Attachment 33

KENNEDY ENVIRONMENTAL LIMITED

DRAFT LITTLE PENGUIN MANAGEMENT PLAN FOR BN AND FN WHARF PROJECT

Prepared for Port of Auckland Limited

March 2025

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2 Document Revision History

Revision	Author	Version	Date of release
1	P Kennedy	Issue to POAL for review.	20 December 2024
2	P Kennedy	Final draft issue to POAL	4 February 2025
	P Kennedy	Re-issue of final draft issue to POAL	3 March 2025

3 Bibliographic Reference

This report should be referenced as:

KEL 2025. Little Penguin Management Plan for BN & FN Wharf Project (draft). Prepared by Kennedy Environmental Limited for Port of Auckland, March 2025.

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1 INTRODUCTION

The Port of Auckland Limited (POAL) operates the Port of Auckland (the Port). POAL is intending to progress construction of two new wharf structures at the Port in accordance with consents obtained under the Fast-track Approvals Act 2024 (the Project). The Project involves:

- The construction of an additional wharf/berth at the seaward side of the existing Bledisloe Terminal. This is referred to as the Bledisloe North (BN) wharf. The new wharf provides for large cruise ships (>300 m in length) and existing roll on roll off (RoRo) needs.
- The construction of an extension to the existing Fergusson North (FN) berth at the Fergusson container terminal which improves vessel container management at the berth (i.e., loading / unloading time).

Under the conditions of consent, POAL is required to prepare a Little Penguin Management Plan (LPMP). This document is the draft LPMP required under those consent conditions. It provides the framework for undertaking pre-construction and construction surveys, responding to little penguin finds in pre-construction surveys or an unexpected find of little penguin during construction works. It also provides the necessary information for meeting the requirements of a Department of Conservation (DoC) Wildlife Act Authorisation (WAA) for handling and relocating little penguin should it be required.

For context, the assessment of potential ecological effects prepared in support of POAL's application for resource consent (KEL 2024) concluded that although little penguin (kororā, *Eudyptula minor iredale*) had not been located within the rock revetments within the Project area, there was a possibility that penguin may be present. As a contingency it was identified that should little penguin be discovered during works that a WAA under the Wildlife Act should be in place to allow the capture, handling and relocation of penguin if required.

2 This Plan

This LPMP has been prepared in accordance with the proposed conditions submitted with POAL's resource consent application. As such this draft LPMP is an outline plan only and will be revised and updated following resource consent being granted, taking into account any revisions made to the conditions of consent and any specific conditions imposed through the WAA process (to be included in Appendix A). The key elements of this plan include:

- Section 3 which sets out key definitions.
- Section 4 which provides a summary of little penguin breeding and ecology.
- Section 5 identifies the points where the plan intersects with the Construction Management Plan (CMP).
- Section 6 sets out management processes where a WAA has been granted.
- Section 7 sets out some recommended draft conditions.
- Section 8 provides information about communications.

Figure 1 below shows the location of the existing revetments at Bledisloe terminal and Fergusson Container terminal.

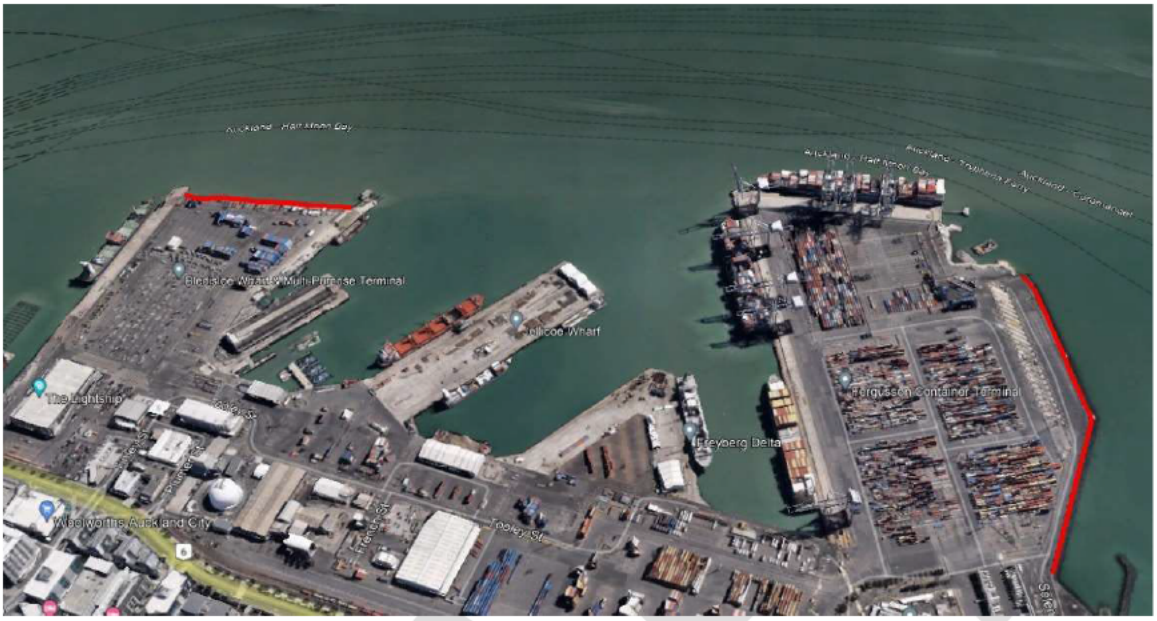

Figure 1: Location of revetment at Bledisloe Terminal (left) and Fergusson Container Terminal, (right) at Port of Auckland (from KEL 2024). Existing FN wharf is the wharf with container ship berthed at north of container terminal.

