

## **STANDARD PROCEDURES for Biodiversity Management**

A supporting document to the SOPA Biodiversity Management Plan

Version	Review	Date	Approved by
Final		January 2014	

# STANDARD PROCEDURES for Biodiversity Management

## Introduction

These Standard Procedures are a supporting document to the SOPA Biodiversity Management Plan. They set out how the Authority will conduct works in a manner that conserves biodiversity and meets legislative requirements.

They are designed to minimise harm to habitats and individual flora and fauna that may be affected by Park operational activities, and have been developed with regard to the Authority's conservation strategies for individual focal species and communities, existing development consent conditions, expert ecological advice, and Permit and Licence conditions. Additional procedural requirements may apply to projects of a specialised or extensive nature

## Legislative position

The Park contains plants, wildlife and ecological communities that are protected under State and Commonwealth environmental legislation.

- It is illegal to harm native fauna except in accordance with Licence conditions, development consent or review of environmental factors (*NSW National Parks & Wildlife Act 1974*, s98)
- It is illegal to harm a threatened species or wildlife that is part of an endangered ecological community except in accordance with Licence conditions, development consent or review of environmental factors (*NSW National Parks & Wildlife Act 1974*, s118A)
- It is illegal to damage the habitat of a threatened species or endangered ecological community except in accordance with Licence conditions, development consent or review of environmental factors (*NSW National Parks & Wildlife Act 1974*, s118D)
- It is illegal to harm protected marine vegetation except in accordance with a Permit (*NSW Fisheries Management Act 1994*, Part 7)
- It is illegal to take an action that has a significant impact on a threatened species, endangered community or migratory species listed under Commonwealth legislation without approval (*Commonwealth Environment Protection & Biodiversity Conservation Act 1999* s18, s20)

Park operational activities (including conservation management activities), can result in 'harm' and 'damage' that is incidental (eg trampling of habitats while conducting management inspections, controlling weeds and pests, or repairing Park infrastructure), or deliberate (eg draining of frog ponds for *Gambusia* control; pruning of mangroves growing over pathways).

These Standard Procedures address the various legislative requirements applicable to Park operational activities that may cause 'harm' or 'damage' to Park habitats. The Authority holds a Licence (issued under *NSW National Parks and Wildlife Act 1974*) that conditionally authorises Park management activities within threatened species habitats, and a Permit (issued under *NSW Fisheries Management Act 1994*) that conditionally authorises pruning and removal of mangrove vegetation. Additionally, various development consents impose conditions on activities within the Park's habitats (Appendices 1-3)

Persons not applying these procedures could be prosecuted under environmental legislation.

## Requirements

Staff responsible for planning and conducting works and programs must:

1. Plan works, developments, programs and events in a manner that is consistent with relevant standard procedures
2. Include relevant Standard Procedures in contract specifications & licence agreements
3. Ensure relevant Standard Procedures are incorporated into contractor Environmental Management Plans and work programs
4. Monitor compliance with Standard Procedures as a component of contractor performance management and/or event/program management.

## Contents

1. Access to habitat areas .....	4
2. Bat roost buildings - maintenance & use .....	6
3. Estuarine areas – routine vegetation management .....	7
4. Frog clearance .....	9
5. Frog habitat – horse trail operation.....	11
6. Frog habitat – minor & major works.....	12
7. Frog habitat – pond water level management .....	14
8. Frog habitat – routine landscape maintenance .....	16
9. Frog habitat – turf maintenance .....	18
10. Litter removal from creeks and wetlands.....	19
11. Mangrove pruning .....	20
12. Mangrove picking – education programs .....	22
13. Pest fauna management .....	23
14. Sydney Turpentine Ironbark Forest (STIF) Management.....	24
15. Visitor programs .....	26
16. WRAMS operations .....	28
17. Wildlife relocation & release.....	30
18. Zannichellia conservation.....	32

Appendix 1 – Extract of Development consent conditions

Appendix 2 – Permit issued under *NSW Fisheries Management Act 1994*

Appendix 3 – Licence issued under *NSW National Parks & Wildlife Act 1974*

## 1. ACCESS TO HABITAT AREAS

### Description of activity:

Foot and vehicle access to habitat areas for management inspections, security patrols, surveys, monitoring, minor maintenance activities and similar.

'Habitat areas' are long grass, shrubland, forest, and wetlands across the Parklands and Boundary Creek corridor, and include restricted areas (Brickpit and Newington Nature Reserve)

### Environmental risks:

- Trampling of plants, habitats, and endangered ecological communities
- Disturbance, death and injury to wildlife
- Trampling of nests of ground-nesting birds
- Introduction of pests and disease organisms such as *Gambusia*, *Phytophthora*, weeds

### Applicable legislative requirements:

It is illegal to harm or damage: native fauna, threatened species or wildlife that is part of an endangered ecological community, habitat of a threatened species or endangered ecological community, or protected marine vegetation, except in accordance with Licence or Permit conditions, development consent or review of environmental factors (*NSW National Parks & Wildlife Act 1974*, s98, s118A, s118D; *NSW Fisheries Management Act 1994*, Part 7)

### Park rules:

#### 1. Planning

- SOPA Project / Contract Manager must ensure all personnel needing to access habitat areas attend a briefing conducted by SOPA Environment & Ecology personnel detailing specific environmental requirements for particular areas
- SOPA Project / Contract Manager must ensure all personnel needing to access restricted areas (Brickpit and Newington Nature Reserve) undertake access inductions conducted by SOPA Environment & Ecology personnel prior to entering these areas

#### 2. Pedestrians

- Use existing pathways and tracks where possible
- Minimise trampling of grassland, reeds, saltmarsh, mudflats and pneumatophores, and damage to tree and shrub branches. Try to walk only on bare ground. Where you must walk on vegetation, try to avoid succulent plants. Vary your route to avoid forming a track, and if there are several people working, everyone should take a different route to avoid concentrating any impacts. Do not drag tools, rubbish bags etc across vegetation.
- Minimise disturbance to wildlife, particularly nesting birds
- Do not damage frog fencing (black shade cloth). Do not climb over frog fencing, lean tools or bollards on it, attach signs or power cords to it, or pile materials against it.
- Do not enter wetlands except where necessary for the activity
- Do not bring pets, birds, fish, animals and plants into the Park
- Be aware of fire risk– do not smoke in grassland or bushland
- Remove all litter including cigarette butts, fruit peel and chewing gum
- Do not disturb study markers

