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PEDESTRIAN PATH TO CONNECT THE HERMANUS CLIFF PATH VIA POOLE'S BAY IN HERMANUS

Pre-application Draft Basic Assessment Report SUMMARY

Ref no 16/3/3/6/7/1/E2/15/1265/20

Prepared for
Cliff Path Action Group
(Jobre Stassen)

December 2020

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1. Background

Why connect the two section of the Hermanus Cliff Path?

The Hermanus cliff path follows the coastline from Grotto beach to the New Harbour except for a detour, almost in the middle of the route, where the path leaves the coastline and continues for almost a kilometre along Main Road. The Cliff Path Action Group in 2018 started investigating the possibility of connecting the two parts of the current cliff path along the coastline of Poole's Bay thereby avoiding walking next to a congested road. During 2019 an assessment process was initiated, which unfortunately did not progress to the application phase due to Covid-19 and lockdown constraints during 2020. As a result, the process needed to be started anew, which has now commenced. Inputs received during the first round of investigations have been valuable and will be incorporated into the design as well as consideration given to the proposal.

The cliff path is one of the main tourist attractions and a major asset in a town depending on the tourism industry. Having an continues walkway along approximately 13km of coastline will enhance this iconic feature, contributing positively towards tourism in the area.

The interrupted section of the Hermanus Cliff path is a rather rocky stretch of about 850m along the coast. The area also deviates from normal land-use practice in that the high watermark forms the seaside boundary of the 13 properties of Poole's Bay. Access in some areas needs to be negotiated over rocks and crevices and therefore mostly limited to agile users and low tide. The intention of the Cliff Path Action Group (Applicant) is to facilitate safer access to this part of the coast in the least disruptive and most practical way. The proposal would be beneficial considering the possible consequences that informal access could have.

2. Legal disclaimer

Ecosense CC has been appointed as independent consultant responsible for facilitating the Basic Assessment process and compiling a Basic Assessment Report and Maintenance Management Plan for the proposed pedestrian path to connect the existing Hermanus Cliff Path via Poole's Bay, Hermanus. The Environmental Assessment Practitioner (EAP) is Kozette Myburgh, EAPASA registration no 2019/1346.

Neither Ecosense nor any of the authors of the report have any material present or contingent interest in the outcome of the report, nor do they have any pecuniary or other interest that could be reasonably regarded as being capable of affecting their independence or that of Ecosense. Ecosense has no beneficial interest in the outcome of the assessment which can affect its independence. The findings, results, observations, conclusions, and recommendations given in the report are based on the author's best scientific and professional knowledge as well as available information supplied to Ecosense by the Applicant or their appointed consultants. Ecosense CC and its staff reserve the right to modify aspects of the report including the recommendations if and when new information may become available from ongoing research or further work in this field or pertaining to this investigation.

The process is being undertaken in terms of the National Environmental Management Act (NEMA, Act 107 of 1998), Environmental Impact Assessment Regulations as promulgated in December 2014 (as amended). The Applicant is the Cliff Path Action Group, who will facilitate and implement the activity, should it be approved by the Department of Environmental Affairs and Development Planning (DEA&DP). In terms of the NEMA, this proposal requires an application for environmental authorisation for the following listed activities 15, 52, 18, 19 and 19A, through a Basic Assessment process. These activities are concerned with development in or within proximity to water courses and the sea.

The information contained in this document is a summary of the content of the Pre-application Basic Assessment Report dated December 2020.

3. What is being proposed?

The concept as developed by the Applicant; Architect and Engineer is as depicted in the schematic below:

The Completion of the Hermanus Cliff Path

Concept for a series of linking walkways on the high water mark

Our project aims to connect two separate coastal walkways across one of the town's most scenic stretches of coastline, a region commonly known as Pooles bay. The existing cliff path, an icon of the town, follows a route from the Klein River Estuary in the East, to the New Harbour in the west, but is broken for almost 1km by thirteen linked private properties which have property rights up to the high water mark.

The full stretch of the coastline under study has been surveyed using advanced Point Cloud Survey equipment. This process produces a digitally accurate 3 dimensional matrix of points (in a cloud), ie every rock has been surveyed! This information will become invaluable in the design development and working drawing stage of the project, where the Consultants will have full access to complex digital terrain information from the desktop.

Satellite image with the existing cliff path in red, the current detour onto main road in yellow and the proposed completion in blue.



Conceptual Principles

A low visual impact on the environment
Using river sand and rough stone aggregate in the concrete mix, the walkway would take on a rough stone look and feel

Different solutions to differing terrain
low battered sections, raised balustrade sections, and sugargum bollard sections

To only build on the sea side of the High Water Mark
using tidal pools and harbour walls as precedent

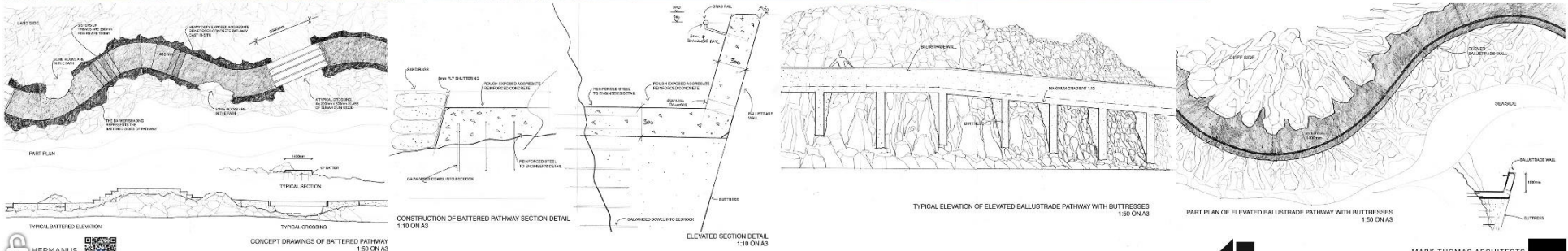
Overall plan of new walkway at 1:200 Scale



Visualisations of the proposed walkway



Material reference images



4. What will be affected or influence the development?

Coastal Considerations

The shoreline areas of the Overberg coastline are rugged and characterized by a range of habitats including rocky headlands, boulder beaches, wave cut platforms, sandy beaches, subtidal soft sediment habitats, pocket beaches, kelp forests, estuaries, subtidal reefs and pelagic habitat. The Poole's Bay area in particular consists mostly of rocky outcrops, but some small gravel coves and pebble beaches with kelp washed up in many places are also found along the area where the connection path is proposed.

