# PROPOSED DEVELOPMENT OF A 'NEW RETREAT' AND ASSOCIATED INFRASTRUCTURE AND MAINTENANCE MANAGEMENT PLAN ON A PORTION OF PORTION 11 OF FARM 1674, PAARL

## EXECUTIVE SUMMARY OF THE POST-APPLICATION DRAFT BASIC ASSESSMENT REPORT

**Introduction**

Following the circulation of the pre-application Draft BAR for public review in November 2020, the report has been updated and the application for Environmental Authorisation has been submitted. This is the post-application Draft Basic Assessment Report (BAR) (which has the Heritage Impact Assessment Report appended to it) which is being circulated for public review and comment. This report has been compiled as part of the integrated Basic Assessment process for the application for Environmental Authorisation in terms of the National Environmental Management Act (No. 107 of 1999) (NEMA) and the associated Environmental Impact Assessment (EIA) Regulations, 2014 (as amended) for a proposed "New Retreat" on a portion of Portion 11 of Farm 1674, Paarl.

It provides information on the proposed development, Listed Activities triggered (which determines the need for an Environmental Authorisation), the site and various natural, built, cultural, and social environmental considerations, as well as specialist studies undertaken, their findings and recommendations.

Following this public review period, the BAR will be updated with comments received and will be submitted to the Competent Authority, namely the Department of Environmental Affairs and Development Planning (DEA&DP).

**Proposed Development**

The proposed development entails the development of a "New Retreat", for the Bertha Foundation which would have the capacity to accommodate up to approximately 34 overnight guests/attendees.

The existing building footprints of the remnant cottages on site would be used, where possible and the proposed development would comprise of the following buildings:

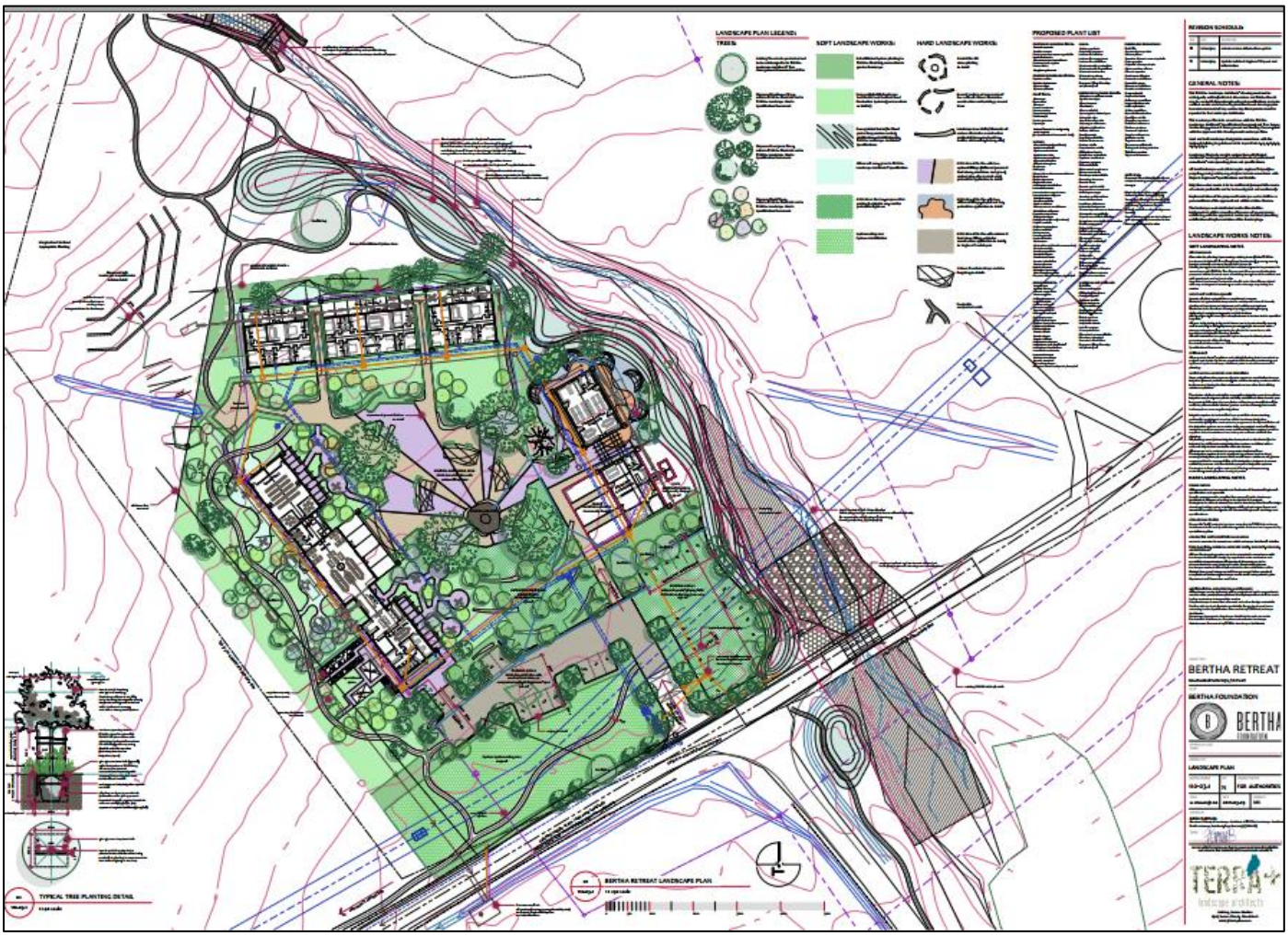
- Accommodation buildings to accommodate up to approximately 34 overnight guests/attendees, which include bedrooms, bathrooms, a lounge/communal living area and covered outdoor areas/deck space;
- A conference facility which includes a small conference venue and up to approximately two breakaway areas;
- A communal dining and lounge area;
- An administration building with a reception and waiting lounge / library;
- Meeting room(s) for community programmes and a communal library; and
- A kitchen area, with space for staff dining, lockers, and ablution facilities.

Up to approximately 24 parking bays (which includes 7 visitors parking bays) would be included. Refer to the site plan for the proposed development below.


**Duplication of Figure 1**

There would be a combination of hard and soft landscaping measures applied. Hard landscaping would include an open courtyard and a network of boardwalks, as well as an outdoor landscaped amphitheatre (which would be grassed). Proposed parking areas would also be landscaped, but these would be tucked within further planting to soften the entrance and interface with the Ou Wa-pad. Soft landscaping would also be used to bridge scale with the proposed buildings and break-away areas as well as to provide screening and synergy with the surrounding landscape. Tree lines as well as rehabilitated fynbos corridors would be implemented to provide strong connections to the broader landscape (*pers comms*, A. Bormans, 29/05/2020). There would be peripheral areas to connect to nature through the provision of a continuous footpath through the rehabilitated fynbos and productive kitchen garden (*pers comms*, A. Bormans, 29/05/2020). The interface with the historic "Ou Wa-pad" would be softened with extensive planting. The intention would be for the site to be as self-sufficient as possible, and so a vegetable garden is a major component of the landscape plan. The landscaping would also make use of permeable surfaces as much as possible and so the source of water for the landscaping would be a combination of municipal supply, rainfall and stormwater run-off (infiltration).

The site would be accessed from the existing Ou Wa-pad, noting that the main access-controlled gate to Boschendal along that road would remain. Refer to the landscape plan below.




**Duplication of Figure 2**

Stormwater would be managed primarily by infiltration through permeable surfaces. Surface flow that may be generated by high rainfall events would be allowed to pass through the development by surface escape, without causing flow concentration. Flood management measures to protect the development from flooding of the adjacent watercourse would be required. These measures comprise the conversion of the existing culvert crossing on Hoof Road to an engineered low level road crossing to contain flood flow safely under and over the new culverts, within the river corridor. The existing berm on the development side of the watercourse would also be formalised to be continuous, reprofiled and raised. The existing head-cut within the stream would be "flooded" (i.e., water would be allowed to pool therein) so that the erosive cut is less likely to move upstream and there would be some low retaining of the channel side embankments in gabions, as well as floor armouring throughout the structure.