### 3. Gambusia and Chytrid hygiene practices

- Hygiene practices for management of gambusia, chytrid, phytophthora, weed propagules and other pests and diseases must be implemented. At the beginning and end of the day, and when moving between different precincts, clean all boots, waders, tools, bags, bins, clothing, boats and boat trailers of mud, seed, and weeds, and disinfect them with bleach or methylated spirits solution. Designated wash-down areas are available within the Park.
- When working in ponds or wetlands, they must be accessed in the following order on any one day:
  - Gambusia-free: Brickpit, NWF, Kronos Hill & Wentworth Common habitat ponds, SWQCP, Haslams Reach leachate ponds, Blaxland Riverside Park, EWQCP
  - Gambusia-reduced: nominated Narawang Wetland ponds between Aug-Jan each year (as advised by SOPA); Wharf Pond after drought
  - Gambusia-infested: all other ponds & estuarine waters, Lake Belevedere, Triangle Pond, all other Narawang Wetland ponds, underpasses connected to Triangle Pond, Haslams Creek, Boundary Creek, Powells Creek
- Sydney Olympic Park is considered as one site for the management of chytrid

### 4. Vehicles

- Only SOPA-authorized vehicles may be driven on Park service roads or lawns. Drivers must display a valid Service Vehicle Permit and:
  - Travel at a speed suited to the level of public activity, not exceed 10kph and use flashing hazard lights at all times.
  - Give way to pedestrians and cyclists; watch for and avoid lizards, turtles and other wildlife.
  - Park so as to not block pathways; not drive, park, damage or turn on areas of long unmown grass, landscaping or other park assets; not drive or park on turf without specific approval from SOPA.
  - Relock gates or bollards immediately
  - Only drive on sealed pathways. Unsealed pathways in Narawang Wetland and Haslams Creek Flats are a no-go zone

### 5. Brickpit access

- Personnel needing to access the Brickpit must first complete an access induction, and abide by conditions of entry

### 6. Newington Nature Reserve access

- Personnel needing to access Newington Nature Reserve must first complete an access induction, and abide by conditions of entry

## 2. BAT ROOST BUILDINGS - MAINTENANCE & USE

### Description of activity:

Maintenance works to Newington Armory buildings; use of currently un-used buildings

Works posing particular risks to microchiropteran bats include: all inspections or works affecting roofs, eaves or wall cavities; sealing of bat access points; spray application of chemicals; use of power tools that generate loud noise; application of odorous chemicals such as paints

### Environmental risks:

- Death or disturbance to roosting bats
- Disruption to breeding patterns; lack of recruitment
- Abandonment of young

### Applicable legislative requirements:

- It is illegal to harm native fauna except in accordance with Licence conditions, development consent or review of environmental factors (*NSW National Parks & Wildlife Act 1974, s98*)

### Park rules:

1. This procedure applies to the following Newington Armory buildings:
  - Buildings with evidence of current or recent use: 36, 37, 38, 42, 43.
  - Buildings with high potential for use because of their roof structure and proximity to forest habitats: 44, 45, 127, 128, 129, 130, 131, 132, 133, 134, 136, 154, 158, 160, 161, 163

Other buildings have low potential for use because of their roof structure and/or distance from the forest.
2. SOPA Project Manager prepares a Preliminary Project Plan (PPP) that describes the proposed works and buildings to be affected, and obtains necessary sign-offs. SOPA Project Manager seeks input from SOPA Parklands Ecologist as required to develop the PPP.
3. SOPA Project Manager arranges assessment/inspection of buildings by an ecologist / bat specialist.
  - If bats are found to be utilising any of the proposed buildings, ecological input is required into planning and scheduling of any proposed works.
  - A Review of Environmental Factors may be required, depending on likely scale of any likely impacts.
  - Works must be scheduled to avoid disruption to maternity roosts during the period November to April, when baby bats are likely to be present.
4. Maintenance activities that may be conducted without assessment are:
  - spray application of herbicide at ground level, using hand-held equipment,
  - Installation of rat bait stations (in enclosed containers) – avoid entry of the roof cavity November to February.
5. Proposals to use buildings 36, 37, 38, 42, 43, 44, 134 must be assessed by an ecologist. Low impact activities such as guided tours in and around the buildings will generally be appropriate, but activities that involve loud or sudden noise, bright lights, and evening/nocturnal access will generally be inappropriate.
6. Disturbance to Building 42 must be avoided between November and April when baby bats are likely to be present.

### 3. ESTUARINE AREAS – ROUTINE VEGETATION MANAGEMENT

#### Description of activity:

Routine vegetation management including weed removal, removal of mangrove seedlings from designated areas, propagation and planting – includes activities within Newington Nature Reserve

Note: for works involving mangrove pruning, see Standard Procedure 11

#### Environmental risks:

- Trampling of saltmarsh & mangrove pneumatophores; compaction of mudflats
- Disturbance to migratory shorebirds
- Loss of mangrove vegetation

#### Applicable legislative requirements:

It is illegal to harm or damage: native fauna, threatened species or wildlife that is part of an endangered ecological community, habitat of a threatened species or endangered ecological community, or protected marine vegetation, except in accordance with Licence or Permit conditions, development consent or review of environmental factors (*NSW National Parks & Wildlife Act 1974*, s98, s118A, s118D; *NSW Fisheries Management Act 1994*, Part 7)

#### Park rules:

##### 1. Vegetation management objectives

Vegetation Management Plans for estuarine areas will address the following objectives:

- Conservation and enhancement of mangrove forest, Coastal Saltmarsh and Swamp Oak Floodplain Forest ecological communities
- Mangroves do not establish in mapped saltmarsh or mudflat conservation areas (as approved under Permit conditions)
- Unvegetated mudflats maintained in shorebird feeding areas

##### 2. Planning

- SOPA Project Manager ensures contractor works specifications are consistent with precinct Vegetation Management Plans, and specifically include compliance with this procedure.
- SOPA Project Manager ensures all personnel attend a site briefing conducted by SOPA Environment & Ecology team detailing specific environmental requirements, and where required, a Newington Nature Reserve access induction
- Works to be undertaken by qualified bush regenerators, horticulturalists or arborists.

##### 3. Scheduling of works:

- Schedule works in saltmarsh, mangroves and mudflats during low tide (note tides at Sydney Olympic Park are approximately half an hour behind tides at Fort Denison).
- Avoid disturbance to migratory birds within the Waterbird Refuge and Newington Nature Reserve from August to March
- Avoid disturbance to nesting Black-winged Stilts in the Waterbird Refuge from August to December

##### 4. Conduct of works

- Prevent weed and disease spread into and within the Park - ensure tools and boots are cleaned and disinfected prior to use at Sydney Olympic Park. Be aware estuarine areas contain *Gambusia holbrooki* – avoid transfer of this fish to freshwater wetlands within the

Park by cleaning boots, tools and equipment after use.