This LPMP does not include matters such as predator control as the Port is a biosecurity-controlled area and POAL has an extensive pest control program in relation to terrestrial pests such as mice and rats.

3 Definitions

This LPMP makes reference to a number of matters that require definition. These are set out below.

Suitably Qualified Coastal Ecologist

A person who with a tertiary ecology qualification and experience working with coastal birds. They will be responsible for supervising and advising on the overall kororā management actions for the Project as required.

Suitably Qualified Kororā Specialist

A person who with a tertiary ecology qualification and experience working with kororā (or if a tertiary qualification is lacking, a person with kororā experience that is approved by DoC). They will be responsible for supervising and advising on kororā management actions for the Project as required.

DoC-Permitted penguin handler

A person who is listed in the WAA (Permit) for the Project to capture, handle and relocate kororā.

Active burrow

A burrow containing, or suspected to contain, a nesting bird, viable nest contents (egg(s) and / or chicks (s)), or moulting bird based on the identification of penguin sign by a suitably qualified and experienced coastal ecologist.

Penguin sign

The sighting of guano, feathers, odour or penguin sounds at a suspected burrow.

As set out in this LPMP, due to the length of the Project construction period, two penguin handlers will be identified. The Korora specialist can be one of those handlers.

4 Kororā

4.1 Introduction

There is little published information available about the numbers of little penguins that are present and nest within the lower Waitematā Harbour. Little penguins have a national conservation status of At-Risk – Declining (Robertson et al. 2021)) and a regional status of Threatened Regionally Vulnerable (Wooley et al. 2024). There are few records of little penguins within Waitematā Harbour in sources such as iNaturalist or e-bird. There are occasional observations of penguins swimming within harbour waters with observations typically peaking in September through November. Little penguin have been found during other construction works within the harbour. The most recent being in 2023 on the Westhaven Marina breakwater during rock replacement.

4.2 Breeding

Kororā / little blue penguins are nocturnal, typically coming ashore after dusk and leaving before dawn. Adults are present at colonies throughout the year. For most colonies in New Zealand the breeding season begins around July and continues until February when chicks fledge. The yearly cycle involves occupation of burrows and pair formation; breeding with egg laying/incubation/hatching/chick rearing/moulting. There is fluidity in timing of breeding activity around New Zealand so it is generally assumed that penguin can be present for most of the year with a short period around May and June when they will be at sea for a few weeks feeding preparing for the breeding season (refer Fleming 2013).

4.3 Burrow Habitat

Kororā utilise a diverse range of habitat for nesting. Burrows are dug where ground is suitable or where natural or artificial features provide a dark space where they can nest. In urban areas on the coast penguin have often bred under houses. As much of the lower Waitematā Harbour shoreline is man-made, penguin have found suitable nesting locations in revetments and under buildings that are up against the shore (e.g., the marine Rescue Centre on Tamaki Drive by the Port).

The two surveys (using a penguin detector dog) caried out in 2024 (KEL 2024) on the BN revetment did not detect penguin sign. Examination of the revetment from the northern end of the Fergusson Container Terminal west to Tamaki Drive, found positive dog detects and several burrow with audible and or visual evidence of penguin presence (Figure 1). Little penguin are not present at the location of the FN works as the rock revetment is yet to be constructed adjacent to this location.

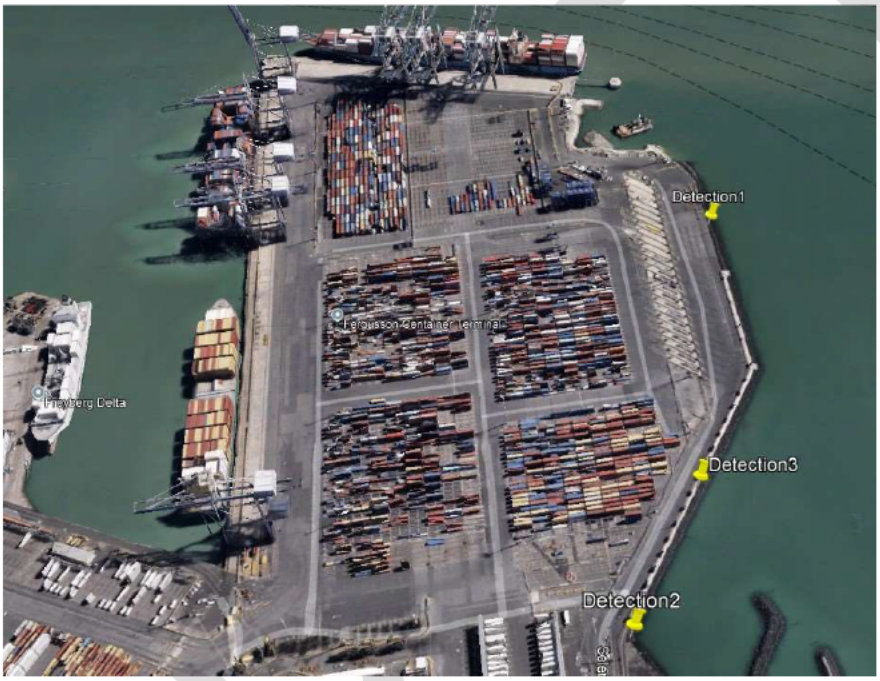

Figure 1: Fergusson Container Terminal, locations where little penguin burrow were detected (from KEL 2024).