For the preferred alternative, potable water supply would come from the Stellenbosch Municipality via a connection to their Lanquedoc pump station. The connection would entail a new, underground 160mm diameter uPVC link to be installed within the road on Boschendal Estate and within the road reserve along Hoof Road. The routing of the western segment of the proposed water line would be determined on site but would be limited to the northern side of the roadway. It would either be routed within the northern half of the road (i.e. hard/blacktop) or between the existing hard top and row of gum trees alongside it (there is currently compacted, bare ground presently between the gum trees and hard/blacktop). Capacity for this has been confirmed by the Stellenbosch Municipality.

While the above solution is pursued, the proposed interim connection would involve tying into the existing York Dam 300 mm diameter irrigation supply line that currently feeds a part of the Boschendal Estate irrigation reticulation. There is an existing "take-off" for water

supply to existing houses just off Hoof Road within the York Farm boundary. The existing connection would be upgraded to a 160 mm connection and a new 160mm diameter uPVC Class 12 pipe would be laid to the Retreat. The new pipe route would extend 282m and be installed within the road/ road reserve on Hoof Road (Middelmann & Hurworth, 2021). The pipe would cross a perennial stream where approximately 20 m would be fastened to the existing culvert. The pipeline will terminate at the entrance of the Retreat. In the interim, a holding tank and combination sand filter and Ultra-violet water treatment plant will be installed to treat the "irrigation water" to the required quality and standard for potable water.

For the preferred alternative, the site would be equipped with a conservancy tank of maximum 30 $m^3$ capacity in order to temporarily hold/store the sewage and wash-water on site until off-site disposal occurs. The wastewater from this tank would be pumped out by a honeysucker as required for off-site disposal. The siting of these components has been intentionally devised in order to pose the least risk possible on freshwater systems on and around the site. Note that in the long-term, the intention is to connect to municipal supply, but this would be done when capacity is available and approved by the Municipality and would be the subject of a separate application for Environmental Authorisation, should there be any Listed Activities triggered.
The proposed development would be supplied with a 200 KVA (300 Amp three phase) low voltage connection to the new site reticulation (*pers comms*, R. Clark, TRAC, 25/03/2021). The new supply would be taken from the existing Kylemore Farmers 1 Eskom 11 kV line via a new 11 kV Tee-off. This would be installed to run across the gravel farm road from the existing Eskom 11 Kv overhead line (*pers comms*, R. Clark, TRAC, 25/03/2021). The new line would feed a new 11kV/420 Volt 200 Kva pole-mounted transformer, installed on the site and connected to a new 300Amp (200Kva) three-phase low voltage Eskom bulk supply meter point (*pers comms*, R. Clark, TRAC, 25/03/2021). It is also the intention to supplement power from the grid with rooftop solar panels in the future (*pers comms*, R. Clark, TRAC, 25/03/2021).

Refuse generated by the operational phase of the proposed development would be incorporated into existing systems at Boschendal.

A fibre spine is proposed to be installed along Hoof Road in the future, and the development would be equipped with a duct and drawpit system to provide connectivity to all units (pers comms, M. Middelman, MH&A Consulting Engineers, 18/03/2021).
Refer to the proposed services plan below.


**Duplication of Figure 4**

Rehabilitation to the stream to the north of the site (i.e. stream 10) would also take place. There is a detailed rehabilitation plan included in the EMPr (refer to Appendix H) and the Aquatic Biodiversity Impact Assessment Report (refer to Appendix G(e)), but Snaddon (2021) indicates the following necessary rehabilitation requirements:

- Bed (head-cut) Stabilisation;
- Bank (lateral) stabilisation);
- Removal of invasive alien plant species; and
- Replanting of rehabilitated areas.

Regular maintenance would also be required, hence the Maintenance Management Plan in the EMPr.

**Legal Triggers**
The proposed development triggers Listed Activities 19 and 48 of Listing Notice 1 and Listed Activities 6 and 12 of Listing Notice 3 in terms of NEMA and the associated EIA regulations, 2014 (as amended). Note that the potable water line from the site to Lanquedoc does not trigger Listed Activities in terms of the EIA Regulations, 2014 (as amended), but is included in the project description as it is necessary to service the site. The proposed development also triggers activities in terms of Section 21 of the National Water Act (No. 36 of 1998) (NWA), particularly S21 (c) & (i). The aspects of the proposed development that would triggers these activities include partial infilling of wetlands, working nearby and in a stream (including for rehabilitation and flood stabilisation measures) and wetlands, as well as the proposed placement of a conservancy tank of up to 30m$^3$ in capacity and associated lines nearby a stream and wetlands. This also covers the potable water line to Lanquedoc given that it would be nearby wetlands and cross watercourses (over them, with the line being attached to existing roods).It should, however, be noted that with mitigation, development Alternative 3 (i.e. the preferred alternative) poses at worst a low risk to the characteristics of the inland aquatic ecosystems affected by the development, and it is recommended that the development be generally authorised in terms of a Section 21 (i) water uses (Snaddon, 2021). Off-site disposal of effluent and on-site containment and infiltration of stormwater would also avoid the need for Section 21 (e) and (g) water uses (Snaddon, 2021). This has been confirmed by the Department of Water and Sanitation (DWS) who have indicated that the proposed development can be authorised under a General Authorisation. An application has been submitted in this regard.

The proposed development also triggers Section 38 of the National Heritage Resources Act (No. 25 of 1999), noting that the proposed temporary and permanent potable water lines to do not. The proposal and nature of the proposed development relative to the current context and sense of place trigger constitute a change of character to a site greater than 5000 m$^2$. The cultural landscape surrounding the site is of such high significance that it forms part of the grade I Cape Winelands Cultural Landscape (CWCL) and has been put forward for inscription on the UNESCO tentative world Heritage Site list. The Ou Wa-pad adjacent to the site is also a key component of the tangible heritage on site and in the context thereof. The social heritage of the site lies within the story thereof and use of the site as homes for the former farm workers.

**Baseline**
**Visual**
Although located along an important historic connection route, the site itself is not highly visible (Smuts & Scurr, 2020). From the north it is obscured from view by trees planted around the York Farm managers' cottages which are located just north of the site and from the south it is visible at the Boschendal property gate on the road to Lanquedoc, but not further than that as the road curves towards Lanquedoc (Smuts & Scurr, 2020). As such, the site is not visible for most of the alignment of the wapad and the cluster of cottages (also then the proposed cottages as the footprint and massing would be very similar) is not visible either from the R310 or the R45, both of which are scenic routes (Smuts & Scurr, 2020). The site is further not visible from Boschendal werf or much visible from any parts of the farm west of the R310 due to the undulating topography across the area, the mature plantings across much of Boschendal and the modest scale of the structures (Smuts & Scurr, 2020).

The most significant view corridor for the proposed development is that from the Rhone werf and to the Rhone werf (Smuts & Scurr, 2020). Both sites are visible to the other, however the views from the werf , which obscure views of the cottages, to the proposed development is of low significance because of the mature trees surrounding the werf as well as the north-facing orientation of the Rhone werf (Smuts & Scurr, 2020). Furthermore, Smuts & Scurr (2020) conclude that the proposed redevelopment of the cottages (with mitigation) would not result in any further visual impacts on Rhone than are already affected by the existing settlement. The views of Rhone from York Farm would also serve to embed the settlement in the Boschendal cultural landscape and would not be occluded or crowded by any of the proposed development interventions (Smuts & Scurr, 2020).

**Heritage**
The site does not have any apparent archaeological sensitivity (Smuts & Scurr, 2020) as a result of the pasturage history and location of the site far from historic werfs. A possibility remains, however, that intact, below ground archaeological remains of high significance could occur at the site.

Smuts & Scurr (2020) confirm that there is a tangible heritage resources in the wider study area which forms a vital component of, and inform, the site and these include the Ou Wa-pad (an historic route which runs from the R45 in the north to Lanquedoc, Pniel and Kylemore in the south).

