Bubmission: Lastern Bays Bhared Pathways Project



Michael Rumble Little Penguin Specialist Eastern Bays Little Penguin Programme Harbour Islands Little Penguin Programme

Submission: Eastern Bays Shared Pathways Project Background

Win-Win and Not Win-Lose

I would like to emphasise from the outset my focus is NOT on stopping the Shared Pathway Project. A shared path and cycle way is definitely needed. There are significant gains for people from this project, but the small amount of little penguin nesting habitat left runs the risk of being further reduced or lost.

Increased disturbance can quickly lead to enforced changes to their natural behaviour. There is also the greater risk of injury or death from dog attacks, bicycles and cars, and pest animals drawn in by increased food waste.

Any further loss of roosting and breeding habitat will also have a significant effect across the wider harbour penguin population, and may force this native bird to utilise unsuitable nesting habitat or, worse still, desert the area.

My submission addresses the very real need to achieve a "Win-Win" by avoiding wherever possible the potential for a "Win-Lose" outcome.

My aim is to support the positive effects from the Shared Pathways Project while ensuring that the negative effects that the project will have on little penguins are carefully managed and mitigated

My Credentials

Attachment One in this submission describes my credentials as they apply to conservation, and in particular little penguins.

My credentials highlight the following points;

- Knowledge of the area affected by the proposed shared pathway.
- An understanding of penguins and their habits, habitats and characteristics.
- Experience with organising and conducting projects involving the design and build of penguin nesting areas.
- Practical experience with building nest boxes and installing them in suitable sites.
- Recent practical experience with the shaping of penguin 'keyholes' in rip-rap (rock walls).
- Training volunteers in the correct methods for capturing, handling and marking little penguins.

My work with little penguins is aimed at ensuring they are properly protected while allowing for a win-win situation where their nesting and habitat needs, and human activities overlap.

DOC Authorities

My current DOC permit for working with little penguins covers the entire eastern bays and the three harbour islands in Te Whanganui-a-Tara (Wellington Harbour). My work with penguins under the permit encompasses caring for and studying these birds.

I am one of a very small number of people in the Wellington region with a current DOC Level Three certificate for handling and managing penguins, and when required training others in handling and marking them.

It is standard practice for the holder of both those authorities to have considerable input to the location, selection, design and construction of little penguin nesting areas.

Key Points

There are a number of very pertinent points that need to be considered in determining the ideal "win-win" outcome in terms protection for little penguins.

Conservation

Conservation – protecting penguin and adding more protection –is definitely 'front and centre' in HCC's consent application.

It is pleasing to see the application is trying to protect existing nesting spaces for little penguins, and avoiding loss of access to existing nest areas so that birds face a greatly reduced risk (mitigation). It does attempt to address the need create and enhance new nest areas and habitats where access will otherwise inevitably be lost because of increased human activity arising from construction of the shared pathway (offsets).

The Policy Bottom Line

The NZ Coastal Pathways Policy Statement 2010 provides clear guidelines for activities where conservation should be a core component.

Attachment Two lists two of the policies most relevant to this consent application, in terms of their impact on the protection measures for little penguins as prescribed in the consent application, notably the supplementary reports from HCC's consultant.

HCC's application is endeavoring to protect little penguins, but most of the focus is on what needs to be done during construction, and very little about long-term monitoring and protection.

Actual Habitat Loss

The potential for little penguin habitat loss is addressed in various parts of HCC's consent application, notably in GWRC's submission by an ecological specialist.

HCC's application, however, does not highlight clearly the true impact from loss of access to penguin nesting habitat along the Shared Pathways. The proposal basically admits the proposed changes will result in an estimated 34% reduction in accessible habitat that is still available.

The way the figure (34%) is presented in the project documentation obfuscates the real loss of access to nesting areas for little penguins in the eastern bays. If one takes account of the

change imposed progressively over the years, the true loss is much closer to an estimated 78%, which is unbelievably and unacceptably high.

This scale of forecast loss needs to be reversed via the application of genuine offsets and equally genuine mitigation measures.

