development is considered low, particularly when mitigation is considered. These would include retaining some areas of natural and semi-natural habitat, the continued monitoring and removal of any alien plants and operational mitigation measures to improve the ecological functioning of the dam.

During the operational phase, ongoing crop cultivation is expected to result in long-term transformation of mostly semi-natural fynbos habitat into managed agricultural land, leading to reduced habitat heterogeneity, simplified vegetation structure, and altered foraging habitat (e.g. prey availability). Agricultural activities, including ploughing, harvesting, irrigation, and agrochemical application, may favour adaptable, generalist species. Potential indirect effects include pesticide-related reductions in invertebrate abundance and degradation of adjacent riparian or wetland systems through run-off. However, with the implementation of mitigation measures such as retention of natural or semi-natural habitat patches, maintenance of vegetated field margins, protection and clearing of riparian areas, and careful agrochemical management, the cultivated landscape is expected to retain some functional value. Residual impacts are therefore anticipated to be long-term but of low to moderate intensity, local in extent, and unlikely to result in significant population-level effects for species of conservation concern.

Following implementation of the recommended mitigation measures, the significance of impacts on avifauna associated with the proposed farm dam is expected to reduce from moderate to low. Incorporation of shallow marginal zones and indigenous littoral vegetation will improve the ecological functioning of the dam, allowing it to provide some foraging opportunities for water-associated birds, partially offsetting habitat loss. Residual impacts are expected to be local in extent, long-term but of low intensity, and unlikely to result in measurable population-level effects, provided cumulative proliferation of similar dams is avoided.

Potential Mitigation:

Construction Phase – Cultivation Pockets

- Clearing of natural vegetation should be prevented or to be kept to a minimum where necessary.
- The smallest possible working corridor, particularly along the southern fynbos habitats, must be used.
- Conduct a pre-construction ecological walk-through to identify active bird nests.
- If active nests or species of concern are found, establish temporary no-go buffer zones until breeding is complete.
- Clearly demarcate the development footprint to prevent unnecessary habitat disturbance.
- No off-road driving should be allowed by construction vehicles.
- Any drainage/water run-off trenches required to be built alongside roads should be shallow and broad with low-angle sides (<30 degrees) so as not to trap fossorial invertebrates (e.g. dung beetles) and small vertebrates (e.g. snakes, tortoises).
- Do not leave deep excavations open longer than necessary.
- Stockpile soil for the shortest possible duration and avoid creating long-term barriers.
- Clearance of alien vegetation across the project area to encourage natural vegetation to regenerate on the areas disturbed by construction and to restore and increase natural habitat for faunal SCC. An Alien Invasive Plant Management Plan needs to be compiled and incorporated into the EMPr.

Construction Phase – Dam Options

- Dam Design to Improve Ecological Value:
 - Create gently sloping littoral shelves (not vertical edges)
 - Plant indigenous sedges, rushes, and reeds in sections of the margin.
 - Maintain a mosaic of open water + vegetated edge
 - Avoid circular/rectangular uniform basins.
 - Include varied edge structure to increase habitat heterogeneity.
- Rehabilitate disturbed natural vegetation after construction using indigenous plants.

- Schedule major construction outside peak Denham's bustard breeding season, if practical (generally spring–early summer).

Operational Phase – Cultivation Pockets

- Retention of natural habitat patches where possible, with the aim to maintain refuge and foraging habitat within the farmed landscape:
 - Retain all remaining riparian strips wetlands and seeps and natural veld patches
 - Maintain vegetated buffer zones (≥ 20 m where feasible) along drainage lines and wetlands.
 - Avoid cultivation right up to watercourses.
 - Maintain uncultivated field margins with natural grasses/shrubs.
 - Avoid frequent mowing or total vegetation removal.
 - Allow some structural diversity (tall grass, shrubs).
- Timing of Agricultural Activities: Avoid mowing, harvesting, or ploughing during peak bird breeding season where feasible, especially close to marginal or natural areas.
- Pesticide use should follow industry best-practice guidelines
- Ongoing clearance of alien vegetation across the project area and rehabilitation to encourage natural vegetation to regenerate on the areas disturbed during construction and to restore and increase natural habitat for faunal SCC.
- An Alien Invasive Plant Management Plan needs to be compiled and incorporated into the EMPr.
- Livestock Management:
 - Prevent overgrazing of riparian areas.
 - Use controlled access points to water.
- Landscape-Scale Planning:
 - Maintain habitat connectivity between natural areas.
 - Avoid cumulative loss of all non-cultivated patches on the farm.

Operational Phase – Dam Options

- Maintenance of Ecologically Function:
 - Maintain shallow littoral zones around portions of the dam margin.
 - Allow establishment of indigenous sedges, rushes, and reeds along selected edges.

- Avoid complete clearing of marginal vegetation for aesthetic or access purposes.
- Control erosion around margins to prevent sedimentation.
- Livestock Access Control (if applicable):
 - Prevent unrestricted livestock access to the entire shoreline.
 - Provide limited, stabilised watering points.
- Management of Problematic Waterbirds:
- Avoid maintaining large expanses of short lawn-like grass around the dam.
- Promote taller marginal vegetation to reduce grazing lawns preferred by geese.

6.1.4 Socio-Economic

The social and economic impacts (positive and negative) associated with the agricultural activity can primarily be reflected in the permanent workers employed by the operation. The workers are all breadwinners for families directly benefiting from the operation. Furthermore, the cultivation of cash crops contributes to food security in South Africa and indirectly abroad. The increase in workable agricultural land, leading to food security and job creation, will in turn also stimulate economic growth. It can safely be assumed that working the lands will have a Medium - High POSITIVE impact on the operation from a socio-economic perspective.

The direct and indirect positive impacts resulting from the proposed activity can be safeguarded through the implementation of best-farming practises and compliance with any recommendations made by the Department of Agriculture.

The site is zoned for Agriculture, is currently operating as a working farm, and is surrounded by a rural farming, agricultural community. Furthermore, a large portion of the site falls within the Herbertsdale-Gouritsmond Protected Agricultural Area, demarcated in terms of the Preservation and Development of Agricultural Land Act (PDALA, Act 39 of 2024). The proposed development will therefore be consistent with the existing land use on the farm as well as the surrounding areas and will enhance efficient use of arable land.