The cultural landscape is also highly significant, and different than the rest of the farm, and comprises an exposed, less tended, wilderness which also forms part of the very important Grade I CWCL.

In terms of intangible heritage, while the derelict cottages themselves have been confirmed to hold no architectural or aesthetic significance, Smuts & Scurr (2020) state that they are representative of a social layer of history which imprints significant memory on the site. The site was once lived on by farm workers who enjoyed various aspects of the site itself and the farm and natura context it is situation within, a life which was disrupted and truncated by the removal of workers off Boschendal in the early 2000s (Smuts & Scurr, 2020). The social significance of the farm and the site is high given its long history of use, and the particular sensitivities arising from the unequal and discriminatory labour practices from the time of slavery to the recent past (Smuts & Scurr, 2020).

Regarding the potable water line, that runs from the Boschendal gate to Lanquedoc links the historic workers' village of Lanquedoc with the R310 (Smuts & Scurr, 2021). Lanquedoc consists of its historic core of cottages designed by Sir Herbert Baker for Rhodes' workers at the turn of the C20th, and more recent RDP and low-cost workers' accommodation (Smuts & Scurr, 2021). The historic settlement of Lanquedoc carries high significance in terms of architectural and landscape significance, as well as social significance (Smuts & Scurr, 2021). In terms of archaeology, historic material from the c20th is likely to be found within the settlement of Lanquedoc itself, but significant material beyond the limits of the village, and within the road reserve, are not anticipated (Smuts & Scurr, 2021).

**Aquatic Biodiversity/ Freshwater**
Snaddon (2021) confirmed three freshwater resources on/near the site, namely the perennial stream 10 which runs along the eastern edge of the site, the Dwars River valley-bottom wetland and the seep wetland to the west of the site. The upper reaches of stream 10

has a high ecological importance and sensitivity, while the lower river is of moderate ecological importance and sensitivity (EIS) (Snaddon, 2021). Both wetlands are transformed from the natural state, as a result of the long history of cultivation of the Estate and there is evidence of excavations and berms in both wetlands, as well as roads and tracks (Snaddon, 2021). The "New Retreat seep" wetland was assessed to be in a Category D – largely modified – while the Dwars River valley-bottom wetland lies in a category C – moderately modified (Snaddon, 2021). Overall, the Dwars River valley-bottom wetland was placed in the High EIS category, and the seep wetland in the Moderate category (Snaddon, 2021).

Two Ecological Corridors pass through the New Retreat site, one along Stream 10 and the other following the Dwars River (Snaddon, 2021).

The route for the proposed water supply line would cross stream 11 as well as its associated seep. Stream 11 is an earth-lined channel with cobble and fine sediments and the watercourse has been heavily invaded by invasive alien plants, with few indigenous riparian plants remaining in the riparian area (Snaddon, 2021). Stream 11 is surrounded by a seep wetland that extends uphill towards Lanquedoc and the diversion channel, with the seep having approximately 10% invasive alien plants and the remainder as indigenous vegetation (Snaddon, 2021). Stream 11 and its associated seep both hold a moderate ecological importance and sensitivity and in terms of Present Ecological Status (PES), they are both category D (largely modified) watercourses (Snaddon, 2021).

The interim water supply line which would connect to an existing irrigation supply, would cross stream 10 as well as run very close to a seep below the York Dam. The York Dam seep wetland has been assessed as being in a PES category C – this seep has also been transformed by the presence of the road and the dam, and a few farm buildings. The wetland vegetation persists, however, including palmiet, Prionium serratum (Snaddon, 2021). In terms of EIS, the seep lies in the Moderate category (Snaddon, 2021)

The impact of the proposed development has been assessed, with the assessment covering three layout/servicing alternatives, as well as two versions of the no-go alternative (all within the existing rights currently permitted, but split out because certain of those land uses would have different impacts on the freshwater system). Note also that the freshwater impact assessment for the two development alternatives that are not preferred covers the potential water line and reservoirs required for one of the municipal bulk water connections proposed and it covers the proposed (and preferred) potable water line to Lanquedoc of the preferred alternative It also covers the proposed flood remediation and rehabilitation works to stream 10.

In general, the impacts anticipated would be similar for all alternatives assessed (including the existing rights/ no-go alternative), but the severity/ significance would differ among alternatives. Construction phase impacts of freshwater resources are anticipated to include compaction and damage of soil structures, pollution of the wetlands or stream, disturbance of aquatic and terrestrial fauna, loss of natural vegetation cover and subsequent loss of biodiversity, erosion and sedimentation and the introduction of alien or invasive seedbanks which adversely affects natural biodiversity (Snaddon (2021). The operational impacts anticipated include decreased water quality as a result of stormwater run-off, changes to water quantity through additional run-off and increased frequency of flood peaks and volume entering the freshwater systems, contamination of soils, groundwater and aquatic ecosystems from leaks in the sewage package plant, disturbance of fauna and flora, as well as compromised biodiversity through import of alien or invasive seeds and seedlings (Snaddon, 2021).

**Terrestrial Biodiversity / Botanical**

The site and potable water pipeline routes are of Low botanical and faunal diversity and sensitivity, and presents no faunal or botanical constraints to the proposed development, other than the seasonal drainage line on the eastern edge of the site (to be addressed by freshwater specialist), where development planning should be in line with what is recommended by the freshwater specialist.

The overall ecological significance of the development of the site (excluding the seasonal drainage line on the eastern edge of the site) and installation of the potable water pipeline would be Low negative (before mitigation) on a regional scale.

The proposed development could actually enhance the ecological status of the site and surrounding area, by means of increasing the current indigenous plant diversity and cover (as proposed in development layouts) and making it more attractive to a wider range of birds and insects.

**Agricultural Sensitivity**

An Agricultural Sensitivity verification and compliance statement has been conducted and the findings indicate that detailed soil mapping identifies the soil map unit, on which the site and potable water pipeline route is located, as being of medium-low soil potential and not recommended for cultivation (Lanz, 2021).

The soil on site is a poorly drained, 80cm deep, sandy soil of the Kroonstad 2000 soil family with a high rock content and a soil potential rating of 3.5 (Lanz, 2021). The soil potential rating is in a category that is not recommended for crop production. Further evidence of the soil being unsuitable for crop production is the fact that this soil map unit has not been cultivated within at least the last 17 years (which is the limit of Google Earth historical imagery), while the surrounding map units, with higher potential rating, are under cultivation (Lanz, 2021).

Because of the poor soils, the site and potable water pipeline routes do not deserve a land capability of more than 7 and the correct agricultural sensitivity, in terms of the four screening tool sensitivity categories (low; medium; high; very high), should therefore be medium (Lanz, 2021).

**Transport and Access**

The Transport Impact Assessment confirmed the following existing roadways in the vicinity of the site:

- **R45 (MR 191):** Provincial Main Road: One lane per direction, with paved narrow shoulders and no sidewalks.
- **Helshoogte Road (MR 172/R301):** Provincial Main Road: One lane per direction, with paved sidewalk located on the eastern side of the road.
- **Lanquedoc Main Road:** One lane per direction, no shoulder, and no sidewalks. This reduces to one travel lane over the Dwars River Bridge. One directional traffic flow is maintained over the Dwars River following a first-come, first-cross principle. Speed humps on either side of the bridge.

- **Ou Wapad:** It is a gravel road, located within a 6 m wide servitude, which traverses over Boschendal owned property, gated at both ends

The assessment focused on the above roads and the Helshoogte Road/Lanquedoc Main Road and Lanquedoc Main Road/Ou Wapad intersections (Pretorius & Sequeira, 2020). Pretorius & Sequeira (2020) confirm that all the intersections are operating satisfactorily with no capacity conditions being experienced and, while the Dwars River Bridge acts as a pinch-point, the delay is only 2.2 seconds per vehicle. When considering the traffic growth, background traffic conditions as well as the additional trips (28 during the morning peak hour) that would result from the proposed development and their distribution, it was found that impact would have a low impact and no capacity upgrades would be required. No non-motorised transport (NMT) interventions are recommended. Recommendations have been made regarding parking capacity and resurfacing of the bellmouth at the Lanquedoc Main Road/ Ou Wapad intersection.