- Weed outbreaks and mangrove seedlings must be controlled while small, before they develop into habitat, and to minimise disturbance due to weed control
- Minimise trampling of saltmarsh, mudflats and pneumatophores when conducting works. Try to walk only on bare ground. Where you must walk on vegetation, try to avoid succulent plants. Vary your route to avoid forming a track, and if there are several people working, everyone should take a different route to avoid concentrating any impacts.
- Mangroves should normally be removed at <0.5m in height, though Permit conditions allow removal of saplings to 1.5m in height to enable removal of 'missed' plants.
- Use hand tools only (including secateurs, handsaws, chainsaws). Do not refuel equipment close to waterways, and have a spill kit readily available
- Minimise soil disturbance when pulling mangrove seedlings. Cut rather than pull:
  - any mangroves in UXO areas of Newington Nature Reserve,
  - any mangroves within one metre of *Wilsonia backhousei*,
  - mangroves greater than 0.5m tall or past the 12-leaf stage
- Ensure all machinery and vehicles are kept out of creeks, wetlands and saltmarsh
- Lift and carry tools and bags of weeds or litter – do not drag them across saltmarsh.
- Remove all green waste from the wetlands to avoid changes to bed elevation and hydrology, and dispose of in accordance with SOPA instructions
- Ensure team members are fully aware of the locations of *Wilsonia backhousei* and *Zannichellia palustris* at the worksite, and minimise trampling of these species
- Minimise all spray application of herbicide. Do not use spray application within five metres of *Wilsonia backhousei* and *Zannichellia palustris*
- Avoid or minimise disturbance to birds and nesting areas throughout the year at all locations.
- Ensure any collection of saltmarsh seed / cuttings for reuse on site is conducted in accordance with Florabank guidelines. Seed is to be collected from multiple plants, over as wide an area as possible, and from strong, healthy plants. No more than 20% of seed may be collected from any one plant. Collection of *Wilsonia backhousei* is not permitted.
- Keep a copy of the regulatory Permit at the worksite at all times when pruning or removing mangroves (Permit issued under *NSW Fisheries Management Act 1994*). Prune mangrove trees to the minimum extent necessary to achieve maintenance outcomes
- Report numbers of mangroves pruned / removed to SOPA, for annual reporting to the regulatory authority
- Report any observations of dead or distressed fish (eg gasping for air) at the worksite to the SOPA Manager, cease all works until further advised.
- Do not remove snags from estuarine waterways



## 4. FROG CLEARANCE

### Description of activity:

Frog clearance is the removal of frogs from a worksite ahead of works to protect them from death or injury. It typically comprises a staged vegetation reduction program integrated with hand-searches for remaining frogs.

A staged vegetation reduction program progressively removes grassy and other habitat over a period of several days, encouraging frogs and other wildlife to relocate of their own accord as the habitat becomes less and less favourable.

Frog clearance is required in all areas of the Park that contain primary or potential Green and Golden Bell Frog habitat (Drawing 001-GG-0220).

### Environmental risks:

- Temporary or permanent loss of Green and Golden Bell Frog habitat, and resultant death of frogs or interruption to life cycle
- Death or injury to Green and Golden Bell Frogs within the works footprint
- Death or injury to other fauna including lizards, ground-dwelling birds, other frog species

### Applicable legislative requirements:

It is illegal to harm or damage native fauna, threatened species, or habitat of a threatened species, except in accordance with Licence conditions, development consent or review of environmental factors (*NSW National Parks & Wildlife Act 1974*, s98, s118A, s118D)

### Park rules:

#### 1. Planning

- SOPA Project Manager prepares a Preliminary Project Plan (PPP) that describes the proposal and identifies the location, area and nature of habitat proposed for removal, timing of works and proposed replacement species (where relevant), and obtains necessary sign-offs. SOPA Project Manager seeks input from SOPA Parklands Ecologist as required to develop the PPP.
- If flagged by the PPP assessment, the SOPA Project Manager completes a Development Application/Review of Environmental Factors (likely to be required for large-scale temporary habitat loss or for permanent habitat removal).
- SOPA Project Manager ensures contractor works specifications specifically include compliance with this procedure, and any additional conditions arising from the Preliminary Project Plan / Development Consent / Review of Environmental Factors.

#### 2. Frog clearance at small and low risk sites

*Eg turf adjacent to ponds; sparse groundcover vegetation; small areas of thick grass (less than 5x5 metres) that are more than 5 metres away from ponds)*

- Mark the boundaries of the works footprint with star pickets, witches hats or similar.
- For works of less than a day's duration: hand-search for frogs or other wildlife within the works footprint immediately prior to commencement of works. Particularly search under rocks or loose rubble, thick plant litter, and within the crowns of tussock grasses.
- Where works will continue for more than one day: hand-search for frogs or other wildlife within the works footprint, then immediately slash or cut grasses within the footprint to <50mm using hand tools. Remove cut material from the worksite so that frogs do not

shelter under it overnight.

*Frog clearances of this nature may be undertaken by approved works contractors provided they have completed an ecology induction detailing proper handling of frogs and are assessed as competent to undertake the frog clearance by the SOPA Manager. Works specifications must explicitly require the contractor to undertake the clearance and specify the methodology to be followed.*

### 3. Frog clearance at large grassy sites

*The SOPA Parklands Ecologist will tailor the procedure to the specific site, based on the generic procedure below. Thatch may need to be removed between cuts. Frog clearance will generally not be approved 1 April - 30 September, when frog activity levels are low.*

- Mark the boundaries of the works footprint with star pickets, witches hats or similar.
- Procedure:

#### *Ride-on mower or similar*

- Day 1: Slash vegetation to 300mm
- Day 2: Slash vegetation to 150-200mm
- Day 3: Slash vegetation to <50mm.  
Hand-search for any remaining frogs;  
commence works

#### *Hand tools (whipper snipper or similar)*

- Day 1: Slash vegetation to 200mm
- Day 2: slash vegetation to <50mm.  
Hand search for any remaining frogs;  
commence works

- SOPA Project Manager is responsible for ensuring contractors understand requirements and vegetation is cut in accordance with approved heights and stagings.