Penguin Sanctuaries

My more recent work with little penguins in the wider Wellington area, and in this case along the eastern bays, has been directed at promoting, establishing and maintaining genuine safe areas where penguins can come ashore and nest without human interference or imposing changes on their natural behaviour.

In 2015 I developed the 'penguin haven' concept and implemented it in HCC's penguin reserve in Days Bay. The concept is based on the need to provide sanctuaries where little penguins can live without interference.

Setting up protected (safe) havens, and building other forms of nesting sites on the sea side of Marine Drive are important requirements as they offer the greatest potential to avoid the prospect of further penguin losses, notably from road kill and predation by dogs, cats and other animals.

The true value of havens increases when it is recognised that Te Whanganui-a-Tara (Wellington Harbour) is a single cohesive community of little penguins. Any changes in one area - e.g. the eastern bays – will have a direct impact on the survivability and support in other areas.

My focus on providing genuine havens (sanctuaries) to protect little penguins excludes using nesting areas as 'test beds' for scientific purposes, particularly the more invasive types of scientific research. Setting up and maintaining sanctuaries for research purposes, imposes changes to penguin natural behavior for the sole benefit of science.

While establishing penguin sanctuaries proposed in this submission as offsets, it is equally important to keep in mind they require several years to set up (legislation as a penguin reserve, fencing, planting, predator control, etc). The actual arrival of penguins also will happen slowly over several seasons. Practical experience with the model haven in Days Bay has shown each haven must be set up for the maximum number of nest boxes even though take-up may be only one-in-five over several seasons.

NZ and Australian Clades

Two quite recent studies, one of which has been published, identified little penguins found in New Zealand originate from one of two clades (clade = a group of organisms that evolved from a common ancestor).

Penguins in the South Island generally come from an Australian clade. These birds tend to exhibit the following types of characteristics of that clade.

The penguins I care for on the three harbour islands and around the eastern bays exhibit the genetic characteristics of a pure New Zealand clade.

An unpublished report by a US scientist confirmed ALL the mitochondrial DNA samples taken from a sample of 32 adult little penguins on Matiu/Somes Island were from a pure New Zealand clade.

It is important to NOT make the mistake of trying to establish sanctuaries, etc in the North Island based on Australian clade habits and behaviours. They need to be organised around the habits and behaviours of the pure New Zealand clade penguins I am familiar with.

Preferred Nesting Habitat

A very useful guide to preferred nesting habitat for little penguins was published in Notornis in late 2019. This paper presented the findings from a study in the South Island, which confirmed the habitat needed to achieve high breeding success for little penguins:

- Overhead cover (mature bush and low trees) is essential.
- They avoid nests placed on rocky surfaces that have little or no soil.
- Nest boxes exposed to direct sunlight are less successful and tend to be used as a last resort.

A large number of nest boxes are installed on the three harbour islands and in the model Penguin Haven (sanctuary) at Days Bay. They meet the nest location and siting criteria in the study findings and as a result have consistently produced a very healthy outcome, namely high nest use and an equally high breeding success rate.

None of the three 'havens' proposed initially as 'offsets' by the HCC meet the preferred nesting criteria identified in the study by HCC's consultant.

Another key point to note is the clear preference for nest boxes by little penguins, ahead of rip-rap and rock walls. The Matiu/Somes study of penguin habitat and behaviour highlights the consistent growth in the size of the colony brought about by the addition of a large number of nest boxes.

Changes To HCC Proposal

My work with little penguins will be affected by what is being proposed, but so will the environmental needs of little penguins. One significant danger that is already apparent is to propose gains by initially offering sites as havens that were entirely unsuitable.

If the three sites originally proposed by HCC's consultant had been retained, even greater habitat loss would have been the most probable outcome.

The Days Bay Penguin Haven (sanctuary) established in Days Bay in 2015 was intended as a model for other sanctuaries developed as part of the Shared Pathways project. A major concern for me was the lack of documented consideration, if any, for the role of this haven as a model. That, in my view is both a serious oversight and a major disappointment as it overlooks what can be done to ease habitat loss by adopting realistic penguin havens on the sea side of the road.