The proposed path would fall within the Coastal Public Property and would therefore affect it as a new structure would be developed. The proposed development is intended to enhance the Coastal Public Property, as it would provide improved access to this part of the coastline, that is also in line with the Western Cape Coastal Access strategy. The proposed path would fall seaward side of the Coastal Management lines as promoted in the coastal management plan of the municipality.



Figure 1: Rocky outcrops



Figure 2: Gravel in small coves



Figure 3: Pebble beach



Figure 4: Tidal pool and pebbles / gravel

Biodiversity Considerations

The Western Cape Biodiversity Spatial Plan (WCBSP) of 2017 is limited to Biodiversity Features above the high watermark of the sea. Although the proposed path would seemingly fall within the Critical Biodiversity Area that is indicated along this stretch of coastline, it is not indicated as such on the WCBSP, as the site falls below the HWM, where very little vegetation is found

Fauna on or adjacent the site is limited to shore birds, an occasional sea otter, dassies or whales offshore. The design is sensitive to the environment as to not impede movements of any of the fauna that would have to cross the path. The site borders onto the Walker Bay Whale Sanctuary, but whales would not be affected.

There is currently easy access to the area close to Bird Island for people and dogs. The human visitation rate was just over 30 people per hour (recorded mainly on Sunday 8 March 2020). The study however concluded that present evidence suggest that little negative disturbance to the avifauna will result from the provision of a walkway between the two existing cliff top pathways, and judging by the number of human visitors, such a path would be regularly used by tourists and local inhabitants alike.

An avian survey confirmed the occurrence of important birds in the area, with two red data species observed on Bird island at the western entrance of the proposed path. Even though the study provides only a snapshot of which avian species may occur in the Poole's Bay area, by definition rare species are less likely to be recorded. At the time of the survey, there was however no evidence of threatened species such as African Penguins or Black Oystercatchers breeding along the proposed path.

A Freshwater Ecology Screening identified two wetlands. Construction of the footpath within either wetland would result in minor wetland loss and may therefore require a Water Use Authorisation in order to proceed with construction. It is, however, possible in the opinion of the specialist that both wetlands can be avoided, and this approach is strongly recommended. At Wetland 1, the watercourse can be crossed by way of a small bridge on the pebbled beach where the watercourse becomes a stream.

At Wetland 2, there is sufficient space below the wetland to construct a concrete footpath over the rocks (which would fall below the high watermark) in such a manner that the flow of water from the wetland is not interrupted in any way.



Figure 5: Delineated wetlands within the vicinity of the proposed path

Heritage Considerations

Two Later Stone Age archaeological sites were located. One was a scatter of shells and quartzite flakes near the east end of proposed path. An existing old footpath goes through this area, but it appears to be only a light scatter that extends under the bushes. A second site was identified only by a few marine shells in an area of lawn and garden midway along the proposed pathway. The first site could be left in situ and incorporated into the new path while the second would not be affected by the new path.

Socio-economic Considerations

Hermanus is one of the top five cities visited in the Western Cape. Hermanus emerges unsurprisingly as the economic hub of the Overstrand local economy contributing almost two-thirds (62,2%) of the area's economic output. Tourism is a major economic driver for the Overstrand and plays an important role in the social, cultural and economic vibrancy of the Overstrand. The effect of tourism is not limited to the accommodation, cafes & restaurants, retail and personal services sectors; the indirect financial and employment benefits filter through to all industries.

Historical processes have over time limited access to the coast. This is reflected in socio-economic patterns of land dispossession and ownership in the present (DEA&DP 2018:18). Historical restriction of access in this particular area has also mostly been driven by property ownership and until very recently, access was 'prohibited' by private signage.

Previously raised concerns

When the assessment process was first initiated during 2019, a number of issues were raised at the time, which have been considered in the process:

Issue	Manner in which the issues were incorporated
<p>Access Clarity on connection points to the existing path. Comments in support also referred to the need for safer and equitable access and a desire to rather walk along the coastline than along the R43.</p>	<p>The two connection points to the existing path have now been indicated more clearly on the site plans. The Coastal Access Audit was considered in the report as the Poole's Bay area was identified as a conflict area where public access is desired. Coastal access is an important government driven issue, as is evident from the current coastal access management strategy. It was revealed during the public participation process for this strategy that people in the area were under the general impression that access was denied to this part of the coast.</p>
<p>Alternatives No-go Inadequate consideration of alternatives</p>	<p>It is the intention of the process to consider practical options with their impacts to determine if feasible and reasonable and if not, the No-go option would be implemented. In the 2019 pre-application draft report, two alternatives were presented along with the no-go alternative. These alternatives were not substantially different, albeit from an alignment / lay-out point of view in that for one, the possibility of having the path above the HWM in some areas was explored. As a result, the impacts associated with each did not differ. Through respecting the fact that properties in this area extend down to the HWM and that the majority of landowners would prefer to see the path below the HWM the only feasible alignment is therefore along the HWM. Although other alternatives, such as materials to be used was considered, it is not regarded as practical within the coastal context and therefore it is motivated that they are not reasonable or feasible. The original design presented is more elaborate and not feasible from a financial point of view, considering that this would be a community funded project. The DEA&DP Guideline on alternatives which confirms that in the absence of reasonable and feasible alternatives, the preferred alternative may be assessed in comparison to the no-go alternative, provided that a reasonable motivation is provided for not considering other alternatives.</p>
<p>Birds The importance of birds and sea life in this area and on the island close to the proposed eastern entry point.</p>	<p>This was further investigated and a survey by an Avian specialist is included under Appendix G. Although two red data species were observed during their study, they also observed a number of people using the current informal path. Their findings concluded that the path would not present fatal flaws from an avian point of view that may compromise the birds' presence or possible breeding.</p>
<p>Costs and funding: Use of public funding / Allocation of funds, Maintenance costs Ability of applicant to complete project</p>	<p>There has been a misconception by some people that the funding for this project would be municipal or other public funding. It is emphasized that the project is community driven, but would be dependent on private funding / donor funding for construction as well as maintenance. Financial guarantees have been suggested to ensure that the means to fund the project are available.</p>
<p>Construction Timing; Methods; Management (noise, dust, nuisance, litter etc)</p>	<p>These issues have been formally addressed in the EMPr</p>
<p>Design and layout Further refinement of design, alignment and inclusion of coastal management line on site plan Structural integrity</p>	<p>Revised design descriptions for the preferred alternative have been included in this report. Updated drawings / plans have been included in Appendix B. The path would need to be constructed in the same way any other sea-exposed structure is done, such as piers, harbours and tidal pools, so damage by wave action can be withstood. Experienced engineers and contractors have been approached for input and method statements are to be included with the EMPr to ensure that structures are developed sustainably.</p>
<p>Freshwater features Stream and wetlands</p>	<p>The Freshwater ecologist suggested a bridge like crossing, so the 1.8m wide stream would not be impacted. This has been incorporated into the design (sugar gum crossings). The ecologist further noted that if the path stays below the HWM, there should not be any impact on the wetlands located adjacent above the HWM. These areas have been demarcated as No-go areas in the EMPr</p>
<p>Liability</p>	<p>Liability can only be addressed by putting agreements in place with the relevant authorities and by ensuring disclaimers are visible along the pathway. This has been stipulated as a requirement to be implemented through the EMPr.</p>
<p>Pollution Concrete spills</p>	<p>The current specifications, as well as method statements to be included with the EMPr specify how construction should take place to minimise the risk of spills.</p>
<p>Safety (referring to physical safety when using the path) Storm surges, danger during high tide, terrain</p>	<p>Appropriate signage has been recommended and included as a specification to be implemented through the EMPr. The purpose of the path would be to ease access over difficult terrain and the proposed design included in the report and Appendix B shows how - battered sections with steps over large rocks or crossings over crevices.</p>

Privacy Loss of privacy Pool on Erf 6337	The proposed alignment is off private property. We have been informed by local landowners that there are regular breaches of privacy by hikers not knowing where to walk currently. It is assumed that since the path is envisaged to be as low as possible, formal demarcation would reduce the amount of people trespassing on private property. The path would also be aligned below the pool on Erf 6337.
Property values Decline due to loss of privacy and security	The perceived loss of privacy and security would be relative to the physical location of the path in relation to individual properties. It is unlikely that the values would decline substantially as a result of the pathway, which may not be physically visible to most of the properties due to topography, as the path would be located behind / below rocks in many places.
Security (referring to criminal elements)	It is our opinion that to formalise the Poole's Bay section would improve accessibility for law enforcement officials to pursue poachers or other criminal elements.
Visual impact The path may result in property owners erecting walls and fences which would have a visual impact.	It is not possible to respond or predict what property owners along the path would do. Currently only two properties don't have some form of barrier between their property and the shore.
Waste Management Construction and operational phases of the proposed development - it must be specified who will be responsible.	The EMPr specifies how waste should be dealt with during construction and operational phase and specifies responsibility.

5. Why is this needed and is it an appropriate development in this location and at this point in time?

The following points relate to need and desirability as considered in the National Guideline on Need and Desirability (2017):

- The site falls below the high watermark and will not impact on biodiversity or conservation targets.
- It is located inside an urban area, surrounded by existing urban development on the one side and the sea on the other and the proposed path would support the land use in the surrounding area.
- There are no recorded ecological sensitivities of significance on or in the immediate site surrounds. The Walker Bay whale sanctuary borders onto the site, but it would not be affected by the proposed development.
- The existing Cliff path in the area, and the fact that the proposed development would enhance this resource.
- The exclusion of the site from identified / mapped biodiversity areas.
- Waste management specifications that take account of the prevent, reduce, reuse, recycle, dispose hierarchy are included in the Environmental Management Programme.
- typical impacts associated with such developments are generally known and easily managed. This Basic Assessment served to contextualise these impacts to the site specifics. There were no apparent gaps in knowledge to suggest that impact identification and assessment were not based on a risk averse/cautious approach.
- Negative impacts associated with the development are limited and of low significance, and most can be avoided altogether or limited to acceptable levels.
- All positive and negative direct, indirect and cumulative impacts on the biophysical and social environment have been clearly documented in Section H of the Basic Assessment Report.
- There will be no unacceptable opportunity costs or any impact of significance that would negatively affect the health and/or wellbeing of the surrounding community.
- A thorough public participation process is being undertaken to inform the assessment.
- The development will serve to support local land users in the area, as well as non-locals. The popularity of the existing cliff path is testament to the need and desirability for completion of it in this location.
- The site is located on public coastal property and not subject to land use applications. There are no known restrictions in existing land use rights that prohibit the development of a path, subject to landowner consent (Department of Land Affairs)
- The Western Cape Provincial Spatial Development Framework (2009) (PSDF) does not extend to project level, however the proposal does not conflict with any of the spatial goals and objectives of the PSDF.
- Overstrand Integrated Development Plan (2017-2021) regards tourism as a key economic driver. Connecting the existing Cliff path would support a landmark tourism attraction in the area. Since the development of the path would not be financed through municipal resources, it would not put pressure on municipal revenue. Certain ward priorities are also for upgrading the Cliff path (Voelklip), thus a connection would support such initiative.
- The attraction of visitors to the area necessitates the need for supporting infrastructure, such as the proposed pathway through a more rugged area of the coast line in Hermanus. As indicated, the proposed connection path would be an enabler in this regard.