The ability to detect little penguin in their burrow using burrow scopes is very dependent upon how deep the burrow is within rocky areas such as revetments. Although little penguin nest above the high tide mark, some burrows can be several metres or more within the revetment.

4.4 Site Fidelity

Little penguin in general return to the colony they fledged from. An overview of fidelity in little penguin colonies is provided by Wilson & Mattern (2024).

5 MANAGEMENT

5.1 Introduction

Rock revetment works will only occur at BN as a component of the overall construction program. Those works will occur for multiple short periods though the entire BN works period. The physical works will involve:

- The removal of rock to allow steel pile tubes to be installed.
- Removal of smaller rock from sections of the revetment to ensure the rock in the revetment is of suitable size. Replacement with rock of defined size.

5.2 Health & Safety

Prior to any surveys being conducted to establish presence of little penguin, a Health and Safety assessment will be carried out and a Job Safety Analysis (JSA) prepared for this element of work. The JSA which will be prepared prior to the first pre-construction survey will focus on field work on the revetment and penguin handling. The JSA which will be included as Appendix B of this Plan, will include relevant matters included in NZPI (2024), and will include:

- Reference to kororā handling protocols (e.g., as a standard operating procedure (SOP)) as they apply to who is permitted to handle under the Wildlife Act 1953 (WA).
- Information about hygiene practices and biosecurity during all site work.
- Safety procedures to be followed while working around the water's edge within the Port/on the revetments.

5.3 Preconstruction/Construction Penguin Communications

Prior to any construction starting information will be communicated to all worksite staff involved in works on the revetment (crane drivers, piling equipment) about little penguin. The information will be sufficient to ensure that site workers will be able to spot little penguin with their work areas and respond accordingly. The key information that will be communicated will include:

- Why there is a need to watch out for penguin.
- Where they could be found.
- What they look like.
- What to do if you see one within a work zone.
- Who to advise if you see a penguin.

Training will be provided to onsite contractors to identify signs of penguin habitation (e.g., moulted feathers and guano (penguin poo)) and to discuss actions required to secure work sites, construction materials and equipment to prevent kororā access. This training will be run by a suitably qualified and experienced ecologist.

During construction and at toolbox meetings:

- What to do if you see one within a work zone and what to do if a penguin is injured.
- Who to advise if you see a penguin.

Information will be re-communicated should there be changes in personnel on site.

5.4 Approved Penguin Handlers

Prior to the commencement of work on the project work site, two approved DoC penguin handlers should be identified and available to assist if required. Two handlers are required due to the duration of the project and to ensure one handler is available at any time.

The identity of the approved handlers should be communicated to DoC through the finalisation of the LPMP.

The work commencement timetable should be communicated to DoC approved penguin handlers.

5.5 Preconstruction Surveys

Prior to any construction starting at BN, a pre-construction survey will be carried to identify any sign of penguin burrow activity within the BN revetment area. As set out in Section 3 of this LPMP, detection is defined as:

- A positive detect by an approved detector dog but no penguin sign or
- The identification of penguin sign (refer definitions and Section 5.6) at a locality identified by a dog.

If a detection is made, a burrow-scope or other suitable tool camera will be used to assist with identifying the burrow contents.

5.6 Information Recorded in Surveys

If a detection is made of any kind, the following information will be recorded (as applicable):

- The location of dog detection(s) or by detection by specialist/handlers.
- The GPS location of the nest (GPS or phone GPS).
- The identification of any penguin sign including guano, feathers, odour, penguin sounds.
- The identification of any penguin within the burrow (e.g., using a burrow-scope) and whether they are moulting).
- The number of eggs or chicks if seen in the burrow.
- Photographs to confirm location.

Information collected in the field will be recorded on the field record form provided in Appendix C.

5.7 Construction Surveys

Following commencement of construction works at BN and FN, little penguin surveys will be conducted no less than every three months on the BN revetment and on the Fergusson Container terminal eastern revetment down to the start of the red fence (identified by Detection 2 in Figure 1). Surveys will cease when piling work is completed.

The surveys will record the information set out in Section 5.6.

5.8 Finding Little Penguin at BN

During penguin surveys (pre-construction)

If little penguin are found during a pre-construction survey, the location(s) will be identified and location communicated to the Project manager.

A temporary exclusion zone of 20 m will be put in place until a review of penguin management options within this area is carried out.

