Eco Route
ENVIRONMENTAL CONSULTANCY
REGISTRATION NO. 1998/031976/23

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DEA REF. NO :

14/1/1/E3/4/10/3/4168/21

Location:

PORTION 17 OF FARM REDFORD 232, PALMIET DRIFT ROAD, THE CRAGS, BITOU, WESTERN CAPE

Description of the activity:

THE RECTIFICATION OF UNLAWFUL COMMENCEMENT ENVIRONMENTAL IMPACT ASSESSMENT REPORT IN TERMS OF THE NEMA ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS FOR THE DEVELOPMENT OF DAM WITHIN A NON-PERENNIAL WATERCOURSE ON PORTION 17 OF FARM REDFORD 232, PALMIET DRIFT ROAD, THE CRAGS, BITOU, WESTERN CAPE

Comments received from Authorities:

Commentaries from Authorities

Comments :	Response :
COMMENT ON THE RECTIFICATION OF UNLAWFUL COMMENCEMENT ENVIRONMENTAL IMPACT ASSESSMENT REPORT IN TERMS OF THE NEMA ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS FOR THE DEVELOPMENT OF DAM WITHIN A NON-PERENNIAL WATERCOURSE ON PORTION 17 OF FARM REDFORD 232, PALMIET DRIFT ROAD, THE CRAGS, BITOU, WESTERN CAPE **DEAD&P Reference Number: 14/1/1/E3/4/10/3/L1168/21** Bitou Local Municipality [redacted]	

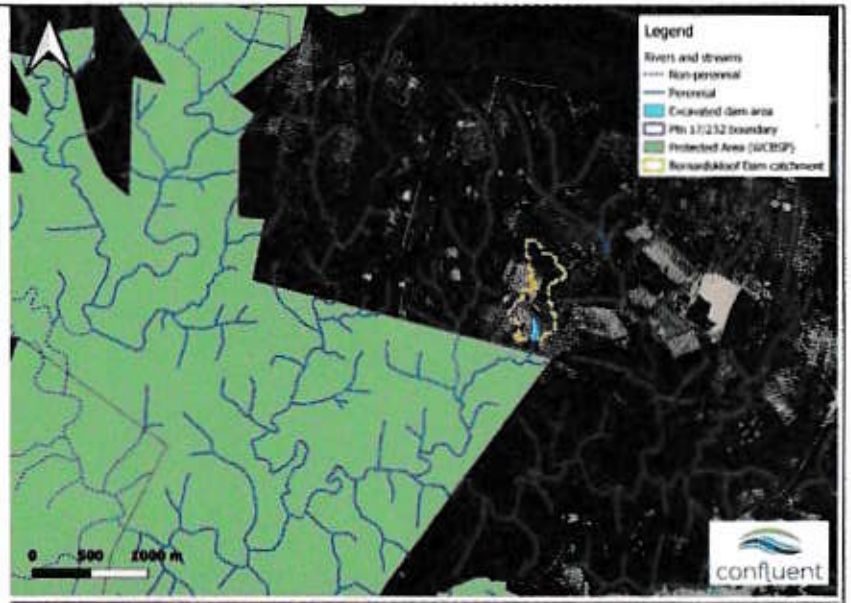
Bitou Local Municipality would like to thank you for the opportunity to review and comment on the 24G Environmental Impact Report. Please note that these comments have been drafted by the Town Planning department within the Economic Development and Planning directorate. Additional comments may be required from other relevant departments within the municipality. The following information was taken from the supplied report and summarise the proposed activities	Ecoroute: Thank-you and noted
DESCRIPTION OF ACTIVITY The land owners commenced with the construction of an instream dam approximately the top half of a non-perennial watercourse on Portion 17 of Farm 232 Redford dam without any environmental authorisations. The intended capacity was 300 000m3 with a dam wall height of 17m. The total area excavated and disturbed covers approximately 1.2ha.	Ecoroute: Agree
LOCATION The dam has been excavated into approximately the top half a headwater non-perennial tributary of the Whisky Creek, which is a tributary of the Keurbooms River on Portion 17 of Farm 232, Redford, Plettenberg Bay. Following a review of the documentation and appendices the following comments are made: 1. Please note that the Geohydrological Report as referred to in the EIR was not made available as part of the Environmental Impact Assessment Report. Please can these documents be provided for review? 2. As per the Aquatic Assessment "*The excavation of the top portion of the valley for construction of the dam is not consistent with the management objective because entire habitat loss has occurred resulting in complete loss of ecological functioning at this location*". The cumulative impact of the loss of ecological functioning of the relevant portion has not been addressed. 3. Clarity is sought regarding the established borehole and whether this has been authorised or is being authorised as part of the current WULA process. Has the impact on the water table been assessed as the dam is proposed to be filled with borehole water? 4. It is requested that an Ecological Water Reserve for the Whiskey Creek tributary be undertaken to be able to understand the indirect and cumulative impacts that the proposed dam will have on the ecological functioning of the system. 5. An Environmental Management Plan (EMP) has not been included in the EIR documentation for comment. Please can this document be provided for review?	Ecoroute: The documents were on the website www.ecoroute.co.za. We will ensure you receive the documents as requested and send them via email separately. CE:The cumulative impact is considered minimal because the entire upper catchment of the Whiskey Creek has numerous dams on every tributary. Approximately 52 instream dams (see below). Some of them legal, others not. The tributary of this proposed dam is on the upper limits of a very small non-perennial catchment (0.14km^2) with a Mean Annual Runoff of 12 200m^3. Water storage in the dam will be sourced primarily from groundwater (borehole) and existing furrow allocations, with only a minimal volume coming from surface runoff from the catchment, which is situated almost entirely on agricultural land. In terms of hydrology, the proposed dam therefore represents a minimal cumulative impact with a reduction of approximately 25% runoff to the catchment downstream (Confluent Hydrology Report). While the location of the watercourse immediately upstream of the Protected Area greatly increases its importance for connectivity, the cumulative impact of reduced connectivity through excavation of the dam and possible construction thereof is less significant than other tributaries in Redford as it is at the top of the watercourse surrounded to the west, north and east by agricultural fields. The catchment is on portions 13, 14, 15, 16, 17 and 18 and 5 out of 6 of the portions are actively farmed, of which the applicant owns two.

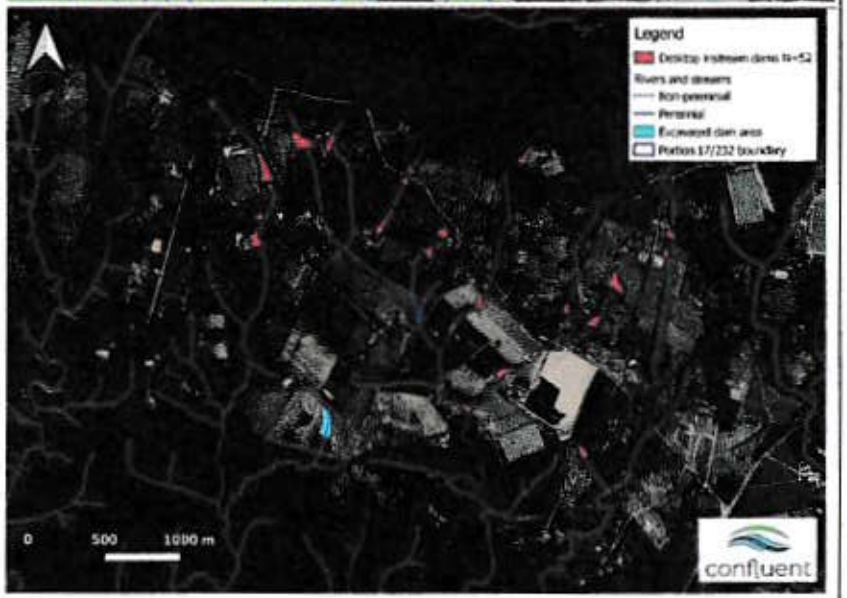
6. Should the proposed dam be approved, a measuring and monitoring mechanism should be included in the conditions of approval to ensure that the approved and allocated water amount is used.

7. The possibility of an ecological water release should be investigated.

8. Do the specialist reports take cognisance of the current authorised water and in particular the unauthorised water uses still to be authorised on Portion 4 and 9 on Farm 232?

9. A Water Use Audit should be undertaken in order to determine what is currently authorised for use and how it currently impacts on the systems at present before additional rights are granted.





CE: The borehole will be registered with the WARMS department if the Section 21a) water use is approved for taking the borehole water through the WULA. The application is for 69 000 m³ per annum. The geohydrology report states that the

	depth to water table is 88 m below ground level. The impact on the regional groundwater table was assessed in the report through the hydrocensus which included 3 neighbouring boreholes. The impact of depleting groundwater due to overabstraction was assessed and determined to be a 'Negligible negative' provided the calculated sustainable yield is maintained (DHS Groundwater, 2021). CE: Undertaking an ecological reserve study for a single non-perennial tributary is not practical. As per the Aquatic Specialist report page 30: *"The proposed dam site is in the upper reaches of the catchment for Whiskey Creek. The catchment is small, measuring a total area of 0.14 km2 (Confluent Environmental Hydrological Study) Mean Annual Runoff for the catchment is approximately 12 200 m3 per annum which would be stored in the Bernardskloof Dam (if approved) instead of flowing through the system. The classification of the system as a non-perennial, intermittent drainage line means that the associated habitat and biota are less susceptible to increased periods of no flow. The sensitivity of the watercourse downstream of the dam is considered to be low, and able to withstand reduced periods of flow. It is therefore not considered essential to release water to meet the Ecological Reserve."* Furthermore, given the high number of dams in the upper catchment of the Whiskey Creek in the Redford area, determination of the Ecological Reserve would need to account for a catchment-based approach to have any meaningful effect. A reserve study of this extent is beyond this scope of a single WULA. Provision should be made to enable water release from the dam should this be required as a condition of the WUL. Ecoroute: Monthly extraction figures to be kept on record and submitted to BGCMA. Pt. 8 CE: No they do not. The proposed additional storage on Portions 4, 9 and 1 / 232 is subject to a separate WULA for a completely different landowner and applicant (WU20050). Whilst forming part of the upper catchment of Whiskey Creek, the proposed storage is on a totally separate network of tributaries. Storage dams on these portions are all upstream of existing dams and therefore any water releases would simply recharge neighbouring dams. There are numerous unauthorized water uses taking place in the catchment. Hence the need for a catchment-based Validation and Verificaton of water use, and Ecological Reserve study. CE: The audit referred to is described above and should take the form of a Validation and Verification process, followed by an Ecological Reserve study. The V & V was requested through the CSIR (appointed to undertake this by the BGCMA) for the Rondebosch River Water User Association, but this has not yet materialized. However, this should be applicable to all water users in the catchment, not just the RRWUA. Catchment-based studies are beyond the scope of single WULAs and are the responsibility of the regulator to implement. It is unreasonable to expect applicants to put development on hold because these

	studies have not been undertaken. If this was the case, development in South Africa would be severely hampered.
The Bitou Municipality reserves the right to revise initial comments and request further information based on any additional information that might be received. Should you require any additional information please do not hesitate to contact this office. Yours faithfully, [redacted] **Environmental Management Officer** **Economic Development and Planning: Town Planning** **Bitou Municipality**	Thank-you