Proposed Penguin Havens

I was invited to collaborate with the applicant (HCC), GWRC, and DOC in a review of the sites initially proposed as additional nesting areas by HCC's consultant. That review highlighted serious flaws in terms of their suitability as little penguin nesting areas (see Attachment Three for details)

None of the three proposed sites fit into the model of 'ideal' nesting areas described in a report prepared by conservationists in 2019 who studied the suitability of penguin areas (havens) for nest boxes. The study findings, and my practical experience with setting up nest sites, indicate:

- The Seaview Marina and Clapham Rock sites are unlikely to result in an increase in suitable habitat for penguins (lack of overhead cover and no soil layer and questionable gains in terms of forecast penguin nest take-up).
- The Whiorau Reserve site also lacks overhead cover, is in the wrong location within the reserve, is unfenced, and overlooks the presence of penguins outside the selected site.

The Whiorau Reserve Penguin Haven was already proposed as a suitable second site for a penguin haven (the Penguin Haven being the first one) as it is flat and is located on the sea side of the road. However, the area is unfenced, and the site needed to be repositioned to where the penguins are likely to nest (and are already there in small numbers).

This less than satisfactory outcome led me to proposing other potential sites where genuine offsets, in the form of penguin havens, would be beneficial to the little penguin population in the eastern bays, and thus to the wider harbour area.

HCC's project team supported my proposal to offset and mitigate any loss of current nest sites by establishing more nesting sites OUTSIDE the length of the proposed shared pathway. This resulted in the identification of other potential areas on the sea side of the road and well above the high tide, for example.

- The foreshore in front of Bishops Park.
- The foreshore at the southern end of HW Shortt Park.
- The foreshore in front of the Esplanade.

It is pleasing to see HCC has adopted these proposed sites, however a particular point of concern is the decision to reduce the size of area in front of Bishop's Park area proposed in the review by penguin specialists and ecological advisers.

These sites can be easily set up as 'new' penguin havens, but they will need legislative protection, effective fencing, planting for overhead cover, protection from uncontrolled dogs (especially dogs of leads), and a strong predator protection programme (bait stations and predator monitoring).

Sea Walls

The proposed sea walls are also likely to present problems for little penguins::

- Including a variety of penguin access points along the proposed sea wall shore, will
 guarantee any penguins still left alive will continue crossing the road to their traditional
 nest sites, and in the process continue running the risk of becoming road-kill to passing
 vehicles.
- Incorporating gaps for ramps or steps in the sea wall will create the effect of drawing
 penguins to these locations as the birds try to return to existing nest sites across the
 road. The value of these 'gaps' is questionable as it will reduce useable beach area and
 simply act as access points for water as the sea rise increases because of climate
 change effects.
- The need for adding special penguin access points could be removed by incorporating
 nest sites (shaped concrete boxes?) on the sea side of the wall, and above the high tide
 mark. This will require modifications to the height and shape of the rip-rap and sea walls

so that boxes are level, are easily accessed by penguins, and are not flooded at high tides.

Rock Walls/Rip-Rap

- Redesigning and building rip-rap should be a key feature of the work to be undertaken
 by the Shared Pathways project. My recent experience with providing advice and
 guidance to HCC on siting penguin 'keyholes' in rip-rap highlighted the need to ensure
 the design is modified to accommodate access to/from little penguin nest sites.
- Little penguin physical and behavioural characteristics introduce issues affecting the design of 'key holes' in rip-rap:
 - The drop down from the surface to the matting under the rock will need to be reduced from that envisaged (needs to be <300mm).
 - o The matting below each 'key hole' must be level, and not at a circa 30° slope.
 - The distance out from the base of the sea wall to the slope down will need to be flat, and wide enough for both forms of seashore nest sites (boxes and 'keyholes').
 - o The flat surface at the top of the rip-rap needs to be well above the high tide line.

Drains

Providing access to some drains that might be used by a small number of penguins is of questionable value.

A potentially effective mitigation measure for each drain involves extending existing pipes out into the sea so that penguins do not use them for access. Including a form of boardwalk above/alongside the extended pipes could provide fishing sites for locals and recreational fishers.