If non-breeding or non-moulting kororā are discovered within the effects zone during a pre-construction survey, or incidentally during works (both within and outside of the kororā breeding and moult periods), works will not commence, or if underway, halt immediately, until the penguin/s has been moved to the relocation site by an authorised person / handler.

Upon discovery of the kororā, the construction manager and Port of Auckland will be informed, and the process outlined in Appendix D will be implemented immediately to arrange the capture, handling and relocation of the bird.

While waiting for the arrival of an authorised person, the kororā will not be handled or disturbed further. If the kororā is injured, DoC will be immediately contacted to receive advice on what actions to undertake.

During construction

On the basis that no little penguin burrows have been identified within the BN revetment, it is not intended that a specialist be on site during all rock removal. However:

- Excavator operators will receive training to ensure they know how to identify little penguin.
- A stop work process will be in place in the event of a penguin sighting. If a little penguin is sighted, the location(s) will be identified and location communicated to project manager and ecology specialists. An exclusion zone of 20 m will then be implemented.

- Work will resume when the penguin has left the area or has been removed for relocation by the approved handler (as specified in the WAA). Relocation will be carried out as set out in Appendix E.

5.9 Capture, Handling, Relocation

These procedures require a Wildlife Act Authority (WAA) under the Wildlife Act.

Penguin handling

All kororā capture and handling will be carried out by an approved handler and will be carried out in accordance with a SOP (which will be included in appendix F of the final draft of the Plan).

Records will be kept to trace all movements of handled/captured penguin.

Should any kororā have a band then the band details should be recorded.

Relocation site

A relocation site will be identified in conjunction with the DoC and the approved kororā handlers prior to the finalisation of the LPMP.

It is recommended that any kororā relocated from the work site should be marked to allow easy identification should it return to the work site.

Suitable transportation cages will be made available for transport of kororā.

5.10 Changes to Management Plan

Following approval (certification) of the LPMP, no material changes will be made to the Plan without the approval of DoC and recertification by Council in accordance with the conditions of consent. In relation to the review of Plan contents:

- The Plan (or specific sections) will be reviewed should site construction activities change in any way that affects management actions within the Plan.
- The overall Plan should be reviewed 30 days prior to the yearly anniversary of the Plan.
- A copy of all changes proposed to the plan will be provided to DoC for approval prior to their final incorporation into the Plan.

6 FINDING INJURED OR DECEASED KORORA

6.1 Injured

Should an injured or sick kororā be identified on site:

Contact the approved handler.

If the handler recommends use the appropriate PPE and place the injured kororā into a suitable transportation carrier as set out in the SOP.

For injured or sick penguins contact the nominated wildlife rehabilitation centre. In this case it is:

BirdCare Aotearoa

74 Avonleigh Road
Green Bay, Waitakere, Auckland
Phone: (09) 816 9219
Website: www.birdcareaotearoa.org.nz

If the centre is unavailable contact DoC through the DOC emergency hotline **0800 DOC HOT (0800 362 468).**

6.2 Deceased

Under the Wildlife Act the kororā is a protected species. In the event that a dead kororā is located within the project area:

- The finding will be reported to DoC (Auckland Office) with 24 hours. Refer contact details in Section 8.
- A photograph should be taken of the bird as found. The photograph should include any information (e.g., on the ground) that might relate to cause of death. The photograph(s) should be included in the findings email to DoC.
- The dead bird should be collected with all handling carried out with disposable gloves and placed into a ziplock plastic bag. The bag should then be stored in a fridge if the carcass is to be transported within 24 hours.
- The project 'ecologist' or' penguin specialist' should determine (in conjunction with DoC) if an autopsy is required. If an autopsy is to be performed, then the carcass should be placed into a suitable container and sent by courier to the vet lab or Massey University [contact details to be included in final plan) or alternative veterinary facility (e.g., Pet Doctors St Lukes & Exotics Centre).

7 CONDITIONS

This section of the LPMP will set out any specific conditions in the Consent as granted and the WAA that relate to:

- Little penguin monitoring.
- Surveys and monitoring.
- Training of construction staff.
- Reporting and communications.

- Responses to penguin sightings.
- The management and relocation of little penguin.

8 COMMUNICATIONS

8.1 Key Contacts

The key contacts for matters set out in this LPMP are set out in Table 1.

Table 1 Key contacts.

Party	Person	Phone	Email
POAL Project manager			
Project ecologist	**P Kennedy**	[redacted]	[redacted]
DoC approved penguin expert			
DoC approved penguin handler			
DoC approved penguin handler			
Department of Conservation			
Auckland Council			

8.2 Summary of Reporting to Department of Conservation and Auckland Council

This section will include all key reporting requirements associated with the consent as granted and the WAA.

4 REFERENCES

NZPI 2024. Penguin monitoring: Health and safety awareness. New Zealand Penguin Initiative. Version 1, August 2024. Available at https://www.nzpi.nz/korora/littlepenguin-resources.

Robertson HA, Baird K, Elliot GP, Dowding JE, Elliott JP, Hitchmough RA, McArthur N, Miskelly CM, O'Donnell CFJ, Sagar PM, Scofield RP, Taylor GA, Mochel P 2021. Conservation status of birds in Aotearoa Zealand, 2021. New Zealand Threat Classification Series 19. Department of Conservation.