Commentaries from Authorities

Comments :	**Response :**
NEMA Section 24G EIA Process including an Application for water use License Application Notification of a Public Participation process for the Rectification of Unlawful commencement of Clearance of Indigenous vegetation and the Development of a Dam within a watercourse on Portion 7 of the farm Redford 232, Palmiet RD, The Crags, Bitou, Western Cape **BGCMA Comment**	
The Matter herein was brought to the attention of this office by a representative of the above mentioned property owner in June 2021, as part of an inquiry to lodge a water use Licence Application, as well as to Voluntarily report Water Use Licence Application, as well as to Voluntarily report the unlawful commencement with water activities involving the excavation of a unnamed non-perennial tributary of the whiskey Greek and removal of vegetation within the said watercourse of the purpose of building an in-stream dam.	CE: Yes, as part of the S24G process it was critical to bring the matter of unlawful commencement to the attention of BGCMA taking co-operative governance into consideration and the one environmental system.
2. Further, since the above development involved commencement of the above-mentioned activities regarded as water uses in terms of section 21 (c) & (i) of the National water act 36 of 1998 (NWA) Without a water use authorization as required by section 22 of NWA. The matter was referred to the Compliance Monitoring and Enforcement CM&Unit of further investigation.	CE: That is correct.
3. To date CME has issued the property owner with a directive interim of section 53 (i) of NWA dated 07/12/2021 instructing the property owner to cease all unlawfully commenced water use Activities and to undertake the rehabilitation of the affected water resource,	CE: A pre-directive followed by directive has been received from CME by the applicant instructing the cessation of unlawful water use and rehabilitation of the excavated area. The applicant has responded timeously to all correspondence with CME and representations have been made. The applicant immediately ceased the Section 21 c) and i) water uses pending the outcome of the WULA. However, while CME directive may influence the outcome of the WULA, it does not prevent the applicant from continuing with their WULA in order to present a fair and balanced assessment of their proposed water use. The applicant is seeking legal advice in this regard.
4. In light of the above mentioned directive should be adhered to. In addition, no further work should be undertaken in the water resource in question and or no further water uses associated with the development should continue unless authorized by a water use license or approved in writing by this office.	CE: No further work has been undertaken in the watercourse. However, the CME directive to rehabilitate the watercourse pre-empts the outcome of a WULA and does not take account of all the specialist assessments that have considered the proposed water use from a wide range of perspectives. Moreover, the directive to rehabilitate triggers a listed activity in terms of the EIA Regulations, which requires authorization in terms of NEMA, before it may be undertaken. The CME unit has agreed to suspend the implementation of the directive to rehabilitate whilst the application is in progress.
5. Kindly note that this office reserves the right to amend and revise its comments as well as to request any further information.	Thank-you

Yours Faithfully [redacted] Chief Executive Officer (Acting)	

Commentaries from Public

Comments :	Response :
Portion 17 of the farm 232 The Crags [redacted]	
We strongly object to the proposed development of the so called Bernardskloof Dam. The strongest point of objection is the restriction of natural water flow into Whiskey Creek, a vital tributary of the Keurbooms River. It is not acceptable to proceed with a project illegally, and then attempt to justify it by saying that to move the dam would cause even more environmental disturbance. The fact is that this disturbance CAN be rehabilitated. Blocking a water course is a permanent state which cannot be rehabilitated. Had the proper process of application been followed, the developer would have learnt this at the outset. Ignorance of the law is no excuse.	Ecoroute: Your objection is noted. CE: The cumulative impact is considered minimal because the entire upper catchment of the Whiskey Creek has numerous dams on every tributary. Approximately 52 instream dams (Fig 5 Aquatic Specialist Report). Some of them legal, others possibly not. The tributary of this proposed dam is on the upper limits of a very small non-perennial catchment (0.14k m^2). Water storage in the dam will be sourced primarily from groundwater (borehole) and existing furrow allocations, with only a minimal volume coming from surface runoff from the catchment (12 200m^3), which is situated almost entirely on agricultural land. In terms of hydrology, the proposed dam therefore represents a minimal cumulative impact. While the location of the watercourse immediately upstream of the Protected Area greatly increases its importance for connectivity, the cumulative impact of reduced connectivity through excavation of the dam and possible construction thereof is less significant than other tributaries in Redford as it is at the top of the watercourse surrounded to the west, north and east by agricultural fields. The catchment is on portions 13, 14, 15, 16, 17 and 18 and 5 out of 6 of the portions are actively farmed, of which the applicant owns two. The dam's catchment represents 25% of the immediate catchment's Mean Annual Runoff which is considered a low proportion in terms of the Ecological Reserve (Confluent Environmental Hydrology Report). CE: As per the aquatic assessment report page 34: Rehabilitation of the excavated area will not be an easy task, and even with the rigorous implementation of mitigation measures recommended in this report is likely to have failures which would require ongoing monitoring and maintenance. CE: It has also been suggested to the BGCMA that any surface water from the very small catchment of the dam (0.14 km^2) be diverted around / through the dam into the watercourse below. This would eliminate the impact on flows in the tributary below, as the primary need for the dam is to store water from the furrow allocations (x3) and borehole.
Despite the above there are other irregularities in this proposal:	CE: Unemployment in the Bitou Municipality is currently at 28%, and the proposed farm area would provide 21 jobs if the dam is authorized allowing irrigation of the

Job creation is not a strong enough motivation. The money used for the creation of this illegal dam would have gone far in creating sustainable industry and jobs within the community, not merely labour. The original proposal was for a 300 000 cubic meter dam with a 17 meter high dam wall. The revised proposal is for a 73 000 cubic meter dam with a 17 meter high dam wall. Why has the height of the dam wall not changed to accommodate less water.	proposed 28 ha of orchards. Job creation of this nature has downstream benefits for the family members employed, as well as industry-related services (consultants, soil ameliorants, packing, export etc.) (See S27 Motivation for more details socio-economic benefits anticipated from the proposed development). DB: The Bitou Municipality Integrated Development Plan (BIDP) has policy guidelines to manage the Municipal area in a manner that supports sustainable resource use. Portions 12, 15 and 17 / 232 are zoned agricultural land, and the BIDP refers to the Redford Area as an 'agricultural focus area' (Bitou IDP, 2020-2021) According to the 2020-2021 Integrated Development Plan for Bitou Municipality, their strategic objectives will strengthen the National Development Plan objectives. In line with the National Water Resources Strategy the Municipality is creating a sustainable environment for social development and economic growth. The National Water Resource Strategy's framework on water use can be summarised as the protection, use, development, conservation, management and control of the water resources for the whole country. This provides the framework within which regional and catchment level water management areas are defined. In this respect, the water use can be regarded as of strategic importance with respect to meeting the development goals for the Bitou Municipality. CE: The money spent on the dam was invested to provide a sustainable water source for irrigation of the orchards which in turn would create a sustainable industry. CE: The original proposal to store 300 000 m3 was calculated incorrectly as the contractor was not an engineer. The dam engineer specialist report recalculated the volume within the footprint of disturbance to be a maximum storage of 73 000 m3. 70 000 m3 is being applied for.

Commentaries from Public

Comments :	**Response :**
[Public participation] Bernardskloof Dam [redacted]	
I strongly object to the construction of the Bernards Kloof dam.	Ecoroute: Your objection is noted.