The proposed application also supports rural development objectives through the alignment with municipal and provincial goals regarding agricultural development, rural economic growth and job creation. Considering the nature of the proposed application the social impact that the development proposal may have on the prevalence of HIV/AIDS, Sexually Transmitted Infections (“STI”) and Tuberculosis (“TB”), as well as equity and gender related concerns are insignificant. No negative socio-economic impacts are therefore expected, at this stage, should this proposal be approved.

6.1.5 Heritage

The proposed cultivation of land will have no impact on any heritage resources. The property is zoned Agriculture, and the activity is not considered to be seen as changing the character of the site. Due to the extensive transformation of the landscape resulting from agricultural practices, it is unlikely that significant in situ archaeological heritage will be disturbed by the proposed development. Furthermore, based on the available literature, the nature of the proposed development, and the already highly altered condition of the landscape, the likelihood of uncovering well-preserved and scientifically significant fossils is considered low. Heritage Western Cape (HWC) HWC noted that the proposed cultivation and dam installation on Farm 186 Portion 3 and Farm 149, Aan de Valsch Rivier and Horeb, Riversdale does not trigger Section 38 of the National Heritage Resources Act no. 25 (1999) and therefore not applicable in terms of impacts to the heritage resource (**Appendix B**).

Please refer to **Appendix E** for the Heritage Screener.

6.1.6 Agriculture

This application entails the expansion and intensification of farming activities on farmland and is supported in principle. However, three key constraints relative to the proposed development were identified and will require due consideration:

- Impact of slope gradient on cultivation: In terms of CARA, “no slopes steeper than 20% may be cultivated without written permission from an executive officer”.
- Contribution of the soil suitability: Adequate soil depth could be lacking in parts of the proposed new fields.
- Availability of lawful water use: Proof of adequate water rights will be required when applying for the CARA permit to cultivate new fields.

Ideally a farm development plan, based on confirmed evidence of soil properties, water requirements and slope gradients, should be compiled to accompany applications for the cultivation of virgin land in terms of CARA and possibly also water use applications. While such a plan is recommended, it is not regarded as a condition for the Environmental Application.

This application is therefore supported and recommended for approval, subject to the conditions below.

Prior to any commencement of land clearing for cultivation activities, A CARA permit should be acquired via the local Land Care office of the Department of Agriculture at DJ Malherbe Building, Ladismith Way, Riversdale, 6670.

Application for the CARA permit will require a soil survey to determine the suitability of the soils for the intended purposes, while it will most likely also require (i) proof of adequate lawful water use allocation(s) and a comprehensive water runoff control design and implementation strategy, based on the final layout of the areas to be cultivated.

The Environmental Management Programme should include monitoring of the development and execution of a water runoff control plan, as well as monitoring of soil erosion induced by runoff with the aim to amend runoff mitigation measures as may be required. The water runoff control plan should include both cultivation areas and access roads.

6.2 IMPACT CRITERIA

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

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

Probability - describe the probability of the impact actually occurring

IMPROBABLE	LOW POSSIBILITY OF IMPACT TO OCCUR EITHER BECAUSE OF DESIGN OR HISTORIC EXPERIENCE.
PROBABLE	DISTINCT POSSIBILITY THAT IMPACT WILL OCCUR.
HIGHLY PROBABLE	MOST LIKELY THAT IMPACT WILL OCCUR.
DEFINITE	IMPACT WILL OCCUR, IN THE CASE OF ADVERSE IMPACTS REGARDLESS OF ANY PREVENTION MEASURES.

Intensity - establish whether the impact is destructive or benign. The specialist/ eap must attempt to quantify the magnitude of the impacts and outline the rationale used.

LOW INTENSITY	NATURAL AND MAN-MADE FUNCTIONS NOT AFFECTED.
MEDIUM INTENSITY	ENVIRONMENT AFFECTED BUT NATURAL AND MAN-MADE FUNCTIONS AND PROCESSES CONTINUE.
HIGH INTENSITY	ENVIRONMENT AFFECTED - NATURAL OR MAN-MADE FUNCTIONS ARE ALTERED TO THE EXTENT THAT IT WILL TEMPORARILY OR PERMANENTLY CEASE OR BECOME DYSFUNCTIONAL.

Duration of the impact -

SHORT TERM	<1 TO 5 YEARS
MEDIUM TERM	5 TO 15 YEARS
LONG TERM	16 YEARS PLUS; IMPACT WILL ONLY CEASE AFTER THE OPERATIONAL LIFE OF THE ACTIVITY, EITHER BECAUSE OF NATURAL PROCESS OR BY HUMAN INTERVENTION
PERMANENT	MITIGATION, EITHER BY NATURAL PROCESS OR BY HUMAN INTERVENTION, WILL NOT OCCUR IN SUCH A WAY OR IN SUCH A TIME SPAN THAT THE IMPACT CAN BE CONSIDERED TRANSIENT

Reversibility -

- Completely reversible – the impact can be reversed with the implementation of minor mitigation measures.
- Partly reversible – the impact is reversible but more intense mitigation measures are required
- Barely reversible – the impact is unlikely to be reversed even with intense mitigation measures
- Irreversible – the impact is irreversible and no mitigation measures exist

Irreplaceable loss of resources - Describes the degree to which resources will be irreplaceably lost due to the proposed activity. It can be no loss of resources, marginal loss, significant loss or complete loss of resources.

