



## **Comments on the Proposed Restoration and Maintenance of the Blue Stone Quarry Wall, Robben Island**

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### **Preamble**

Between us we have a wealth of knowledge of the ecosystems of Robben Island in particular its avifauna.

Peter Barham, Les Underhill and Rob Crawford set up the Earthwatch research project (Penguins of South Africa) that has collected a mass of data on Robben island over the past 20 years. Initially the project was created to trial new designs of flipper bands for penguins, but has grown over the years to become an integrated penguin monitoring project, following the full life cycle of many individual birds on the island. The Biodiversity and Development Institute currently has a project to monitor the African black oystercatchers on the island, while the University of Bristol in conjunction with the University of Exeter has a number of current projects, for example tracking penguins on foraging trips from the island. Several PhD and MSc students from the Universities of Cape Town and Bristol have carried out most, or all, of their research on Robben Island. BirdLife South Africa has carried out several research and conservation projects on Robben Island, for example to investigate the use of transponders to mark penguins. SANCCOB is involved in a number of research projects on Robben Island, including post-release monitoring and long-term survival of African penguins, rescue of injured, oiled and abandoned seabirds and employs a Penguin and Seabird Ranger on the island who assists Robben Island Museum with monitoring and management of seabirds breeding on Robben Island.

In 2004 there were an estimated 52,000 breeding pairs of African penguins in South Africa, this had fallen to just over 13,000 by 2019. Robben Island holds around 15% of the total population of African penguins (in 2004 there were just under 8,000 pairs and 1,200 in 2019). As a result of the serious decline in numbers this century across the entire range of the African penguin it was listed by the IUCN, as an endangered species in 2010.

Robben Island is also home to other endangered species, notably the Cape Cormorant which in the past few years have formed a new breeding colony in the area around the Blue Stone Quarry and the Bank cormorant which breeds at the harbour, mostly on the short arm and could be affected by the proposed batching plant.

Any developments on Robben Island, should therefore take into account the potential impacts they may have on the penguins and Cape Cormorants to avoid further damaging the status of these endangered species. The penguin and Cape Cormorant colonies are not static, the locations where the penguins choose to come ashore and to breed have varied over the years, so that in some areas

numbers are still declining while in other areas numbers are growing. A few years ago Cape cormorants formed a new colony which breeds at or close to the Blue Stone Quarry.

We additionally note that paragraph 6 of the conditions of this project's environmental authorisation (as granted on 19 May 2015) specifies that the authorised activity "must commence within a period of three (3) years from the date of issue of this authorisation" and that "[i]f commencement of the activity does not occur within that period, the authorisation lapses and a new application for environmental authorisation must be made in order for the activity to be undertaken". We are unaware of any activities having commenced to reinstate the Blue Stone Quarry wall during this three-year period (which has now expired). Nor are we aware of any application to amend the environmental authorisation's period of validity prior to it having lapsed. Unless commencement of the activities or the submission of such an application occurred during the requisite period, it is our understanding that a new application for environmental authorisation is necessary. In particular, the avifaunal assessments on which this proposal is based were made at least seven years ago, so that they are now quite out of date. In particular, there is no consideration at all, anywhere in the proposal of the effects on the cormorants in carrying out construction work within or adjacent to their new colony.

We appreciate the need to ensure historical significance of the Blue Stone Quarry is preserved so that the many stories of the prisoners who were forced to construct and work in the quarry can continue be told to coming generations. However, we also believe that considerable damage to the natural environment and avifauna of the island could be caused if the development goes ahead in its present form. We hope that Robben Island Museum will consider carefully the balance between the cultural and ecological heritage and see if there might be alternative ways in which the story of the quarry might be told that are less invasive to the island's fauna.