- The Overstrand Integrated Development Plan includes the Environmental Management Framework for the local area and notes the effects of climate change which includes mean sea level changes, as well as the frequency of storm events, consideration of which has been included in the design to provide for a more robust and durable structure.
 - Findings and recommendations from Specialist Screening studies that were undertaken during 2019 were incorporated into the mitigation measures in the Basic Assessment Report and Environmental Management Programme and it informed the formulation of the preferred layout alternative.
 - The area through Poole's bay is already informally used by hikers. As such, it is believed that this proposal constitutes a development that would optimise use of the area and add value to the existing cliff path.

The above factors as well as the congruence of the proposal with coastal management policy clearly demonstrates the activity as appropriate at this point in time (i.e. there is a need for the activity), and that the activity is appropriate in the context of its environmental setting (i.e. the activity is desirable in this location).

6. Why is a formal environmental impact assessment process required?

The approval of the development is subject to a Basic Assessment Process as required by the NEMA Environmental Impact Assessment Regulations 2014, as amended.

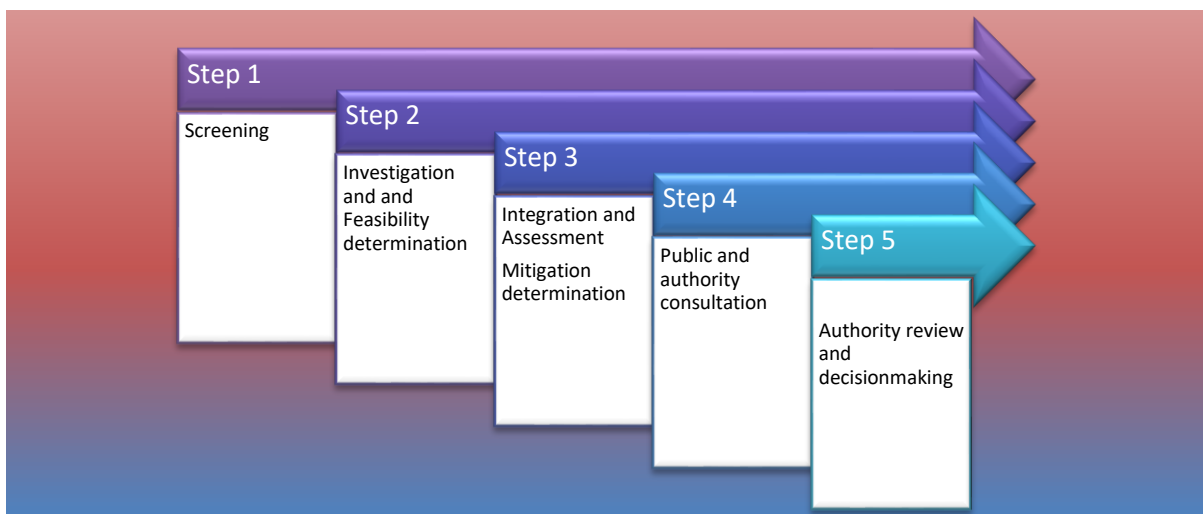


Figure 6: Basic Assessment process depicting where public participation is required

Listed Activities

Relevant Basic Assessment Activity(ies) as set out in Listing Notice 1	Portion of the proposed development to which the applicable listed activity relates.
15, 52 The development or expansion of structures in the coastal public property where the development footprint is bigger than 50 square metres	The proposed pathway would exceed 50 m ² .
18 The planting of vegetation or placing of any material on dunes or exposed sand surfaces of more than 10 square metres, within the littoral active zone, for the purpose of preventing the free movement of sand, erosion or accretion	The proposed pathway would entail the placement of concrete on more than 10m ² exposed sand surfaces within the littoral active zone in order to provide safe access for pedestrians, hence preventing the free movement of sand, erosion or accretion in these areas
19 The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from a watercourse	The pathway will cross a small stream flowing into the sea and may entail the disturbance of more than 10 cubic metres, depending on the design of the path at this point. It is highly unlikely though, as the area to be crossed will only impact on approximately 5m ² surface area. Therefore, this activity will only be triggered if excavations required are more than 2m deep.
19A The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from the seashore	Construction activities would necessitate the infilling or depositing of more than 5 m ³ of pebbles and grit within the seashore, as the pathway would be more than 800m long.

Note that although Activity 12 of listing notice 3 (regarding removal of vegetation in a CBA) was considered, it is our opinion that it would not be required, as the path would be located below the HWM of the sea, where there is no vegetation to be cleared.

7. What options have been considered and how was the current preferred alternative determined?

The two layout alternatives previously considered differed only in one area where a servitude was proposed over private land. After consultation with private landowners, it became clear that the structure should preferably remain on public land and therefore below the HWM. A long process of investigation and consideration has been followed to reach a reasonable and feasible alternative:

1. Project objectives were determined - the main objective for the applicant is to complete the Hermanus Cliff path through Poole's Bay
2. Constraints were investigated, especially highwater mark and topography, as well as possible impact to birds, heritage and freshwater features in proximity to the site.
3. Alternatives were considered including the path being above the HWM in some sections - but since the route is limited to the HWM through Poole's Bay as a result of private property boundaries up to the HWM, alternatives are limited to use of materials and design. The success of concrete structures in rough sea conditions have been repeatedly confirmed, and it seems fitting to implement a well validated solution.
4. Initially the path would also have spanning sections (thus a design alternative), but the cost of construction would be too high and the visual effect too sophisticated.
5. As there was a previous opportunity to obtain input from adjoining landowners, the concerns and suggestions were incorporated as far as practically possible. The preferred alternative would therefore consist of battered step and balustrade sections, depending on the height above ground level as well as the wave force in the area. To make the design as little intrusive in the landscape as possible, there would also be sections of varying demarcation as some areas on the beach may only require subtle demarcation for users of the path to refrain from entering private property.
6. For safety considerations, balustrade sections would have stainless steel grab rails.
7. For geographical considerations, steps would accommodate the landscape, creating paths over large rocks, while crossings would accommodate the falls and allow sea water to flow back and under the path. These gully areas would be bridged by heavy duty sugar gum beam crossings, connected to the concrete with stainless steel threaded bar.
8. The layout is planned to follow the HWM from in front of Erf 12257 on the western side to Erf 6088 at Mickey's Rock on the eastern side. Avian specialists indicated that disturbance to the birds on the Island at Mickey would not be of significant concern, but informal use and the option of a servitude over Erf 6088 would still form part of the layout, should the landowners be receptive to the option at any time in the future.