Wilson K-J, Mattern T 2024. Little (Blue) penguin/kororā. Available at https://sop.penguinarchive.org/little-penguin. Accessed 17 December 2024.

Woolly J, Lovegrove T, Robertson H, Dell'Ariccia G, Melzer S 2024. Conservation status of birds in Tāmaki Makaurau / Auckland. Auckland Council technical report, TR2024/5

Appendix A: Wildlife Act Authorisation.

To be appended when granted by Department of Conservation.

Appendix B: Job Safety Analysis.

This Appendix contains a draft JSA. This will be reviewed and updated by the Ecologist, Penguin specialist, POA and Contractor prior to inclusion in the LPMP for certification. The project site will be under the control of the Contractor.

JOB SAFETY ANALYSIS (JSA) WORKSHEET

LOCATION/ SITE:	Bledisloe North wharf construction/Fergusson North wharf addition Little Penguin Management	**JOB PLAN / SHEET** (if applicable)		**JSA NO:**	POAL_6
COMPANY NAME (CONDUCTING WORK):	KEL, POA staff, Dabchick and any Project Contractor staff who might assist as required. To be updated prior to finalisation of LPMP.				
WORK ACTIVITY / JOB / TASK OR ACTIVITY DESCRIPTION	Little penguin surveys on BN revetment; Fergusson container terminal revetment. Barge mounted coring of seabed sediment off northern face of Bledisloe reclamation. For work to be undertaken between 10 June and 15 June 2024.			**DATE JSA DEVELOPED:**	02 March 2025 First unreviewed draft
NAME OF EMPLOYEES INVOLVED IN INITIAL JSA DEVELOPMENT:	Paul Kennedy (Ecology Co-ordinator). Dabchick staff and conservation dogs; Project LP specialist, POA support staff.	Toolbox meetings prior to daily work			
AUTHORISING PERSON: (PRINT)	Paul Kennedy (KEL)	**SIGNATURE:**		**DATE OF AUTHORISATION:**	Not authorised

NOTE: This JSA has been prepared in advance of pre-work review and will be reviewed and approved by POA prior to any field work being undertaken.

S: Safety

E: Environment

LIKELIHOOD	**CONSEQUENCE**		
	S: Onsite treatment (first aid) **E:** Minor impact (onsite)	**S:** Offsite treatment (Medical) **E:** Minor impact (offsite)	**S:** Fatality or permanent injury **E:** Major impact (onsite/offsite)
Almost Certain (Will probably occur)	**CHECK**	**STOP**	**STOP**
Possible (May occur, has happened)	**START**	**CHECK**	**STOP**
Unlikely (could occur - known to happen)	**START**	**START**	**CHECK**

ACTION TABLE			
Uncontrolled Risk Level	What do we need to do?	Controlled Risk Level	What should happen next?
STOP	Hazards must be eliminated or the uncontrolled risk level reduced through substitution, isolation, engineering or a design change.	**STOP**	TASK MUST STOP The task CANNOT proceed until company has agreed to what (IF ANY) further controls must be applied.
CHECK	Ensure that the highest possible controls have been applied (e.g., elimination, substitution, isolation, engineering, several administrative controls and PPE).	**CHECK**	TASK MUST BE CHECKED COMPANY MUST review controls and ensure they are appropriate and effective before the task can start.
START	The Supervisor or equivalent MUST review the controls and ensure they are appropriate and effective before the task can start.	**START**	TASK MAY START Continually review controls are in place and working effectively.

ACTIVITY / TASK SEQUENCE	HAZARDS	UNCONTROLLED RISK LEVEL	CONTROLS	UNCONTROLLED RISK LEVEL	WHO WILL DO THIS?
Break the job down into tasks. Each task should accomplish some major activity and be in a logical sequence.		STOP CHECK START	☐ Work in Adjacent Areas ☐ Licenses, Qual's, Permits ☐ Training requirements ☐ Approvals, Plans & Permits ☐ Maintenance / Inspection ☐ Safety Equipment ☐ PPE ☐ MSDS	STOP CHECK START	Wherever possible list who specifically (by name) and when this needs to be done.
1	**Personnel well-being and Covid/Respiratory illnesses**				
	State of health	All field team to confirm that they are well/fit to conduct work prior to work start (no temperature, coughs etc.)	Check		Start	All team members
	Work area		Check	All work is outdoors Hand sanitiser will be provided. To be used prior to and regularly during workday and before all meal/tea breaks. Review requirements each day at toolbox.	Start	All team members
2	**Pre-checks for field survey work/site work.**				
2.1	PPE	Ensure required/ appropriate PPE is being worn/used.	Check	Following PPE is mandatory for pre-construction surveys: High vis vest Safety boots/shoes. Approved lifejacket. Following additional PPE to be available during construction should site H&S require: Safety glasses, gloves and noise protection (to be available).	Start	All team members
2.2	Weather	Weather	Check	Met-service weather (or windy) forecast to be checked prior to field work by Team Lead. Any unusual weather conditions to be identified via forward weather forecast and communicated to team prior to start of workday including any specific additional PPE requirements.	Start	All team members.
2.3.	Weather	Weather check	check	If ok, ensure weather related PPE is available/being used by field team: Winter: appropriate field clothing/wet weather gear. Summer: Sun hats/sunscreen/ long sleeve shirt where appropriate.	Start	All team members.
2.4	Work on revetment	Work above and near water. Be aware of wave and swell conditions if working towards low tide areas of revetment.	check	It is a POA requirement that all field staff working adjacent to water within Port wear suitable lifejackets. Any field team or co-opted team members will be provided by lifejackets. Be aware of unusual swell and wave conditions near work areas.	Start	All team members.
3	**Toolbox**					