Significance of impacts are determined through a synthesis of the assessment criteria and is described as –

- Low negative– where it would have negligible effects and would require little or no mitigation
- Low positive – the impact will have minor positive effects
- Medium negative – the impact will have moderate negative effects and will require moderate mitigation
- Medium positive – the impact will have moderate positive effects
- High negative – the impact will have significant effects and will require significant mitigation measures to achieve an accepted level of impact
- High positive – the impact will have significant positive effects
- Very high negative – the impact will have highly significant effects and are unlikely to be able to be mitigated adequately
- High positive – the impact will have highly significant positive effects

6.3 IMPACT RANKINGS

BOTANICAL			
Nature of impact: <i>Biological aspects: Loss/disturbance to vegetation and SCC (Construction Phase)</i>			
Extent & duration of impact:	Local & long term	Degree to which the impact may cause irreplaceable loss of resources:	Low
Probability of occurrence:	Probable - Definite	Significance - prior to mitigation	Low - Medium negative
Degree to which the impact can be reversed:	Low	Significance - after mitigation	Very Low negative
Nature of impact: <i>Biological aspects: Loss/disturbance to vegetation and SCC (Operational Phase)</i>			
Extent & duration of impact:	Local & Medium term	Degree to which the impact may cause irreplaceable loss of resources:	Low
Probability of occurrence:	Possible - Probable	Significance - prior to mitigation	Very Low negative
Degree to which the impact can be reversed:	Low	Significance - after mitigation	Low negative
FRESHWATER			
Nature of impact: <i>Impact 1: Disturbance of wetland habitat during the establishment of orchards (Construction Phase)</i>			
Extent & duration of impact:	Local and Short term	Degree to which the impact may cause irreplaceable loss of resources:	Low
Probability of occurrence:	Probable	Significance - prior to mitigation	Low Negative
Degree to which the impact can be reversed:	High	Significance - after mitigation	Negligible
Nature of impact: <i>Impact 2: Disturbance of wetland habitat during the construction of the dam (Construction Phase)</i>			
Extent & duration of impact:	Local & Permanent	Degree to which the impact may cause irreplaceable loss of resources:	Medium - Low
Probability of occurrence:	Certain - Unlikely	Significance - prior to mitigation	Medium - Low Negative
Degree to which the impact can be reversed:	Medium - High	Significance - after mitigation	Medium - Low negative
Nature of impact: <i>Impact 3: Pollution of watercourses caused by surface runoff of sediments, pesticides and nutrients from orchards (Operational Phase)</i>			
Extent & duration of impact:	Local & Permanent	Degree to which the impact may cause irreplaceable loss of resources:	Medium - Low
Probability of occurrence:	Likely - Probably	Significance - prior to mitigation	Low Negative

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Degree to which the impact can be reversed:	High	Significance - after mitigation	Low negative
Nature of impact: <i>Impact 4: Pollution of watercourse caused by spray drift during pesticide application (Operational Phase)</i>			
Extent & duration of impact:	Local & Permanent	Degree to which the impact may cause irreplaceable loss of resources:	Low
Probability of occurrence:	Probably	Significance rating of impact prior to mitigation	Low Negative
Degree to which the impact can be reversed:	High	Significance rating of impact after mitigation	Low negative
Nature of impact: <i>Impact 5: Reduced instream flows caused by abstraction of water for irrigation (Operational Phase)</i>			
Extent & duration of impact:	Local & Permanent	Degree to which the impact may cause irreplaceable loss of resources:	Low
Probability of occurrence:	Likely - Probably	Significance - prior to mitigation	Medium Negative
Degree to which the impact can be reversed:	High	Significance - after mitigation	Low negative
FAUNAL			
Nature of impact: <i>Loss of habitat and local populations of faunal SCC (Construction Phase) (Cultivation pockets 1 — 5)</i>			
Extent & duration of impact:	Local & short term.	Degree to which the impact may cause irreplaceable loss of resources:	Low
Probability of occurrence:	Medium probability	Significance - prior to mitigation	Medium negative
Degree to which the impact can be reversed:	Low	Significance - after mitigation	Low negative
Nature of impact: <i>Loss or displacement of local populations of faunal SCC (Construction Phase) (Dam Options 1 — 3)</i>			
Extent & duration of impact:	Local & short term.	Degree to which the impact may cause irreplaceable loss of resources:	Low
Probability of occurrence:	Medium probability	Significance - prior to mitigation	Low negative
Degree to which the impact can be reversed:	Low	Significance - after mitigation	Low negative
Nature of impact: <i>Loss of local populations of faunal SCC (Operational Phase) (Cultivation pockets 1 — 5)</i>			
Extent & duration of impact:	Local & short term.	Degree to which the impact may cause irreplaceable loss of resources:	Low
Probability of occurrence:	Medium probability	Significance - prior to mitigation	Low - Medium negative
Degree to which the impact can be reversed:	Medium	Significance - after mitigation	Low negative
Nature of impact:			

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<i>Loss or displacement of local populations of faunal SCC (Operational Phase) (Dam Options 1 — 3)</i>			
Extent & duration of impact:	Local & short term.	Degree to which the impact may cause irreplaceable loss of resources:	Low
Probability of occurrence:	Medium probability	Significance - prior to mitigation	Medium negative
Degree to which the impact can be reversed:	Low	Significance - after mitigation	Low negative
AGRICULTURAL			
Nature of impact: This application entails the expansion and intensification of farming activities on farmland and is supported in principle, by the Agricultural Specialist.			
Extent & duration of impact:	Local & Long term.	Degree to which the impact may cause irreplaceable loss of resources:	n/a (Positive Impact)
Probability of occurrence:	Probable	Significance - prior to mitigation	Medium - High positive
Degree to which the impact can be reversed:	n/a (Positive Impact)	Significance - after mitigation	n/a (Positive Impact)
SOCIO ECONOMIC			
Nature of impact: The social and economic impacts (positive and negative) associated with the agricultural activity can primarily be reflected in the permanent workers employed by the operation. The workers are all breadwinners for families directly benefiting from the operation. Furthermore, the cultivation of cash crops contributes to food security in South Africa and indirectly abroad. The increase in workable agricultural land, leading to food security and job creation, will in turn also stimulate economic growth. The direct and indirect positive impacts resulting from the proposed activity can be safeguarded through the implementation of best-farming practises and compliance with any recommendations made by the Department of Agriculture. The site is zoned for Agriculture, is currently operating as a working farm, and is surrounded by a rural farming, agricultural community. Furthermore, a large portion of the site falls within the Herbertsdale-Gouritsmond Protected Agricultural Area, demarcated in terms of the Preservation and Development of Agricultural Land Act (PDALA, Act 39 of 2024). The proposed development will therefore be consistent with the existing land use on the farm as well as the surrounding areas and will enhance efficient use of arable land. The proposed application also supports rural development objectives through the alignment with municipal and provincial goals regarding agricultural development, rural economic growth and job creation. Considering the nature of the proposed application the social impact that the development proposal may have on the prevalence of HIV/AIDS, Sexually Transmitted Infections ("STI") and Tuberculosis ("TB"), as well as equity and gender related concerns are insignificant/negligible. No negative socio-economic impacts are therefore expected, at this stage, should this proposal be approved.			
Extent & duration of impact:	Local & short term.	Degree to which the impact may cause irreplaceable loss of resources:	n/a (Positive Impact)
Probability of occurrence:	Probable	Significance - prior to mitigation	Medium - High positive
Degree to which the impact can be reversed:	n/a (Positive Impact)	Significance - after mitigation	n/a (Positive Impact)