It is noted that there are plans by the Stellenbosch Municipality to upgrade the Dwars River Bridge in the near future, funding permitting.

**Fauna**

The site is largely located within a low sensitivity faunal area, however the high-sensitivity faunal areas and the association faunal corridors correlate with the wetlands and river (and associated ecological buffers) associated with the site (refer to **Error! Reference source not found.**). The proposed development is consistent with the goals for low and high sensitivity areas indicated in Jackson *et al* (2019). Helme (2021) states that the faunal diversity of the site is low, and typical of disturbed, remnant habitat in the region. No animal Species of Conservation Concern (SCC) were recorded in the study area, and none are expected to survive in this disturbed area. Faunal sensitivity is Low on a regional scale (Helme, 2021). Fauna noted in the stream included the Cape River Crab, *Potomonautes perlatus*, blackfly larvae, *Simulium* spp., and numerous mayfly nymphs of the family *Baetidae*. These species are all hardy taxa, tolerant of impacted water quality (Snaddon, 2021).

Ecological sensitivity has also been considered relative to the proposed water supply line and the reservoir at the end for Alternative 2 and this is either adjacent to, or at times encroaching into a faunal corridor. The potable water line along Hoof Road to Lanquedoc pump station for the preferred alternative has also been considered from a faunal sensitivity perspective. Given that the line would be underground and located within the existing farm road and then within existing tarred road or the compacted ground between the edge of the black top and the gum trees, this would not provide any constraints during operation and would, therefore, only require careful management during construction, particularly regarding trenching and measures to limit faunal from getting trapped in the trenches.

Overall impacts on fauna would be low during construction, if mitigation is implemented, and would be positive during operation as the ecological status of the site would be improved upon and more, better quality habitat would be provided in a habitat which is currently transformed (i.e. some of it would become fynbos habitat, which is significant in the area).

**Alternatives and Comparison**

Three development layout/servicing alternatives are formally assessed in this process, namely the preferred alternative (i.e. Alternative 3) and Alternatives 1 and Alternative 2. The alternatives assessed are the same with respect to the building layouts, use of the site and landscape intentions, as well as flood risk mitigation, stream rehabilitation and services for refuse and telecommunications. The alternatives differ with respect to sewer, stormwater, and potable water services. These are summarised in the duplication of Table 6.

**Duplication of Table 6**

| Alternative | Project Scope | Sewer | Water | Stormwater | Layout |
|---|---|---|---|---|---|
| 1 | Redevelopment of the cottages for the "New Retreat" to accommodate up to 34 overnight guests with supporting conferencing facility, communal lounge and dining area, administration buildings, meeting rooms, outdoor patios and spaces and kitchen and staff areas.<br>Up to 24 parking bays.<br>Hard and soft landscaping to include grassed amphitheatre, parking area planting, central courtyard, tree lines, fynbos gardens and kitchen gardens all in synergy with surrounding landscape.<br>Flood mitigation measures including conversion of the existing culvert on the Ou wapad to an an engineered low level road crossing and reinstatement of berms along riverbanks. | Siting of the pumpstation, wastewater treatment tank/treatment package plant (i.e. a tank which would employ a low energy biological treatment process to treat the wastewater/sewage) of 40 $m^3$ and associated access track all on the north-western "corner" of the site. Treated wastewater would be used for toilet flushing and irrigation of the landscaping on road verges. | Several supply alternatives were considered (municipal, borehole, and farm dam), but the final supply had yet to be confirmed. The services layout indicated pumping water to a reservoir (comprising approximately three 10 000 L storage tanks) further south of the site, with the proposed line being located within the existing road limits. No further detail is available for this alternative as feedback from Stellenbosch Municipality in this regard was outstanding at the time of assessment. | Siting of vegetated swale to the north of the proposed parking area and for a short stretch along the stream. | Refer to 37 of BAR. |
| 2 | | Siting of the pumpstation, wastewater treatment tank/ treatment package plant (i.e. a tank which would employ a low energy biological treatment process to treat the | | Siting of vegetated swale to the north of the proposed parking area and pulling it away from the stream, which reduces the risk to the | Refer to Figure 38 of BAR. |

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| | River rehabilitation works. 200KVA low voltage electrical connection to the existing Kylemore Farmers 1 Eskom 11kV line. Refuse would be incorporated into the existing system. Telecommunications ducts and drawpit for all units, to connect to future fibre spine along Hoof Road. | wastewater/sewage) of 40 $m^3$ and associated access track to locate the treatment tank/package plant (i.e. the SOG trickling filter component) further from the stream by placing it on the opposite side of the ou wapad, to the south-west of the site. The siting of these components has been intentionally devised in order to pose the least risk possible on freshwater systems on and around the site. Treated wastewater would be used for toilet flushing and irrigation of the landscaping on road verges. | | watercourse | |
| 3 (preferred) | | Siting of the pumpstation, pipelines, conservancy tank to locate the conservancy tank further from the stream by placing it on the opposite side of the ou wapad, to the south-west of the site. A conservancy tank of 30m3 capacity would be utilised to temporarily hold/store the sewage and wash-water until off-site disposal occurs. The wastewater from this tank would be pumped out by a honeysucker as required for off-site disposal. The siting of these components has been intentionally devised in order to pose the least risk possible on freshwater systems on and around the site. Note that in the long-term, the intention is to connect to municipal supply, but this would be done when capacity is available and approved by the Municipality and would be the subject of a separate application for Environmental Authorisation, should there be any Listed Activities triggered. | Following confirmation of requirements of Stellenbosch Municipality Bulk water would be sourced from the external municipal network in Lanquedoc. An underground 160 mm diameter uPVC link main is proposed to be constructed from a connection point on the Lanquedoc PRV water distribution zone, on the fringe of the Lanquedoc estate, along Hoof Road and into Boschendal (refer to **Error! Reference source not found.**). The routing of the western segment of the proposed water line would be determined on site, but would be limited to the northern side of the roadway. It would either be routed within the northern half of the road (i.e. hard/blacktop) or between the existing hard top and row of gum trees alongside it (there is currently compacted, bare ground presently between the gum trees and hard/blacktop). A bulk meter would be required at the Boschendal boundary, proposed at a convenient location outside the security gate and to the approval of the local authority, and the pipeline would continue as a private main up to the Retreat development, on Ptn 11 of Farm 1674. The pipeline would bridge various stormwater culverts by surface fixing. This link | Large areas of permeable surfaces in the parking areas to such a degree that a vegetated swale is not required. The preferred alternative has a larger extent of grassed area (i.e. Grass fix) to improve infiltration. | Refer to **Error! Reference source not found.** and **Error! Reference source not found.**. |

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|---|---|---|---|---|---|
| | | | main is in principle in accordance with the alignment proposed in the GLS capacity analysis report and accompanying schematics for the development, dated 5 December 2020, and has been formally endorsed by confirmation of capacity by the local authority. The GLS report proposes a demand of approximately 13 kL per day for the development, and this capacity is available in the network. The main would terminate at the development, and a supply off this main would provide potable and fire water to the Retreat. This supply would be managed through a private sub-meter and would separate on-site into a 110 mm uPVC Class 16 fire ring and a 50 mm uPVC Class 12 domestic system.<br><br>While the above option is pursued, a temporary pipeline would be constructed to connect into the existing York Dam 300 mm diameter irrigation supply line that currently feeds a part of the Boschendal Estate irrigation reticulation. There is an existing "take-off" for water supply to existing houses just off Hoof Road within the York Farm boundary (north-east of the site). The existing connection would be upgraded, and a new 160 mm diameter pipe would be laid to the Retreat. The new pipe route would extend 282 m and be installed within the road reserve on the northern side of Hoof Road and turn north towards the connection point while continuing within the road reserve. The pipeline will terminate at the entrance of the Retreat. A holding tank and combination sand filter and Ultra-violet water treatment plant will be installed to treat the "irrigation water" to the required quality and standard for Municipal potable water. The internal reticulation would be the same as for the permanent supply. | | |

