

# STANDARD OPERATING PROCEDURE

## *ENGAEUS GRANULATUS* TRANSLOCATION

### SQUIBBS ROAD DRAINAGE IMPROVEMENT PROJECT

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#### ENVIRONMENTAL MANAGEMENT OVERVIEW

This SOP provides an overview of the DCC environmental management objectives and guidelines for works to be addressed by contractors in translocating *Engaeus granulatus* as part of the Squibbs Road Drainage Improvement Project.

This SOP must be read in conjunction with the Offset Management Plan and the permits and approvals given by the regulatory authorities for the project.

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#### Environmental Objectives

The Devonport City Council is committed to achieving environmentally and economically - sustainable development.

#### Purpose

Contractors and Service Providers must be able to demonstrate to the DCC that the execution of works and the provision of services will be undertaken in a manner that complies with the relevant legislative requirements, regulations and policies.

#### Legislation

Contractors and Service Providers shall, as a minimum, comply with the requirements of relevant Commonwealth and Tasmanian Legislation, Regulations, Environmental Policies.

In addition the Contractor shall abide by all Ordinances and By Laws designated to protect the environment.

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## OBJECTIVE

To maximise the number of Central North burrowing crayfish (*Engaeus granulatus*) successfully translocated from the **Activity Site** (Squibbs Road) to the **Offset Site** (Clayton Reserve).

## TARGETS

- No impact on flora and fauna (except Central North burrowing crayfish, **CNBC**) in the vicinity of the project beyond that reasonably anticipated at the design phase;
- A maximum number of Central North burrowing crayfish (*Engaeus granulatus*) successfully translocated from the Activity Site to the Offset Site;
- Minimal losses of CNBC during the excavation process at the Activity Site; and
- The appropriate preservation and curation of excavation-compromised CNBC for future research opportunities.

## RESPONSIBILITIES

- The Contractor has a responsibility to ensure that any conditions associated with permits issued to conduct the translocation, such as Tasmania's *Threatened Species Protection Act 1995* (TSPA) and *Nature Conservation Act 2002* (NCA), and the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), are met.
- Except for when the DCC is the permit holder, DCC has a responsibility to sight the necessary permits from the Contractor before they engage the Contractor to conduct the works.
- Only suitably qualified Contractor's that can lawfully perform the tasks and duties of the work will be engaged by DCC.

## PERMITS / LICENCES

- Any specific conditions contained in permits obtained under the TSPA, NCA or EPBC Act must be strictly adhered to.

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## **SITE HYGIENE**

- Hand tools, gumboots, holding containers and other equipment used in the excavation of CNBC from the Activity Site can be used at the Offset Site but they must first be thoroughly washed in a solution of F10 disinfectant.

## **PROCEDURE**

### ***Setup***

- Ensure all site workers are familiar with the conditions of the permits and environmental aspects of the project at the site induction;
- Establish with the excavator operator(s) the process of excavation (eg decide on hand signals for directions, timing of excavation and direction within each drain, direction of excavation, technique of excavation and depth); and
- Ensure that the works to create habitat at the Offset Site to receive the translocated animals has been completed prior to excavation commencing at the Activity Site including –
  - The delineation of a translocation area at the Offset Site using steel droppers (fitted with safety caps) and orange plastic fencing;
  - Auger holes created (at least 30 at the start of the translocation process as more can be dug during the project if required; a north-south oriented measured grid pattern will be used to enable more effective, accurate and efficient initial monitoring to occur) into which animals can be placed;
  - Sediment fencing and rocks are appropriately installed/located to ensure surface flows are controlled and erosion risk is kept to a minimum; and
  - Appropriate signage advising the public that the area is part of a DCC road construction project and should remain undisturbed (ie no entry) and with contact details for a DCC officer.
- Prior to the commencement of works photopoint locations will be established at the Offset Site translocation area by a suitably qualified person to ensure an accurate photographic record of site works and improvements at the site is made;

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- Arrangements must be made prior to excavation works commencing for the short-term storage and then removal of dirt from the excavation area within the Activity Site;
- All safety requirements must be identified and addressed, such as working close to a main road, confined space (some of the deeper drains) and drain collapse. Measures may include the use of high-vis vests and traffic control measures.