9. What happens if the development doesn't go ahead?

In the case of the 'no-go' alternative, no action will be taken to formalise the path and undesirable access and usage conditions will remain as is current. Pedestrians would still be required to use the sidewalk detour along the R43 for this section of the path.

10. What impacts would completion of the Cliff path have as a result?

Impacts normally associated with construction activities include disturbance outside construction footprint, noise, littering, etc. In order to mitigate these impacts, specifications have been included in the Environmental Management Programme (EMPr), which must be adhered to. These include:

- Demarcated restriction of construction activities site to minimise any potential disturbance to the surrounding area.
- Following an integrated waste management approach during construction and operation.
- Rehabilitation of disturbed areas must take place after the completion of construction.
- Environmental awareness training to construction staff.
- Local employment.

Operational aspects of the proposed development would be limited to maintenance of infrastructure and signage and waste management along the path. Specifications in the EMPr to address the associated impacts include:

- Regular inspection of infrastructure and signage
- Regular clean-up of litter along this section of the path

No detrimental impacts to the environment or affected parties are expected; on the contrary, this proposed activity will strive to enhance social impacts.

Cumulatively, the connection path would support tourism in the area and region. Improved co-operation between the municipality and community organisations could also be brought about and the objectives of the Western Cape Coastal access strategy would be endorsed.

The negative impacts associated with the proposal are generally of low to medium significance. The positive impacts are mostly of medium to high significance:

Construction				
Aspect:	Impact:	Score:	Additional Criteria Ratings:	
		Significance	Probability	Consequence
Geographical / physical	Structure in the landscape	Other means of realising this benefit may likely be cheaper to achieve	Definite if the path is built	Negative or positive change (depending on opinion) with no other geographically related consequence
		Low -	Definite	Slight
Geographical / physical	Indirect: spillage of concrete / pollution	Impact not substantial, remediation fairly easy to achieve	Probable due to construction context	Problem, but not insurmountable
		Low -	Probable	Moderate
Biological	Disruption of aquatic / marine ecology	The impact is negligible within the bounds of impacts which it could occur as watercourses are on private property above the HWM, which would be a no-go area. The stream which needs to be crossed, is a narrow trickle over the beach into the sea with limited function. The high dispersal rate of the sea would mitigate concrete spills, which would be limited as a result of manual labour	Although it will be of short term (even temporary), the stream flow would have to be interrupted if a crossing is installed at this point	Problem, but not insurmountable
		Low -	Definite	Moderate
Biological	Displacement of birds	The impact is low where the impact affects the environment in such a way that natural, cultural and social functions and processes are minimally affected.	It is probable that this impact may occur	Problem, but not adverse
		Med -	Probable	Moderate
Biological	Destruction of vegetation	The impact is negligible within the bounds of which it could occur due to the sparse occurrence of vegetation on the path footprint. Most vegetation is located on neighbouring private property, which would be a no-go area.	Depending on the route followed by the HWM, it is very likely that some vegetation would need to be removed.	Problem, but not adverse
		Med -	Probable	Moderate
Waste	Pollution - litter and building rubble	Impact is low and can be easily mitigated	It is possible that even with mitigation in place, it could occur due to neglect by construction workers	Nuisance, but manageable
		Low -	Possible	Moderate
Noise	Nuisance of construction noise	Impact is very low due to natural noise mitigation by wave action	Although of very low significance, it is probable that the impact would be experienced by some	Nuisance, but manageable
		Low -	Probable	Moderate
Visual	Visual intrusion of activities	Impact would be low, as most of the construction area would not be visible to the public and be limited to some private properties abutting the HWM	Very likely that construction activities would visually intrude according to some perceptions, but due to the short term nature may not be regarded as an impact by others	Nuisance, but manageable
		Low -	Probable	Moderate
Socio-economic		Should identified resources need to be removed, the impact would be	Some identified resources may need to be removed, but unlikely	Problem, but not adverse