HERITAGE

Nature of impact:

The Heritage Specialist stated that *“based on the available information, it is unlikely that the proposed development will impact on significant heritage resources and as such, it was recommended that no further heritage studies are required”*. HWC confirmed that *“HWC noted that the proposed cultivation and dam installation on Farm 186 Portion 3 and Farm 149, Aan de Valsch Rivier and Horeb, Riversdale does not trigger Section 38 of the National Heritage Resources Act no. 25 (1999) and therefore not applicable in terms of impacts to the heritage resource.”*

Heritage Impacts are considered negligible.

7. PUBLIC PARTICIPATION PROCESS

The section below outlines the various tasks to be undertaken as part of the Public Participation Process as per Regulation 41 of the EIA Regulations 2017, as amended. The issues raised during this pre-application scoping phase will be considered and evaluated in the statutory Scoping and EIA phase of this application.

7.1 TASKS TO BE UNDERTAKEN: SCOPING PHASE

- Interested and Affected Parties (I&APs) will be identified throughout the process (**Appendix F1**).
- Notification letters were posted to all identified I&APs informing them of the activity and the opportunity to comment. Neighbouring landowners were requested to inform all those residing on their farms of the application and the opportunity to comment.
- A site notice was erected at the entrance to the farm.
- An advertisement was placed in the Suid-Kaap FORUM.
- A copy of the Scoping Reports will be made available on our company website www.phsconsulting.co.za
- A 30-day commenting period was allowed [31 July – 31 August 2026].
- All comments received during this commenting period will be included in the Final Scoping Report which will be circulated to registered I&APs, Organs of State and State Departments for a further 30-day commenting period in the statutory process.
- A Comments and Response Table will also be included – this table summarises the comments received and each comment is responded to.

7.2 IDENTIFICATION OF STATE DEPARTMENTS AND ORGANS OF STATE:

- DEA&DP: Development Management (Region 3)
- BOCMA
- Provincial Department of Agriculture
- National Department of Agriculture
- DEA&DP Directorate: Biodiversity Management
- DEADP Directorate: Pollution and Chemical Management
- Garden Route District Municipality

- Hessequa Local Municipality
- Cape Nature
- Heritage Western Cape (HWC)
- South African Heritage Resources Agency (SAHRA)
- South African Civil Aviation Authority (SACAA)

7.3. SUMMARY OF ISSUES RAISED BY I&AP'S

A summary of the issues raised by I&AP's during the process has been compiled into a Comments and Response Document. All I&AP's names and contact information will be entered into a Register for I&AP's (**Appendix F1**).

8. PLAN OF STUDY FOR THE EIA

As discussed in Section 2.11 above, the following must be included in the Plan of Study:

- i. *a description of the alternatives to be considered and assessed within the preferred site, including the option of not proceeding with the activity;*
- ii. *a description of the aspects to be assessed as part of the environmental impact assessment process;*
- iii. *aspects to be assessed by specialists;*
- iv. *a description of the proposed method of assessing the environmental aspects, including aspects to be assessed by specialists;*
- v. *a description of the proposed method of assessing duration and significance;*
- vi. *an indication of the stages at which the competent authority will be consulted*
- vii. *particulars of the public participation process that will be conducted during the environmental impact assessment process;*
- viii. *a description of the tasks that will be undertaken as part of the environmental impact assessment process; and*
- ix. *identify suitable measures to avoid, reverse, mitigate or manage identified impacts and to determine the extent of the residual risks that need to be managed and monitored;*

8.1 DESCRIPTION OF THE ALTERNATIVES TO BE CONSIDERED AND ASSESSED:

Alternative 2 (Preferred Alternative)

The proposal involves the proposed expansion of the agricultural development within the site through the cultivation of virgin soil and the construction of a dam for agricultural purposes as follows:

- The proposed cultivation of ± 52.5 hectares:
 - Pocket 1: (± 7ha) – Grazing
 - Pocket 2: (± 8ha) – Grazing
 - Pocket 3: (± 11.5ha) - Avocado orchard
 - Pocket 4: (± 20 ha) - Mostly Avo Orchard and/ or other Fruit Trees / Cash Crops
 - Pocket 5: (± 6ha) - Cover / Cash Crops
- A new dam with a maximum ±34 235m³ storage capacity will be constructed.

Dam Options:

Dam Option 1: (Applicant & Engineers Preferred Option)

- This position was chosen as it was the most suitable sub soil with a very high clay content. No additional sealing is required

- Cost to build this dam estimated: R2 320 000
- Water holding capacity: $\pm 33\,700\text{m}^3$; Wall height: 6.5m

Dam Option 2:

- This position has a high concentration of rock and stone. This dam must be sealed with a membrane.
- The cost of the: a) ground works will be: R2 797 180; b) membrane: R1 050 000
- Water holding capacity: $\pm 34\,235\text{m}^3$; Wall height: 8m

Dam Option 3:

- This position has also got a high volume of rock and very little Clay. This dam will have to be sealed with a membrane
- The cost of the a) ground works will be: R2 500 000; b) membrane: R1 050 000.00
- Water holding Capacity: $\pm 29\,500\text{m}^3$; Wall height: 8.5m

No-Go Alternative

This alternative is the “no-development alternative”. The no-development option will result in the status quo of the property being maintained. This alternative constitutes the existing rights on the property in terms of the current zoning of Agriculture Zone 1. However, as the majority of the site has not been cultivated in the past 10 years, this would result in the majority of the site being un-usable from an agricultural perspective (due to authorisation being required in terms of NEMA). This is not a viable option from a socio-economic perspective, for the Applicant or the local community. The Applicant purchased the property with the intention to farm the lands in order to make a living.

The ‘No-Go’ option would potentially see any good-quality fynbos habitat, and especially aquatic habitat associated with the river, of the project area becoming transformed through cultivation, and/or overgrown with invasive alien trees if no alien plant management plan is earmarked for future implementation. The encroachment of alien plants would continue to have significant long-term negative impacts for a range of faunal groups.