The no-go alternative has also been assessed and considered as "no development", with retention of the derelict old worker cottages, but with the possibility of farming activities on the site, in line with existing rights. With respect to existing rights, the site is zoned

Agriculture and Rural Zone in terms of the Stellenbosch Municipality Zoning Scheme By-law. This could then include primary uses permitted in terms of its Agricultural and Rural Zoning in the Stellenbosch Municipality Zoning Scheme By-law, including:

- Agricultural building (≤200 0m²)
- Agriculture
- Dwelling house
- Forestry
- Natural environment
- Occasional use (one event/year)
- Private road
- Polytunnel (≤2000 m²)
- Second dwelling
- Employee housing (one unit)

Therefore, when considering land use planning legislation as well as the EIA Regulations, as amended, the no-go alternative may include any combination of the following activities on site:

- Use of the existing cottages (in their current footprint) as farm accommodation or any other farm-related use like storage or administration;
- Use of the site for cultivation (which does not involve the release of GMOs);
- Use of the site for breeding of animals (which does not involve the release of GMOs), below the following thresholds:
    - 20 square metres per large stock (i.e. horses) and less than 500 in total;
    - 30square metres per crocodile and less than 20;
    - 8 square metres per small stock unit (e.g. pigs, chickens, etc.) and less than 1000 in total, unless pigs are kept which would then be less than 250;
    - 3 square metres per rabbit and less than 500;
    - 250 square metres per ostrich/emu and less than 50.

Given that there are different implications of the which existing rights use is implemented for the freshwater ecosystem, two scenarios have been assessed by Snaddon (2021) (i.e. from an aquatic biodiversity perspective), namely:

- **No-go Alternative 1**: this is the best case scenario, which would entail renovation of four of the eight buildings (those that lie outside the 32m NEMA buffer for the stream) for farm worker accommodation, and the remaining land is left as is (the remaining cottages would not be demolished); and
- **No-go Alternative 2**: this is the worst-case scenario, which would involve the cultivation of the full site and removal (demolition) of all buildings. It must be noted that this alternative is unlikely, due to the poor quality of the soil on site.

**Comparison of Alternatives**

Layout/servicing alternatives have been assessed in the form of the preferred development alternative (i.e. Alternative 3), as well as development Alternative 1 and Alternative 2, and the no-go or "existing rights" alternative (i.e. whereby the Applicant may continue with development which does not require approval and is aligned with existing rights whereby rights for agricultural use are presently in place for the farm portion within which the site is located). In addition, alternative design/ layout solutions, sewage disposal/treatment solutions and development approach (i.e. demolish and rebuild, vs refurbish, vs redevelop) have been considered within the preferred development alternative, although they have not been formally assessed. In general, the impact of the proposed development is anticipated to be a combination of medium and low positive impacts and low to very low negative impacts, while the impact of the existing rights alternative would largely be very low, low and medium negative, with no positive impacts and possible positive impacts of the proposed development in terms of heritage and terrestrial biodiversity which would be foregone. While the no-go alternative (the best case scenario where no intensive crops are intended) is preferred from an aquatic ecology perspective, the preferred development alternative can be mitigated to acceptable levels presenting low risk to freshwater systems and the preferred alternative proposed is also preferred from a freshwater ecology perspective, over the other development alternatives assessed. Note also that there are existing rights for the site, which allows for development without the need for Environmental Authorisation and, therefore, the aforementioned impacts indicated for the existing rights alternative are "with mitigation" however mitigation would not be monitored or controlled by any external parties (such as would be the obligation in terms of an Environmental Authorisation).

The proposed development is preferred over the existing rights alternative for the following reasons:

- The baseline conditions of the site are such that there are limited terrestrial environmental/ecological sensitivities on site and that aquatic ecological sensitivities can be avoided to acceptable levels. Heritage/cultural conditions are also conducive to the proposed development and would yield positive impacts if implemented with care (and as per the mitigation measures prescribed by Smuts & Scurr (2020). In general, adverse impacts associated with either development would be low and there would be positive impacts from an architecture, landscape and social perspective, as well as from a terrestrial ecology perspective, and even an aquatic ecology perspective with regard to the landscaping component which includes fynbos rehabilitation.
- There are derelict buildings on site already which would better serve the farm in the form of tourism accommodation and socially beneficial uses (which is located nearby the local community), rather than having support buildings located well within the farm, far from other such operational infrastructure and separated from those hubs by a river which prevents easy access thereto.
- The preferred alternative would be better than using the site for farming as the agricultural sensitivity of the site has been found to be Medium and not recommended for crop production (Lanz, 2021). The employment opportunities created would likely have some minor benefit to the local communities. The cost of establishing the cottages would be relatively lower on the site, given the existing cottages, when compared to any other site. The existing rights alternative would likely not result in any new employment opportunities and unsuitable crop yields or greater expenses to make the land better suited for crop production.
- The anticipated social benefits of providing a space for human rights and environmental activist groups as well as to provide space for local community groups that aim at improving the lives of the people in the area would be positive and this would not be possible with the existing rights alternative. The location of the site is also meaningful as it lies along the Ou Wa-pad and in close proximity to the local community which would use it.

- Use of the site for typical agricultural activities could potentially require the demolition of the existing cottages to make space for grazing or crops, which is not desirable given that they provide an opportunity for tourism and community use.
- The principle of 're-use' and rehabilitation and/or refurbishment of existing derelict structures is a primary planning and design principle.

**Impacts**
Generally, the construction phase impacts for the proposed development (preferred alternative), with mitigation implementation, are anticipated to be Low (-) and Very Low (-) and the operational phase impacts, also with mitigation implementation, are anticipated to be similar with most impacts being Low (-) and one very low (-) and negligible.The negative impacts associated with the proposed development are anticipated to be either very low, low or negligible, while the positive impacts are anticipated to be low and medium. On balance, the positive impacts are greater and would outweigh the negative impacts during the operational phase, while the construction phase impacts would present more negative impacts. However, the construction phase impacts are related to construction activities which are short-term, and generally easily managed and mitigated and would also need to be independently audited throughout the construction phase. There is no single aspect or impact which stands out; however, it is important that the mitigation measures indicated in this report and in the Environmental Management Programme (EMPr) are followed as the significance of the impacts is contingent thereon.

Refer to the summary table below, noting that these are duplications of Tables 6 and 7.

