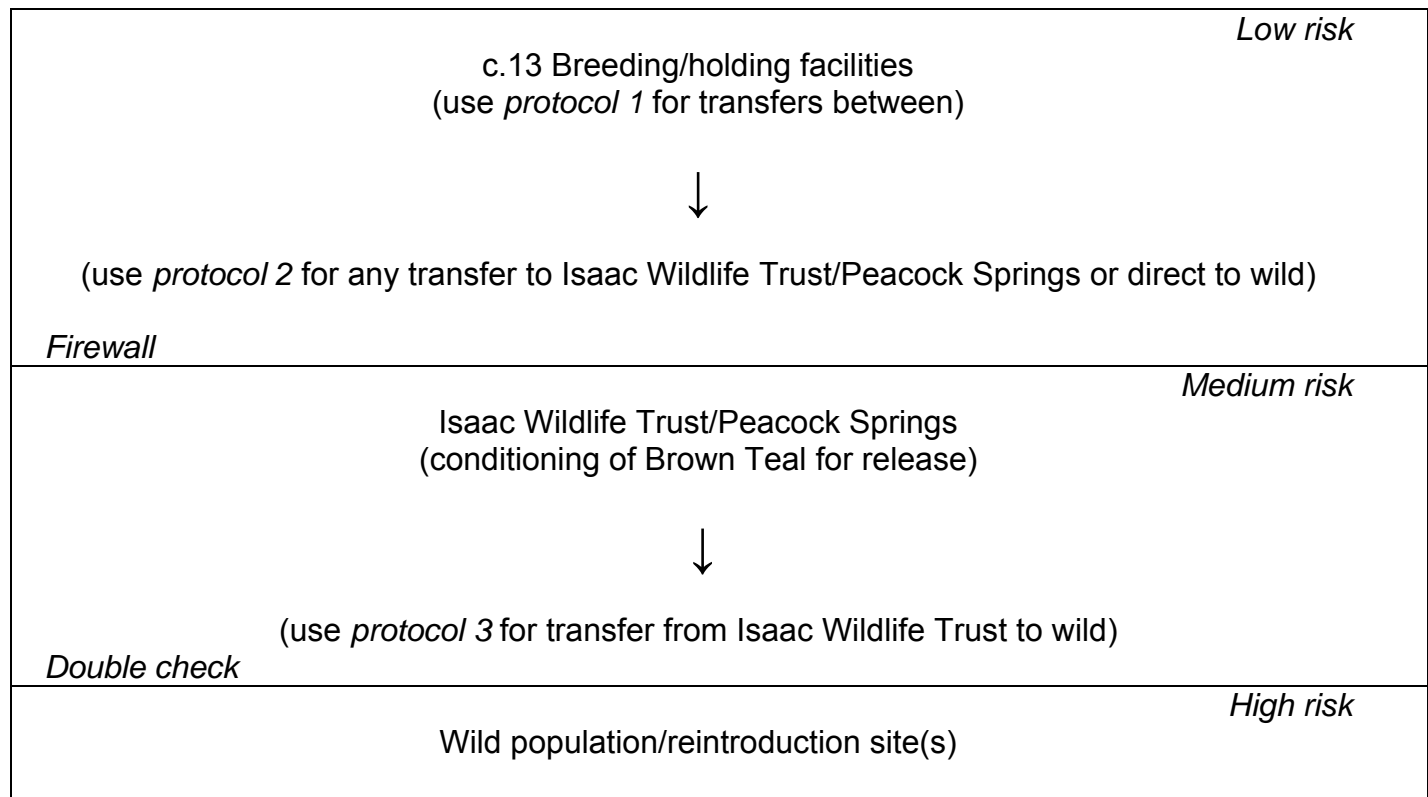


Brown Teal/Brown Teal Quarantine Protocols

1. Background

Diagram 1 below outlines the rationale behind the quarantine protocols for translocation of Brown Teal. The protocols are designed to mitigate the risk of disease transfer to wild Brown Teal populations and reintroduction sites. Brown Teal are a nationally endangered species so it is important to treat disease as a threat to the species, alongside other threats such as predation and habitat destruction. Transfers between captive breeding/holding facilities are seen as low risk, as the captive population is treated as a 'whole population'. Protocol 1 applies to standard captive-captive transfers. Transfers between captive breeding/holding facilities and Isaac Wildlife Trust/Peacock Springs are seen as medium risk, as Isaacs represents the 'filter' between captivity and the wild, where Brown Teal are conditioned for release (e.g. exposed to diet and feeders used at the release site). Protocol 2 applies to a transfer from a captive breeding/holding facility and Isaacs. Protocol 2 also applies to a transfer from a captive breeding/holding facility direct to the wild. Protocol 2 is the most intensive, dubbed the 'firewall', reflecting the need to reduce the risk to wild Brown Teal populations/reintroduction sites. Transfers from Isaacs to the wild offer the final opportunity to check the health and fitness of release birds and potential diseases of concern, dubbed the 'double-check', to reduce the risk of disease transfer to the wild.

Diagram 1: rationale for quarantine protocols



Decision path:

1. Is the transfer from one captive holding/breeding facility to another (excluding Isaac Wildlife Trust/Peacock Springs)? Yes – use *protocol 1*.
2. Is the transfer from a captive holding/breeding facility to the Isaac Wildlife Trust/Peacock Springs? Yes – use *protocol 2*.
3. Is the transfer from a captive holding/breeding facility (excluding Isaac Wildlife Trust/Peacock Springs) direct to the wild? Yes – use *protocol 2*.
4. Is the transfer from the Isaac Wildlife Trust/Peacock Springs to the wild? Yes – use *protocol 3*.

2. Protocols

Protocol 1: Basic requirements for captive – captive transfer

Explanation