The ‘No Go’ or no development scenario takes into consideration the impacts associated with the no construction option. It is a prediction of the future state of the affected area in the event of no construction activities taking place and is based on the current and/or anticipated future land use. If no construction were to take place and the status quo would remain the same, there would be continued bush cutting and

livestock grazing, along with potential spread of IAPs. This would have a Low negative impact rating from a botanical perspective.

8.2 SPECIALIST STUDIES, METHODOLOGY AND ASPECTS TO BE ASSESSED:

Potential impacts have been and will be identified in this Scoping Report (Section 6) and will be assessed further in the Impact Assessment Phase of this Environmental Process. Cumulative impact is an impact which in itself may not be significant but may become significant if added to other existing or potential impacts that may result from activities associated with the proposed development. The cumulative impact can be: negligible, low, medium or high. An example in this instance would be the issue of Food Security. Cumulative impacts will be unpacked further in the EIR phase.

Considering the nature of the application, the following specialist input was/is required:

8.2.1 Botanical Impact Assessment

Greg Nicolson from CAPENSIS has been appointed and will undertake a Botanical Impact Assessment which addresses the 'Terrestrial Biodiversity' and 'Plant Species' Theme.

The following terms of reference/ tasks are relevant to the study:

- Department of Environmental Affairs and Development Planning (DEA&DP) Guidelines for Involving Biodiversity Specialists in the EIA Process (Brownlie, 2005).
- Ecosystem Guidelines for Environmental Assessment in the Western Cape (Cadman et al., 2016).
- The requirements of CapeNature for providing comments on agricultural, environmental, mine planning and water-use related applications (Turner, 2013).
- Procedures for the assessment and minimum criteria for reporting on Identified Environmental Themes in terms of Sections 24(5)(a) and 44 of the National Environmental Management Act (Government Gazette, 2020).
- Undertake a site visit to the study area.
- Identify and describe biodiversity patterns at community and ecosystem level (main vegetation type, plant communities in the vicinity and threatened/vulnerable ecosystems), at species level (threatened Red List species, presence of alien species) and in terms of significant landscape features.
- Assess the local and regional importance of the vegetation communities and plant species within the affected areas based on the relevant biodiversity plans, bioregional planning documents and Environmental Management Frameworks.

- Describe the sensitivity of the site and its environs and map these resources.
- Identify any areas not suitable for construction activities (No-Go Areas) and related buffers that should be observed.
- Describe the direct, indirect and cumulative botanical impacts (both before and after mitigation) and provide an assessment of the significance of the impacts.
- Describe the measures to mitigate any impacts, and an indication of whether the measures (if implemented) would change the significance of the impact.
- On the basis of the impact assessment findings, provide an authorisation opinion regarding whether or not the proposed activity should proceed.

8.2.2 Freshwater Impact Assessment

James Dabrowski from Confluent has been appointed and will undertake a Freshwater Impact Assessment which addresses the 'Aquatic Biodiversity' Theme.

The following terms of reference/ tasks are relevant to the study:

- Procedures for the assessment and minimum criteria for reporting on Identified Environmental Themes in terms of Sections 24(5)(a) and 44 of the National Environmental Management Act (Government Gazette, 2020).
- A DWS Risk Assessment Matrix (GN 4167 of 2023) will be undertaken in accordance with the NWA.
- Undertake a desktop study of relevant freshwater information for the site.
- Undertake a site visit to the study area.
- Classify and delineate the freshwater ecosystems potentially affected by the agricultural expansion.
- Determine the present ecological state, functional importance and conservation value of the freshwater ecosystems that will be potentially affected by the agricultural expansion.
- Assess the impacts of the proposed development on aquatic biodiversity.

8.2.3 Faunal Impact Assessment

Jonathan Colville from Terrestrial Ecologist & Faunal Surveys and Callan Cohen from Birding Africa has been appointed and will undertake a Faunal Impact Assessment which addresses the 'Animal Species Theme'.

The following terms of reference/ tasks are relevant to the study:

- Protocol for the Specialist Assessment and Minimum Report Content Requirements for Environmental Impacts on Terrestrial Animal Species as

stipulated in the Government Gazette, No. 43855 (Published in Government Notice No. 1150) of 30 October 2020.

- SANBI's (2020) 'Guidelines for the Implementation of the Terrestrial Fauna and Terrestrial Flora Species Protocols for Environmental Impact Assessments In South Africa'.
- Carry out a desktop study to determine if the faunal SCC have been recorded at or near the project area and to ascertain the habitat requirements of the SCC.
- Conduct a site visit of the project area to assess the physical and biological characteristics of the site with regards to habitat suitability for the faunal SCC and identify any sensitive areas.
- Prepare a report detailing the findings of the desktop study and site visit, confirming, or disputing the environmental sensitivity theme as identified by the screening tool, and the issuing of a Terrestrial Animal Species Compliance Statement or a recommendation that a Terrestrial Animal Species Specialist Assessment would be required.
- Following the impact assessment methodology, estimate the nature and the extent of the potential impacts (direct, indirect, and cumulative) of the proposed cultivation and for three dam construction alternatives on the populations of the faunal SCC located within the project area.
- Provide potential mitigation measures to reduce the impacts of the developments on the animal SCC.
- Provide a terrestrial animal species impact assessment report and statement detailing the findings and include a reasoned opinion, based on the findings of the specialist assessment process, regarding the acceptability or not of the developments, and if the development should receive approval or not.

8.2.4 Agricultural Impact Assessment

Francois Knight from Agri Informatics has been appointed and will undertake a Site Sensitivity Verification and Agricultural Compliance Statement.

The following terms of reference/ tasks are relevant to the study:

The procedure for the study, being a contribution to the environmental authorisation process (NEMA EIA Regulations 2014 - as amended) is guided by the Protocol for the Specialist Assessment and minimum report content requirements for Environmental Impacts on Agricultural Resources, as published in Government Notice No 320 (March 2020).

This Protocol makes use of the web-based Environmental Screening Tool of DFFE, which identifies the general agricultural sensitivity of the study area and then

prescribes either an Agricultural Agro-Ecosystem Specialist Assessment (for areas with High or Very High sensitivity) or an Agricultural Compliance Statement for areas with Medium or Low sensitivity, to be conducted by a SACNASP registered soil or agricultural scientist.