	Destruction of archaeological resources	real but not substantial in relation to other impacts, little mitigation would be required	as it forms part of a section of the informal path that could still be utilised as such (mitigation)	
		Med -	Unlikely	Moderate
Socio-economic	Employment creation	Other means of achieving this are about equal in time, cost, and effort	Construction workers would definitely be required, but there is a chance that it would not require new appointments and that local contractors with existing labour would be utilised	Positive convenience
		Med +	Probable	Moderate
Operation				
Aspect:	Impact:	Score:	Criteria ratings	
		Significance	Probability	Consequence
Biological	Displacement of birds	Impact is real but not substantial in relation to other impacts.	It is possible that this impact may occur	Problem, but not adverse
		Med -	Possible	Moderate
Waste	Pollution - litter	Impact is real but not substantial in relation to other impacts. In the case of adverse impacts, mitigation and/or remedial activity are both feasible and fairly easily possible	It is probable that even with mitigation in place, it could occur due to neglect or ignorance of path users. Litter would also be washed up from the sea which cannot be controlled by the applicant	Nuisance, but manageable
		Med -	Probable	Moderate
Socio-economic	Improvement of access to coastal resources (tourism)	This is a positive impact to which there is no real alternative to achieving this benefit	It is very likely that the proposed path would have a notable impact	Material improvement in access to public amenity
		High +	Probable	Substantial
Socio-economic	Improvement of safety (pedestrians)	This is a positive impact to which there is no real alternative to achieving this benefit	It is very likely that the proposed path would have a notable impact	Material improvement in pedestrian safety when using the path
		High +	Probable	Substantial
Socio-economic	Improvement of security (neighbouring private property)	This is a positive impact to which there to which there may be cheaper alternatives to achieving this benefit, although it would then be the responsibility of individual property owners	Although it cannot be guaranteed, that security could be improved	Convenience of having improved security access in otherwise difficult to access area
		High +	Possible	Moderate
Socio-economic	Improvement of privacy (reduced trespassing on neighbouring private property)	This is a positive impact to which there to which there may be cheaper alternatives to achieving this benefit, although it would then be the responsibility of individual property owners	Although it cannot be guaranteed, it is likely that pedestrians would adhere to the demarcated path and not wander onto private property if the path is safer and clearly demarcated	Convenience of demarcation could reduce trespassing
		High +	Possible	Moderate
Socio-economic	Employment creation	Other means of achieving this are about equal in time, cost and effort	Unlikely that new opportunities would be created during operational phase of the project due to low maintenance requirements	Positive convenience
		Med +	Unlikely	Moderate
Cultural	Improvement of the landscape and natural features (the Cliff Path valued by the local community for aesthetic significance)	There is no real alternative to achieving this benefit	If the path is constructed, this cultural resource would very likely be improved.	Material improvement in aesthetic significance of existing public amenity
		High +	Probably	Substantial

11. What are proposed to limit the identified impacts?

Mitigation measures are approaches or practices to prevent, reduce or control undesirable effects of a project. Implementation of an environmental management programme to cover construction and operation and maintenance of the path would be conditional upon approval.

The EMPr aims to have the following broad outcomes:

- To provide a structure or framework within which the environmental management requirements will be implemented, audited and reported on, in order to ensure that potential impacts on the environment are minimised.
- To set out the mitigation measures and environmental specifications which are required to be implemented during the various phases of the development in order to minimise the extent of environmental impacts, to manage environmental impacts and where possible to improve the condition of the environment.
- To state standards and guidelines that are required to be achieved in terms of environmental legislation and authorization conditions.
- To provide a clear indication of the environmental management requirements of each of the role players involved.

Mitigation and Monitoring measures included in the EMPr aims to achieve the following more specific outcomes:

Construction Phase –

- Controlled Access and Construction Traffic
 - Construction access to this site is limited to the existing cliff path (by foot) on either end of the new path section, as accessed via Main Road and Protea Road parking areas. Access via private properties would need to be specifically negotiated between the contractors and the respective property owners. Construction vehicles are not to hinder the access of other road users in the area (public roads and public parking places) e.g. during off loading or due to obstructive parking. Traffic safety must be maintained at all times and station flagmen placed when required. All parking, delivery and access points and routes must be approved by the Principal Agent and the ECO.
 - Appropriately secure transported materials to ensure safe passage between destinations. This includes cleaning running boards of loose debris before vehicles leave site and covering trucks carrying sand with shade cloth/canvas covers to avoid loss en-route.
 - Any lost materials/sand/debris on the surrounding public road network or cliff path as a result of the contractors' activities shall be cleared immediately. These shall be swept up and removed and not left on the side of the road or path.
- Effective Site Demarcation and adherence to avoidance of No-Go Areas
 - No staff, materials, equipment, damage or dumping of materials or waste is allowed outside of the agreed work site boundaries (5 meters path work area width SEAWARD from HWM plus 3.5 meter width buffer area inland above HWM to erect demarcation and approved stockpile/site storage areas, unless otherwise agreed per an approved Method Statement) except where used to specifically rehabilitate/repair an area off-site.
 - Private properties are considered no-go areas (unless access has been specifically negotiated and formalized in writing between the contractor and the owner) and wherever possible pegs shall be used to demarcate the extent the work area inland within the 3.5m buffer zone where this abuts private property so that staff have a visual guide/reminder.
- Well organised, secured and neat Contractor's Camp
 - The contractor shall obtain approval from the landowner/municipality for any area used for temporary stockpiling/deliveries, or establishing a site storage container.
- Effective management of fuel and plant
 - No bulk fuel storage (more than 50l) shall take place on the site. Jerry cans of fuel on site shall be stored in leak-proof drip trays, well away from combustible materials and at least 20 meters away from the stream and wetland areas as indicated on plan.
 - Maintain all vehicles and equipment in a good condition in order to minimize the risk of leakage and possible contamination of the soil, stormwater or adjacent public roads by fuels, oils and hydraulic fluids.
 - Mop up or treat (bio-remediate) any spills immediately.
 - Provide drip trays (placed strategically to avoid incidental spillage of oils and fuels onto the ground) for any plant/equipment e.g. generators and concrete mixers that leak during refueling or operation.
- Appropriate Housekeeping and Waste Management
 - The Contractor shall provide for the ECO's approval a Waste Management Plan Register indicating the anticipated construction waste types, sorting and storage and disposal/recycling methods.