### 4. Frog clearance within or close to ponds

*The SOPA Parklands Ecologist will tailor the procedure to the specific site, based on the generic procedure below. Frog clearance will generally not be approved when tadpoles are likely to be present (November – March). Thatch may need to be removed between cuts.*

- Mark the boundaries of the works footprint with star pickets, witches hats or similar.
- Procedure:

#### *Aquatic vegetation*

- Lower water levels or pump out pond (where feasible); wait two days
- Hand-cut emergent macrophytes as low as possible; remove cut material from the works footprint but leave on-site so any frogs contained within it can relocate

#### *Terrestrial vegetation*

- Day 1: Slash vegetation to 300mm
- Day 2: Slash vegetation to 150-200mm.
- Day 3: Hand search by ecologists for any remaining frogs; slash vegetation to <(50mm); commence works

### 5. Maintenance of frog-cleared areas

- Where works continue over prolonged periods, vegetation must be maintained at <100mm high to deter recolonisation by frogs or other wildlife

### 6. Relocation of captured wildlife

- Captured frogs of any species are to be relocated to the nearest pond and released amongst dense reeds. Lizards are to be relocated to the nearest area of thick grass or leaf litter. Ensure hands are clean and free of sunscreen, insect repellent, fuels or other chemicals before handling wildlife.
- Sick or injured frogs/lizards or frogs in torpor must be placed in a moist plastic bag or container and notified to SOPA staff immediately for assessment
- Records of all wildlife relocated must be provided to the SOPA Parklands Ecologist.

## 5. FROG HABITAT – HORSE TRAIL OPERATION

### Description of activity:

Use of the horse exercise trail during the Royal Easter Show

### Environmental risks:

- Trampling and grazing of adjacent frog habitats
- Disturbance to wildlife
- Pollution of habitat ponds by manure

### Applicable legislative requirements:

It is illegal to harm or damage native fauna, threatened species, or habitat of a threatened species, except in accordance with Licence conditions, development consent or review of environmental factors (*NSW National Parks & Wildlife Act 1974*, s98, s118A, s118D)

Development consent S38/7/97 contains specific conditions relating to horse trail operation

### Park rules:

#### 1. Relevant development consent conditions

- The horse trail and exercise area shall operate only in association with the period of the Royal Easter Show.
- The horse trail and exercise area shall only be used in daylight hours.
- The applicant shall ensure the preparation and implementation of a Waste Management Plan detailing the measures proposed to manage horse solid waste generated during operation of the horse trail and exercise area. The plan shall include details of the collection and disposal of solid waste on a daily basis and plans for its disposal.
- The site shall be fenced to ensure public safety during the operation of the horse trail and exercise area. Fencing shall be of a type that where appropriate allows the movement of frogs between ponds.
- Sediment and runoff controls must be positioned between the frog ponds and the horse trail during operation of the horse trail

#### 2. Additional requirements

- Horses must be confined to the granite track and the approved mown lawn exercise area only. Adjacent grassland, ponds, garden beds, BBQ areas, playgrounds, and the pathway to Kronos Hill are 'no-go' areas and must be fenced off and signposted prior to horses coming on site. Fences must be maintained in a good state of repair throughout the show period. Horses must not be corralled, exercised, grazed or watered in 'no-go' areas.
- Event staff must be briefed on the location and reason for 'no-go areas', and their responsibilities for policing access restrictions.
- No vehicles, fencing materials, barricades or similar are to be driven, placed or stored on unmown grass during installation or removal of temporary fencing. No piles of fencing materials may be left on site overnight. Fencing consisting of hollow pipes must be capped.
- At the conclusion of the show period, fences and barricades must be checked for frogs before being removed. All cut cable ties must be collected and removed.

## 6. FROG HABITAT – MINOR & MAJOR WORKS

### Description of activity:

Minor works are small-scale works involving incidental trampling of grassland; digging for installation of signposts, park furniture or similar; works to irrigation, electricity or leachate services; repair or resurfacing of pathways and boardwalks

Major works including construction of new facilities and large-scale maintenance works involving trampling / loss of grassland or excavation

### Environmental risks:

- Temporary or permanent loss of Green and Golden Bell Frog habitat, and resultant death of frogs or interruption to life cycle
- Death or injury to Green and Golden Bell Frogs within the works footprint
- Death or injury to other fauna including lizards, ground-dwelling birds, other frog species
- Chemical pollution of waterbodies from oiling of boardwalks

### Applicable legislative requirements:

It is illegal to harm or damage native fauna, threatened species, or habitat of a threatened species, except in accordance with Licence conditions, development consent or review of environmental factors (*NSW National Parks & Wildlife Act 1974*, s98, s118A, s118D)

### Park rules:

#### 1. Planning

- SOPA Project Manager prepares a Preliminary Project Plan (PPP) that describes the proposal and identifies the location, area and nature of habitat proposed for removal (both temporary or permanent), timing of works and proposed replacement species (where relevant), and obtains necessary sign-offs. SOPA Project Manager seeks input from SOPA Parklands Ecologist as required to develop the PPP.
- If flagged by the PPP assessment, the SOPA Project Manager completes a Development Application/Review of Environmental Factors (likely to be required for large-scale temporary habitat loss or for permanent habitat removal).
- SOPA Project Manager ensures contractor works specifications specifically include compliance with this procedure, and any additional conditions arising from the Preliminary Project Plan / Development Consent / Review of Environmental Factors.

#### 2. Conduct of works

- SOPA Project Manager organises frog clearance prior to commencement (if required) and ensures all personnel attend a site briefing conducted by SOPA Environment & Ecology team detailing specific environmental requirements
- Clearly mark the works footprint with flagging tape, witches hats or similar to identify the extent of works and no-go areas
- Minimise trampling of long grass. Keep people, tools, materials and vehicles within demarcated area
- Do not leave materials, tools or equipment on site overnight unless approved by SOPA and only if frog clearance has been arranged prior to commencement of works next day
- Ensure holes and trenches are backfilled at the end of each day, and pipes are capped

- Protect frog fences from damage – do not climb over them; do not lean tools or bollards on them; do not pile materials on them

### 3. Gambusia and Chytrid hygiene practices

- Hygiene practices for management of gambusia, chytrid, weed propagules and other pests and diseases must be implemented. At the beginning and end of the day, and when moving between different precincts, clean all boots, waders, tools, bags, bins, clothing, boats and boat trailers of mud, seed, and weeds, and disinfect them with bleach or methylated spirits solution. Designated wash-down areas are available within the Park.
- When working in ponds or wetlands, they must be accessed in the following order on any one day:
  - Gambusia-free: Brickpit, NWF, Kronos Hill & Wentworth Common habitat ponds, SWQCP, Haslams Reach leachate ponds, Blaxland Riverside Park, EWQCP, Wilson Park bioremediation ponds
  - Gambusia-reduced: nominated Narawang Wetland ponds between Aug-Jan each year (as advised by SOPA); Wharf Pond after drought
  - Gambusia-infested: all other ponds & estuarine waters, Lake Belevedere, Triangle Pond, all other Narawang Wetland ponds, underpasses connected to Triangle Pond, Haslams Creek, Boundary Creek, Powells Creek
- Sydney Olympic Park is considered as one site for the management of chytrid