The first step is to conduct a Site Sensitivity Verification (SSV) through the use of:

- a) a desktop analysis, using satellite imagery;
- b) a preliminary on-site inspection; and
- c) any other available and relevant information.

The outcome of the Site Sensitivity Verification will:

- a) Assess the current/recent use of the land and confirm or dispute the environmental (agricultural) sensitivity as identified by the screening tool;
- b) contain a motivation and evidence (e.g. photographs) of either the verified or different use of the land and environmental sensitivity; and
- c) be submitted together with the relevant assessment report prepared in accordance with the requirements of the Environmental Impact Assessment Regulation

Agri Informatics was requested by PHS Consulting, the lead consultant for the Applicant, to conduct an Agricultural Site Sensitivity Verification of the land and subsequently an Agricultural Compliance Statement.

The assessment had to include:

- An Assessment of the Agricultural Sensitivity of the site, based on a Site Visit and Desktop Study
- Confirmation or Dispute of the Agricultural Sensitivity as presented by the DFFE Screening Tool
- A substantiated statement with regards to the acceptability, or not, of the proposed development
- Description of the conditions to which the statement is subjected
- Monitoring and Mitigation Measures to be incorporated in the EMPr
- Presentation of findings in an Agricultural Compliance Statement Report conforming to the reporting guidelines as per Government Notice 320 published in the Government Gazette 43110, dated 20 March 2020.

8.2.5 Hydrological Study of Surface Water Runoff

Dr. Johan Hattingh & Riaan Zeeman from Creo Design were appointed to undertake a Hydrological Study of Surface Water Runoff on the Farms.

The following terms of reference/ tasks are relevant to the study:

- Perform a desktop study of the area under investigation for the purpose of establishing a basic appreciation of the study site and its immediate surrounding areas as well as the geological, hydrological & geohydrological setting of the area.
- Do a GIS based estimation of the catchment area feeding the properties.
- Determine the catchment discharge.
- Conduct a site visit to survey the area.
- Compile an inclusive hydrological report covering aspects that might influence the hydrological parameters of the study site and discharge regime of the catchment area.

The EAP and applicable specialist, as part of the Impact Assessment Phase, will provide detailed mitigation measures to ensure that the potential impacts are further reduced to acceptable levels of significance. An Environmental Management Programme (EMPr) will be developed to ensure that additional impacts, during the construction and operational phase as well as any tasks related to rehabilitation, will be managed and monitored.

The scope of studies as set out in the plan of study for the EIA was determined by the EIA Regulations and professional judgment (which considers the sensitivity of the particular environmental aspect in the study area and the level of confidence required for decision making). The higher the level of sensitivity or potential impact on the project the higher the level of confidence required for decision making, the greater the level of study required.

Impact criteria should include the following:

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

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

Reversibility -

- Completely reversible – the impact can be reversed with the implementation of minor mitigation measures.
- Partly reversible – the impact is reversible, but more intense mitigation measures are required.
- Barely reversible – the impact is unlikely to be reversed even with intense mitigation measures.
- Irreversible – the impact is irreversible, no mitigation measures exist.

Irreplaceable loss of resources - Describes the degree to which resources will be irreplaceably lost due to the proposed activity. It can be no loss of resources, marginal loss, significant loss or complete loss of resources.

The **significance** of each impact identified was assessed according to the following variables (evaluation components):

Significance is the product of probability and severity. Probability describes the likelihood of the impact actually occurring, and is rated as follows:

Probability

IMPROBABLE	LOW POSSIBILITY OF IMPACT TO OCCUR EITHER BECAUSE OF DESIGN OR HISTORIC EXPERIENCE.
PROBABLE	DISTINCT POSSIBILITY THAT IMPACT WILL OCCUR.
HIGHLY PROBABLE	MOST LIKELY THAT IMPACT WILL OCCUR.
DEFINITE	IMPACT WILL OCCUR, IN THE CASE OF ADVERSE IMPACTS REGARDLESS OF ANY PREVENTION MEASURES.

The **severity** factor is calculated from the factors given to “intensity” and “duration”.

Intensity:

LOW INTENSITY	NATURAL AND MAN-MADE FUNCTIONS NOT AFFECTED.
MEDIUM INTENSITY	ENVIRONMENT AFFECTED BUT NATURAL AND MAN-MADE FUNCTIONS AND PROCESSES CONTINUE.
HIGH INTENSITY	ENVIRONMENT AFFECTED - NATURAL OR MAN-MADE FUNCTIONS ARE ALTERED TO THE EXTENT THAT IT WILL TEMPORARILY OR PERMANENTLY CEASE OR BECOME DYSFUNCTIONAL.

Duration:

SHORT TERM	<1 TO 5 YEARS
MEDIUM TERM	5 TO 15 YEARS
LONG TERM	16 YEARS PLUS; IMPACT WILL ONLY CEASE AFTER THE OPERATIONAL LIFE OF THE ACTIVITY, EITHER BECAUSE OF NATURAL PROCESS OR BY HUMAN INTERVENTION
PERMANENT	MITIGATION, EITHER BY NATURAL PROCESS OR BY HUMAN INTERVENTION, WILL NOT OCCUR IN SUCH A WAY OR IN SUCH A TIME SPAN THAT THE IMPACT CAN BE CONSIDERED TRANSIENT

Significance of impacts are determined through a synthesis of the assessment criteria and is described as –

- Low negative– where it would have negligible effects and would require little or no mitigation
- Low positive – the impact will have minor positive effects
- Medium negative – the impact will have moderate negative effects and will require moderate mitigation
- Medium positive – the impact will have moderate positive effects
- High negative – the impact will have significant effects and will require significant mitigation measures to achieve an accepted level of impact
- High positive – the impact will have significant positive effects
- Very high negative – the impact will have highly significant effects and are unlikely to be able to be mitigated adequately
- High positive – the impact will have highly significant positive effects

8.3 CONSULTATION WITH THE COMPETENT AUTHORITY:

The Provincial Department of Environmental Affairs and Development Planning (DEA&DP) has been identified as the Competent Authority. Consultation with the competent authority will be ongoing throughout the environmental process and will include the following as a minimum:

- Submission of the Notice of Intent (NOI) to submit an application form (COMPLETE);
- Submission of the Site Sensitivity Verification Report (SSVR) (COMPLETE);
- Circulation of the Pre-Application Scoping Report for comment (THIS REPORT);
- Submission of application form;

- Circulation of the updated Scoping Report for comment;
- Submission of the updated Scoping Report for decision making;
- Circulation of the Environmental Impact Report for comment;
- Submission of the Environmental Impact Report for decision making.