Additional Issues

There are other points and issues that appear to be glossed over or not addressed in the consent application. These points and issues are addressed in no particular order in this section of my submission.

Need for a Wider and Longer-Term View

It is important to keep firmly in mind eastern bays penguins are an integral part of a much wider harbour-based penguin community. Whatever is done in the eastern bays will have an impact on other penguin areas. This could be potentially catastrophic if the incorrect decisions are made. Any changes proposed or decided must be viewed and assessed in terms of their impact on the wider harbour environment.

The potential for the outcomes from this consent application to focus on short-term changes and not on the critical long-term effects is an area of concern. For example, the process for setting up nesting sites and monitoring the return or arrival of penguins will take several years, and therefore requires an equally long-term view on penguin monitoring and predator control. Taking into account inevitable sea level rises will be a critical factor as well.

Several time-driven matters need to be addressed in setting timelines for penguin-related work as part of the Shared Pathways project:

- Legislative measures defining each penguin haven as a Penguin Reserves need to developed and implemented (the model haven at Days Bay is legally designated as a reserve, and specifies it is closed to the public, dogs, etc).
- Planning for and establishing secure penguin havens should begin as soon as consent is received, and before construction surveys are carried out and actual construction work begins.
- Work on setting up penguin havens should not wait for work on the shared pathway, notably the proposed havens outside the shared pathway construction areas, which will not be affected by construction and can be set up well ahead.
- Fencing to control access by people and dogs, and predator monitoring must be high priority tasks that need to be implanted as soon as reserves legislation is published.
- The grass originally planted (marram) needs to be replaced with the correct type (pingao, etc).
- Planting and growing suitable habitat protection will take several years and needs to start as soon as possible (preferably in conjunction with building fences).
- Nest boxes need to be built and left to weather for at least one full season (a sizeable number of boxes have been built).
- Long-term penguin monitoring and predator control programmes are required which address the following basic requirements:
 - It needs to start as soon as penguin havens are constructed, and before work on the shared pathway is completed. This also applies if the project decides to construct the pathway bay-by-bay over an extended number of years..
 - The monitoring and predator control programme will need to be funded as part of the project, and continue after the pathway sections are built, until it can be clearly confirmed active penguin nests have re-appeared and established nests in the penguin havens, sea wall, and rip-rap.

Another major issue relates to an unsubstantiated story that nest boxes in the havens should be replaced by "piles of rocks" in the proposed areas in front of Eastbourne. The ecological nature of the area itself (grass, gently sloping beach, and park areas on the land side) is not conducive to setting up "piles of rocks". These types of suggestions contribute nothing to the discussion.

These long-term and wider-view requirements should be included as key components of a Little Penguin Risk Management and Management Plan. As noted elsewhere in this submission, a negotiated and agreed plan needs to be included as a key document in the consent, and not left for later consideration.

Timing of Construction Work

Timing of the construction is another matter requiring careful consideration.

Little penguins generally come ashore to roost, nest, moult, and hatch/feed chicks throughout the year. This to and fro process is especially heavy during mating, nesting and

moult. These three phases traditionally stretch from July to December, but the increasing effect of climate change has extended this to at least June and January/February.

The application includes suggestions that penguins be moved 'temporarily' while construction proceed in and around areas where there were nests. This ignores the known fact that penguins are genetically predisposed to return to or near their nesting areas, will probably desert the 'temporary' place almost immediately, and endeavour to return to their 'home' location.

This characteristic of NZ, and possibly Australian, clade little penguins reflects this homing instinct noted during 12+ years of studies of penguins nesting on Matiu/Somes Island and the other two harbour islands.

Unrestricted access to existing and proposed nesting areas throughout the year would be the desirable outcome. If this cannot be accommodated in the construction process, then the only genuinely 'safe' period for construction work would be to March through to May each year.

This will restrict the rate at which the shared pathway can be built, just like keeping the only road into and out of Eastbourne accessible at all times. However, the impact of this restriction can be offset by carrying out construction work one bay at a time.