### 4. Major works

- the need for works practices additional to those listed above (such as temporary frog fencing, daily frog clearance of worksites, vegetation maintenance in frog-cleared areas), is dependent upon scale, duration, nature and season of works, and will be assessed by SOPA Environment & Ecology on a case-by-case basis

## 7. FROG HABITAT – POND WATER LEVEL MANAGEMENT

### Description of activity:

Manipulation of water levels in freshwater ponds and wetlands including maintenance of minimum environmental levels, cyclic draining, draining for wetland maintenance

### Environmental risks:

- Temporary loss of Green and Golden Bell Frog habitat
- Death or injury to Green and Golden Bell Frogs and tadpoles
- Introduction or spread of *Gambusia holbrooki*
- Disturbance, death or injury to breeding waterbirds and other fauna

### Applicable legislative requirements:

It is illegal to harm or damage native fauna, threatened species, or habitat of a threatened species, except in accordance with Licence conditions, development consent or review of environmental factors (*NSW National Parks & Wildlife Act 1974*, s98, s118A, s118D)

### Park rules:

#### 1. Gambusia and Chytrid hygiene practices

- All persons working in freshwater ponds must implement gambusia and chytrid hygiene practices
- At the beginning and end of the day, and when moving between different precincts, clean all boots, waders, tools, bags, bins, clothing, boats and boat trailers of mud, seed, and weeds, and disinfect them with bleach or methylated spirits solution. Designated wash-down areas are available within the Park.
- Ponds or wetlands must be accessed in the following order on any one day:
  - Gambusia-free: Brickpit, NWF, Kronos Hill & Wentworth Common habitat ponds, SWQCP, Haslams Reach leachate ponds, Blaxland Riverside Park, EWQCP, Wilson Park bioremediation ponds
  - Gambusia-reduced: nominated Narawang Wetland ponds between Aug-Jan each year (as advised by SOPA); Wharf Pond after drought
  - Gambusia-infested: all other ponds & estuarine waters, Lake Belevedere, Triangle Pond, all other Narawang Wetland ponds, underpasses connected to Triangle Pond, Haslams Creek, Boundary Creek, Powells Creek
- Sydney Olympic Park is considered as one site for the management of chytrid

#### 2. Pond maintenance (including cyclic draining, sediment removal)

- Pond draining for maintenance works or for ecological reasons must be scheduled for August/September or April/May, to minimise impacts to breeding frogs and waterbirds
- The standard procedure for Minor & Major Works in Frog Habitats must be applied to maintenance works requiring draining of freshwater ponds (including constructed water quality control ponds)

#### 3. Water level management objectives- NWF, EWQCP

- Fluctuate water levels in the macrophyte beds year-round to mimic ephemerality
- Flood levels not exceeded for more than one week to minimise drowning of macrophytes

- Water levels cover 2/3 of the macrophyte bed during November-March
- Biannual extended drying of the macrophyte bed for 4 weeks August/September. Coordinate timing with maintenance needs and Gambusia management. EWQCP and NWF to be dried in alternate years
- Maintain 300µ filter on EWQCP pump to Brickpit Reservoir to prevent Gambusia transfer, in accordance with WRAMS development consent conditions

#### 4. Water level management – NWF

- Only harvest stormwater if water levels are above:  
Winter >RL 102.3; Summer >RL 102.4  
*(water may only be abstracted for frog pond filling if water levels are lower than specified)*
- After rain, reduce flood levels(>102.5) within one week to:  
Winter RL102.1; Summer RL102.25

#### 5. Water level management - EWQCP

- Only harvest stormwater if water levels are above:  
Winter >RL 2.7; Summer >RL 3.0  
*(water may only be abstracted for frog pond filling if water levels are lower than specified)*
- After rain, reduce flood levels(> RL3.2) within one week to:  
Winter RL2.7; Summer RL2.8  
In winter, harvest water to RL 2.9 within 2-3 days and then to RL2.7 within one week, to reduce sediment movement.
- Manually remove weir boards if water has remained above the flood level (RL 3.2) for more than one week and the WRAMS reservoir is full

#### 6. Water level management - Brickpit Reservoir

- Cease transfers into the Reservoir at RL 82.5
- Commence pumpout to EWQCP at RL 83.0 and lower Reservoir to 82.5

Note: RL 2.7 = base of outer gabion; RL 3.23 = weir overtops; Summer = November to March

## 8. FROG HABITAT – ROUTINE LANDSCAPE MAINTENANCE

### Description of activity:

Routine vegetation management within areas classified as Green and Golden Bell Frog habitat or potential habitat, as identified on Map 3. Note the mapped area includes parts of most Parklands precincts, as well as the Boundary Creek corridor and SWQCP.

Activities include weed control, slashing, installation of new plantings, refurbishment of senescing plantings, mulching, pruning, macrophyte removal, renewal disturbance and rehabilitation of degraded areas

### Environmental risks:

- Loss or damage of habitat (including weeds)
- Death or injury to Green and Golden Bell Frogs
- Introduction or spread of *Gambusia holbrooki*
- Disturbance, death or injury to nesting birds, lizards and other fauna

### Applicable legislative requirements:

It is illegal to harm or damage native fauna, threatened species, or habitat of a threatened species, except in accordance with Licence conditions, development consent or review of environmental factors (*NSW National Parks & Wildlife Act 1974*, s98, s118A, s118D)

A number of development consents issued to SOPA under the *NSW Environmental Planning and Assessment Act 1979* require the creation and ongoing management of Green and Golden Bell Frog habitat (including Blaxland Riverside Park, the Brickpit, Narawang Wetland)

### Park rules:

#### 1. Vegetation management objectives

Vegetation Management Plans for frog habitat areas will address the following objectives:

- Breeding ponds to retain water for a minimum of 8 weeks; at least 75 cm deep in part of the waterbody; unshaded between 10am and 4pm; contain 30-60% open water; contain tall macrophytes in patches ideally over 1.5 metres wide; surrounded by tall dense grass (over 30cm high) extending a nominal 5 metres from the pond edge.
- Terrestrial habitats comprised of tall dense grasses (over 30cm high) covering at least 70% of the nominated movement corridor or foraging area
- Maintaining a mosaic of habitat stages within precincts, by implementing a periodic renewal disturbance regime (including manipulation of pond wetting and drying cycles, and terrestrial and aquatic vegetation renewal).
- Frog fencing retained in a good state of repair

#### 2. Planning

- SOPA Project Manager ensures contractor works specifications are consistent with precinct Vegetation Management Plans, and specifically include compliance with this procedure.
- SOPA Project Manager ensures all personnel attend a site briefing conducted by SOPA Environment & Ecology team detailing specific environmental requirements, and where required, a Newington Nature Reserve and Brickpit access induction
- Works to be undertaken by qualified bush regenerators or horticulturalists.