8.4 PUBLIC PARTICIPATION PROCESS (PPP):

The following is a list of tasks to be performed as part of the PPP in the EIA Phase:

- Receive approval for the Scoping Report and the Plan of Study for EIA from CA;
- Compile Draft Environmental Impact Report (EIR) for public comment based on specialist information;
- Submit copies of the Draft EIR to DEA&DP and relevant State Departments and Organs of State and notify them of the commenting period in terms of Section 24O of NEMA;
- Notify Registered I&APs of the opportunity to comment on the EIR;
- Make the EIR (including EMPr) available for a 30-day commenting period;
- Receive comments on the EIR;
- Preparation of the EIR for submission to DEA&DP -to include the proof of the Public Participation Process, comments received and our responses to these comments.

8.5 CONTENTS OF THE EIR:

According to Appendix 3 of the EIA Regulations 2017, as amended, the following information must be included in the EIR:

- a) *Details of –*
 - i) *The EAP who prepared the report; and*
 - ii) *The expertise of the EAP, including curriculum vitae;*
- b) *The location of the development footprint of the activity on the approved site as contemplated in the accepted scoping report, including:*
 - i) *The 21 digit Surveyor General code of each cadastral land parcel;*
 - ii) *Where available, the physical address and farm name; and*
 - iii) *Where the required information in items (i) and (ii) is not available, the coordinates of the boundary of the property or properties;*
- c) *A plan which locates the proposed activity or activities applied for as well as the associated structures and infrastructure at an appropriate scale, or, if it is –*
 - i) *A linear activity, a description and coordinates of the corridor in which the proposed activity or activities is to be undertaken;*
 - ii) *On land where the property has not been defined, the coordinates within which the activity is to be undertaken;*
- d) *A description of the scope of the proposed activity, including –*

- i) *All listed and specified activities triggered and being applied for; and*
 - ii) *A description of the associated structures and infrastructure related to the development;*
 - e) *A description of the policy and legislative context within which the development is located and an explanation of how the proposed development complies with and responds to the legislation and policy context;*
 - f) *A motivation for the need and desirability for the proposed development, including the need and desirability of the activity in the context of the preferred development footprint within the approved site as contemplated in the accepted scoping report;*
 - g) *A motivation for the preferred development footprint within the approved site as contemplated in the accepted scoping report;*
 - h) *A full description of the process followed to reach the proposed development footprint within the approved site as contemplated in the accepted scoping report, including:*
 - i) *Details of the development footprint alternatives considered;*
 - ii) *Details of the public participation process undertaken in terms of regulation 41 of the Regulations, including copies of the supporting documents and inputs;*
 - iii) *A summary of the issues raised by interested and affected parties, and an indication of the manner in which the issues were incorporated, or the reasons for not including them;*
 - iv) *The environmental attributes associated with the development footprint alternatives focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects;*
 - v) *The impacts and risks identified including the nature, significance, consequence, extent, duration and probability of the impacts, including the degree to which these impacts –*
 - aa) can be reversed;*
 - bb) may cause irreplaceable loss of resources; and*
 - cc) can be avoided, managed or mitigated;*
 - vi) *The methodology used in determining and ranking the nature, significance, consequences, extent, duration and probability of potential environmental impacts and risks;*
 - vii) *Positive and negative impacts that the proposed activity and alternatives will have on the environment and on the community that may be affected focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects;*
 - viii) *The possible mitigation measures that could be applied and level of residual risk;*
 - ix) *If no alternative development footprints for the activity were investigated, the motivation for not considering such; and*
 - x) *A concluding statement indicating the location of the preferred alternative development footprint within the approved site as contemplated in the approved scoping report;*
 - i) *A full description of the process undertaken to identify, assess and rank the impacts the activity and associated structures and infrastructure will impose on the preferred development footprint on the approved site as contemplated in the accepted scoping report through the life of the activity, including:*
 - i) *a description of all environmental issues and risks that were identified during the environmental impact assessment process; and*
 - ii) *an assessment of the significance of each issue and risk and an indication of the extent to which the issue and risk could be avoided or addressed by the adoption of mitigation measures;*
 - j) *An assessment of each identified potentially significant impact and risk, including –*
 - i) *Cumulative impacts;*
 - ii) *The nature, significance and consequences of the impact and risk;*
 - iii) *The extent and duration of the impact and risk;*

- iv) *The probability of the impact and risk occurring;*
 - v) *The degree to which the impact and risk can be reversed*
 - vi) *The degree to which the impact and risk may cause irreplaceable loss of resources; and*
 - vii) *The degree to which the impact and risk can be mitigated;*
- k) *Where applicable, a summary of the findings and recommendations of any specialist report complying with Appendix 6 to these Regulations and an indication as to how these findings as to how these findings and recommendations have been included in the final assessment report;*
- l) *An environmental impact statement which contains –*
 - i) *A summary of the key findings of the environmental impact assessment*
 - ii) *A map at an appropriate scale which superimposes the proposed activity and its associated structures and infrastructure on the environmental sensitivities of the preferred development footprint on the approved site as contemplated in the accepted scoping report indicating any areas that should be avoided, including buffers; and*
 - iii) *A summary of the positive and negative impacts and risks of the proposed activity and identified alternatives;*
- m) *Based on the assessment, and where applicable, recommendations from specialist reports, the recording of proposed impact management outcomes for the development for inclusion in the EMPr as well as for inclusion as conditions of authorisation;*
- n) *The final proposed alternatives which respond to the impact management measures, avoidance, and mitigation measures identified through the assessment;*
- o) *Any aspects which were conditional to the findings of the assessment either by the EAP or specialist which are to be included as conditions of authorisation;*
- p) *A description of any assumptions, uncertainties and gaps in knowledge which relate to the assessment and mitigation measures proposed;*
- q) *A reasoned opinion as to whether the proposed activity should or should not be authorised, and if the opinion is that it should be authorised, any conditions that should be made in respect of that authorisation;*
- r) *Where the proposed activity does not include operational aspects, the period for which the environmental authorisation is required and the date on which the activity will be concluded and the post construction monitoring requirements finalised;*
- s) *An undertaking under oath or affirmation by the EAP in relation to:*
 - i) *The correctness of the information provided in the reports;*
 - ii) *The inclusion of comments and inputs from stakeholders and I&APs*
 - iii) *The inclusion of inputs and recommendation from the specialist reports where relevant; and*
 - iv) *Any information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs made by interested or affected parties;*
- t) *Where applicable, details of any financial provisions for the rehabilitation, closure, and ongoing post decommissioning management of negative environmental impacts.*
- u) *An indication of any deviation from the approved scoping report, including the plan of study, including –*
 - i) *Any deviation from the methodology used in determining the significance of potential environmental impacts and risks; and*
 - ii) *A motivation for the deviation;*
- v) *Any specific information that may be required by the competent authority; and*
- w) *Any other matters required in terms of section 24(4)(a) and (b) of the Act.*