Penguin Risk Mitigation and Management

The work needed to create the shared pathway will involve extensive upgrades and changes to the shoreline. The impact of construction work on penguins and their natural nesting habitat will be substantial, and special measures are required to manage and mitigate those effects.

Monitoring penguin activity before, during, and after construction ends using a penguin detection dog should be an essential and ongoing component of any consent decision about the Shared Pathways project.

It would be reasonable to have the project fund the full cost of monitoring penguin recovery, including nest take-up, of penguins. This should be coordinated and managed by the current holder of the DOC permit for handling and monitoring little penguins in the eastern bays.

I am aware it has been standard practice to avoid submitting a comprehensive risk management plan as part of the consent process. However, this precedent has now been overturned by the recent decision to incorporate a comprehensive plan in the consent process for the foreshore redevelopment along Cobham Drive.

With the precedent now established, a similar comprehensive Risk Mitigation and Management Plan needs to be developed and approved as part of the process leading up consent for the Shared Pathways project. Development of the plan should be coordinated and managed by an acknowledged independent ecological expert who also has in depth penguin experience.

This innovative approach will ensure all risk-related issues likely to appear prior to, during, and after construction are identified, addressed, and agreed in a binding plan.

Roadside Signage

The absence of effective signage about little penguins in and around the eastern bays is another major issue:

- Penguins normally travel from and to the sea at night, but there is little low-level light along the road.
- There is one battered sign at the northern end of Marine Drive for vehicles driving south.
- There are no high-profile reflective signs at both ends of each bay reminding residents and people driving to and from the area need to look out for penguins.
- There are no painted signs on the asphalt.

It is my firm recommendation that the SPP should follow the leadership shown by a local body in Golden Bay by and install signs along Marine Drive (ideally at each end of each bay) that are solar powered and light up at night.

Protection from Predation

The shared pathway will bring with it the prospect of increased predation by dogs not under control (that is, 'off lead'), cats, and other predating animals including rats and stoats.

Much of the predator issues can be addressed by simple measures such as fenced areas around penguin havens, keeping dogs on leads near penguin nesting sites, and an effective and well-managed predator control programme.

Having rubbish bins placed out along Marine Drive, and quarterly HCC-sponsored and managed beach/area clean-ups, are an important component of any anti-predation measures.

It is worth looking at what is already in place at the model penguin haven in Days Bay.

A More Balanced Approach

There are issues and flaws in what was originally proposed by HCC and it's consultants. Some of them have been corrected:

- The Seaview and the Clapham Rock penguin havens have been discarded.
- The original proposal for the Whiorau Reserve Penguin Haven has been replaced by the area I recommended in my review of the original proposal.

There is a real need to extend these corrections and adjustments by incorporating other essential changes which will initially, and in the future, help protect the little penguins from further loss of access to suitable habitat (currently about 78%).

Setting up and maintaining four penguin sanctuaries on the sea side of Marine Drive is an essential aspect of redesigning the penguin protection measures proposed by HCC. These havens (sanctuaries) are a potentially effective method of providing offsets that are genuinely beneficial to little penguins, and will reverse the trend in reducing the loss of suitable nesting habitat.

Designing and building penguin havens needs to be carried out in a carefully managed and specific order:

- Select and develop havens as legislated reserves
- These havens need to fit within the criteria for optimum nesting success as recommended in the findings from the nesting study reported in Notornis.
- Install fencing that restricts dogs (and people!) from gaining uncontrolled access to each haven.
- Plant vegetation recommended by DOC as suitable for each location, including replanting if some of the initial planting fails.
- Set up and maintain a comprehensive predator trapping and monitoring programme as soon as haven fences are in place.
- Install the large number of nest boxes needed that fit the one-to-five take-up criteria, bearing in mind that nest take-up itself will be a long-term activity (the figure of 100 boxes has been suggested).

A HCC-sponsored and funded long-term programme to monitor nest and area 'take-up' is necessary to establish if and when little penguins return to existing and new penguin protection areas. This should be a community-based monitoring programme similar to the one I set up in 2015.