- Provide sufficient bins/bags on site in which to store the solid waste. Storage facilities shall not be allowed to become overfull. Bins/bags/waste stockpiles must be covered with lids/shade cloth to prevent redistribution of the waste in high wind conditions where this is a risk due to the type of waste stored.
- The site shall be kept neat and tidy. No littering on site - litter shall be collected daily into bins or more frequently as required to prevent it from blowing onto adjacent properties/areas.
- Waste shall be disposed of at licensed waste disposal sites. Recyclable/re-usable waste shall be stored/bagged separately for recycling. No waste may be disposed of on site by burning or burying. Remove staff food waste from site minimum daily.
- The Contractor is responsible for maintaining records to demonstrate that waste has been lawfully disposed of by the Contractor – this shall be kept on the Contractor’s site file and checked by the ECO. Records shall detail who removed the waste (Contractor directly or a third party service provider), date removed from site, type, quantity and destination/treatment of waste e.g. recycling/landfill, and where obtainable, receipts/proof of delivery to a licensed landfill or waste management service provider.
- Stockpile all building rubble in central locations on site and remove this as soon as it constitutes a practical load. Keep clean building rubble separate from ‘soft’ waste to minimize dumping costs and allow for recycling e.g. at an off-site crusher facility.
- Hazardous demolition or construction waste e.g. fuel/oil contaminated waste etc., requires special handling and disposal per legislation. Store in a sealed drum and remove off the site to a hazardous waste disposal site or have collected by an accredited hazardous waste disposal service provider. Waste manifests and the related safe disposal receipt copies shall be submitted to the ECO for all hazardous wastes disposed of by the Contractor.
- Available Emergency Procedures
 - Fire - Advise the relevant authority of a fire as soon as one starts and do not wait until it can no longer be controlled. All site staff to be made aware of the procedure to be followed in the event of a fire.
 - Spills - Mop up all fuel/oil/chemical/sewage spills and keep all contaminated earth and mop up materials in a sealed drum for removal to a hazardous waste disposal site periodically/at end of contract. Alternatively, treat in-situ with a bio-remedial product. Report all spills and treatment to the ECO.
- Properly managed Concrete and Cement Works
 - Give preference to pre-cast concrete elements as opposed to on-site batching/casting wherever practically possible.
 - Store unused cement in a secure weatherproof location.
 - Avoid any cement contaminated runoff into the environment. Create/provide an impermeable plastic/plastic-lined sump if required to hold any cement contaminated water.
 - Remove any concrete spills from the surrounding area immediately.
 - No mixing/ placing concrete products on unprotected terrain – use of mixing trays/pans/boards only.
 - Collect empty cement bags from the working areas at the end of every day and store in a windproof container and remove from site for disposal daily.
- Properly managed Paints/Hazardous Substances
 - No paint products, chemical additives or solvents such as thinners and turpentine or any other hazardous substances may be disposed of on site.
 - Store all hazardous substances in sealed, well labelled containers when on site and remove from site at the end of every working day. Liquid substances containers shall be placed on a drip tray/bunded area to safely contain any accidental spillages

Operational Phase –

- Continued Infrastructure maintenance
 - Regular maintenance of infrastructure and signage
 - The Construction management specifications contained within the EMPr must be applicable to any construction work required as part of maintenance work, including ECO appointment if the work scope is longer than 2 weeks.
- Adherence to No-go areas
 - Maintenance workers and staff shall not access private properties at any time
 - Signage shall be installed and maintained to discourage public access into private properties from the pathway and trampling of vegetation.
- Effective Alien Invasive Plant Management
 - The area within 2 meter width of the new cliff path shall be kept free of alien invasive plants as listed in the Alien Invasive Species Regulations (2016 and any subsequent amendments) of the National Environmental Management: Biodiversity Act (of 2004).
 - These shall be pulled out by hand as seedlings and the plants removed from the area for disposal.

- Effective Waste Management
 - Provision of litter bins
 - Periodic litter clean ups
- Ensuring safety and awareness of path users
 - Safety/indemnity signage is recommended to make path users aware of safety risks due to terrain and location within the HWM of the sea.
 - Interpretative signage, encouraging environmental/conservation awareness is encouraged.
 - Signage and infrastructure shall be aesthetically pleasing (and thus maintained in good condition).
- Utilisation of Local labour
 - Wherever possible, local labour shall be used for maintenance work.

How will implementation be ensured?

The specifications, method statements and monitoring need to be implemented by the contractor on site. An Environmental Control Officer must be appointed to monitor and report on this implementation on a regular basis to the relevant authorities. The Applicant is ultimately responsible for compliance and non-compliance is punishable through law.

12. Recommendations to be considered by the Decision-making Authority

As the public participation process has not been concluded yet, recommendations cannot be finalised yet. Based on the specialist studies conducted, as well as previous input received from the authorities and the public, the following is provisionally proposed to be conditional upon approval of the proposed development:

- The Applicant should provide the DEA&DP with a bank guarantee for the cost of the works and 5 year’s maintenance costs before construction may commence.
- The EMPr must be adhered to, including the appointment of an ECO during construction and any future maintenance, should activities for maintenance exceed a period of two weeks.
- A maintenance management plan should be adopted by the DEA&DP for future activities associated with maintenance of the path, which would entail disturbance of material within the stream or on the seashore
- All activities must be restricted to the demarcated area to minimise any potential disturbance to the surrounding area and avoid trespassing on private property.
- During excavations, sediment into streamflow and the sea must be restricted.
- All construction staff must be provided with environmental awareness training prior to the commencement of construction activities.
- An integrated waste management approach must be used that is based on waste minimisation and should incorporate reduction, recycling, re-use and disposal where appropriate. All excess sand, gravel, concrete and waste material, including litter associated with meals, must be removed from the construction site.
- Rehabilitation of any disturbed areas associated with the development must take place after the completion of construction.
- If any animals are trapped on site, they must first be removed and relocated to places of safety in a similar habitat and not harmed in any way.
- The proliferation of alien invasive plants must be prevented and controlled.
- As many as possible local community members should be employed for construction work.

13. How does public participation work?

A particularly important component of the NEMA Authorisation process is Public and Authority consultation.

It is task of the Environmental Assessment Practitioner’s (EAP) (in this case Ecosense) to compile a comprehensive report containing details of the investigation, recommendations and conditions and present this in order to identify any additional issues as a result of the proposal.

Such issues must be addressed and presented again to those interested and affected parties that chose to participate. Once the EAP is satisfied that all the identified issues had been addressed, the report plus proof of public consultation can be submitted to the Authorities for decision making.

Notices will be issued via the media and to pre-identified persons (neighbours, community organisations, Councillors, Authorities etc) that there will be an opportunity to comment on the assessment reports for a proposed development.