3.6	Weather	Variable weather conditions.	Check	Weather issues to be discussed at daily toolbox before work start. All field staff to ensure they have appropriate field gear to allow for weather changes. Field staff to have: Waterproof rain gear. Sufficient warm clothing should air temperature drop (wind change etc.). Field staff to ensure they stay hydrated. Bottled water to be available. Sunscreen to be available.	Start	All team members.
3.7	Survey risks	Work on revetment	Check	All staff to understand risks associated with working on/moving across revetment. Care with footing and stability and match to weather conditions.	Start	All team members.
3.7	Work risks	Work on revetment and around construction areas	Check	As above. During construction all work will be undertaken in conjunction with key construction team persons/equipment operators so ensure that any LP related work is clear of any active equipment.	Start	All team members.
3.8	Comms	Not being able to communicate incident	Check	At least 2 members of field team must have mobile phone during field work All team members must know incident call in procedures (refer below).	Start	All team members.
4	**Field work**					
4.1	Falls on revetment	Injury	Check	All work on revetment to be to conditions. All falls to be logged and noted for following toolbox. All minor injury (scrapes, bruising etc.) to be reported for following toolbox. Non-minor injury requiring first aid to be called in using POA DEFINED PROCEDURE. Non-minor injury requires root-cause analysis to be carried out following event. .	Start	All team members.
4.2	Person in water (surveys)	Injury/drowning	Check	All field staff to wear lifejackets. Field team to have lifeline available to aid retrieval. Incident to be called in using POA DEFINED PROCEDURE.	Start	All team members.
4.3	Person in water (during construction)	Injury/drowning	Check	All field staff to wear lifejackets. Field team to have lifeline available to aid retrieval. Location of emergency equipment (life rings etc) within construction area to be known. Incident to be called in using POA DEFINED PROCEDURE.	Start	All team members.
4.4	LP handling	Injury	Check	All LP handling to be carried out be LP specialist/approved persons (refer SOP for LP handling). Appropriate PPE to be worn.	Start	All team members.
4.4	LP handling	Disease	Check	All LP handling to be carried out be LP specialist/approved persons (refer SOP for LP handling and information regarding bird diseases). Appropriate PPE to be worn.	Start	All team members.

WORK DIAGRAM (IF APPLICABLE)

E.g., sketch or attach relevant diagrams or drawings of task hazards such as services, other plant or equipment, hazardous areas, environmental considerations etc.).

WORKER NAME	SIGNATURE (I have been consulted in and understand this JSA)	DATE	EMPLOYEE NAME	SIGNATURE (I have been consulted in and understand this JSA)	DATE

Note: Attach additional signature pages if necessary.

REVIEW NO:	1	2	3	4	5	6	7	8	9	10
Date:										
Initial:										

Note: JSA's must be reviewed at a minimum weekly.

JSA AMENDMENT REASON/DETAILS	CHANGE MANAGEMENT ACTIONS (e.g., actions taken to communicate changes)	DATE

Appendix C: Field Record Forms.

Field record form for kororā burrow discovery during construction . V1 2 March 2025 Pre-review draft.

Location		
Date of survey		
Time of LP burrow detection		
Unique burrow ID	i.e., BN-1, FN-1 etc.	
GPS (if available)		
Method of detection	Person	
	Detector dog	
Penguin sign	Guano	
	Odour	
	Tracks	
	Feathers	
	Heard	
	Seen visual	
	Seen burrow-scope	
Site location photographs taken	Yes/No	
	Time	
Other notes		

Field forms will be supplemented with the following additional forms when required:

Record form for all PIT tagging of LP.

Record form for all morphometric measurements taken of captured LP.

Appendix D: Notification Process (kororā on site).

Note: This appendix provides a summary of all activities that require notification within project and to various organisations on the occasion that kororā are discovered. Actions will be modified based on requirements of WAA. This Appendix may be integrated into the main body of the LPMP.

1 Discover of injured kororā

1a Injured natural causes

Action	Party	Contact details
Collect and transport to vet specialist	Birdcare Aotearoa Vets, St Lukes.	Phone, address Phone, address
Communicate by email to DoC Auckland.	Department of Conservation	Email.

1a Injured during handling

Action	Party	Contact details
Collect and transport to vet specialist	Birdcare Aotearoa Vets, St Lukes.	Phone, address Phone, address
Communicate **by phone** and email to DoC Auckland.	Department of Conservation	Phone Email.