That programme includes basic monitoring by students from Wellesley College, which can be easily extended to the other two schools in the Eastbourne. In addition, there is ample scope for HCC to extend and promote community contribution via families in the eastern bays.

Nest site searches by a DOC-certified penguin detection dog, and coordinated by the DOC permit holder, are an important component of the monitoring programme. These surveys should begin before, during, and after each area where construction is to take place. There also needs to be schedule of regular (three-monthly?) in subsequent years as a component of monitoring nest take-up.

Effective predator control measures, dogs kept on leads, anti-litter rubbish bins along the shared pathway, and quarterly HCC-managed beach clean-ups are classic examples of what can and needs to be done to protect the little penguins as well as keep the area tidy.

Predator monitoring before, during, and after construction is also an essential protection measure and needs to be a permanent arrangement.

Penguin offset and mitigation measures must be capable of preventing/removing the need for penguins to cross Marine Drive. This can be achieved by setting up at least the number of havens proposed, and by altering sea walls and rip-rap so that they stop little penguins crossing the road to traditional nesting sites.

This will require:

- Adjustments to the design of the proposed sea walls so that the number of potential access points is reduced to the bare minimum (the ideal outcome is no access points).
- Adjustments to the design of the proposed sea walls by incorporating 'concrete' nest sites on the sea side of the wall.

- Modifications to the design of rip-raps so that penguin suitable 'keyholes' can be built into them.
- Modifying the height of rip-raps to cater for optimum sea levels, and include the incorporation of a wider flat area that sits above the high tide level.

Timing is a critical issue as construction work must NOT occur during the penguin nesting and moulting cycles as this will have the opposite effect to that desired. March to May is likely to be the period with least penguin movement to and from the sea.

Construction noise will be an issue, which means a generous safe distance (**circa 100m**) from nests sites must be applied at all stages and in all areas before and during construction. Implementation of this requirement needs to be carefully managed and monitored.

There is a need to develop and implement a plan for setting up and maintaining day-and-night signage that warns drivers to look out for little penguins. The approach adopted by the local body in Golden Bay using solar-powered signs is a good example of what can be done if there is a will to do so.

Penguin signage painted on the road into and out of the each bay would be a useful addition. But, it is important to keep in mind they will not be very useful at the time penguins travel to/from nests (after sunset and before dawn), and should be viewed as a possible adjunct to other, and potentially more effective signage.

My practical experience with;

- the effectiveness of the model penguin haven at Days Bay;
- setting up successful nesting sites on the three harbour islands,
- creating 'keyholes' in rip-rap; and
- placing suitable 'nesting boxes on the rip-rap;

has shown these proposed changes are practical and achievable requirements.

Introducing one or more dog parks would be an effective addition to planned mitigation measures.

The changes outlined in my submission should be viewed as essential work to be undertaken as part of the Shared Pathway project.

Closing Observation

There is a better way for people and native birds to live in harmony. This can be achieved for little penguins by building up and creating additional nesting areas for our locally iconic seabird species. These areas are an essential component in the overall effort to ensure habitat loss is no longer a factor for little penguins.

Changes to the rip rap, sea wall, and drains will strengthen the potential to avoid further habitat loss, and loss of penguins via road-kill.

The provision of more and better access to nest areas is the most immediate need, there is an equal requirement to ensure that little penguins are supported and protected in the foreseeable future.

Regular monitoring and predator control before, during, and long after construction is completed are equally essential requirements when it comes to caring for this rather special seabird.

Adopting the changes and additions proposed in this submission would give even greater meaning to the title of the proposed project - Shared Pathways.

Mike Rumble
Coordinator Eastern Bays Little Penguin Programme
Coordinator, Matiu/Somes Little Penguin Programme
Holder of DOC Permit for Little Penguin Studies in the Eastern Bays and Harbour Islands

Attachments: 1. My Credentials

2. Extracts from NZ Coastal Policy Statement 2010

3. Original Haven Sites Proposed by HCC

My Credentials

Caring for little penguins and protecting the small amount of environment left has been my primary focus for over 10 years. My work as a little penguin specialist has focussed on conserving – protecting – those two key facets.