#### 5. Gambusia and Chytrid

- At the beginning and end of the day, and when moving between different precincts, clean all



boots, waders, tools, bags, bins, clothing, boats and boat trailers of mud, seed, and weeds, and disinfect them with bleach or methylated spirits solution. Designated wash-down areas are available within the Park.

- When working in ponds or wetlands, they must be accessed in the following order on any one day:
  - Gambusia-free: Brickpit, NWF, Kronos Hill & Wentworth Common habitat ponds, SWQCP, Haslams Reach leachate ponds, Blaxland Riverside Park, EWQCP, Wilson Park bioremediation ponds
  - Gambusia-reduced: nominated Narawang Wetland ponds between Aug-Jan each year (as advised by SOPA); Wharf Pond after drought
  - Gambusia-infested: all other ponds & estuarine waters, Lake Belevedere, Triangle Pond, all other Narawang Wetland ponds, underpasses connected to Triangle Pond, Haslams Creek, Boundary Creek, Powells Creek
- New macrophytes sourced from nurseries must be free of Gambusia and aquatic weeds.
- Never transplant macrophytes from gambusia- infested or gambusia-reduced ponds into gambusia-free ponds
- Sydney Olympic Park is considered as one site for the management of chytrid

#### 6. Herbicides

- Ecological review is required for proposed use of any herbicide other than Roundup Biactive or equivalent
- Spray application of herbicide will not be applied to vegetation over 50mm tall, other than isolated weeds in mulched beds or footpaths
- Herbicide is not to contain dyes or other additives
- Herbicide is not to be mixed within habitat areas
- An appropriate spill response kit must be readily available, and staff trained in its use

#### 7. Slashing

- Tall annual weeds may be slashed to 200mm high as required to remove flowers or immature seedheads
- Slashing of grasses and groundcovers (including weeds) to less than 200mm high requires frog clearance procedure to be implemented
- Do not refuel equipment close to waterways, and have a spill kit readily available

#### 8. Renewal disturbance, macrophyte removal and rehabilitation of degraded areas

- Ecological input to scheduling and scale of works is required, scheduling must account for seasonal frog activity and breeding patterns.
- Extensive removal of reeds must generally be conducted when ponds are dry

#### 9. Access principles

- Weed outbreaks must be controlled while small, before they develop into habitat, and to minimise disturbance due to weed control
- Avoid and minimise trampling of grassy habitats by avoiding unnecessary access and personnel
- Avoid works to breeding ponds November to March, and particularly when tadpoles of any species are present
- Check tadpole status of ponds with SOPA before entering waterbodies; do not enter ponds where tadpoles are present. Minimise sediment disturbance during works. Take care to not pierce or otherwise damage pond liners.
- Remove all greenwaste, tools, materials and equipment from site daily to avoid fauna sheltering within it overnight
- Where greenwaste is approved to be retained on site - pile harvested vegetation on sparsely vegetated ground at least two metres from ponds, in locations where it will not fall or blow into a pond or look unsightly when viewed from public pathways. Do not pile harvested vegetation on rock piles.

## 9. FROG HABITAT – TURF MAINTENANCE

### Description of activity:

Mowing, pesticide application, fertiliser application and replacement of turf within or adjacent to frog habitat including Kronos Hill, Wentworth Common, Blaxland Riverside Park, Newington Armory, Woo-la-ra, Bicentennial Park.

### Environmental risks:

- Death or injury to Green and Golden Bell Frogs and other wildlife sheltering in overgrown turf
- Poisoning of Green and Golden Bell Frogs and other wildlife utilizing turf treated with herbicides
- Pollution of waterbodies with pesticide and fertilizer runoff

### Applicable legislative requirements:

It is illegal to harm or damage native fauna, threatened species, or habitat of a threatened species, except in accordance with Licence conditions, development consent or review of environmental factors (*NSW National Parks & Wildlife Act 1974*, s98, s118A, s118D)

### Park rules:

1. Mown lawns are not to exceed 100mm between mowings
2. Should lawns exceed this length, frog clearance procedures incorporating staged slashing and search for sheltering frogs is required
3. Ecological review must be conducted regarding any proposed application of herbicide or pesticide, other than Roundup Bioactive or equivalent. Where herbicide use is approved, dyes and other additives may not be used.
4. No herbicide of any kind may be applied to the lower slopes at the Northern Water Feature (below the path) over the period November to March, to avoid poisoning frogs that hunt on the lawns at night.
5. Herbicide is not to be mixed within habitat areas
6. An appropriate spill response kit must be readily available where herbicide is used, and staff trained in its use
7. Do not refuel equipment close to waterways, and have a spill kit readily available
8. Turf replacement works must incorporate the controls specified in the Minor and Major procedure, due to the risk of frogs colonising worksites

## 10. LITTER REMOVAL FROM CREEKS AND WETLANDS

### Description of activity:

Removal of litter from creeks and wetlands

### Environmental risks:

- Trampling of saltmarsh, mangroves, or reeds
- Introduction of *Gambusia holbrooki* into frog ponds
- Disturbance to nesting waterbirds
- Accidental removal of frogs and lizards sheltering within litter

### Applicable legislative requirements:

It is illegal to harm or damage: native fauna, threatened species or wildlife that is part of an endangered ecological community, habitat of a threatened species or endangered ecological community, or protected marine vegetation, except in accordance with Licence or Permit conditions, development consent or review of environmental factors (*NSW National Parks & Wildlife Act 1974*, s98, s118A, s118D; *NSW Fisheries Management Act 1994*, Part 7)

### Park rules:

#### 1. Planning

- SOPA Contract Manager ensures all personnel are briefed on this procedure prior to each occasion works are undertaken.

#### 2. Estuarine areas (eg Haslams Creek, Mangroves in Bicentennial Park)

- Schedule works during low tide (note tides at Sydney Olympic Park are approximately half an hour behind tides at Fort Denison).
- Prevent weed and disease transfer to and within the Park - estuarine areas contain *Gambusia holbrooki* – avoid transfer of this fish to freshwater wetlands by cleaning tools and boots at completion of works.
- Minimise trampling of saltmarsh, mudflats and pneumatophores when conducting works. Try to walk only on bare ground. Where you must walk on vegetation, try to avoid succulent plants. Vary your route to avoid forming a track, and if there are several people working, everyone should take a different route to avoid concentrating any impacts.
- Lift and carry tools and bags of litter – do not drag them across saltmarsh.