## Comments

The proposed restoration of the Blue Stone Quarry wall on Robben Island poses many new environmental issues. The plan that is proposed in the documentation was formulated six years ago. At that time there were significant tensions between the Avifaunal assessment and the Heritage considerations. In fact, the avifaunal report from 2014 included the assessment that *“Essentially, the project cannot be undertaken without contravening national legislation and therefore from an avifaunal perspective this project is **fatally flawed**.”* It then moved on to noting that in the event that the Heritage considerations were agreed to take precedence over the environmental ones, there might be a barely acceptable solution. In that solution, a six month construction period with various mitigations applied, where the damage to the penguins, which were identified as the species that would suffer most, could be reduced from very high to medium high.

However, these considerations were made more than six years ago. In the meantime, environmental conditions have changed dramatically on Robben Island to the extent that the original Avifaunal report no longer reflects the situation on the Island, particularly at the site of the Blue Stone Quarry. The most important fact is that for the last few years, a large colony of Cape cormorants has bred in and around the Blue Stone Quarry. Cape cormorants, like African penguins, are listed as an endangered species and all the legislation that is in place to prevent disturbance to penguins applies equally to the Cape cormorants. Since there is no mention at all of Cape cormorants in the original assessment, there is nothing on which to base an assessment of the disturbance that will occur to these endangered birds if the proposed restoration of the quarry wall takes place. Further, over the intervening years, the penguins have increased their use of the quarry as an important route to and from the sea.

Robben Island is also the breeding site for the largest colony of Hartlaub’s gull in Southern Africa as well as for the Greater crested (Swift) tern. Their breeding sites must not be disturbed for the duration of this project. The Caspian tern which is frequently referred to in the out of date avifaunal report, bred on the island for about a decade but has now abandoned the site for breeding.

It is our opinion that should the works be carried out as described in the proposal, this Cape cormorant colony on Robben could be permanently destroyed. This is something that should not be allowed to happen. All seabird species mentioned above are listed as Threatened and Protected Species under the National Environmental Management: Biodiversity Act (10/2004): Threatened or Protected Marine Species (ToPS) Regulations and are thus legally protected and may not be harassed (including approach by a person closer than 5m).

Accordingly, before any action is taken it is essential that a new and up to date Avifaunal assessment is carried out. Only then can a proper assessment be made of the impact of the restoration project, and whether the detrimental impacts on both penguins and Cape cormorants can be mitigated to a sufficient extent for the project to proceed in its present form, or whether a different approach to commemorating the history of the quarry may need to be envisaged.

A few examples of the changes in the past few years that will need to be addressed in the new Avifaunal assessment include:

1. A large colony of Cape cormorants approximately 2 000 pairs in size has formed at the Blue Stone Quarry. Of these ca. 200 pairs use the pile of rocks that are designated as the building material for the restored wall as nest sites. A further ca. 500 pairs nest all along the quarry walls on either side of the quarry and the remainder use whatever nests sites they

can find either inside or just outside the quarry, mainly on the Southern edge. In January 2021, more than 1,800 cormorant chicks had to be rescued by SANCCOB after they were abandoned by their parents. Many more chicks were predated by Kelp gulls and Sacred Ibis. This gives some indication of the susceptibility of Cape cormorants to disturbance so any construction around their colony will result in abandonment on a similar or greater scale.

Questions the Avifaunal assessment will need to address include:

- a. Would it be possible (practically and legally) to discourage the cormorants from nesting on the rock pile or the quarry walls without preventing them from breeding at all in the year the work is carried out?
  - b. How could the loss of this nesting habitat be mitigated?
  - c. What alternative habitat could be provided in the long term?
  - d. Will the restored walls provide a sufficient nesting habitat for these birds in the future or
  - e. Will RIM find it unacceptable to have breeding cormorants in the restored quarry which would make it a no-go area during future breeding seasons?
  - f. What mitigations can be applied to avoid disturbance leading to abandonment of the birds in future years after the work has been completed (including during any maintenance activities that are envisaged subsequent to the wall's restoration)?
2. The number of African penguins using the quarry as a site to enter and leave the sea has increased – we have observed over 200 penguins lining up to come home on the beach just outside the quarry before returning to their nests in the evening.
  3. Hartlaub's gulls are not mentioned in the 2014 report, but now breed regularly in the area designated on the restoration plans as the "Construction Camp".
    - a. What mitigations will be necessary to protect these birds?
  4. Kelp gull numbers have increased significantly since 2014 and they now breed over an extensive area to the South of the Quarry. Our personal observations suggest that they have extended their breeding season to later in the year to overlap more with their prey species. Kelp gulls predate on eggs and chicks of Hartlaub's gulls, Swift terns, African penguins and Cape cormorants especially when they are disturbed by human activity.
    - a. How can opportunistic predation by Kelp gulls on the various birds nesting along the Western perimeter Road be mitigated against in light of traffic causing noise and other disturbance along the road during construction?
  5. Over the past ten years or so, Western Perimeter Road has been closed to traffic for one or two months, when there are chicks in the gull and tern colonies, to prevent road kill. With a six month construction period, it is very likely that the situation where chicks have hatched and are starting to run freely around in the colonies along Western Perimeter Road will arise.
    - a. What additional mitigations will be put in place to prevent traffic running over these young birds. For example, will a fence be erected along both sides of the road?

Even ignoring the overarching issue of the out of date Avifaunal report and the additional questions a new assessment will raise, there remain a number of issues with the current proposal and the mitigations to attempt to protect penguins and other avifauna which need urgent attention. Some are listed below.

1. It appears that no mitigations to avoid times when penguins are commuting to and from the sea are provided (c/f the construction at Alpha One where work is to be limited to specified hours) – In 2015, we observed around 250 penguins lining up on the shoreline at BSQ – we have not been able to get numbers since as the area has been taken over by nesting birds. In any event, this indicates that all work in the area should cease in good time for these birds to assemble – say 90 minutes before sunset.
2. It appears that night working is proposed. There is mention of floodlights in the ‘REINSTATEMENT OF THE BLUE STONE QUARRY WALL AND LIMESTONE ROADWAY ADDENDUM REPORT Alternative Construction Options Assessment’. Any such lighting will negatively impact any birds in the area. It will also act to attract pelagic species that do not normally come onto land. This should not be allowed at all. Any driving along the roads at night should be banned – the noise and lights will disturb all the fauna on the island and the risks of road kill will be greatly increased as a consequence. Further any night time activity would most likely impeded the cat and Fallow deer eradication work which is done at night.
3. The plan is very vague about when the project will start and the times when people will be active on the site – it appears to simply hope that the disturbance caused at the site will begin before any breeding birds arrive and will be sufficient to prevent them breeding in the area.
  - a. A detailed work scheme stating when work will be carried out is needed. This should include: the day of the year on which work will start. Once work has started a structured plan of what type of work will be being carried out in each week is also needed to assess probable impacts.
  - b. Before any realistic assessment of the impact on the avifauna can be made it is also necessary to understand what types of work may be carried out at different times of day. For example, if there is a requirement to drive vehicles to the site, that should not be done at times when penguins are commuting across the roads; etc.
4. There is no mention in the proposed plan of a risk assessment or any mitigations for the impact of the ‘batching plant’; in Appendix A all that is said is “The avifaunal specialist has recommended that the batching plant must be installed in close proximity to the harbour and not in proximity to the BSQ site under any circumstances. This is so as not to create unnecessary ‘pollution’ (visual, noise, dust or any disturbance to birdlife) created by a plant such as this”. This is all very sensible. However, what mitigations will be in place, for example, to reduce impacts of these same types of pollution on penguins nesting and crossing the roads near the harbour? The harbour on Robben Island is also an important breeding site for the endangered Bank cormorant which only breeds at a limited number of sites in South Africa in relatively small numbers, one of its strongholds being Robben Island.
  - a. A full risk assessment for this batching plant is needed. Such an assessment needs to include mitigations to prevent harmful impacts on flora and fauna that are found in the area.
5. Road traffic: Risks of road-kill are serious – the speed of heavy vehicles needs to be very much slower than normal to allow for time to stop when a bird, tortoise, antelope, etc. runs out in the path of a vehicle. It would be sensible to put fencing up on both sides of the entire length of the Western Perimeter Road from Lighthouse road to the BSQ, to keep

fauna off the road. We'd also recommend a rigidly enforced speed limit of no more than 20kph, with no night driving permitted.