Commentaries from Public

Comments :	Response :
Public participation] S24G for Portion 17 of the Farm Redford 232 [redacted]	
Having read through the specialist assessment reports, it is clear that the illegal activities associated with the building of a dam on this property have had significant negative effects on both the biodiversity and ecological integrity of this area - not only the property itself, but the wider area. They suggest that had the correct process for environmental authorisations been followed from the start, it could have been possible to establish an off stream dam that met the storage requirements and cause far less environmental damage than the current in stream excavation. They seem to be concluding that the rehabilitation of the excavated area would be very difficult. So, the damage has been done, and not easily remedied. The aquatic specialist suggests that given the site has been excavated to such a large extent, it is preferable to use a smaller portion of the disturbed site, given the largely irreversible damage. This is an indictment and clearly of great concern. It is also very upsetting to the members of the community who work so hard to conserve the biodiversity and ecological corridors of the region. The Redford Conservancy has been working tirelessly to remove invasive alien vegetation and promote the conservation of the area. The illegal activities on this property adversely affect not only the biodiversity of this site, but undermines the broader ecological processes of the area.	It is correct that had an EIA / WULA been pursued from the start, an offstream dam would have been investigated, as an alternative to an instream dam in the kloof. The respective impacts of both would have been assessed, and recommendation based on the least impacts would have been made by each relevant specialist. However, this was not done. CE: We presently have an area of extensive excavated area to consider. As you have indicated in the aquatic specialist study, the rehabilitation effort required will be extensive, difficult, and subject to possible repeat failure. This is because of the volumes of topsoil, subsoil, and rock that have been excavated from the relatively steep valley-sides. Restabilising this material and preventing erosion while not impossible, will be a significant challenge. While construction of the dam in the footprint of existing disturbance does not represent the strict rectification option, it is the most practical one under the circumstances. If hydrology in the watercourse downstream can be maintained by releases from the dam, or diversion of water from the catchment around/through the dam, then this option eliminates the risk of further degradation due to erosion and sedimentation downstream. It would also in effect create an offstream dam, the primary purpose of which is to store water from the furrow allocations and borehole. CE: If the water use is authorized through the license application, the applicant will be obliged to revegetate a 10 m buffer around the dam with indigenous plants which aims to protect the water resource from the impacts of farming, but also to maintain biodiversity and downstream habitat connectivity.
It is crucial that every effort is made to address the ecological damage and contribute to the restoration of this site and the broader area. It is also important that any the outcomes of this process make it very clear to landowners and residents of the area that damaging illegal activities will not be tolerated, and that the environmental legislation, which serves to ensure that our environment is properly protected, will be strictly enforced. As an absolute minimum, all of the recommendations made by the various ecological specialists as part of this process should be strictly enforced. Yours sincerely, [redacted] Chair, Redford Conservancy	CE: The applicant is currently following the correct procedures to ensure compliance with the Environmental Legislation. CE: The applicant has embarked on a S24G rectification process in terms of NEMA, the outcome of which usually carries a significant financial penalty which is strictly enforced. Where unlawful water or land uses are taking place in the area, residents are able to report offences anonymously to law enforcement, as has happened in this situation. Residents are likely to be more sensitized to this as a result.

Comments :	Response :
[Public participation] Bernardskloof Dam [redacted]	

As die damwal hoër as 5m is en en meer as 50 000m3 kapasiteit is, moet n gesertifiseerde dam ingenieur dit goedkeur en afteken., Jan Brink van George kan genader woed. Hulle moet ook vir Section 21 c en i aansoek doen. Section 21g is nie voldoende nie. 0.2km2 is 'n baie klein opvang gebied. Dit gaan defnitief die afstroom stoom negatief beinvloed. Verdere impakstudies moet gedoen word. So dam in die Tuinroete is hartseer , gegewe die impak op die natuur en dra gladnie my goedkeuring weg nie.	CE: Jan Brink is the appointed dam engineer and is qualified to register the dam for dam safety should it be authorised. Confluent Environmental is in the process of submitting a WULA for section 21 (c) and (i). CE: The cumulative impact is considered minimal because the entire upper catchment of the Whiskey Creek has numerous dams on every tributary. Approximately 52 instream dams (see below). Some of them legal, others not. The tributary of this proposed dam is on the upper limits of a very small non-perennial catchment. Water storage in the dam will be sourced primarily from groundwater (borehole) and existing furrow allocations, with only a minimal volume coming from surface runoff from the catchment. In terms of hydrology, the proposed dam therefore represents a minimal cumulative impact. While the location of the watercourse immediately upstream of the Protected Area greatly increases its importance for connectivity, the cumulative impact of reduced connectivity through excavation of the dam and possible construction thereof is less significant than other tributaries in Redford as it is at the top of the watercourse surrounded to the west, north and east by agricultural fields.

Comments :	**Response :**
Eco Route Environmental consultants for Denina Barnard, applicant in the matter of illegal dam works on Portion 17, in tributary of the Whiskey Creek River. From: [redacted]	
We are deeply saddened to see the misuse of power with regard to The Whiskey Creek Nature Reserve. There has been an unswerving determination by Denina Barnard to go ahead with changing the water course for personal gains. This eventually runs into The Keurbooms River and will stand to have long term detrimental effects on this important watercourse including the Whiskey Creek water course which directly affects our farm and which we are the custodians of.	CE: The property borders Whiskey Creek Nature Reserve. The dam is excavated into a headwater non-perennial tributary of the Whiskey Creek, which is a tributary of the Keurbooms River. As per the Aquatic Specialist report page 20: *"The most important aspect of the watercourse is preservation of ecological structure and function of habitat adjoining a Protected Area of conservation significance (Whiskey Creek Nature Reserve). The importance of the watercourse in terms of connectivity is not very high because it is at the headwater of the watercourse and surrounded by modified agricultural lands. In this sense it represents a dead end for migrating wildlife. As a non-perennial system, any biota associated with the watercourse would be well adapted to periodic no flows, and therefore less sensitive to this aspect."* CE: It must be noted that the whole Redford area has numerous instream dams throughout the tributaries and on Whiskey Creek itself. Some of them registered and lawful, some of them not. The collective impact of these water uses represent a significant pre-existing impact to the Whiskey Creek system in terms of hydrology and biodiversity. The proposed Bernardskloof Dam will primarily store borehole water and 3 existing furrow allocations. Surface water inputs are minimal. Therefore, the main present impact to the aquatic system is the disturbance to the valley sides, bed and banks. The associated risk of erosion and downstream sedimentation can be eliminated by constructing the dam in the existing footprint, which was the recommendation in the aquatic specialist assessment. The Bitou Municipality Integrated Development Plan (BIDP) has policy guidelines to manage the Municipal area in a manner that supports sustainable

	resource use. Portions 12, 15 and 17 / 232 are zoned agricultural land, and the BIDP refers to the Redford Area as an 'agricultural focus area' (Bitou IDP, 2020-2021) According to the 2020-2021 Integrated Development Plan for Bitou Municipality, their strategic objectives will strengthen the National Development Plan objectives. In line with the National Water Resources Strategy the Municipality is creating a sustainable environment for social development and economic growth. The National Water Resource Strategy's framework on water use can be summarised as the protection, use, development, conservation, management and control of the water resources for the whole country. This provides the framework within which regional and catchment level water management areas are defined. In this respect, the water use can be regarded as of strategic importance with respect to meeting the development goals for the Bitou Municipality. The Bitou Local Municipality has the third smallest population within the Garden Route District, after Hessequa and Kannaland. As of 2019, the Bitou Local Municipality had a population of 61,645 people with an annual growth of 0.8%. There is an unemployment rate of 27.9% within the Bitou Local Municipality (BIDP). The development is focussed on creating a healthy agricultural environment supported by key infrastructure developments such building a dam, a technically advanced irrigation plant and, in the future, a processing facility. Please refer to the Bitou Integrated Development Plan: https://www.cogta.gov.za/cgta_2016/wp-content/uploads/2020/12/Bitou-Integrated-Development-Plan_2020-2021.pdf
Not only does this project affect the biodiversity in whiskey Creek and Crags area, which we as residence have worked extremely hard to maintain at huge financial costs, but it is also a threat to our water safety in an already water stressed area. The damage caused has already had an obvious effect on wildlife in our area.	CE: At the time of the aquatic specialist assessment, sedimentation in the non-perennial tributary of Whiskey Creek had travelled approximately 30 m downstream and is unlikely to have reached Whiskey Creek itself. Water for storage in the dam consists of a) surface runoff from the small catchment (12 200 m3), 3 furrow allocations (total 25 000m3) and abstraction from a borehole (69 000 m3). The furrow allocations are existing allocations on the Rondebosch River Water User Association which has 31 users and do not represent a new water use. The surface runoff is considered minimal in terms of volumes required for sustaining the Whiskey Creek or Keurbooms River, however this can only be ascertained through an Ecological Reserve study, which is beyond the scope of this application. The borehole water was assessed in the geohydrology specialist report to have negligible negative impact on the regional groundwater table. Therefore, the impacts to water security / safety are less of a threat than they may first appear.
We would appreciate the applicant be denied any permissions to continue with this (retroactive) application We would like to see the extreme damage that they have caused the earth to be rehabilitated and restored as much as possible We would like this to be monitored so that they indeed	CE: Your comment has been noted and we will inform you regarding the continuation of the legal processes.

comply with the regulations as it is clear they see themselves above the law and their word cannot be trusted. please keep us informed of the progress of this restoration of this land thanking you kindly [redacted]	