The conservation projects and programmes work I have set up or been involved in have given a high level of understanding and involvement with little penguins, and an in-depth knowledge of their habits and habitats:

- My introduction to little penguins arose from an invitation in 2009 to join a study based on the three islands in Te Whanganui-a-Tara:
 - That study had its genesis in establishing if flipper bands affected the ability to forage and thus feed chicks. The study looked at over 2,000 birds and established that flipper bands had little impact on their ability to forage. I took on the role of coordinator for the harbour islands studies in 2012.
 - An important subsidiary exercise in the harbour islands studies involved building up the colony while maintaining colony size, and health, by introducing hundreds of nest boxes. The colony is acknowledged to be the largest in the area.
 - Studies on these three predator-free islands have been extended to a third stage, in 2015, with the focus shifting to monitoring the colony for the signs and impact of what are now generally described as Climate Change effects.
 - I hold the DOC permit for handling and monitoring penguins in the eastern bays between Pencarrow and the rail bridge at Seaview, and the three harbour islands. This permit includes handling and monitoring little penguins in and around the three harbour islands.
 - I also hold the DOC Level 3 certificate for handling and monitoring little penguins.
 - During 2019 I began the lengthy task of training participants in the third study so that they can obtain DOC certificates authorising them to handle and mark (that is install flipper bands, transponders, or loggers) little penguins under supervision.
 - Some of my more recent work involves penguin rescue on behalf of DOC, and linking with native bird rescue and recovery centres.
- Few people will be aware the first penguin haven established in the Wellington Region is located on the sea side of the proposed route of the shared pathway:
 - The haven was first set up in the 1990s, with the aim of protecting little penguins from further impact by humans. The site is the only penguin-specific reserve in the area, if not the whole of New Zealand. Selected students from Wellesley College carry out fortnightly visits to the Haven during the nesting season and help with monitoring.
 - In 2015 I initiated a project with financial support from the Hutt City Council, to refurbish this historic site as a secure Penguin Haven. Most of the heavy work was

- carried out by two people who volunteered their time and materials and made a significant contribution to shaping the haven, and installing a protective fence.
- The primary intention was to create a model for other havens along the eastern bays and by that means reverse the continuing loss of nesting habitat and penguin deaths on the road.
- The haven has been operating for five seasons, but sadly the design and modelling aspects do not feature in what has been proposed by HCC's consultant for the Shared Pathways project.
- As soon as the Penguin Haven was ready, and adults started returning in 2015, a youth education programme for selected students was organised with Wellesley College who were very interested in a genuine conservation activity. This programme has been very successful and will continue in 2021.
- After the Penguin Haven was set up the focus shifted towards determining where penguins were nesting along the length of the eastern bays, between Pencarrow and the rail bridge across the Hutt River:
 - With DOC's assistance I located a dog approved for little penguin searches, and HCC stepped up to the mark with funding to pay for a search during 2016.
 - The search was successful in locating a number of penguin sites but the numbers found was less than expected, primarily because 2016 was a very bad nesting season for penguins (high than usual harbour temperatures!).
 - The decision was taken to repeat the search in 2017, but this time was funded by the Shared Pathways project. Repeating the search was the correct action as 78 sites were found between Burdans Gate and Seaview. Many of the sites had penguins, eggs, or chicks present.
 - o GIC, a volunteer organisation set up to help community groups map their study areas using GIS, produced a series of maps with sites marked by GPS at no cost to HCC. These maps were provided to the Shared Pathways project as it offered the best option for assessing and forecasting the location and number of penguins in the area of the walkway/cycleway.
- I have organised two community-based nest box building programmes that relate specifically to the eastern bays:
 - The first project (30 boxes for the model Penguin Haven set up in Days Bay) was funded by HCC. It was carried out with the support and involvement of Placemakers Seaview, the Menz Shed Days Bay, and students from Wellesley College.
 - In 2019 the contractor for the planned pipeline rebuild at Seaview provided funding for the construction of 50+ nest boxes. This project is supported by DOC, Placemakers Seaview, Menz Shed Days Bay, and students from Wellesley College, Muritai School, and San Antonio School. The box build phase was ready to go, but was delayed until October 2020 when it became apparent the Covid-19 lockdown was imminent.
 - The nest boxes are now stored on Matiu/Somes Island while they weather.