The proposal does not provide any detail of the route people and vehicles will take from the harbour and the village to the quarry. It is important that this is laid out clearly and that the approved route is adhered to. In particular there should be no traffic associated with the project along Cornelia Road as that would cause great disturbance to the penguins breeding in that area.

6. There is an error in timing of the penguins' moult given in Appendix A. *"Therefore, commencing construction in the second half of September following the predominant moulting period and before the highest egg laying season is optimal."* The moult period actually starts around mid-November and continues to the start of February. This will affect any decisions on the best times to carry out the work.
7. In 2020/21, there were two oystercatcher nests in close proximity to the BSQ site which would be impacted adversely by the construction activity. The impact of the construction on these nests needs to be given proper consideration.
8. Worryingly, the impacts table, pages 13 -16, pays scant attention to and appears rather dismissive of the environmental and ecological problems that will be attendant on this work for example:
  - a. Under noise it says *"Maintenance and/or restoration activities will generate a certain amount of noise due to the operation of machinery and movement of vehicles. There are however no human receptors in the area, the noise may be a nuisance to the local bird population in the area."*

The noise will be more than just "a nuisance" to the local bird population. It will cause a deal of disturbance to patterns of behaviour and may lead to reductions in breeding success, deserting of nests and even emigration from the island in some species. Noise may well also impact other fauna e.g. by scaring the antelope and causing them to panic, etc. These issues all should be fully addressed in the Avifaunal and ecological assessments with appropriate mitigation measures put in place.
  - b. In the fauna section it is stated that *"The removals of rocks, from the old stockpile, to be used for the dry packing (and reinstatement of the wall) will result in disturbance and loss of habitat for local alien invasive fauna as well as disturbance or fatalities for local indigenous fauna such as lizards and snakes"*. We do not know what invasive alien species are being referred to here. The removal of the rockpile will however, destroy nesting habitat of the endangered Cape Cormorant which is not an alien species as well as for a variety of lizards and mole snakes. What alternative breeding and sheltering habitat will be provided for the displaced animals?
  - c. Under the penguin section it is stated *"The restoration of the Quarry Wall and other maintenance activities may influence the access route for the penguins to their breeding area as the wall will form a barrier to movement for this species. They will have to adapt and habituate to the barrier and learn to use a new route to the breeding sites. Penguins have shown resilience in doing this and therefore are not expected to be significantly impacted."* We disagree that penguins are not expected to be "significantly impacted". At the onset of the project penguins will be using established pathways that will suddenly be blocked off – the number of penguins

immediately affected will of course depend on the timing of the works, but as time progresses additional birds will be impacted. While it is probably true that penguins can be quite adaptable, it does take some time. Thus any birds that are feeding young at the time their pathways are blocked may not adapt quickly enough to be able to continue to feed their chicks well enough for them to survive. At the very least the additional time it will take them to commute to and from the sea will reduce the time available for them to forage for food for their chicks so we can anticipate a reduced breeding success for those birds.

9. We are concerned to see in section seven, the statement “*Dispose of cigarettes and matches carefully, so to prevent veld fires (arson and littering is an offence)*” – this is far from strong enough a warning – the risks of veld fires especially in the hot dry summer months are very high and could lead to catastrophic consequences for the island’s fauna – note that many animals are naïve of fire – penguins on the Falkland islands were burned to death as they remained at their nests when a fire spread through a colony back in the 1990s during an operation to clear land mines. Penguins had never previously seen fire and had no reason to be concerned about it until they were overwhelmed.