- Protocol 1 is the basic requirement for a standard transfer of brown teal between holding/breeding facilities
- Protocol 1 excludes any extra test that a particular facility (or MAF) requires as part of their own health/disease management plans
- Protocol 1 excludes transfer between any brown teal holding/breeding facility to Isaac Wildlife Trust/Peacock Springs in Christchurch (see protocol 2 for this type of transfer).
- In general, the costs of protocol 1 will be covered by the participating donor facility unless prior arrangements have been agreed by participating parties.

Quarantine holding period:

- Minimum 7 days, unless positive results returned/treatment/further testing/further holding required and/or additional requirements (facility specific/MAF). Note this minimum period recognises that the birds have a known history at the donor facility and have been continuously monitored (with records kept) by the breeder. If there have been any illnesses in the waterfowl collection during the previous 30 days veterinary advice should be sought on the appropriate length of quarantine.

Tests/treatments prior to transfer:

- Physical exam by trained operator (experienced staff or vet) – record weight; assess condition; look for pox type lesions (if identified – take biopsy); listen to airways, check for external parasites (fleas, nasal mites, ticks). Check birds are eating and behaving normally and passing normal droppings.

- Parasites

Internal parasites (intestinal nematodes, cestodes/tapeworms and trematodes/flukes) – treat with a parasiticide effective against internal parasites (e.g. Sheep oral ivermectin at 200mcg/kg or Fenbendazole at 50mg/kg po plus Praziquantel at 10mg/kg orally) at commencement of quarantine. Screen before departure via faecal direct smear and flotation counts from each bird. Treatments to be repeated within 3 days of departure if any positive findings in the parasite screens

External parasites - All birds to be treated for ectoparasites with a suitable parasiticide (e.g. fipronil (Frontline) spray) once before departure

- Samples to be sent to: Gribbles Veterinary Pathology, 35 O'Rorke Rd, Penrose, Auckland Tel 09-526-4560 or Alpha Scientific, 57 Sunshine Ave, Hamilton, Tel 07-850-0777. Call at least 3 days in advance to advise shipment of samples.