#### 3. Freshwater ponds (eg Northern Water Feature)

- Aim to schedule works when water levels are low and edges of ponds are exposed
- Prevent weed and disease transfer to and within the Park - The Northern Water Feature and other freshwater ponds are free of *Gambusia holbrooki* – avoid transfer of this fish into the wetlands by ensuring tools and boots are cleaned of dirt and mud prior to use.
- Minimise disturbance to reeds as these are wildlife habitat – stay on turf or mudflats
- Be alert for frogs that may be on, in or under litter – look inside open containers and pipes - encourage any frogs to jump away before bagging
- Lift and carry tools and bags of litter – do not drag them across vegetation

## 11. MANGROVE PRUNING

### Description of activity:

Strategic and minimal pruning of mangroves for approved routine maintenance purposes

### Environmental risks:

- Loss or damage to marine vegetation and associated habitats

### Applicable legislative requirements:

- It is illegal to harm protected marine vegetation except in accordance with a Permit (NSW *Fisheries Management Act 1994, Part 7*)
- The Authority holds a Permit which conditionally permits strategic and minimal mangrove pruning and removal activities for the following approved routine maintenance activities:
  - protection and maintenance of existing infrastructure (eg flushing channels, culverts, radio towers, seawalls),
  - visitor amenity (eg access along pathways and boardwalks, bird hides),
  - maintenance of appropriate hydrological regimes
  - maintenance of operational boat access, particularly along Haslams Creek and Powells Creek.

### Park rules:

#### 1. Planning

- SOPA Project Manager prepares a Preliminary Project Plan (PPP) (with accompanying map) that describes the proposal and identifies the purpose, timing, location and scale of proposed works, and obtains necessary sign-offs. SOPA Project Manager seeks input from SOPA Environment & Ecology team as required to develop the PPP.
- SOPA Parklands Ecologist confirms whether proposed works are in accordance with scope and conditions of SOPA's existing Permit
- SOPA Project Manager ensures:
  - contractor works specifications specifically include compliance with this procedure, and any additional conditions arising from the Preliminary Project Plan or REF.
  - contractor staff are appropriately qualified, and participate in an induction briefing prior to commencement of works to ensure that they are aware of conservation requirements and Permit conditions.

#### 2. Conduct of works

- A copy of the Permit must be kept at the worksite at all times
- Schedule works during low tide (if foot access to mudflats is required)
- Use hand tools only (secateurs, handsaws or chainsaws).
- Ensure all machinery and vehicles are kept out of creeks, wetlands and saltmarsh
- Clearly mark the work area to identify extent of works and no-go areas (including patches of *Wilsonia backhousei*)
- Prevent pest, weed and disease transfer - ensure tools, boots and tools are clean and dry prior to use at Sydney Olympic Park, and between different sites within the Park.
- Minimise trampling of saltmarsh, mudflats and pneumatophores when conducting works.

Try to walk only on bare ground. Where you must walk on vegetation, try to avoid succulent plants. Vary your route to avoid forming a track, and if there are several people working, everyone should take a different route to avoid concentrating any impacts.

- Prune trees to the minimum extent necessary to achieve maintenance outcomes, and in accordance with horticultural best practices
- Where trees or large seedlings are removed, leave root systems in place to minimise disturbance to mudflats
- Report numbers of mangroves pruned / removed to SOPA, for annual reporting to the regulatory authority
- Remove all green waste from the wetlands to avoid changes to bed elevation, chip and dispose of in accordance with SOPA instructions
- Report any observations of dead or distressed fish (eg gasping for air) at the worksite to the SOPA Manager, cease all works until further advised. Worksites are to be checked twice-daily.

## 12. MANGROVE PICKING – EDUCATION PROGRAMS

### Description of activity:

Picking of mangrove branchlets and pneumatophores by SOPA Education staff for teaching purposes

### Environmental risks:

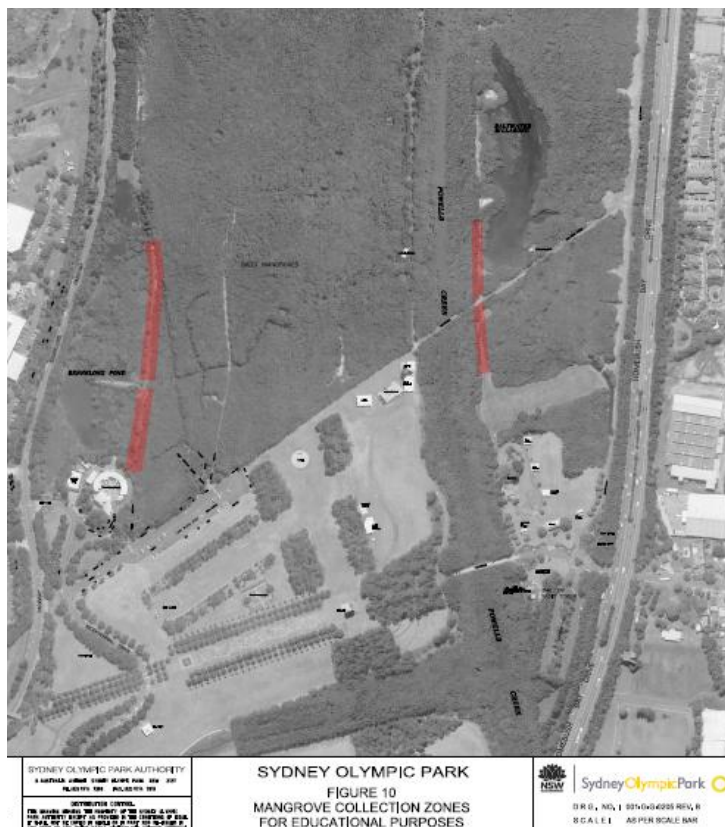
- Loss or damage to marine vegetation and associated habitats

### Applicable legislative requirements:

- It is illegal to harm protected marine vegetation except in accordance with a Permit (NSW Fisheries Management Act 1994, Part 7)
- The Authority holds a Permit that conditionally permits picking of small branchlets and pneumatophores by education staff for teaching purposes

### Park rules:

- A copy of the Permit must be carried during collection, and be readily accessible during teaching activities
- Collection may only be undertaken by staff familiar with this procedure and approved by SOPA Manager Education Programs
- The collection area is restricted to identified areas of Badu Mangroves (drawing 001-GG-0205), with collection points to be rotated to minimise impacts to particular areas
- Maximum quantities of Grey Mangrove to be collected are:
  - 20 pneumatophores per month- 40 weeks of the year and
  - 3-4 small branches(less than 1cm diameter) each week – 40 weeks of the year.
- The collection area will be rested during school holidays.
- Collection must be undertaken with secateurs, using horticultural best practice, and not result in significant damage or death to any tree.
- Education Officers must record the number of samples collected and report any observed impacts or issues as they arise to SOPA Environment & Ecology staff
- Dip-netting and collecting within Bennelong Pond is limited to the area adjacent to the central bund where Zannichellia is not prolific. Zannichellia is not to be collected.