It is our understanding that no smoking is permitted anywhere on the island with the exception of the harbour and the village. Hence the instruction for this project should be the same and no onsite smoking should be allowed. However, if this is not possible, then smoking should only be allowed in a designated smoking area. Such an area should be properly enclosed so there is no risk of a lighted butt accidentally starting a veld fire. Designated smoking areas should be fenced in and placed so that there is no combustible material (including vegetation) within at least 3 metres of the fences.

10. On page 19 it states the ECO should visit the site monthly – this would mean only six visits during the project. Such infrequency is totally inadequate for a disruptive project such as this where the risks to the ecology are very high unless strict adherence to all the mitigation measure are observed at all times. Without much more regular inspections, a situation that showed disregard for the environment or the flora and fauna could continue for many weeks before any corrective action was taken. There should be a person on site everyday while work is being undertaken with the power to supervise and stop any activities that endanger the flora or fauna.

We note that in this section it also states “*The contractor’s meeting minutes must reflect environmental queries, agreed actions and dates of **eventual** [our emphasis] compliance. These minutes form part of the official environmental record.*” This statement suggests that the contractors only need to comply with the environmental regulations, etc. ‘eventually’ what process will be in place to ensure timely – i.e. immediate – compliance?

In summary, it is essential that a new Avifaunal report is compiled and the whole project reconsidered in light of the conclusions of that report. If once that report is available, it is still considered that the heritage considerations outweigh the environmental considerations, then a new construction plan needs to be made so that the timing of the project is set to avoid as much disturbance to the penguins and the cormorants as is possible. This will almost certainly involve a number of further mitigations being put in place. Some such mitigations which we think will be essential are noted briefly below, although it is to be expected that more issues will arise once the new avifaunal assessment is completed.

1. The data in figure 1 of the Avifaunal assessment addendum will need to be updated before any decisions on the possible timing of the start of the construction work are reached. First there is no data in the figure for the breeding cycle of the endangered Cape Cormorants which now breed each year in the Blue Stone Quarry. As these are a protected endangered species it is not legal to disturb them at all – so work can only start before they start to breed and if they do start to breed within the area where disturbance could occur, work would have to stop. It is also apparent that the Kelp gulls have lengthened their breeding season to take advantage of the availability of gull, tern and cormorant eggs and chicks during their later breeding season and so the Avifaunal assessment would need to be updated to reflect this.
2. A legal opinion needs to be sought in terms of whether the action to deter seabirds from breeding close to or within the Blue Stone quarry is legally possible in light of stipulations stated in the TOPS Marine regulations under ‘harassing’. Additionally, would contractors need to obtain a TOPS Marine permit in light of point (f) under the term ‘harassing’ in Chapter 1, since the proposed work will certainly require contractors to approach seabird breeding colonies closer than 5m.
3. Even if it is possible (from a practical and legal point of view) to deter Cape cormorants, Kelp gulls, Hartlaub’s gulls and Swift terns from breeding close to or within the Blue Stone quarry, it is highly likely that they will choose to breed in the general area along the Western Perimeter Road to the South of the Blue Stone Quarry. It will then be important to ensure that appropriate mitigation measures are put in place to avoid disturbance to any of these birds. In particular, it will be necessary to prevent small chicks wandering into the road, and to avoid any noise or lights which may make parents leave their nests and expose their eggs and chicks to Kelp gull predation.
4. Overall the risks to two endangered species (African penguin and Cape cormorant) posed by this work are very high so that it will be imperative that all the mitigation measures put in place are strictly adhered to. In that context there must be a full time independent monitor with the power to stop work if there are any infringements. This monitor should be based permanently on the island during the construction phase and provided with all the tools (a vehicle, binoculars, telescope, radar gun to check vehicle speeds, etc.) necessary to carry out that monitoring. It will not be sufficient to rely on the SANCCOB penguin ranger to do this job, although his advice and experience will be invaluable for the project.