Quarantine Requirements

- Isolate transfer birds from all other brown teal and other species
- Sign on door: "Quarantine - No Unauthorized Entry"
- Insect/rodent traps/screens/baits
- Bags for waste disposal
- Feeding, watering and cleaning utensils
- Animal capture and restraint equipment
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- Lock for facility
- boot changes
- Protective clothing eg overalls plus disposable gloves if handling birds
- Aviary habitat/ furniture as appropriate for species
- Animal record forms, pens
- Send results to Captive Coordinator

Record sheet for Protocol 1

Facility Name:
Contact Person:
Contact Phone:

Quarantine Start Date:
Finish Date:

ID Number	Age	Sex	1. Physical (grams)	2. Faecals (√/X)	Samples sent	Samples received	Comments
Key: 1. Physical exam, condition assessed, body weight, measurements optional completed 2. Faecals taken/treatments completed							

Protocol 2: Captive – wild transfer and Captive – Isaac Wildlife Trust transfer

Explanation

- Protocol 2 is the requirement for any transfer of brown teal from a holding/breeding facility to the wild or to the Isaac Wildlife Trust/Peacock Springs
- This protocol is more intensive and relates to the Isaac Wildlife Trust facilities as these facilities provide pre-release conditioning of birds immediately prior to release. The Isaac Wildlife Trust facilities act as a 'firewall' between captivity and the wild, in terms of minimising the risk of disease transfer.
- Protocol 2 excludes any extra test that a particular facility (or MAF) requires as part of their own health/disease management plans
- In general, the costs of protocol 2 will be covered by the release programme budget (approved DOC or joint venture programme with stakeholder) or recovery group budget, as agreed between the participating parties.

Quarantine holding period:

- Approximately 10-14 days unless positive results returned/treatment/further testing and further holding required. . Note, as for Protocol 1, this minimum period recognises that the birds have a known history at the donor facility and have been continuously monitored (with records kept) by the breeder. If there have been any illnesses in the waterfowl collection during the previous 30 days veterinary advice should be sought on the appropriate length of quarantine.

- Test day 1; transfer when all returned results are negative

Tests/treatments prior to transfer:

- As for protocol 1, plus:
- Chlamydophila – ELISA Antigen test on conjunctival/choanal/cloacal swab from each bird (use Chlamydial swab)
- Avian TB – minimum blood smear for differential white blood cell (WBC) count ;ideally blood smear AND whole blood sample (heparin-coated capillary tube sealed at both ends) for haemtocrit and total protein; check previous history of avian TB in source bird collections.
- Salmonella – from cloacal swab direct from cloaca, or from fresh faecal, in transport medium
- Samples to be sent to: Gribbles Veterinary Pathology, 35 O'Rorke Rd, Penrose, Auckland Tel 09-526-4560 or Alpha Scientific, 57 Sunshine Ave, Hamilton, Tel 07-850-0777. Call at least 3 days in advance to advise shipment of samples.

Quarantine Requirements

- Isolate transfer birds from all other brown
- Lock for facility

teal and other species

- Sign on door: "Quarantine - No Unauthorized Entry "
- Insect/rodent traps/screens/baits
- Bags for waste disposal
- Feeding, watering and cleaning utensils
- Animal capture and restraint equipment
- Quarantine register to track movement of people in and out of quarantine

- boot changes
- Protective clothing eg overalls plus disposable gloves if handling birds.
- Aviary habitat/furniture as appropriate for species
- Animal record forms, pens
- Send results to Captive Coordinator

Record sheet for Protocol 2

Facility Name:
Contact Person:
Contact Phone:

Quarantine Start Date:
Finish Date:

ID Number	Age	Sex	1. Physical (grams)	2. Blood (√/X)	3. Faecals (√/X)	4. Swabs (√/X)	Samples sent	Samples received	Comments

Key:

1. Physical exam, condition assessed, body weight (measurements – optional) done
2. Blood smear, haematocrit and total protein completed
3. Faecals taken/treatments completed
4. Choanal/cloacal swab completed

Protocol 2: Isaac Wildlife Trust – wild transfer (double check)