2 Discover of deceased kororā (unknown causes)

1a Known cause

Action	Party	Contact details
Communicate **by phone** and email to DoC Auckland.	Department of Conservation	Phone Email

1a Unknown cause

Action	Party	Contact details
Communicate **by phone** and email to DoC Auckland.	Department of Conservation	Phone Email
Communicate **by phone** and email to MPI.	Ministry of Primary Industries	Phone Email.

3 Relocation of kororā

Following completion of a relocation, relocation information will be emailed to DoC.

Action	Party	Contact details
Communicate email to DoC Auckland.	Department of Conservation	Email

4 Discovery of kororā during construction

Should a kororā be discovered on site or during construction.

Situation/Action	Communication to	Contact details
If sighted off revetment adjacent to BN or FN work location		
1. Notify kororā team	Team ecologist Project team	Phone Phone
Action	Kororā team to capture and relocate kororā and or transport to Birdcare or vet.	
If sighted on revetment at BN		
1. Operator/person making observation	Project site contact.	Phone
Action	Establish 20 m buffer zone around sighting.	
2. Project site contact	Team ecologist Specialist	Phone Phone
3. Kororā team.	Initiate "kororā" toolbox meeting at site with Project "lead" as to how kororā will be managed at specific site.	
4. Kororā team.	Remove kororā from site for relocation. Remove need for buffer zone	
Communicate outcome to DoC/AC.	Auckland Council, Department of Conservation	Email Email

Appendix E: Relocation Site.

Kororā Relocation Site.

Note: This Appendix will contain the map showing the location of the relocation site, which is to be determined in consultation with DOC Auckland Conservator, in line with the management procedures detailed in the LPMP and supported by the Handling SOP.

Appendix F: Kororā Handling SOP.

Kororā Handling Standard Operating Procedure.

Note: This document is a pre-review SOP prepared to set out the key aspects/requirements should kororā handling/management be required as part of the Project. It is intended that this document will be:

Reviewed and updated where required by the project penguin specialist.

Provided to Auckland Council as part of the LPMP certification.

Provided to Department of Conservation as part of the confirmation of specialist/penguin handling training and to assist in ensuring that all methods are appropriate.

1 Introduction

This SOP sets out specific information relating to:

- Appropriate training for kororā handlers.
- Health & safety related to handling.
- The handling of kororā following discovery during project works.
- The management of kororā following capture.
- Relocation of kororā.
- The management of injured kororā.
- The management of deceased kororā.

The latter two items are included for completeness although they are included in the LPMP.

Permissions are required from Department of Conservation (DoC) to interact with kororā, capture kororā for obtaining data, checking bands/tags and inserting new PIT tags and or relocating Korora if required during construction works. These permissions are obtained through a Wildlife Authorisation granted under the Wildlife Act 1953 (https://www.doc.govt.nz/get-involved/apply-for-permits/).

2 Appropriate Training

The kororā specialist must have appropriate experience in the following:

- Handling of kororā and must have handled kororā previously in the field.
- Handling kororā to take morphometric measurements and taking the required measurements (refer below).

And training/certification in the following:

- Banding kororā or inserting PIT tags (if PIT tagging of captured birds is confirmed).

Training/certification to Level 3 (DoC banding certification) will be required if PIT tagging of kororā is to be undertaken. If PIT tagging is not required, then a lower level of overall experience may suffice for general handling of kororā.

It is expected that the Project will have two handlers available. If the second is not Level 3 certified for banding then PIT tagging may not occur on that day.

A formal team induction will be undertaken prior to field work starting.

3 Health & Safety

3.1 JSA

All kororā management team members must have read the LPMP JSA prior to commencing work and understand the risks associated with working on the project and working with kororā. The key aspects of the JSA include:

- Being aware of the work environment especially while on the Port revetments.
- Being aware of risks while handling or assisting with handing of kororā.

3.2 Working on revetment

No field team members will undertake field work alone/out of site when near water or on any section of port revetment. Life jacket to be worn.

When working on the revetments, all field staff must be fully aware of footing when moving over the revetment. Ensure you are comfortable at all times in locations you are working. Take extra care if windy or during rain. If any concerns are raised, Take 5 and discuss state of work conditions. No work is planned during times of darkness.

3.3 Well-being of LP

There are a number of areas where well-being of LP should be considered. NZ Penguin Initiative (2024) has been referred to as the document is one of the few Health & Safety evaluations of working with Kororā.

The penguin specialist (and any person who may assist) should wear gloves to avoid direct contact with penguin to reduce transfer of oil to feathers.

Kororā are susceptible to stress and injury during handling. Handlers should be familiar in recognising stress during handling.

3.4 Diseases

As discussed by NZPI (2024) kororā are susceptible to a range of diseases.

Most penguin have not been in direct contact with humans. As such they are susceptible to a variety of pathogens that can be communicated by humans. With current concerns about bird flu, the potential for communication to LP must also be considered.

No field team members should have been in contact with poultry. If there has been contact, the clothes being worn should have been laundry washed.

Refer section 8 on handling injured, ill or Section 9 on handling deceased kororā.

4 Kororā handling

Penguin specialist and any team member who may assist will have had appropriate training in handling of kororā prior to construction commencing.

Gloves will be worn while handling kororā.

Hands are to be washed before touching face or eating.