### ***Excavation of CNBC***

- Hand tools cleaned in F10 (trowel, spade, shovel etc) will be used as the main means to excavate animals from the drainage network;
- On the advice of a suitably qualified ecologist, an excavator may be used to excavate some drains where hand tools are impractical (eg deep burrows, confined space, danger of drain collapse); and
- For safety reasons, an excavator will be used to dig drains where they qualify as a 'confined space' (drain deeper than 70cm).

### ***Handling of CNBC***

- Only authorised persons will handle CNBC animals;
- Animals once caught will be -
  - examined to check that they have not been compromised by the excavation process;
  - washed free of dirt and mud from the excavation site by placing them into a container of dechlorinated potable water (tap water that has been allowed to sit in a vented container for at least 72 hours);
  - cleaned in a second container of dechlorinated potable water;
  - rinsed in a third container of dechlorinated potable water; and
  - Stored in a cool location out of direct sunlight in an open plastic container lined with damp paper towel or sponges ready for translocation.
- The dechlorinated potable water within each container will be replaced each time animals are moved to the translocation area in the Offset Site (see 6.4 Transportation of CNBC); and

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- Compromised animals, in the opinion of a suitably qualified person, may include animals that have lost both their front claws (but not animals that retain one front claw unless they have other injuries), have sustained an injury to their thorax, head or abdomen from which they are unlikely to recover or are only partially complete (eg have been decapitated or cut in half by the excavation process). These animals will be –
  - Euthanised in a solution of MS22 or AQUI-S until such time they are deemed to be dead (any leftover solution will be disposed of in accordance with the manufacturer's directions);
  - Placed into preserving jars containing 90% ethanol for preservation; and
  - Specimens will be lodged (including the appropriate collection details) with the Tasmanian Museum and Art Gallery (TMAG) for addition to the collection for future research opportunities. Specimens will be lodged within 3 months of the translocation project being completed.

### ***Transportation of CNBC***

- Only appropriately qualified/experienced persons will transport CNBC from the Activity Site to the Offset Site; and
- When 12 animals have been captured, cleaned and stored pending translocation, OR when the animal that was captured first in the group has been in captivity for 90 minutes, the animals will be transported to the Offset Site for translocation.

### ***Introducing Animals to Offset Site***

- Only appropriately qualified/experienced persons will introduce CNBC to the translocation area at the Offset Site;
- Only one animal will be placed into each auger hole;
- Auger holes that have been used to translocate an animal will be marked with a weed mat stake marked with flagging tape (blue);
- A photopoint will be established post-translocation of all the animals to show the translocation area; and

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- A 'map' of the translocation area at the Offset Site will be prepared post-translocation of all the animals noting the -
  - Burrows into which a CNBC was placed;
  - Burrows into which an injured, but not compromised, CNBC (eg one front claw missing) was placed; and
  - Burrows into which a gravid female CNBC was placed (if present).

## **MONITORING**

- A suitably qualified ecologist will design the methodology and conduct the assessment of burrow number and density in the translocation area at the Offset Site;
- The assumptions used to estimate the number of CNBC at the Activity Site will be applied at the Offset Site; the number of burrows will be counted (if the area is large then the sub-samples may be collected using quadrats across the area; advice from an ecologist will be sought in this case) and number of animals estimated based on a 50% occupation rate of the total number of burrows. This approach makes the assessment of impact and offset directly comparable in terms of number of estimated animals present; and
- Burrow counts will be conducted every 2, 4, 6, 8, 10, 12, 24, 36 and 52 weeks from the date of translocation (1-year monitoring total).

## **RECORDS**

All written records and field notes must be provided to DCC for future reference and reporting to the Commonwealth Department of Environment and Energy (DoEE) and Policy and Conservation Assessment Branch of the Tasmanian Department of Primary Industries, Parks, Water and Environment (DPIPWE).

Written records of the translocation process must be kept by the Contractor, including:

- The date of excavation works, weather conditions, the names of persons involved in the excavation process and
  - the number of animals excavated and transported to the Offset Site; and

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- the number of animals that were compromised during the excavation process and subsequently euthanised and preserved.
- The date and time of notification to the Contractor of any failure to implement site specific management requirements.
- Directions given to the Contractor by the DCC Superintendent to fix any identified issues and the timeframe within which the Contractor should complete the remedial works.