Explanation

- Protocol 3 is the final double check requirement for any transfer of brown teal from the Isaac Wildlife Trust/Peacock Springs to the wild
- All birds for transfer originating from other facilities will have already completed quarantine under protocol 2

Quarantine holding period:

- Minimum 30 days unless positive results returned/treatment/further testing/further holding required

Tests/treatments prior to transfer:

- Monitor body weight - reweigh 2 weeks after arrival and if not less than 90% of arrival weight reweigh at departure; if less than 90% of arrival weight follow veterinary advice

- Physical exam by trained operator (experienced staff or vet) – record weight; assess condition; look for pox type lesions (if identified – take biopsy); listen to airways, check for external parasites (fleas, nasal mites, ticks)

- Parasites

Screen 2 weeks after arrival via faecal direct smear and flotation counts from each bird. Treat if positive and re-screen within 3 days of departure. Transfer if negative on screen.

Quarantine Requirements

- Isolate transfer birds from all other brown teal and other species
- Lock for facility
- boot changes

- Sign on door: "Quarantine - No Unauthorized Entry "
- Insect/rodent traps/screens/baits
- Bags for waste disposal
- Feeding, watering and cleaning utensils
- Animal capture and restraint equipment
- Quarantine register

- Protective clothing eg overalls plus disposable gloves if handling birds.
- Aviary habitat/furniture as appropriate for species
- Animal record forms, pens
- Send results to Captive Coordinator

Record sheet for Protocol 3

Facility Name:
Contact Person:
Contact Phone:

Quarantine Start Date:
Finish Date:

ID Number	Age	Sex	1. Physical (grams)	2. Faecals (√/X)	Samples sent	Samples received	Comments
Key: 1. Physical exam, condition assessed, body weight, measurements optional completed 2. Faecals taken/treatments completed							

3. Communication Plan for Delivering Quarantine Protocols

Activity	Communication Requirement
1. Notification of transfer	Captive co-ordinator <input type="checkbox"/> holder/breeder
2. Implement appropriate quarantine protocol (1/2/3) and communicate results pre transfer	Holder/breeder <input type="checkbox"/> captive co-ordinator
3. Notification of positive results from protocol (1/2/3) quarantine	Holder <input type="checkbox"/> captive co-ordinator Captive co-ordinator <input type="checkbox"/> veterinary advisor to brown teal captive programme Captive co-ordinator <input type="checkbox"/> recovery group leader (protocol 2/3 only)
4. Seek advice and agree on treatment/further testing/additions to holding period associated with positive results returned from any quarantine. Recommended actions relayed to holder/breeder	Captive co-ordinator <input type="checkbox"/> veterinary advisor to brown teal captive programme Captive co-ordinator <input type="checkbox"/> holder/breeder
5. Final recommendation on unresolved issues between parties	Recovery group leader <input type="checkbox"/> all involved parties

- The captive co-ordinator will be the point contact with all holders/breeders (and their facility veterinary advisors). Individual holders/breeders or their veterinary advisors should not contact the veterinary advisor to the brown teal captive programme directly – they should work through the captive co-ordinator

- The veterinary advisor to the brown teal captive programme will be the point contact for veterinary advice on positive results returned from disease screening and recommended treatment/ further holding requirements. Any further consultation required with disease experts regarding treatments/further testing will be led by the veterinary advisor to the brown teal captive programme

Contacts:

Position	Contact
Captive co-ordinator brown teal	Kevin Evans (ph: 09 4392 561, 027 4392 561) (mailto:kevin@brownteal.com)
Veterinary Advisor to brown teal captive programme	Richard Jakob-Hoff (ph: 09 360 3814) (mailto: richard.jakob-hoff@aucklandcity.govt.nz)
Recovery group leader brown teal	Shaun O'Connor (ph: 04 4713 244w, 025 222 1868c (mailto:smoconnor@doc.govt.nz)
Holding/Pre-release Conditioning	
Isaac Wildlife Trust	Anne Richardson (ph: 03 359 3621w, 027 224 9225) (mailto:anner@isaac.co.nz)