It is assumed at this stage that kororā will need to be captured if:

- A burrow is identified at BN during pre-construction survey (during moult period).
- Penguin are identified during works (rock removal).

During revetment rock removal if a kororā is seen, the penguin specialist will approach the kororā from behind. The penguin is grabbed gently with both hands with flippers held against its sides. The penguin is held away from the handlers body to reduce potential for pecking. The carrier box (lined with a towel) will be brought to the handler and the kororā placed into the cage. The cage will then be taken to a level location close to the revetment for checks/measurements (refer below) then transported to overnight care or vets or to relocation site.

The pet cage should be placed in shade and should not be left in a stationary vehicle unattended especially in summer.

Time in pet-cage should be as short as possible.

If the timing is suitable, the kororā should be transported to the relocation site, same day.

If the relocation cannot happen same day, the penguin should be transported asap to the agreed holding facility (e.g., BirdCare Aotearoa) who will have been notified in advance. The penguin will then be collected the following day and released at the relocation site.

5 Checking for identification

Any LP caught will be checked for identification which could be either:

A flipper tag. Tag details will be recorded

A pit tag. The LP will be checked for PIT (Passive Integrated Transponder) tag using a handheld electronic reader. NZ made options include Gallagher HR4 but there are a range of simple reader options available.

6 Banding/tagging

It is preferred that any kororā relocated from the site are banded/tagged so that they can be identified in the future. Unless agreed otherwise, it is assumed that unidentified kororā will be identified with PIT tags.

The project will confirm that the specialist has sufficient training in the implanting of PIT tags in kororā (i.e., is a Level 3 certified bander). If not additional assistance/training will be sought prior to construction commencing.

It is assumed that the specialist will be trained to level 3 (NZPI 2024) and can insert tags independently. The Level 3 person can supervise tag insertion by a Level 1 or 2 person if persons with those levels of certification are part of the project team (https://www.doc.govt.nz/our-work/bird-banding/how-to-become-a-certified-bander/).

PIT tags would likely be 11 mm Trovan, injected using Trovan injector.

It is assumed that all kororā that are tagged will be adults. Birds should be at least 600 g to be tagged and should be in good condition. Only one PIT tag insertion should be attempted on an individual penguin. Inserted PIT tags to be checked following insertion. Refer Section 7.42 and 7.4.3 of NZPI (2024) re insertion failure and fail to read tags.

All work (if tagging is undertaken) would be in accordance with DoC banding office regulations.

A PIT tag insertion SOP may be prepared to ensure that all tags are inserted correctly. However, the PIT tag insertion procedure in Section 9 of NZPI (2024) may be utilised. The NZPI procedure was adapted from the DoC best practice for tagging yellow eyed penguin (DoC undated). A PIT tag record sheet will be maintained [Action].

7 Taking morphometric measurements

Prior to the certification of the LPMP, discussion with AC/DoC will confirm whether morphometric data will be collected for any LP collected from within the Project work area.

The project will confirm that the specialist has sufficient training in the taking of measurements from Korora. If not additional assistance/training will be sought prior to construction commencing.

If data is to be collected, a data collection SOP will be prepared to ensure that all data collected is collected in a specific pre-determined way and data records are complete [Action].

The expected measurements would include weight and bill measurements.

If a bird bag is used the bag should be washed prior to use again.

Morphometric measurements will follow the methods set out in Section 6.12 of Wasiak (2020).

8 Injured Kororā

Ther are two situations where injured Korora may need to be managed.

During the Project If at any time a kororā is injured as part of the translocation process, DOC will be immediately contacted to receive advice on what actions to undertake.

If a kororā has been injured while at sea by a predator or boat. Protocol will be to take bird to either of the identified veterinary facilities.

Handling of injured kororā should be carried out as noted in the following section.

9 Collection and handling of dead Kororā

Should a dead kororā be found during pre-construction surveys or during construction, the following will be carried out/information collected. The final process will be confirmed with DoC prior to the LPMP certification. Although unlikely if multiple deceased Korora are identified,

leave birds in place and advise DoC and MPI as required. This is precautionary due to the potential for avian flu to be the cause (refer discussion on avia influenza on DoC website and by NZPI 2024).

A photograph will be taken in situ.

Several close-up photos of kororā should be taken.

Field notes should be taken of any observation of surroundings and of state of penguin to assist in interpreting photographs or specimen.

When handling dead kororā, gloves must be worn. NZPI (2024) recommends that a mask is also worn and that post handling if any skin scratches etc. are identified by handlers, wounds should be treated with disinfectant.

At this stage it is assumed that a check for cause of death will be carried out be a veterinarian specialist. The extent of autopsy will be confirmed prior. The specimen should be placed into a large paper bag and placed into a sturdy plastic container and if the specimen cannot be taken to the vet same day, stored in a refrigerator at 4oC. The specimen should be delivered to one of the two identified veterinarians in the LPMP within 48 hours. DoC should be notified of the death and delivery to Vet. Final autopsy information should be forwarded to DoC.

10 References

DoC undated. Use of transponders to monitor yellow-eyed penguins: Updating best practice.

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Wasiak P 2020. Fieldwork procedures for working with little penguins. Phillip Island Nature Parks, Conservation Department. Issue 1, June 2020.