Persons / entities can register as interested and affected parties (IAPs) by sending their name and contact details via email, SMS, WhatsApp, fax or hardcopy letter to the EAP that is facilitating the EIA process. Information about the progress of the process will be distributed to those who register, and they will have an opportunity to comment, in writing, on any related documents made available for this purpose.

IAPs may raise any issues which they believe to be of significance to the consideration of the application. It is however required by the Regulations that any interested and affected party that register as part of the process to comment also disclose any direct business, financial, personal or other interest they may have in the approval or refusal of the application.

that after the initial notifications, any future correspondence will only be issued to those parties who officially registered.

Interested and affected parties wishing to register must note that in terms of the Protection of Personal Information Act, participating interested and affected parties should be aware that by taking part, they are entering a public process and that their names, comments and objections will be made public. Contact details which may appear on submitted emails for instance will be hidden as far as possible and only made available to the authorities for proof.

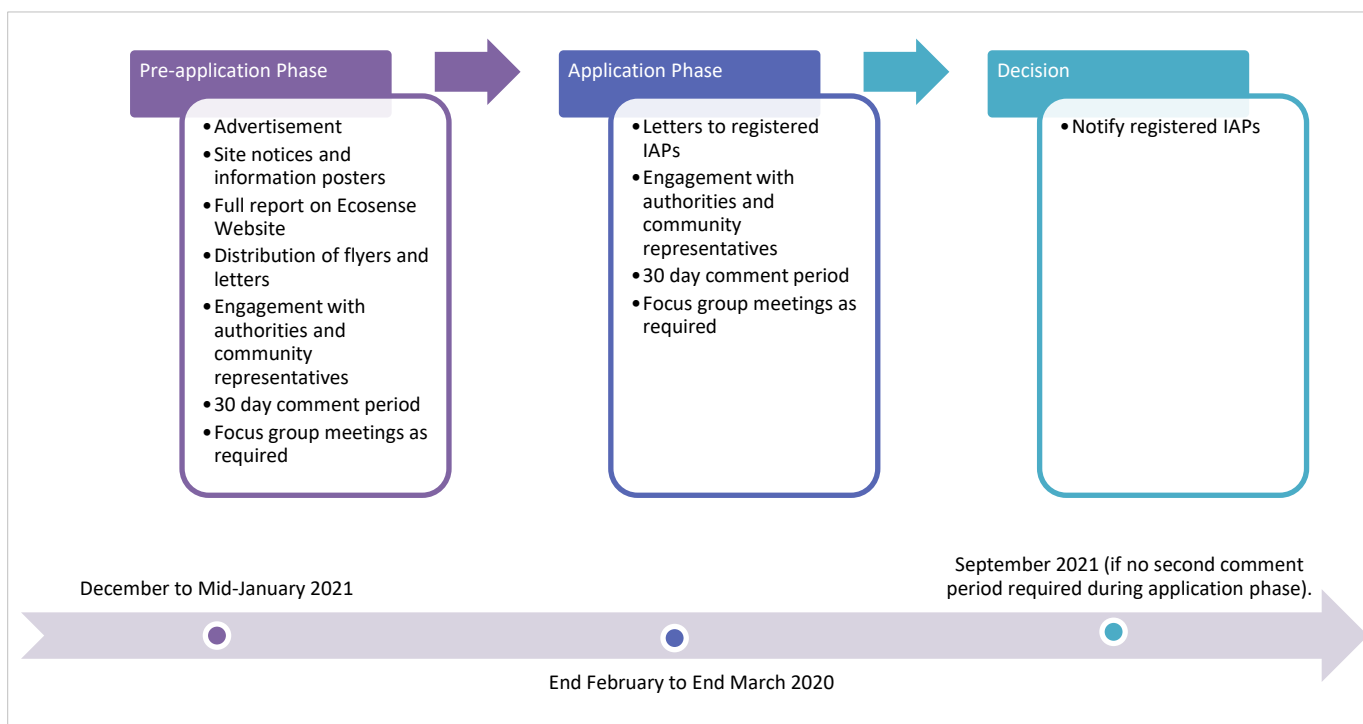


Figure 7: Opportunities for public participation

14. How can Interested and Affected Parties participate?

- 1 -Register as stakeholder - HOW? Send your name via SMS, WhatsApp or email.
- 2- Read the report - WHERE? The complete report is available at the Hermanus Library and electronically at <http://www.ecosense.co.za/documents-for-public-review/> . Information posters with more detail information is available at the Hermanus Public Library, Information office, Tourism Bureau and Fernkloof Information office.
- 3 - Send questions or comment about your concerns - HOW? Send an email, SMS or WhatsApp message.

15. How and when will the decision be made?

Once all the comment periods have been concluded and no new issues were raised that had not been addressed before, the EAP will submit the final reports with proof of all the actions undertaken for public consultation, including all comments received and responses thereto.

Since the Applicant is not an organ of state, the application will be submitted to the Western Cape Department of Environmental Affairs and Development Planning.

For the final Decision, the Department has 107 days to conclude. After the decision has been issued the EAP must notify the registered interested and affected parties of the outcome. There is then an opportunity to appeal, should there still be unresolved issues in the opinion of the interested and affected party.

16. Ways to contact us:

Contact person: Mrs Kozette Myburgh
Address: PO Box 1426 Knysna, 6570
Tel: 021 161 0258, Whatsapp/SMS: 082 783 9860
Fax: 086 547 4221
Email: kozette@ecosense.co.za
Web: <http://www.ecosense.co.za/documents-for-public-review/>

17. A few frequently used abbreviations:

CBA - Critical Biodiversity Area; **CPAG** - Cliff Path Action Group; **DEA&DP** - Department of Environmental Affairs and Development Planning; **EAP** - Environmental Assessment Practitioner; **ECO** - Environmental Control Officer; **EMPr** - Environmental Management Programme; **HWM** - High watermark; **NEMA** - National Environmental Management Act 107 of 1998; **WCBSP** - Western Cape Biodiversity Spatial Plan of 2017