Commentaries from Public

Comments :	Response :
S24G for Portion 17 of the Farm Redford 232 [redacted]	
To whom it may concern, We have lived on farm portion 29/293 since 1998. And consider ourselves as custodians of a part of the nature reserve as Whiskey Creek traverses the land. During the past 24 years Whiskey Creek has stopped flowing 4 times due to drought. And as more farms upstream have dug dams. this has also affected the flow negatively That in the consultants "report" it states that because of the "mistake" of clearing for the "proposed Dam" without any consultation. It should be "re seeded and re planted, with the top soil available, seems the best cause of action. That they now wish to build a "smaller dam" and "fix the mistake" sounds like lip service to mitigating the impact. The hydrological report suggests that the study was taken from rain studies up until 2009. We can with 100% certainty say that the rain pattern has changed over the last years and that to assume statistics from 2009 should be adequate, does not allow for any changes from global warming issues to be addressed in any of the reports.	CE: Nowhere in the aquatic specialist report was the excavation described as a mistake. This word does not appear in the report. The methods described for rehabilitation are the mitigation measures applicable to the decommissioning phase, ie. If the WULA is declined. CE: As explained in the aquatic specialist study, there is an area of significant instream excavation to consider. The rehabilitation effort required will be extensive, difficult, and subject to possible repeat failure. This is because of the volumes of topsoil, subsoil, and rock that have been excavated from the relatively steep valley-sides. Restabilising this material and preventing erosion while not impossible, will be a significant challenge with high risk of failure. While construction of the dam in the footprint of existing disturbance does not represent the strict rectification option, it is the most practical one under the circumstances. If hydrology in the watercourse downstream can be maintained by releases from the dam, or diversion of water from the catchment around/through the dam, then this option eliminates the risk of further degradation due to erosion and sedimentation downstream. It would also in effect create an offstream dam, the primary purpose of which is to store water from the furrow allocations and borehole CE Hydrology: More recent rainfall records for the specific catchment area (that are also compatible with the existing records covering the 50-year simulation period) were not available. It is important to stress however that monthly data over a 50-year rainfall period was used – and not an average over the 50-year period. The simulation therefore takes very low rainfall periods into account (e.g. 1932, 1968, 1972, 1988, 1997, 2009) and is considered adequate for the purposes estimating irrigation requirements and the size of the dam required.
A new post 2009 study to include the last decade which would include current water distribution, would be valuable to make a correct decision going forward, as we fear so much has happened post 2009. The annual rain water distribution has diminished significantly during this time. It must be stressed that the reports say that there is "not enough water" for the proposed Macadamia farm in the area. That they would also need a "borehole" as stated in the report. Which would also	CE Hydrology: More recent rainfall records for the specific catchment area (that are also compatible with the existing records covering the 50-year simulation period) were not available. It is important to stress however that monthly data over a 50-year rainfall period was used – and not an average over the 50-year period. The simulation therefore takes very low rainfall periods into account (e.g. 1932, 1968,

affect the water table and have other hidden consequences? Which have not been discussed in any detail? On the surface of understanding, it does not sound like the project should go ahead. Also, it cannot be stressed enough that Macadamias in this area would need to be sprayed with chemicals to succeed. This would also impact downstream negatively. Which due to the size of the farm would negatively affect the aquatic fauna and flora in the whiskey creek and Keerbooms water system and surrounding areas. As long as Whiskey Creek water flow downstream is not affected , and no excess chemical Fertigation goes into the water , we would not object . However, if the flow of water is compromised and the use of chemicals affects the water in anyway. We would object profusely. your sincerely [redacted] Owners [redacted]	1972, 1988, 1997, 2009) and is considered adequate for the purposes estimating irrigation requirements and the size of the dam required. CE: A comprehensive geohydrology specialist assessment was provided as a supporting document for this application (DHS Environmental, 2021). In this report, the author has provided an impact assessment of the sustainable abstraction volumes and determined through a hydrocensus that included 3 other boreholes in the area, that 69 000 m3 / yr can be abstracted through the borehole. To ensure sustainable supply however, storage of the water is necessary. DHS Groundwater: A monitoring programme is proposed within DHS Groundwater's specialist report with the aim being to monitor the water table and water chemistry. This will form part of the WUL conditions with water levels and chemistry to be reported to the BGCMA. Furthermore, DWS determines the Utilisable Groundwater Exploitation Potential (UGEP) per quaternary catchment, which is amended in WARMS as new users are licenced. The groundwater volume applied for is well below the registered available UGEP and allocable WARMS volumes. In short, the groundwater volume applied for adheres to all applicable regulations as per the NWA and DWS allocable volumes. CE: If the water use is authorized through the license application, the applicant will be obliged to revegetate a 10 m buffer around the dam with indigenous plants which aims to protect the water resource from the impacts of farming, but also to maintain biodiversity and downstream habitat connectivity. CE: It has also been suggested to the BGCMA that any surface water from the very small catchment of the dam (0.14 km2) be diverted around / through the dam into the watercourse below. This would eliminate the impact on flows in the tributary below, as the primary need for the dam is to store water from the furrow allocations (x3) and borehole. In this way, the hydrology in the Whiskey Creek would remain no less affected than it currently is.

Commentaries from Public

Comments :	**Response :**
[Public participation] Proposed dam [redacted] Not in favour of this proposed gigantic dam. We are rural not heavily agricultural. Water is shared by everyone on the Redford Road. Pesticides affect all of our natural water systems. Sorry this is a NO.	CE: The Bitou Municipality Integrated Development Plan (BIDP) has policy guidelines to manage the Municipal area in a manner that supports sustainable resource use. Portions 12, 15 and 17 / 232 are zoned agricultural land, and the

	BIDP refers to the Redford Area as an 'agricultural focus area' (Bitou IDP, 2020-2021) According to the 2020-2021 Integrated Development Plan for Bitou Municipality, their strategic objectives will strengthen the National Development Plan objectives. In line with the National Water Resources Strategy the Municipality is creating a sustainable environment for social development and economic growth. The National Water Resource Strategy's framework on water use can be summarised as the protection, use, development, conservation, management and control of the water resources for the whole country. This provides the framework within which regional and catchment level water management areas are defined. In this respect, the water use can be regarded as of strategic importance with respect to meeting the development goals for the Bitou Municipality. CE: If the water use is authorized through the license application, the applicant will be obliged to revegetate a 10 m buffer around the dam with indigenous plants which aims to protect the water resource from the impacts of farming (including pesticides), but also to maintain biodiversity and downstream habitat connectivity.

Comments :	**Response :**
[Public participation] Bernardskloof Dam [redacted]	
I disagree with the proposal of this dam and register my opposition to it. Thanks, Andre Weavind.	**Ecoroute: Noted**

Comments :	**Response :**
[Public participation] Brnardskloof Dam [redacted]	
I hope that the authorities will deal with this type of entitled attitude shown by the new owners. Deal with it like you count for something, use some teeth. There has been very few questions asked over a period of time regarding questionable dams which have sprung up. You have the technology now to monitor this type of thing instead of dealing with things after the event	Ecoroute: Your objection is noted. The relevant environmental authorisations and rectification processes are underway and are being dealt with by the authorities. Unlawful activities can be reported to the relevant authorities at any time for investigation.

Comments :	**Response :**
Public participation] S24G for Portion 17 of Farm 232, Redford [redacted]	
Please find following my comments on the S24G for Portion 17 of Farm 232, Redford. Sadly I have not had the opportunity to systematically work my way through all of the various, and lengthy, documents made available for public review	Ecoroute: Your comments are noted and addressed within the C&R.

From the outset, I feel that many of the new landowners intending on planting nut farms understand how the "bureaucratic system works" and they think they can pay their way out of it. In the instance of Portion 17 of Farm 232, it also feels like they did so much damage that any environmental impact assessment would likely say the easiest thing is they continue as the damage is so great. I am assuming that Eco Route is being employed to conduct a post mortem environmental impact assessment on behalf of the land owner and therefore is biased. It certainly feels that much of the information outlined has been "softened" from the reality of the situation.	Ecoroute: Ecosense and Eco Route has been appointed to complete the S24G application. We take our independency very seriously and have not mitigated from the fact that environmental degradation has occurred without Environmental Authorisation. The appointed specialists have conducted independent reports and their findings and their reports has been placed within the public domain for comments. The pictures provided shows clearly the environmental degradation that has occurred on site. The recommendations of the EAP have not been concluded as this is an ongoing process. These recommendations need to be taken into consideration before making the assumption that the appointed EAP is biased.
Some thoughts I would like to add to the public participation : - • I disagree with some of the assessments made. I feel that this is an extremely sensitive biodiversity site. To say the ecosystem status is least threatened is absurd. • The habitat condition would have been nearly 100% natural with low to moderate levels of alien infestation before excavation work was carried out yet the 6. (b) states that the natural habitat is classified at 0% natural. • The activity impacts on the aesthetics of the environment and the decimation of the natural environment in addition to having huge consequences to the natural flow of waterways. • Dam considerations should be made on environmental impact not cost impact. There is no need for further macadamia plantations in the area. They are not essential. Water and nature are	Ecoroute: Cape Farm Mapper identifies the vegetation type as Tsitiskamma Sandstone Fynbos which has an ecological class as least threatened. This is according the National Biodiversity Act. No natural habitat has remained after the clearance of vegetation and the construction within the footprint of the dam. 6 (b) heading states Highlight and describe the habitat condition on site. CE: The dam is excavated into a headwater non-perennial tributary of the Whiskey Creek, which is a tributary of the Keurbooms River. As per the Aquatic Specialist report page 17: *"The most important aspect of the watercourse is preservation of ecological structure and function of habitat adjoining a Protected Area of conservation significance (Whiskey Creek Nature Reserve). The importance of the watercourse in terms of connectivity is not very high because it is at the headwater of the watercourse and surrounded by modified agricultural lands. In this sense it represents a dead end for migrating wildlife. As a non-perennial system, any biota associated with the watercourse would be well adapted to periodic no flows, and therefore less sensitive to this aspect."* The catchment of the dam is very small delivering approximately 12 200 m3 runoff per annum on average. CE: The WULA includes a Section 27 motivation which addresses socio-economic benefits anticipated by the water use. The Department of Water Affairs therefore do take economic, as well as environmental, considerations into account. Furthermore, the land is zoned agricultural and it is up to the landowner to determine what type of agriculture they would like to pursue. CE: Of the range of irrigated crops / pastures on the Garden Route, Macadamia nuts have moderate water requirements when compared to pasture or vegetables. CE: The site is zoned agricultural land, and apart from dryland pasture, all cultivation requires irrigation to some degree. The groundwater specialist study has confirmed sufficient and sustainable water is available in addition to the furrow allocations to irrigate the 28 ha orchards. The additional 12 200m3 surface runoff from the catchment makes up the remainder of the water requirements.