| Phase | Impact | Alternative 1, 2 and 3 (preferred) | | No- Go Alternative 1 | | No- Go Alternative 2 | |
|---|---|---|---|---|---|---|---|
| | | **Before Mitigation** | **After Mitigation** | **Before Mitigation** | **After Mitigation** | **Before Mitigation** | **After Mitigation** |
| **Planning, design, and development** | **Physical:** Altering the surface drainage regime | Low (-) | Neutral | N/A | N/A | N/A | N/A |
| | **Socio-economic:** Generation of local economic stimulus | Medium (+) | Medium (+) | N/A | N/A | N/A | N/A |
| | **Nuisance Impacts:** Noise and Dust | Low (-) | Very Low (-) | Low (-) | Very Low (-) | Low (-) | Very Low (-) |
| | **Visual:** Adverse visual/ aesthetic impacts | Low (-) | Very Low (-) | N/A | N/A | N/A | N/A |
| | **Natural Resources:** Depletion of Natural Resources through use as material in the development/construction phase | Low (-) | Very low (-) | Low (-) | Very low (-) | Low (-) | Very low (-) |
| | **Traffic:** Effect on LOS of local road network during the operational phase (Some minor congestion could be experienced during morning peak along the local road network, or a slightly longer waiting period to cross the Dwars River Bridge in the morning peak) | Low (-) | Low (-) | N/A | N/A | N/A | N/A |
| | **Traffic:** Traffic Congestion on local road network during construction | Low (-) | Very Low (-) | N/A | N/A | N/A | N/A |
| | **Freshwater:** Storage of building or demolition materials (sand, soil, bricks etc) in or close to sensitive areas – this would damage the soil structure and would destroy or shade out plants growing in and around these ecosystems. Dump areas frequently lead to the compaction of soils, which can influence re-growth of plants. | Low (-) | No impact | Low (-) to no impact | Low (-) to no impact | Low (-) | Low (-) |
| | **Freshwater:** Leakage or spillage of fuels, oils, etc. from construction / demolition machinery – this would lead to pollution of the wetlands or stream. | Low to medium (-) | Low (-) | Low (-) | Low (-) | Low (-) to medium (-) | Low (-) to medium (-) |
| | **Freshwater:** Foot and vehicular traffic across the site, leading to destruction or deterioration of freshwater habitat. | Low (-) | No impact | Low (-) | Low (-) | Low (-) to medium (-) | Low (-) to medium (-) |
| | **Freshwater:** Presence of construction / demolition teams and their machinery on site – this may lead to noise and light pollution in the area, which will disturb aquatic and terrestrial fauna and flora. | Low (-) | Low (-) | Low (-) | Low (-) | Low (-) to medium (-) | Low (-) to medium (-) |
| | **Freshwater:** Construction or demolition activities close to the wetlands or stream will lead to the loss of natural vegetation cover, and subsequent loss of biodiversity. | Low to medium (-) | Low (-) | Low (-) | Low (-) | Low (-) | Low (-) |
| | **Freshwater:** Construction or demolition activities close to the wetlands or stream may lead to an increased input of mobile sediments, especially during the wet winter months when rain and runoff may cause erosion and sedimentation. | Low to medium (-) | Low (-) | Low (-) | Low (-) | Low (-) to medium (-) | Low (-) to medium (-) |
| | **Freshwater:** Topsoil or sand brought onto the site, for filling and landscaping can lead to the introduction of alien or invasive seedbanks. | Low to medium (-) | Low (-) | Low (-) | Low (-) | Low (-) | Low (-) |
| | **Heritage- Archaeology:** Impacts are possible to subsurface remains, should these occur, during developmental stage through trenching and earthmoving activities related to construction activities. | Medium (-) | Medium (-) or minor Low (+) if it contributes to site identification | None | None | None | None |
| | **Heritage- Architecture:** The cottages hold no architectural significance and no impacts will arise. Unsympathetic alteration could, however, result in the loss of a layer of the farm's history as expressed in the variety of architectural styles present on the | Medium (-) | Low (+) | Medium (-) | Low (-) | Medium (-) | Low (-) |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | farm. | | | | | | |
| | **Heritage- Landscape:** Inappropriate landscaping interventions will interfere with the ability of the new development to sit in the landscape in an authentic, sympathetic manner, which is crucial to retaining the significance of the cultural landscape. | Medium (-) | Low (+) | Medium (neutral, slightly negative) | Low (neutral, slightly negative) | Medium (neutral, slightly negative) | Low (neutral, slightly negative) |
| | **Heritage- Social:** Redevelopment of former workers' cottages risks erasing traces of those people's lives and labour from the Boschendal landscape, negatively affecting the authenticity of the farm as a heritage site. | High (-) | Medium (+) | High (neutral, slightly negative) | Very High (neutral, slightly negative) | High (neutral, slightly negative) | Very High (neutral, slightly negative) |
| **Operational Phase** | **Fauna:** Impacts on faunal movement through the site (Restriction of passage of fauna through the site) | Medium (-) | Low (-) | Medium (-) | Low (-) | Medium (-) | Low (-) |
| | **Heritage-Archaeology:** No impacts are anticipated to archaeological heritage during the operational phase | N/A | N/A | N/A | N/A | N/A | N/A |
| | Heritage- Architecture: The cottages hold no architectural significance and no impacts will arise. Unsympathetic alteration could, however, result in the loss of a layer of the farm's history as expressed in the variety of architectural styles present on the farm. | Medium (-) | Low (+) | Loss of the cottages through either demolition or dereliction would constitute a loss of a layer of the farm's history as expressed in the variety of architectural styles present on the farm. Medium (-) | Low (-) | Medium (-) | Low (-) |
| | **Heritage- Landscape:** Inappropriate landscaping interventions will interfere with the ability of the new development to sit in the landscape in an authentic, sympathetic manner, which is crucial to retaining the significance of the cultural landscape. | Medium (-) | Low (+) | Loss of built fabric illustrative of different periods of Boschendal history will reduce the heritage significance of the farm as a whole Medium (neutral, slightly negative) | Low (neutral, slightly negative) | Medium (neutral, slightly negative) | Low (neutral, slightly negative) |
| | **Heritage- Social:** Redevelopment of former workers' cottages risks erasing traces of those people's lives and labour from the Boschendal landscape, negatively affecting the authenticity of the farm as a heritage site. | High (-) | Medium (+) | The loss of these cottages through either demolition or | Very High (neutral, slightly negative) | High (neutral, slightly negative) | Very High (neutral, slightly negative) |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | dereliction represents the loss of representative samples of recent labour practices and worker's lives on the farm High (neutral, slightly negative) | | | |
| | **Socio-economic:** Generation of local economic stimulus in perpetuity (Creation of employment opportunities as a result of operation of the proposed development. Note that additional indirect stimulus as a result of attracting more tourists to the area would also result.) | Medium (+) | Medium (+) | N/A | N/A | N/A | N/A |
| | **Resource- use:** Depletion of resources through use of resources such as energy and water and production of waste as a result of domestic activities | Low (-) | Very low (-) | Low (-) | Very low (-) | Low (-) | Very low (-) |
| | **Nuisance Impacts– Dust-** The cultivation or used of the site for grazing would result in the generation of dust which may be a nuisance to surrounding land users, in perpetuity. | N/A | N/A | Low (-) | Very Low (-) | Low (-) | Very Low (-) |
| | **Terrestrial Biodiversity** | Low (+) | N/A | N/A | N/A | N/A | N/A |

| Phase | Impact | Alternative 1 | | Alternative 2 | | Alternative 3 (Preferred) | | No-Go Alternative 1 | | No-Go Alternative 2 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **Before Mitigation** | **After Mitigation** | **Before Mitigation** | **After Mitigation** | **Before Mitigation** | **After Mitigation** | **Before Mitigation** | **After Mitigation** | **Before Mitigation** | **After Mitigation** |
| **Operational Phase** | **Freshwater:** Stormwater discharge into natural areas – water quality impacts. | Medium (-) | Low (-) | Medium (-) | Low (-) | Low (-) | Negligible | Low (-) | Low (-) | Medium (-) | Medium (-) |
| | **Freshwater:** Stormwater discharge into natural areas – water quantity impacts. | Low to medium (-) | Low (-) | Low to medium (-) | Low (-) | Low (-) | Negligible | Low (-) | Low (-) | Low (-) to medium (-) | Low (-) to medium (-) |
| | **Freshwater:** Proximity of buildings and human activity to the wetlands and Dwars River. This may lead to local disturbance of fauna and flora, through noise, light, trampling, etc. Fauna may move away from the site. | Low to medium (-) | Low (-) | Low to medium (-) | Low (-) | Low to medium (-) | Low (-) | Low (-) | Low (-) | Low (-) | Low (-) |
| | **Freshwater:** Disturbance of soils for landscaping / maintenance of gardens/agricultural activities. Alien or invasive seeds and seedlings may be transported onto site. Alien vegetation is well adapted to establishing on previously disturbed soils and road verges. | Low (-) | Low (+) | Low (-) | Low (+) | Low (-) | Low (+) | Low (-) | Low (-) | Low (-) | Low (-) |
| | **Ecological- Freshwater:** On-site treatment of wastewater – impacts on water quality | Medium (-) | Low to medium (-) | Medium (-) | Low (-) | Low (-) | Negligible/ Low (-) | Low (-) | Low (-) | N/A | N/A |

**Mitigation and Response**
The findings and recommendations of the specialist studies have been recorded in the EMPr to ensure effective planning, design, development, and operational management of the proposed development.