9. CONCLUSIONS AND RECOMMENDATIONS

The Scoping exercise was undertaken in order to present concept proposals to all potential Interested and Affected Parties (I&AP's) and identify potential environmental issues and concerns regarding the proposed development. This Scoping Report summarises the process undertaken to date, and highlights further steps required to complete the Environmental Impact Assessment (EIA). The report presents and assesses the alternatives considered and uses the comprehensive baseline assessments as planning tools to guide the planning of the proposed development, in order to identify all potential opportunities and constraints onsite and ensure minimal impacts occur.

The proposed agricultural activities are located on an operational farm within an agricultural area, in fact, with a large portion of the site falling within the Herbertsdale-Gouritsmond Protected Agricultural Area, demarcated in terms of the Preservation and Development of Agricultural Land Act (PDALA, Act 39 of 2024). This application proposes expansion and intensification of agricultural land use and is thus in-line with this demarcation. Agriculture is standard practice within the area and therefore little impact will be caused to people's health and wellbeing (in terms of noise, odours, visual character, sense of place or socio-economic conditions) as a result of this activity. The location of the site also limits the impacts that the activity will have on people as the site is located within a rural setting.

The construction of the dam will assist with water security for the cultivation areas to ensure reliable irrigation supply, especially during dry periods. Water storage also helps farmers adapt to climate variability and reduced rainfall predictability. Sustained water supply would improve farm yields and income stability. Economic viability of farming operations in turn supports job creation in the form of seasonal and permanent farm labour.

According to the Hydrologist, the runoff estimated in this study shows that the demand of 210 000 m³ per annum represents some 7% of the estimated surface water discharge available at the farm. This will be sufficient to sustain the increased surface water requirement on the properties under discussion and allow for some 93% of the discharge to be still available to the downstream drainage system.

According to the Botanical Specialist, most of study area is characterized by vegetation that has been or is currently used for agriculture. The typical agricultural activities are bush-cutting the Fynbos and livestock grazing. This type of land management favours species that respond well to cutting, including shrubs, graminoids and bulbs. Species that would not persist under these conditions are those that regrow from seeds only (i.e. non-resprouters) and require a few years to mature enough to produce seeds (e.g.

reseeding proteas). This management regime therefore allows the indigenous vegetation to persist but reduces the species diversity.

The presence of threatened vegetation types on the site indicates that allowing some areas to remain natural is very important to ensure species and ecological processes persist on the subject properties. The numerous drainage lines and adjacent areas are all important and should be excluded from development, along with a suitable buffer. The subject properties are large and considering that the suggested No-Go areas have been observed, indigenous vegetation and ecological processes will persist on the site.

The Faunal Specialists identified several areas of faunal sensitivity that included the river and associated wetland habitats, good quality fynbos habitat on the western ridge, and some northern and eastern areas on farm 149. Most concern was associated with Denham's bustard, where parts of the upper ridge area of open habitat offered ideal habitat for this bird SCC, both in terms of foraging and breeding. This species was also seen flying over the project site and foraging in adjacent open areas. Low sensitivity areas were associated with low-lying historically disturbed areas and most of the eastern areas of the farm Aan De Valsch Rivier. It was suggested by Colville and Cohen (2025) that any agricultural expansion be focussed in the low sensitive areas considering the already high disturbance in several of these areas.

Overall, Colville and Cohen (2025) indicated that the proposed development is unlikely to generate significant negative impacts on any of the faunal SCC flagged, based on the condition that the sensitive areas (river and associated wetland habitat, western ridge and fynbos habitat, and northern fynbos areas of farm 149) are excluded.

From a freshwater perspective, several wetlands including large hillslope seep and unchannelled valley-bottom wetland systems have been identified within the property boundaries, most of which are in a largely natural ecological condition. The wetlands are therefore of high biodiversity and ecological importance, particularly considering that they are mapped as CBAs and occur within a SWSA. The study area falls at the head of an agriculturally intensive farming area. Existing cumulative impacts on water resources are significant and are related primarily to loss of wetland and riparian habitat, and nonpoint source pesticide and nutrient pollution. Agriculture in the area is primarily dryland and consequently there is not significant pressure on river flows in this part of the catchment. The proposed layout has avoided wetland habitat and 30 m buffers have been recommended to protect these wetland areas and mitigate against nonpoint source pollution.

As a result of the above, the need for the following specialist input has been identified as being required for the EIA phase:

- Botanical (or Terrestrial Biodiversity) Impact Assessment (Including Plant Species Assessment)

Draft Scoping Report (Pre-Application) - July 2026

- Aquatic Biodiversity (or Freshwater) Impact Assessment
- Faunal (or Animal Species) Impact Assessment
- Agricultural Compliance Statement (**Appendix E2**)
- Hydrological Study of Surface Water Runoff (**Appendix E3**)
- Geotechnical Study

The significance of the positive and negative impacts associated with the alternatives proposed will be assessed in the EIA phase. Comments received will be used to inform the specialist's studies and will be addressed in the next phase of the EIA process.

PLEASE SUBMIT ANY COMMENTS YOU HAVE TO:

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COMMENTS MUST REACH US ON OR BEFORE MONDAY 31 AUGUST 2026.