• Feasible or reasonable site alterations is not to grow a crop with such heavy water demands	
• Socio economic aspects 19 new employment opportunities during the construction phase at R222,300 each to 100% previously disadvantaged individuals would equate to R18,520 per person per month based on construction taking place over the course of one year. There is no mention of the costs going to the contractor and the likelihood is the bulk of the R222, 300 will be going to the contractors and not the local employees. Local employees, i.e. previously disadvantaged individuals are likely to be paid R200 per day which would equate to approximately R4, 000 per month per individual. These individuals are likely to already be employed by the contractor under taking the work so although they may be classified as previously disadvantaged individuals they were most likely already working, continuing to be disadvantaged and the reality is very little new employment is being created. • I did not notice whether there was any mention made to electric fences being installed in order to protect ones' investment. By doing so would only contribute to damaging the ecosystem further by restricting free movement of animals in their search of food and shelter.	Ecoroute: Page 38 of the S24G states *what was the value of employment opportunities during construction phase of the dam which is a civil engineering project and which will be undertaken by a suitable contractor.* The planning phase, construction phase and operating phase of the project already have and will continue to contribute to redressing the results of past racial and gender discrimination. Various temporary job opportunities have already been created for the preparation of the agricultural area. Jobs that benefit the local community have already been created over the past 2 years and include: • Initial clearing of alien vegetation (done) • Amelioration of 35ha (done) • Borehole (done) • Solar panels and installation of pipes to connect borehole to the house (done) • Fencing (ongoing with approx. 6-8 workers involved) • Ridging (ongoing with approx. 5 workers involved) A local excavator operator was sent to White River for training on how to construct perfect ridges for Macadamia Nut orchards. Three historically disadvantaged individuals are currently permanently employed for weeding and maintenance. When workers are transported to the farm for casual or seasonal work a transport operator will benefit from this. The planned drying / dehusking facility will mostly be operated by historically disadvantaged women. Construction of this facility as well as infrastructure to house the irrigation facility, machinery and equipment will be required, and will be undertaken by several historically disadvantaged individuals. Installation of the irrigation system including extensive pipe laying requires specialist skills and ongoing skills development. The applicant's irrigation consultant has recommended a skilled individual to transfer their knowledge to a local team of historically disadvantaged individuals to lay the pipes and complete the installation independently. Tree planting will require temporary employment of approximately 14 historically disadvantaged individuals including several women who have already been trained by a local service provider for this task. Several of these women will return to the farm as seasonal workers.

	As more farms are established, more processing capacity is also created to cope with the ever-increasing volumes. Eventually when enough farms are established in the Western Cape a processing facility will be established locally which will also employ a large number of people. These facilities are labour intensive and the majority of people who are employed there are women. The development in processing facilities located in the Western Cape could then also lead to the expectation of more products to be exported from the province. The Western Cape Province can take a trade advantage in the Chinese market attributable to the distance and transaction cost the Western Cape have with these markets. During the operational phase of the Macadamia Nut orchards, permanent as well as seasonal work opportunities will be created. A total of 28 ha of orchards will be established. Job opportunities created will include skilled as well as unskilled work. This project will allow further economic growth and development for these people, benefitting their families and other residents. The Bitou Local Municipality has the third smallest population within the Garden Route District, after Hessequa and Kannaland. As of 2019, the Bitou Local Municipality had a population of 61,645 people with an annual growth of 0.8%. There is an unemployment rate of 27.9% within the Bitou Local Municipality (BIDP). In South Africa, agriculture has a great capacity to provide employment and economic upliftment in rural and semi-rural communities as well as downstream business opportunities within the agri-processing and manufacturing sectors. The macadamia nut value chain starts off with growers using various inputs and primary activities to support on-farm production. According to SAMAC (2020), the average operating cost per hectare to produce macadamia's is around R25 000 (weeding, fertilising and irrigation) and another R100 000 to establish new orchards. All of these activities directly translates into the industry creating economic opportunities for primary inputs applied in the cultivation of macadamias including seedling, fertilizers, crop protection chemicals, research of cultivars, and agricultural equipment, contractors and other businesses services (Western Cape Government, 2021). According to The Macadamia (South Africa's leading publication for the Macadamia nut industry), seasonal workers on farms in South Africa increased from 10 174 in 2019 to 11 111 this year. Seasonal factory workers increased from 2 356 to 2 460. They predict that a 65 000-ton crop will be harvested for 2021, creating a bigger uptake of seasonal workers for longer periods of time in factories as well as on farms CE: The Bitou Municipality Integrated Development Plan (BIDP) has policy guidelines to manage the Municipal area in a manner that supports sustainable resource use. Portions 12, 15 and 17 / 232 are zoned agricultural land, and the BIDP refers to the Redford Area as an 'agricultural focus area' (Bitou IDP, 2020-2021)

	The portions of land "excluded" or fenced for this development have lots of natural area around them and are not gateways/obstructions to food sources as they are otherwise bordered by other agricultural land.
Rainfall figures have been assumed from readings last taken in 2009. One report refers to precipitation records ranging between 1920 and 2009. Any local can tell you the rainfall in this area has changed significantly in the past ten years in both when it rains and how much. An example being January 2022 recorded a substantially lower rain fall than previous years. • There is no guarantee that the water from the borehole will run at levels indicated from a survey report. To even think that the monthly amount of 5,800 m3 will be available is ludicrous. Countless landowners in the area have been forced to install boreholes to comply with South African bond regulations and are finding that less and less water is available as more and more people are tapping into that water source	CE Hydrology: More recent rainfall records for the specific catchment area (that are also compatible with the existing records covering the 50-year simulation period) were not available. It is important to stress however that monthly data over a 50-year rainfall period was used – and not an average over the 50-year period. The simulation therefore takes very low rainfall periods into account (e.g. 1932, 1968, 1972, 1988, 1997, 2009) and is considered adequate for the purposes estimating irrigation requirements and the size of the dam required. DHS Groundwater: Same as per previous comment, but, the public participant mentions that "countless landowners in the area have been forced to install boreholes to comply with South African bond regulations and are finding that less and less water is available as more and more people are tapping into that water source" – This is a troublesome statement, as none of these boreholes/groundwater use are licenced with DWS and was not picked up during the specialist study (no record exist of such boreholes within the various databases of DWS, nor was it identified during the Hydrocensus. "South African bond regulations" implies the groundwater use is licenced... RE the "ludircrous" monthly volume – this was determined from data as per DWS pumptest standards. (4x1hr step test and recovery + 72hr CDT and recovery). And again, a monitoring programme is proposed within DHS Groundwater's specialist report with the aim being to monitor the water table and water chemistry. This will form part of the WUL conditions with water levels and chemistry to be reported to the BGCMA. Furthermore, DWS determines the Utilisable Groundwater Exploitation Potential (UGEP) per quaternary catchment, which is amended in WARMS as new users are licenced. The groundwater volume applied for is well below the registered available UGEP and allocable WARMS volumes. In short, the groundwater volume applied for adheres to all applicable regulations as per the NWA and DWS allocable volumes.

The furrow eventually runs into Whiskey Creek. The flow of water in Whiskey Creek over the past five years has changed considerably for the worse. I understand that separate discussions and investigations are taking place with regard to this. The Hydrological Assessment states that the furrow allocation for Portion 17 of Farm 232 annually is 50,377 m3. In the Western Cape Government application, it states they plan on filling the dam with the furrow allowance from all three properties. If the furrow allocation per property is 50,377 m3 that would equate up to 150,000 m3 of water not making its way into Whiskey Creek. That would have huge ramifications	CE: The ecological reserve study required to determine the volumes of flow required to sustain the ecological state of the Whiskey Creek is beyond the scope of this single application, but should be addressed at a catchment level by the BGCMA. It is important to note that there are multiple water users in the upper catchment, and numerous instream dams (some lawful, some not). There are 31 users on the Rondebosch River Water User Association which is a historical water user association. CE: The quoted volume for the 3 furrow allocations is between 25 000m3 per annum based on actual flows measured, and up to 50 377 m3 per annum based on modelled values (Confluent Environmental Hydrology Report, Revised June 2022).
The amount of water taken from the furrow over the past ten years has increased dramatically with multiple new wines, polo, almond and hemp etc. farms being built. This impacts how much water flows back into the system once the landowner has taken what one needed historically and syphoned any excess back into the furrow. I am lead to understand that a dramatically reduced amount of water now reaches the end of the furrow and the environment cannot afford for that to decrease further • The water flow from the furrow is already under duress from a combination of less rainfall and over use. Attached are	CE: These allegations need to be addressed to the RRWUA they are beyond the scope of this application. The RRWUA has powers and duties delegated to the said association by the Minister of Water Affairs and Forestry on 6 November 2002 which allows the association to manage in accordance with a constitution which is subject to the provisions of the National Water Act of 1998 (Act 36 of 1998), raw water available out of the Rondebosch River to persons entitled to such water in accordance with water entitlements determined according to Section 22(1) of the Act, The RRWUA supervises and regulates the distribution and use of water from the Rondebosch River in according to the relevant water use entitlements, by erecting and maintaining devices, or requiring members to erect and maintain such devices at their own expense, for measuring and dividing, and/or controlling the diversion, transportation, storage and use of the water.
Photographs of the "infinity pool" taken this afternoon. Water is not flowing into the pool and the outlet is all but a trickle • It is very disheartening to read that much emphasis was put on the importance of protecting ones investment as opposed to the protection of the environment. At the end of the day it comes down to natural habitat and water. No water = no life! • Macadamia orchards use substantially more water than the historical (pre dam excavation) land use, i.e. fynbos • The rehabilitation of areas out with the dam is essential and although growing grasses may be a quick and effective way to reduce soil erosion, a plan should be implemented to regrow the natural vegetation	Ecoroute: The Bitou Municipality Integrated Development Plan (BIDP) has policy guidelines to manage the Municipal area in a manner that supports sustainable resource use. Portions 12, 15 and 17 / 232 are zoned agricultural land, and the BIDP refers to the Redford Area as an 'agricultural focus area' (Bitou IDP, 2020-2021) CE: If the water use is authorized through the license application, the applicant will revegetate a 10 m buffer around the dam with indigenous plants which aims to protect the water resource from the impacts of farming (including pesticides), but also to maintain biodiversity and downstream habitat connectivity.
As mentioned in a previous email (to Janet), many individuals who registered an interest in this EIA did not receive notification of the public participation. I suggest a summary of the comments, removing the names of those who commented, received by members of the public is shared to all individuals who registered an interest. The outcome and any conditions should also be widely communicated.	Ecoroute: The C&R will be available to all public.
Should the building of the dam be allowed to continue, there must be an official way to monitor and information made freely available to see how much water is taken from the furrow. What is to say that the landowner diverts the full furrow at times in order to fill their dam / does not feedback into the system once they have taken their allocation?	It is the duty of the RRWUA to investigate and record with regard to ALL users- (a) the quantity of water at different levels of flow in a watercourse and/or waterwork, (b) the times when, and

	(c) the places where water may be used by any person entitled to use water from a water resource or waterwork.
Thought must be put into ensuring this does not happen again in the future. Let us work together with new landowners not against them. When an individual buys a piece of land they are probably not given information with regard to local environmental requirements, i.e. the legal requirement to remove aliens or information regarding the usage of furrows etc. Perhaps feedback can be given to the Western Cape Government and local Municipalities that this is something that could be addressed in the future?	Ecoroute: Noted. CE: Noted
Out of principle, I feel the request to continue with any form of dam build should be rejected so as not to set a precedent that this can happen again. Sadly this is not the first but let's hope it is the last.	Ecoroute: Noted. We have confidence in the legal processes and that the right outcome, with ALL relevant information in a particular situation taken into account, would be achieved in every individual case.