The mitigation measures from heritage specialists are planning and design-related and have either been incorporated into the proposed layout (e.g. low key design, tight building footprint, hybrid approach to retention vs demolish and rebuild, etc) or landscaping intent (e.g. proposed wilderness feeling.), or they would be considered in detail design, with certain measures being incorporated into the EMPr. This would guide development in such a way that the sense of place would be in synergy with the surrounding social heritage and landscape context and be respectful of the current sense of place through appropriate use of architecture for the existing buildings. The location of the site itself is along an historic route and the proposed development, if carried out sensitively, would serve to reconnect the farm with the communities in a positive way. The potable pipe routings have not been found to have any impact on heritage resources, but there would be archaeological monitoring required (as well as for work on the New Retreat site) in the unlikely event that archaeological material is unearthed during construction activities. This is included in the EMPr.

Many of the mitigation measures from the freshwater ecologist are already included in the proposed layout, and the preferred layout has been guided by the freshwater impacts and ecological buffers (i.e. the layout has been devised to reach a preferred alternative that located the sewage lines and conservancy tank beyond ecologically sensitive areas and also maximises on permeable surfaces for stormwater management), landscape plan (e.g. treatment of the ecological corridors and inclusion of less invasive structures therein) and stormwater management plan, while the remaining conditions are more management based and would be implemented through the EMPr (noting that all mitigation measures are nonetheless included in the EMPr as it covers the planning and design phase as well). These measures have been included to ensure low adverse impacts on the freshwater system and to provide a positive impact thereon as well.

The recommendations from the terrestrial compliance statement are minimal, only requiring that some species on the landscape list be included, and this has been done in the Landscape Plan.

The remaining specialists such as structural engineers, civil services engineers and transport engineers and geotechnical engineers have also made recommendations in terms of design and planning to adequately service and develop the site in such a way that does not have significant adverse impacts off-site. The transport measures are included in the proposed layout (i.e. parking area, access points) and also in the EMPr, while the stormwater management plan is incorporated into the proposed services layout and has included the high-level mitigation measures of the freshwater ecologist (noting that there are additional mitigation measures that must be included in detail design. Water and electricity are available on the existing network, as confirmed by Eskom and the Stellenbosch Municipality respectively. The flood line analysis has also been considered in the civil services report and design.

Overall, all the mitigation measure recommended by the team of specialists involved in this project and assessment are considered important and have been included in the EMPr. There are no measures which have been excluded from the EMPr and only one that was edited by the EAP to add clarity when extracted from the specialist report (within which the context serves to clarify the point).

**Public Participation**
Given the triggers in terms of the NEMA and the NHRA, the public participation process has been integrated.

The PPP approved by the DEA&DP on 13 October 2020, intends to exceed the minimum legislative requirements prescribed in regulation 41 of the EIA Regulations, 2014 (as amended), but would be aligned with the requirements of the Standard Operating Procedure agreed between the DEA&DP and Heritage Western Cape (HWC) on December 2015. The PPP to-date has included the following activities (noting that no alternative sites have been considered in this impact assessment process):

- A pre-application draft BAR, the previous iteration of this report, was circulated for public comment for a period of 35 days from 6 November 2020 to 10 December 2020 with the notification (in the form of a letter) to the preliminary I&AP database being done by email and regular post (for those I&APs who do not have email addresses)
- Hard copies of the documentation, as well as the executive summary, were made available at the Pniel Public Library, the Pniel Museum and the Stellenbosch Public Library and the availability at these locations was advertised to the community through placement of notices in this regard at several key locations throughout the community;
- The executive summary and a comment box were also left at the Pniel Museum and Pniel Public Library for I&APs who cannot access the internet;
- The pre-application Draft BAR was available for download from Chand's website, the English and Afrikaans Executive Summaries were also made available for separate download (to limit data use) from Chand's website;
- Written notice to the municipal councillor of the ward in which the site is located was done and a site meeting was held with the Ward Councillor of Lanquedoc (noting that the Ward Councillor for Pniel was also invited, but did not attend) on 1 February 2021;
- Written notice to the municipality (Local and District Municipality) which has jurisdiction in the area was done as part of the notification above;

- Written notice to any organ of state having jurisdiction in respect of any aspect of the activity was done as part of the written notification of the availability of the pre-application draft BAR;
- A Focus Group Meeting with key community representatives was held on 22 February 2021.

Current PPP activities include the following:

- The I&AP database has been updated to include registrations received to-date;
- The public review period for the post-application Draft BAR is currently underway for a period of 30 days;
- Notification of the availability of the post-application Draft BAR (in the form of a letter) has been provided to registered I&APs via email and regular post (for those I&APs who do not have email addresses);
- Hard copies of the documentation have been made available at the Pniel Public Library and the Stellenbosch Public Library;
- The executive summary and a comment box have also been left at the Pniel Public Library for I&APs who cannot access the internet;
- The post-application Draft BAR has been made available for download from Chand's website, and the executive summaries have also been made available for download as separate documents (to limit data requirements for I&APs who do not have access to much data).
- Advertisements of the availability of the post-application draft BAR have been placed in the Cape Times and the Eikestad Nuus, noting the proposed development and Basic Assessment, Heritage Impact Assessment and Water Use Registration/ Licensing processes;
- Site notices providing the information required in terms of Regulations 41 (3) and (4) of the EIA Regulations, 2014 (as amended) have been placed on the site boundary, at the main entrance to the farm, as well as at the approximate mid- and end-points of the proposed potable water line routes;
- With respect to the written notice to the owners and persons in control of the site, note that the Applicant is the landowner of the site and the Stellenbosch Municipality owns the road for the line (and Stellenbosch Municipality has provided power of attorney for approval processes to the Applicant);
- Note that there are no legitimate "occupiers" on the site, but users of the site would be able to see the site notices;
- Written notice to the municipal councillor of the ward in which the site is located was done;
- Written notice to the municipality (Local and District Municipality) which has jurisdiction in the area was done as part of the notification and advertisement above;
- Written notice to any organ of state having jurisdiction in respect of any aspect of the activity has been done as part of the written notification of the availability of this post-application draft BAR.

Following the public review of this post-application Draft BAR, the report will be updated with I&AP comments/issues raised and submitted to the DEA&DP for decision-making. Once the DEA&DP has issued their decision (a statutory timeframe of 107 days is allowed for this), registered I&APs will receive notification of the final decision on the application from Chand.

**Synopsis and Conclusion**

Through this impact assessment investigation, which entailed inputs from the design and engineering team as well as specialists and Bertha grantees (as well as staff and management), a number of environmental impacts were identified and considered.

Those aspects that influenced the opinion of the Environmental Assessment Practitioner (EAP) are primarily related to the following points:

- The baseline conditions of the site are such that there are sensitive freshwater areas and faunal/ ecological corridors on portions of the site and along the edges thereof which require protection and careful consideration in development;
- The baseline conditions of the proposed potable water line routes are not sensitive, given that these are located within existing roadway, or would be within transformed areas within the road reserve.
- The preferred development alternative has been designed to keep the sewage servicing components away from the sensitive freshwater aspects of the site, to maximise surface permeability for stormwater, and to provide a stable supply of potable water to the site;
- The site and potable water line routings have no apparent archaeological or agricultural sensitivities thereon;
- The fact that there are already buildings on the site as well as access routes and capacity for services;
- The fact that Stellenbosch Municipality has confirmed capacity for potable water from the existing network and that Eskom has confirmed available capacity for electrical supply;
- The need and desirability of the proposal with regard to the establishment of a community activist enterprise which would provide space for local community upliftment organisations in a venue that is close to the communities that would use it as well as one that is meaningfully located along a historic connection route (namely, the Ou Wa-pad). The additional aspect of creating a small number of permanent employment opportunities that would benefit the local community which also provide some direct social benefits to these areas and some limited indirect financial benefits;
- The positive social heritage impact anticipated through re-establishing connectivity between the communities and the farm along the Ou Wa-pad;
- The understanding, based on specialist assessment, that adverse impacts can be mitigated to Low, Very Low, and even Negligible levels for both construction and operation, and that there would be low and medium positive impacts for both the construction and operational phase (for the preferred alternative);
- A portion of the site is proposed for fynbos rehabilitation, which would improve the ecological condition of the site as currently the site has low terrestrial ecological value;

- The alignment of the intentions of the proposed development (with implementation of mitigation) with the WCBSP; and
- The zoning of the site for agricultural purposes as well as the designation of the area in the Stellenbosch Municipality EMF which indicates that it falls beyond conservation zones.
- The intentional routing of the permanent potable water line within the road (and road reserve) and along the northern edge where there are no sensitivities.
- The routing of the temporary pipeline within existing roadway and on the side of the road where wetlands are not located.