- I have also been called upon by HCC to provide advice to, and work with, a contractor on the design of 'keyholes' in rock sea walls (generally known as 'rip-rap') so that they can be used by little penguins. This work identified issues in the design of rip-rap which would limit access by penguins for nesting purposes.
- I have been contacted regularly to give talks about New Zealand's iconic little penguin to community organisations.

Extracts From NZ Coastal Policy Statement 2010

Policy 11: Deals with protecting indigenous biological diversity in the coastal environment.

Clause 11(a)(i) states "... avoid adverse effects of activities on ... indigenous taxa listed as threatened or at risk" (little penguins are listed as At Risk and in some areas are Declining)

Clause 11(b)(ii) states "... avoid significant adverse effects and avoid, remedy or mitigate other adverse effects of activities on ... habitats in the coastal environment that are important during the vulnerable life stages of indigenous species"

Clause 11(b)(iii) states "... avoid significant adverse effects and avoid, remedy or mitigate other adverse effects of activities on ... indigenous ecosystems and habitats that are only found in the coastal environment and are particularly vulnerable to modification ... "

Policy 19: Deals with walking access.

Clause 19(3)(a) states "... only impose a restriction on public walking access to, along or adjacent to the marine coastal area where such a restriction is necessary ... to protect threatened indigenous species

Clause 19(3)(b) states " ... only impose a restriction on public walking access to, along or adjacent to the marine coastal area where such a restriction is necessary ... to protect dunes, estuaries and other sensitive natural areas or habitats ..."

A key question: Does this 'walking access' extend to or include dogs?

Original Haven Sites Proposed by HCC

Seaview Marina

Any attempt to rebuild the site, and take part of it for other seabirds, will destroy penguin nests already there. Therefore, it cannot be claimed as genuine offset, nor is it a genuine gain in terms of mitigation:

- The location is only suitable for rip-rap style nesting areas, and for a very small number of nest sites.
- It lacks the bush and/or tree cover needed in spaces set up as havens.
- Human activity and boating noise from the marina, and the exposure to Wellington northerlies and southerlies, will ensure the location is of very limited value in terms of potentially successful penguin nesting.
- As the site would be starting with a 'clean slate' (no existing and active penguin nests left), it would also require enforced relocation of penguins from other areas, something penguins simply do not do.

Even if penguins were moved to the 'new' site their genetic predisposition and homing instinct will see them returning to, or near, where they were hatched and fledged from.

Clapham Rock

- The site chosen for a haven was equally unsuitable:
- The rock is composed entirely of greywacke and the absence of soft soil-like surface makes the location totally unsuitable for penguin nesting areas:
- There are no genuine flat areas for nest boxes.
- There is only space for a very small number of nest boxes.
- The rock and its surroundings are fully exposed to northerlies and southerlies.
- It is one of three fishing sites in constant use by recreational fishers.
- The location is totally open to the public and dogs.
- It is currently unfenced, and furthermore has a bus stop in front of it.

The previously known nesting sites are two located in 'rip-rap' slightly North of Clapham Rock (found during the detection dog surveys I organised).

Whiorau Reserve

This site had already been earmarked by me, in consultation with HCC Parks and Reserves as the next possible site for a penguin sanctuary (the existing Penguin Haven model was the first). Unfortunately, the area selected is not where penguins already nest and is definitely not the ideal location in that reserve:

- There is a lack of bush and/or tree cover for nesting in the area selected.
- The bush- and tree-clad area plus the rip-rap surrounding the reserve where penguins already nest are excluded from the area proposed for the Whiorau Penguin Haven.
- The proposed location is open to cars, the public, and dogs.
- It is unfenced.
- The space selected by the consultant for the proposed haven is used by local iwi as a storage area for waka.