Comments :	**Response :**
[Public participation] Objection to the development of a 73m3 dam [redacted]	
Objection to the development of a 73m3 dam. Message My objection is grounded on the following: 01 The draw off to fill this 73,000 c.mt dam from groundwater sources will affect the underground water table of the whole Crags area and cannot be sustained without damage to the water source of many Inhabitants of the area.	DHS Groundwater specialist: A monitoring programme is proposed within DHS Groundwater's specialist report with the aim being to monitor the water table and water chemistry. This will form part of the WUL conditions with water levels and chemistry to be reported to the CMA. Furthermore, DWS determines the Utilisable Groundwater Exploitation Potential (UGEP) per quaternary catchment, which is amended in WARMS as new users are licenced. The groundwater volume applied for is well below the registered available UGEP and allocable WARMS volumes. In short, the groundwater volume applied for adheres to all applicable regulations as per the NWA and DWS allocable volumes. The aquifer consists of a good fracture network with radial flow present. Transmissivity is in the order of 4.2 to 7.8 m2/day. An available drawdown of 160 mbcl is recommended. As a rule of thumb, 60% of the total available drawdown (depth between main water strike and static water level) can be utilised without jeopardizing aquifer sustainability. A dynamic water level of 125 mbcl is anticipated over a 24hr pump schedule at a volume of 2.16 l/s. The water level should not exceed 160 mbcl, which is referred to as the critical water level. Consistent drawdown below the critical water level will have a negative impact on the aquifer sustainability and yield. It is therefore HIGHLY recommended to monitor the water level closely during pumping, to prevent drawdown in excess of 160 mbcl. A conduit should be

02 The feed off for the dam using irrigation channels which exist at present will stop or at least lower the water availability downstream of the dam. Causing untold difficulties for small holders and farmers. 03. It is not acceptable that anyone should develop a dam of this size without doing an environmental study protecting the right of established farms and small holders water sources. Furrows and water availability is the life blood of those who will be effected by reduced water flow and in some cases stop water flow permanently. Thank you for noting my objections.	installed alongside the pump to allow for the measurement of the water level. A calibrated flow meter must be installed at the immediate pump outlet at the borehole to ensure the recommended pump volumes are not exceeded. CE: Downstream from this applicant's proposed dam there is only the Whiskey Creek Nature Reserve. There are no smallholdings or farms downstream. Storage of surface runoff from the very small catchment would amount to 12 200 m3 per annum, which will have a minor impact on the watercourse downstream, as it is non-perennial (doesn't flow all the time). The applicant is now following a S24G process in terms of NEMA and a Water Use License Application in terms of the National Water Act. The outcome of these processes will be communicated to all I&AP's.

Comments :	**Response :**
[Public participation] Dam sight survey [redacted]	
Dam sight survey Message Incorrect application for building of dam. Must be taken into account that this is the source of Wiskey Creek , so water flow to this area is of utmost importance as it will be restricted also the quality of water provided by run off into the dam and excess from the dam into the Creek .This has a high probability of being polluted with pesticide residue as this area is going to be intensely farmed for export.	CE: This tributary is not the only source of water for Whiskey Creek. The entire Redford area forms most of the upper catchment and includes many dams on each of the tributaries. Very little of the water proposed for storage in the dam actually comes from surface runoff. By far the majority is from the borehole and 3 furrow allocations. CE: If the water use is authorized through the license application, the applicant will be obliged to revegetate a 10 m buffer around the dam with indigenous plants which aims to protect the water resource from the impacts of farming (including pesticides), but also to maintain biodiversity and downstream habitat connectivity.

Comments :	**Response :**
[Public participation] BERNARDKLOOF DAM [redacted]	
BERNARDKLOOF DAM Message This dam was started without any regard for the environment. I understand that much damage has already been done and the owners should be held responsible and do everything recommended to lessen the damage.	Ecoroute: Noted. We have confidence in the legal processes and that the right outcome, with ALL relevant information in this particular situation taken into account, would be achieved.

Comments :	Response :
[Public participation] comment on the Section 24G application for Portion 17 of the Farm Redford 232. [redacted]	
Comment on the Section 24G application for Portion 17 of the Farm Redford 232. Message Thank you for the opportunity to comment on the Section 24G applications for Portion 17 of the Farm Redford 232. I have a number of concerns related to the application, which I detail below. I submit these concerns in my personal capacity and as a neighbour who is solely dependent on access to water from the furrow, which is the partial subject of the application, as well as a member of the Redford Conservancy who has a deep commitment to realising its objectives, and the positive contribution that realising those objectives can make towards conserving and enhancing the critical biological sensitivity of the area, as well as the status and integrity of the Tsitsikama/Keurbooms section of the Garden Route National Park, which the applicant's property abuts.	Ecoroute: Noted. We have confidence in the legal processes and that the right outcome, with ALL relevant information in this particular situation taken into account, would be achieved.
I summarise my concerns below. ECOLOGICAL IMPACT AND WILDLIFE CORRIDORS 1. Since the farms in question directly about the Tsitsikama/Keurbooms section of the Garden Route National Park, I am reasonably confident that they ought to fall within the buffer zone of the national park. In principle therefore, any illegal activities associated with development that have a significant potential to threaten a nationally declared protected area, and the objectives of the conservancy, ought to be resisted and rejected.	Ecoroute: Portion 17/232 boarders a protected SAPAD protected area (Whiskey Creek). Ecoroute: Portion 17/232 is located within the SAPAD Garden Route Biosphere Reserve. CE: The land is zoned agricultural, so farming may take place. However, this must be undertaken with sensitivity to the receiving environment in the adjacent protected area. This issue has been addressed in various specialist studies.
2. Over the past decade there have been extensive efforts made by the Crags local community to operationalize the objectives of the conservancy so that it contributes to an enabling buffer zone which not only supports the nationally protected area but which facilitates the removal of threats identified in the EMP for the area. This includes the removal of alien vegetation (together with Working for Water and SANParks, continued on an individual voluntary basis during the pandemic when funding for Working for Water was no longer available). Conservancy activities also focus on preserving the integrity of the indigenous flora and creating corridors for the free movement of wildlife so that it doesn't impact unduly on the Nationally Protected Area, and the biologically sensitive flora and fauna acknowledged by the experts in the application and the Terrestrial Biodiversity Report. (See page 18, "The proposed activity may reduce ecological connectivity of the surrounding areas.")	Ecoroute: We are of aware of a legal EMP for the area, please can you provide us a copy in order to assess the information? Ecoroute: Noted CE: As the watercourse with the excavated dam area is at the very top of its catchment, it has limited opportunity to provide significant value as a migration corridor through the landscape.
3. On page 24 of the application the vegetation status is described as 'least threatened'. This appears to be in contradiction with the application form which expressly applies or permission to undertake a listed activity involving a critical biodiversity area (CBA) - see page 14. As well as other documents, for example page 17 of the terrestrial biodiversity report, which cites a "Critical Biodiversity Area (CBA) occurs here."	Ecoroute: Cape Farm Mapper identifies the vegetation type as Tsitiskamma Sandstone Fynbos which has an ecological class as least threatened. This is according the National Biodiversity Act. A portion of the property falls within a CBA area

4. As someone who frequently walks past section 17 on the public road adjacent to it (see point 5 below) I would like to state for the record that the vegetation removed by the illegal dam excavations were not "alien wattle and pine" but included a healthy cope of indigenous vegetation as would be expected to occur naturally in a non-perennial watercourse.	Ecoroute: The applicant provided proof of significant alien vegetation that was present prior to clearing and the excavation and testifies that at that time there was no access past the excavated area as it was severely overgrown.
5. In the last weeks the Bernard's have attempted to close a public road (RE/232) by erecting 'private property - no trespassing' signs, which further impacts on the viability of corridors. This matter is being challenged separately to this application. I strongly urge that if authorisation is granted, a condition of authorisation is that they minimise fencing and plant indigenous hedgerows/allow indigenous regrowth so that the integrity of the ecological corridor is not interrupted.	Ecoroute: Noted. CE: The value of the proposed dam site in terms of connectivity in a fragmented landscape is disputed as low. At the top of a watercourse, surrounded to the west, north and east by agricultural fields it represents somewhat of a 'dead end' (see below). There are far more valuable corridors along watercourses which connect right across the area, spanning from the Whiskey Creek Nature Reserve to the forestry area to the north.  The Bitou Municipality Integrated Development Plan (BIDP) has policy guidelines to manage the Municipal area in a manner that supports sustainable resource use. Portions 12, 15 and 17 / 232 are zoned agricultural land, and the BIDP refers to the Redford Area as an 'agricultural focus area' (Bitou IDP, 2020-2021)
ACCESS TO WATER 1. As mentioned above, my sole access to water derives from the Rondebosch River Furrow, which I share with 30 other 2 members, including the Bernards who, with their three farms, now have rights to 3 allocations	Ecoroute: Noted. It is acknowledged that the applicant is entitled to three allocations in accordance with the entitlements in terms of the RRWUA.
2. I note from the reports that they do not mention that one of the Bernards' three properties (portion 12) has an existing dam. This has recently been enlarged. (I am not sure whether this enlargement was done in accordance with legislative requirements.) This means that there is existing storage capacity, which is already drawing from the furrow, and this should be taken into account when determining the drawdown of the proposed new dam. (In other words, the footprint and volume of proposed new dam can be smaller than the 100,000m2 deemed necessary for them Agricultural purposes, since there is already capacity in place.)	CE: The pre-existing dam on 12/232 was cleared of accumulated silt, and the dam wall was strengthened as it was leaking. As the dam wasn't enlarged these activities needed no authorization as it is an offstream dam. The applicant currently stores one furrow allocation in this dam but should the larger dam on Portion 17 be approved, this will be transferred. The small, offstream dam on Portion 12 would then store rainwater from buildings.