With respect to environmental sensitivities, the site and potable water line routes are of Low botanical and faunal diversity and sensitivity and presents no faunal or botanical constraints to the proposed development, other than the seasonal drainage line on the eastern edge of the site. About 500 $m^2$ of low-diversity indigenous vegetation would need to be cleared from the site in total. Snaddon (2021) confirmed five freshwater resources on/near the site and potable water line route, namely the perennial stream 10 which runs along the eastern edge of the site, the Dwars River valley-bottom wetland and the seep wetland to the west of the site, seasonal stream 11 (which would be crossed on existing road by the potable water supply line) and its associated almost perennial hillslope seep as well as a wetland seep associated with the York Dam. Two Ecological Corridors pass through the New Retreat site, one along Stream 10 and the other following the Dwars River (Snaddon, 2021). Adverse impacts on the freshwater system are anticipated, and these can be mitigated to Low and very low levels of significance. The impacts of greatest severity are linked to the construction activities proposed for the flood protection measures, footpaths, service track (alternatives 1 and 2), amphitheatre, and water pipelines. However, these impacts can be mitigated against, which would reduce the significance of these impacts to, at worst, low negative/negligible, for all three development alternatives (noting that the preferred alternative would have comparatively more negligible impacts). With the implementation of all mitigation measures, specifically including implementation of the rehabilitation plan, effective site monitoring, the conservation of all mature riparian trees, use of compacted earth for pathways in the buffers, and the removal of invasive alien plants from the site, there may ultimately be a positive impact on the environment (Snaddon, 2021). The proposed development could actually enhance the ecological status of this area, by means of increasing the current indigenous plant diversity and cover (as proposed in development layouts) and making it more attractive to a wider range of birds and insects (Helme, 2021).

Service capacity for electricity and refuse is available on the farm already as the proposed development would be incorporated into existing systems and processes. There is also confirmed capacity for potable water within municipal supply, as confirmed by the Stellenbosch Municipality. The sewage resulting from the proposed development would be temporarily held/stored *in situ* through the inclusion of a conservancy tank of 30$m^3$ capacity in the proposed development and the sewage would be removed as required through the existing system on the farm (i.e. by private contractor). Stormwater would also be appropriately accommodated. Stormwater and sewage would be managed in a way that presents low risk to the freshwater systems on and nearby the site and the preferred alternative is the preferred development alternative from a freshwater perspective for this reason.

There would also be limited traffic impacts anticipated and minimal interventions are required. These requirements are included in the EMPr.

Generally, the construction phase impacts for the proposed development (preferred alternative), with mitigation implementation, are anticipated to be Low (-) and Very Low (-) and the operational phase impacts, also with mitigation implementation, are anticipated to be similar with most impacts being Low (-) and one very low (-) and negligible. The negative impacts associated with the proposed development are anticipated to be either very low, low or negligible, while the positive impacts are anticipated to be low and medium. On balance, the positive impacts are greater and would outweigh the negative impacts during the operational phase, while the construction phase impacts would present more negative impacts. However, the construction phase impacts are related to construction activities which are short-term, and generally easily managed and mitigated and would also need to be independently audited throughout the construction phase. There is no single aspect or impact which stands out; however, it is important that the mitigation measures indicated in this report and in the EMPr are followed as the significance of the impacts is contingent thereon.

Layout/servicing alternatives have been assessed in the form of the preferred development alternative (i.e. Alternative 3), development Alternative 1 and development Alternative 2, and the no-go or "existing rights" alternative (i.e. whereby the Applicant may continue with development which does not require approval and is aligned with existing rights whereby rights for agricultural use are presently in place for the farm portion within which the site is located). In addition, alternative design/ layout solutions, sewage disposal/treatment solutions and development approach (i.e. demolish and rebuild, vs refurbish, vs redevelop) have been considered within the preferred development alternative, although they have not been formally assessed. In general, the impact of the proposed development is anticipated to be a combination of Medium and Low positive impacts and low to very low negative impacts, while the impact of the existing rights alternative would largely be very low, low and medium negative, with no positive impacts and possible positive impacts of the proposed development in terms of heritage and terrestrial biodiversity which would be foregone. While the no-go alternative (the best case scenario where no intensive crops are intended) is preferred from an aquatic ecology perspective, the preferred development alternative can be mitigated to acceptable levels presenting low risk to freshwater systems and is preferred in this regard over the other two development alternatives assessed. Note also that there are existing rights for the site, which allows for development without the need for Environmental Authorisation and, therefore, the aforementioned impacts indicated for the existing rights alternative are "with mitigation" however mitigation would not be monitored or controlled by any external parties (such as would be the obligation in terms of an Environmental Authorisation).

Therefore, the selection of the preferred alternative has been based on the needs of the Applicant in terms of the easiest way to support social and environmental activism (and also to create a small number of jobs for the local community) through the utilisation of existing, unused and derelict infrastructure and servicing it most efficiently, effectively and reliably in a manner which responds sensitively to the cultural and social landscape in such a way that contributes to redress in a meaningful way and that does not unacceptably compromise the quality of the natural environment. An additional preference for this alternative is also that it is largely supported from a spatial planning perspective, particularly on the basis of 're-use' and rehabilitation of existing derelict structures as a primary planning and design principle, and there is a fynbos rehabilitation component which would have a low positive impact on the aquatic and terrestrial ecology of the site. There is also rehabilitation for the stream to the north-east of the site (i.e. stream 10).

It is believed that the impacts that have been identified have been adequately addressed through the proposed development plan, landscape plan and services plans or would be mitigated to acceptable levels through the final design and the strict implementation of the EMPr (which incorporates all specialist recommendations and the river rehabilitation plan), as well as suggested conditions of authorisation (if the DEA&DP grants authorisation and includes those suggestions therein). A number of specialists have been involved in order to inform the investigation which provided rigour, independence, and transparency in the process as well as appropriate skills and expertise.

The EAP has been encouraged by the fact that the applicant and design team have been receptive to the issues raised by specialists and other commenting parties (such as DWS, DEA&DP, etc.) and appropriate mitigation and rehabilitation has been put in place. In short, the design and mitigation measures have been a co-operative and iterative process between all parties concerned.

Comments received from I&APs during the pre-application public review period of the Draft BAR have been included and responded to in this report. The proposed development and specialist assessments in this regard are still subject to stakeholder engagement with some feedback received from I&APs during the pre-application Draft BAR public review period. This would further be achieved through the public review of this post-application draft BAR and the comments thereon will be incorporated into the final iteration of the BAR, which would go to the DEA&DP for their decision-making.

The decision for the authorisation lies with the Competent Authority and should be taken based on the information provided. It is believed that there is, however, not yet sufficient information contained in this report to make the decision because the report still requires further incorporation of post-application comments from I&APs, which would be delivered in the final iteration of the report, given that this document is currently under public review for the second time. The decision should be taken by considering all impacts and the way they weigh up against one another, as well as the I&AP comments and the responses provided thereto.

In conclusion, it is believed that the preferred alternative represents responsible development which would be suited to the site. It is therefore believed that the preferred alternative (i.e. Alternative 3/ the proposed development) as described in this report, subject to the implementation of the mitigation measures included in this report and the EMPr could be developed. However, final input from I&APs is required before further consideration in this regard can be made.

Should the DEA&DP grant Environmental Authorisation for the proposed development, they cannot do so until the public participation process has concluded. It is also critical that mitigation measures required by specialists and specifications documented in the EMPr are adhered to. The remaining recommended conditions of authorisation are listed in Section J 2.2. of the BAR. The report for final decision-making will be provided to the DEA&DP once the current public participation process is concluded.

********** END **********