3. As I am at the last water user on this portion of the furrow, and the Bernards' water off-take is upstream of me, the intention to store water, including from the furrow, has a significant potential to negatively impact my rights and access to water. I do not detect a discussion of how downstream users rights will be protected. Given that the application is based on an illegality, and on the seeming appetite of the applicant to disregard agreements with community members and engage in further illegalities, even whilst the application is pending, I am deeply concerned about my water security. In your recommendations on the application to government I urge you to recommend that it is a condition of approval that the rights of downstream users is not negatively impacted in any way.	CE: Greater certainty could be achieved through the installation of a flow meter to all users at the inflow of the furrow to the storage facility on relevant properties. However this will need to be enforced by the RRWUA who have powers and duties delegated to the said association by the Minister of Water Affairs and Forestry on 6 November 2002 which allows the association to manage in accordance with a constitution which is subject to the provisions of the National Water Act of 1998 (Act 36 of 1998), raw water available out of the Rondebosch River to persons entitled to such water in accordance with water entitlements determined according to Section 22(1) of the Act. The RRWUA supervises and regulates the distribution and use of water from the Rondebosch River in according to the relevant water use entitlements, by erecting and maintaining devices, or requiring members to erect and maintain such devices at their own expense, for measuring and dividing, and/or controlling the diversion, transportation, storage and use of the water.
4. Of additional concern is the intensive use of herbicides and pesticides in conventional macadamia nut farming, and its potential contamination of said water. There are viable, thriving modern alternatives to monoculture farming practices (see attached article 'Trends emerge as South Africa's mac yields plunge' - https://themacadamia.co.za/2022/01/31/trends-emerge-as-south-africas-mac-yields-plunge/) These methods are likely not only to be more cost effective in the long run, but have significantly less negative impact on wildlife and water as they promote biodiversity and stress the "importance of returning life to the orchards". I hope that the application to government will include recommendations to explore these options.	Ecoroute: Noted. This will be addressed in the Final S24G CE: If the water use is authorized through the license application, the applicant will revegetate a 10 m buffer around the dam with indigenous plants which aims to protect the water resource from the impacts of farming (including pesticides), but also to maintain biodiversity and downstream habitat connectivity.
ADDITIONAL POINTS 1. I note that the applicant's three farms are incorrectly detailed in the Terrestrial Biodiversity section: none of their three properties connect directly side by side, but touch at the corners only, and they do not include portion 18/232 as detailed in the diagrams in this section. (However the properties are correctly detailed in the farm mapping diagrams.) Based on the erection of high fences around the three properties, I do hope that measures to protect the existing corridors, and make provisions for new ones, will be included in the recommendations.	Ecoroute: Noted. The incorrect inclusion of 18/232 has since been corrected. CE: The most important aspect of the watercourse is preservation of ecological structure and function of habitat adjoining a Protected Area of conservation significance (Whiskey Creek Nature Reserve). The importance of the watercourse in terms of connectivity is not very high because it is at the headwater of the watercourse and surrounded by modified agricultural lands. In this sense it represents a dead end for migrating wildlife. As a non-perennial system, any biota associated with the watercourse would be well adapted to periodic no flows, and therefore less sensitive to this aspect.

Comments :	**Response :**
[Public participation] Barnardkloof dam, Redford Road [redacted]	
This illegal dam should be stopped and the area returned to its original state. The stream on which it is situated, feeds directly into the Whisky creek river system, which is already under huge pressure/threat from farming. The Whisky creek is currently completely dry! Indigenous fish and other wildlife are threatened by excessive water being removed from the system. The owners/developers of this dam have shown themselves to be completely insensitive to and uncaring of the environmental impact the dam will have on the river system and need to be held accountable for the damage they have already done. They should not be allowed to get away with their	CE: The proposed dam feeds onto a non-perennial tributary of the Whiskey Creek at the top of the catchment. There are numerous dams in the Redford area. Some of them lawful, others not. There is a cumulative hydrological impact of small to medium scale agriculture in the catchment which can only be addressed through a catchment-scale Validation and Verification of water use, followed by determination of the ecological reserve. These studies must be commissioned by the BGCMA, and the local community can apply pressure in this regard.

illegal activities; there should be consequences to their willful destruction of a sensitive riverine eco system.	

Comments :	Response :
[Public participation] Barendskloof dam [redacted]	
My concern is for the funa and flora of this delicate eco system, already under immense pressure with our lack of rainfall over the past years. And what about pesticides? They will eventually find their way into the water ways.	CE: See previous comments about the riparian buffer zone. CE: Protected Area greatly increases its importance for connectivity, the cumulative impact of reduced connectivity through excavation of the dam and possible construction thereof is less significant than other tributaries in Redford as it is at the top of the watercourse surrounded to the west, north and east by agricultural fields. CE:The cumulative impact is considered minimal because the entire upper catchment of the Whiskey Creek has numerous dams on every tributary. Approximately 52 instream dams (see below). Some of them legal, others not. The tributary of this proposed dam is on the upper limits of a very small non-perennial catchment. Water storage in the dam will be sourced primarily from groundwater (borehole) and existing furrow allocations, with only a minimal volume coming from surface runoff from the catchment. In terms of hydrology, the proposed dam therefore represents a minimal cumulative impact. While the location of the watercourse immediately upstream of the Protected Area greatly increases its importance for connectivity, the cumulative impact of reduced connectivity through excavation of the dam and possible construction thereof is less significant than other tributaries in Redford as it is at the top of the watercourse surrounded to the west, north and east by agricultural fields.

Comments :	Response :
[Public participation] Dam [redacted]	
Think that as long as the dam is built to standard, and that all the right approvals are in place, then it is a great economic development for our town.	Ecoroute: Your comment is noted

Comments :	Response :
[Public participation] Dam by Balderja pty [redacted]	

I object to the building of the dam on the grounds that we are a water scares area and that the biodiversity of the area is being destroyed	Ecoroute: Your objection is noted.

Comments :	**Response :**
[Public participation] Redford Portion 232 The Crags [redacted]	
Building this dam would directly affect our water supply from Whiskey Creek.	CD: The cumulative impact is considered minimal because the entire upper catchment of the Whiskey Creek has numerous dams on every tributary. Approximately 52 instream dams (see below). Some of them legal, others not. The tributary of this proposed dam is on the upper limits of a very small non-perennial catchment. Water storage in the dam will be sourced primarily from groundwater (borehole) and existing furrow allocations, with only a minimal volume coming from surface runoff from the catchment. In terms of hydrology, the proposed dam therefore represents a minimal cumulative impact. While the location of the watercourse immediately upstream of the Protected Area greatly increases its importance for connectivity, the cumulative impact of reduced connectivity through excavation of the dam and possible construction thereof is less significant than other tributaries in Redford as it is at the top of the watercourse surrounded to the west, north and east by agricultural fields.

Comments :	**Response :**
Redford 232, The Crags, Bitou Municipality [redacted]	
To: Eco Route Environmental consultants for Denina Barnard, applicant in the matter of illegal dam works on Portion 17, in tributary of the Whiskey Creek River. From: Jane Rosenthal, The Broome (11/290, The Crags) 082 896 8880 Comments on this application above: The aerial photographs clearly show how close this watercourse is to large area of the Whiskey Creek and Keurbooms Reserves managed by SANParks. As a landowner in this area, and downstream from this dam on Portion17/232, I am shocked and appalled at the devastation that has already been inflicted on the area called the study area. The biodiversity and aquatic reports seem to imply that the damage cannot be restored or mitigated in under 20 years or so. Actions requested: - The applicant should desist from further work on this instream dam and opt for an alternative off stream dam to irrigate the orchards with correct permit procedures.. - Vegetation should be restored and monitored over 10 years to ensure it survives. - The damage on the sides of the dam should be mitigated with erosion matting and silt fences as proposed. -Water flow must be restored to what it was previously.	Ecoroute: It is acknowledged that 17/232 borders the Whiskey Creek Nature Reserve. CE: Your objection and recommendation for rehabilitation is noted. While consistent with the extensive recommendations in the aquatic specialist report, the specialist confirmed that given the steep gradient of the valley sides which has been exacerbated by excavations, there is a strong likelihood of failure even with erosion protection measures such as matting, sausages, silt fencing etc. The author has experience with failures on similar gradient slopes which creates ongoing damage and sedimentation downstream. Therefore, the specialist recommended that the dam be completed within the existing footprint of disturbance.

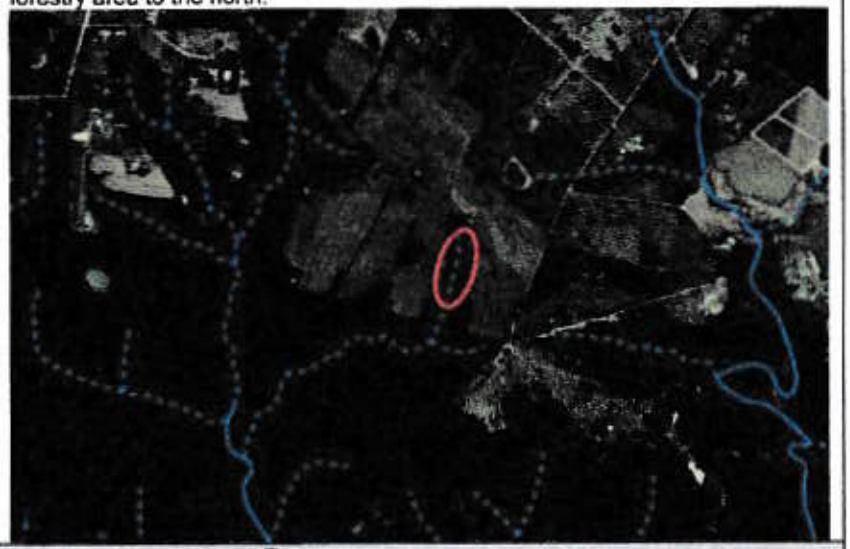
Further notes on Biodiversity at The Crags The Redford Conservancy as well as SANParks have put many years of effort and a huge amount of money into preserving the biodiversity of The Crags. It is possible Ms Barnard and Eco Route and the specialists who provided reports are unaware of this. 'The SANParks Biodiversity Social Project was started in 2013 (on our property 11/290, The Crags and continued for several years. The Southern Cape Conservancy also joined and alien in invasive plants were removed by Working for Water teams. 25 properties in the Redford Conservancy area were cleared and followed up, as well as large areas of Kuthumba and Forest hall. For more details on this contact Mrs Colleen Noble, the first chairperson of the conservancy, and Anton Wolfaardt, current chairperson	Ecoroute: Noted Ecoroute: Yes, the EAP has asked to see a copy of the approved EMP in order to address any issues within the EMP with regards to 17/232
It is dismissive and ill-informed to say most of the areas of surviving forest and fynbos at The Crags are overrun by alien vegetation. The lists of animals and birds seen on site visits are very sad because they show how much damage has been done. You certainly should have found baboons, leopards, rooikat, puffadders, nightjars, fish eagles... and many more. I guess the amphibian populations will never recover. Not even mentioned. Please keep me informed of progress in the restoration of this piece of land between the mountains and the forest. Kind regards [redacted]	Ecoroute: Thank-you your comments have been forwarded to the Biodiversity specialist. CE: While not explicitly stated in the aquatic specialist study, the mitigation measures considering both options for approval of ongoing construction / decommissioning of the 'dam' consider amphibian populations because these are the main vertebrate species affected by the development. Recommendations have considered the preservation of amphibians downstream of the excavated area.

Comments :	**Response :**
[Public participation] Objection on grounds of going ahead without proper permits [redacted]	
Objection on grounds of going ahead without proper permits Message The project has to be halted until proper permissions are granted and in place rather that just going ahead and doing whatever the developers want to do without permission. That attitude is rife and has to be stopped. On whose authority did the land clearing start? As soon as this happens one questions if someone was paid to look the other way. Such is the nature of this kind of entitled behaviour. And we all find out about it minutes before the cut-off time today. Nice work.	Ecoroute: Your objection is noted Ecoroute: The PPP was advertised in the [redacted] Newspaper and was in the public domain for 60 days. You have been registered as an I&AP and will receive all further information or new public participation dates in order to provide us with more comments CE: The project has been halted. The applicant is in the process of obtaining proper permissions through NEMA (S24G) and the NWA (Water use license).

Comments :	**Response :**
participation] Objection to Dam 17/232 Redford road [redacted]	
The area of the dam needs to be urgently restored to it's natural vegetation state before it damages the river, Whiskey Creek, downstream. In other words I support the assessment that erosion control needs to be put in place. [redacted]	Ecoroute: Your objection is noted.

Comments :	Response :
[Public participation] Objection to the dam on portion 17 of 232 Redford [redacted]	
On the owner's own website related to their farming venture on these portions of the farm Redford, www.balderja.co.za, it states "Our aim is to contribute to the productive landscape while paying the necessary respect and attention to preserve, enhance and enjoy the delicate indigenous and natural features of this indescribable piece of heaven in the Garden Route". The old adage, actions speak louder than words, is applicable here. The owners have in fact done the opposite, created permanent and irreparable damage to the property. They have done this without any consideration for their neighbours, particularly those downstream who are dependent on the Whiskey Creek for their water. They have done this without any consideration for the sensitive ecosystem, the fauna, the flora, the environment and the general landscape that makes the area of the Crags unique. Furthermore, work was only halted after the community stepped in. To say that they were ignorant of the laws is disingenuous. You don't need to read the law to realise the widescale destruction that was inevitable as a result of their actions.	Ecoroute: Noted CE: The proposed orchard will be 28 ha. Riparian buffers revegetated with indigenous vegetation around the dam have been stipulated as part of the aquatic specialist study to protect the watercourse from pesticides. CE: The cumulative impact is considered minimal because the entire upper catchment of the Whiskey Creek has numerous dams on every tributary. Approximately 52 instream dams (see below). Some of them legal, others not. The tributary of this proposed dam is on the upper limits of a very small non-perennial catchment. Water storage in the dam will be sourced primarily from groundwater (borehole) and existing furrow allocations, with only a minimal volume coming from surface runoff from the catchment. In terms of hydrology, the proposed dam therefore represents a minimal cumulative impact. While the location of the watercourse immediately upstream of the Protected Area greatly increases its importance for connectivity, the cumulative impact of reduced connectivity through excavation of the dam and possible construction thereof is less significant than other tributaries in Redford as it is at the top of the watercourse surrounded to the west, north and east by agricultural fields. Ecoroute: Noted
Do we as a community have any say whether we endorse a 50 hectare commercial macadamia development, with its resultant high water usage and dependence on pesticides like glyphosate, which no doubt will run off into streams and the groundwater. This area has until this time been one of low key subsistence and small scale farming, and a lifestyle area. I for one would like to preserve it as such. For the owners, this is a mere folly/hobby, and to add insult to injury, they are not even permanently residing in the area they seek to fundamentally alter.	Ecoroute: Noted Please refer to the Bitou Integrated Development Plan: https://www.cogta.gov.za/cgta_2016/wp-content/uploads/2020/12/Bitou-Integrated-Development-Plan_2020-2021.pdf
Worst of all is that these actions create a very real precedent, where people do what they want, create permanent damage to the environment, pay a fine (maybe) and then continue on their way without apparently any consequences. It is the slippery slope for continued environmental destruction we are witness to worldwide.	Ecoroute: Noted
I would like to see the construction of the dam halted completely, and the owners forced to comprehensively rehabilitate the damage they have caused. Unfortunately there is no going back to entirely remediate the negative effects and I do believe that substantial penalties be applied.	Ecoroute: We have confidence in the legal processes and that the right outcome, with ALL relevant information in this particular situation taken into account, would be achieved

Comments :	Response :
[Public participation] Bernardskloof dam objection [redacted]	
The Redford Conservancy as well as SANParks have put many years of effort and a huge amount of money into preserving the biodiversity of The Crags. It is possible Ms Barnard and Eco Route and the specialists who provided reports are unaware of this. The SANParks Biodiversity.	Ecoroute: Noted CE: The value of the proposed dam site in terms of connectivity in a fragmented landscape is disputed as low. At the top of a watercourse, surrounded to the west, north and east by agricultural fields it represents somewhat of a 'dead end' (see below). There are far more valuable corridors along watercourses which connect

Social Project was started in 2013 on portion 11/290, The Crags and continued for several years. The Southern Crags Conservancy also joined and alien invasive plants were removed by Working for Water teams. 25 properties in the Redford Conservancy area were cleared and followed up, as well as large areas of Kuthumba and Forest Hall. For more details on this contact Mrs Colleen Noble, the first chairperson of the conservancy, and Anton Wolfaardt, current chairperson. The proposed dam site is in a vital area of connectivity for pollinators, avifauna and small and large mammals. It will interrupt an important corridor for biodiversity, particularly in this era of climate change. It is on this basis that I object to the dam project.	right across the area, spanning from the Whiskey Creek Nature Reserve to the forestry area to the north. 
Comments :	**Response :**
[Public participation] Objection [redacted]	
I would like to object to this dam. The ecological impact was not taken into consideration and people should not get away with doing what benefit's them just because they have money. Kind Regards, [redacted]	Ecoroute: Your Objection is noted. CE: The Bitou Local Municipality has the third smallest population within the Garden Route District, after Hessequa and Kannaland. As of 2019, the Bitou Local Municipality had a population of 61,645 people with an annual growth of 0.8%. There is an unemployment rate of 27.9% within the Bitou Local Municipality (BIDP). The development is focussed on creating a healthy agricultural environment supported by key infrastructure developments such building a dam, a technically advanced irrigation plant and, in the future, a processing facility. The Bitou Municipality Integrated Development Plan (BIDP) has policy guidelines to manage the Municipal area in a manner that supports sustainable resource use. Portions 12, 15 and 17 / 232 are zoned agricultural land, and the BIDP refers to the Redford Area as an 'agricultural focus area' (Bitou IDP, 2020-2021) Please refer to the Bitou Integrated Development Plan: https://www.cogta.gov.za/cgta_2016/wp-content/uploads/2020/12/Bitou-Integrated-Development-Plan_2020-2021.pdf