### 13. PEST FAUNA MANAGEMENT

#### Description of activity:

Fox, cat, hare and rabbit control by shooting, trapping, and/or den fumigation

Rat control by baiting

Feral bee control within tree hollows using registered chemicals

Mosquito control by ground and/or aerial application of registered mosquito control products to estuarine areas (including Newington Nature Reserve)

#### Environmental risks:

- Incidental trampling of wildlife and habitats
- Death of birds of prey, due to feeding on poisoned rats
- Disturbance to birds during aerial mosquito treatments
- Incidental poisoning of wildlife during hollow fumigation

#### Applicable legislative requirements:

It is illegal to harm or damage: native fauna, threatened species or wildlife that is part of an endangered ecological community, habitat of a threatened species or endangered ecological community, or protected marine vegetation, except in accordance with Licence or Permit conditions, development consent or review of environmental factors (*NSW National Parks & Wildlife Act 1974*, s98, s118A, s118D; *NSW Fisheries Management Act 1994*, Part 7)

#### Park rules:

- Implement park access rules (Standard Procedure 1: Access to habitat areas)
- Ensure works are undertaken by appropriately licensed personnel, who have completed necessary access inductions for Newington Nature Reserve and the Brickpit, where relevant
- Schedule works to avoid disruption to wildlife breeding activities
- Apply pesticides in accordance with regulatory requirements
- Type and placement of rat baits installed in open parkland areas considers impacts to birds of prey – baits requiring more than one dose are preferentially used in such areas



## 14. SYDNEY TURPENTINE IRONBARK FOREST (STIF) MANAGEMENT

### Description of activity:

Routine vegetation management of Sydney Turpentine Ironbark Forest within Newington Nature Reserve, Newington Armory and Narawang Wetland.

Activities include weed control, maintenance of fuel reduced zones around buildings, maintenance of access tracks, rail corridors and fence lines, seed collection and planting, herbarium collection

### Environmental risks:

- Loss / trampling of vegetation
- Disturbance to wildlife

### Applicable legislative requirements:

- It is illegal to harm an endangered ecological community except in accordance with Licence conditions, development consent or review of environmental factors (*NSW National Parks & Wildlife Act 1974, s118A; s118D*)

### Park rules:

#### 1. Vegetation management objectives

Vegetation Management Plans for Sydney Turpentine Ironbark Forest STIF vegetation will address the following objectives:

- Conservation and enhancement of the community
- Compliance with rail safety legislation
- Fire risk management

#### 2. Planning

- SOPA Project Manager ensures contractor works specifications are consistent with precinct Vegetation Management Plans, and specifically include compliance with this procedure.
- SOPA Project Manager ensures all personnel attend a site briefing conducted by SOPA Environment & Ecology team detailing specific environmental requirements, and where required, a Newington Nature Reserve and Brickpit access induction
- Works to be undertaken by qualified bush regenerators or horticulturalists.

#### 3. Conduct of works

- Hygiene practices for management of phytophthora, weed propagules and other pests and diseases will be implemented. All footwear, tools and equipment must be cleaned and disinfected prior to entering Newington Nature Reserve forest.
- Herbicide use will be minimised; spray application of herbicide will not be used within five metres of an individually-listed threatened plant species
- Weed outbreaks must be controlled while small, before they develop into habitat, and to minimise disturbance due to weed control

#### 4. Seed collection

- SOPA must provide NSW Office of Environment & Heritage with a yearly 'wish list' of target plant species and quantities to be collected from Newington Nature Reserve.
- Implement Florabank guidelines during seed collection
- To maximise genetic diversity, seed must be collected from multiple plants to bulk, over as



wide an area as possible

- Collect seed from strong, healthy plants
- To allow for natural regeneration, and for fauna that feed upon seeds, no more than 20% of seed is to be collected from any one plant
- Seed may not be collected from individually-listed threatened species
- Collection of seed and propagules for use outside of Sydney Olympic Park will only be permitted for revegetation programs supported by OEH and where the collector has a valid s132C licence under the *National Parks and Wildlife Act 1974*, and is approved by the NPWS Area Manager.

#### 5. Revegetation

- Only plants of local provenance are to be used for revegetation purposes within the STIF community.
- Material, including ROTAP species, collected from the primary Newington Nature Reserve source should, where possible, be used for all revegetation purposes within a 300m radius of the reserve, to create a genetic and species buffer.
- SOPA must clearly mark and record the origin of planted material such that this can be used as a secondary source for future plantings away from the NNR and the 300m radius.
- For plantings outside the 300m buffer zone, secondary source material can be used as required.

## 15. VISITOR PROGRAMS

### Description of activity:

Events, tours and educational programs conducted within or adjacent to sensitive ecological areas

This procedure only applies to events and programs routinely conducted within the Parklands (such as walking and running events, site hires, filming, education programs, tours and school holiday activities) and subject to existing term Parklands Approval Permits. Proposed new programs and events require separate review and approval.

### Environmental risks:

- Trampling of vegetation
- Littering
- Water pollution
- Lighting, noise, disturbance
- Introduction of weeds, pests and disease

### Applicable legislative requirements:

It is illegal to harm or damage: native fauna, threatened species or wildlife that is part of an endangered ecological community, habitat of a threatened species or endangered ecological community, or protected marine vegetation, except in accordance with Licence or Permit conditions, development consent or review of environmental factors (*NSW National Parks & Wildlife Act 1974*, s98, s118A, s118D; *NSW Fisheries Management Act 1994, Part 7*)

Events and programs are 'restricted activities' under the Parklands Plan of Management, and require a 'Parklands Approval Permit'.

### Park rules:

Controls for individual events and programs are specified in Parklands Approval Permits (issued under the Parklands Plan of Management), and included in third-party licence agreements where applicable.

Parklands Approval Permits will contain the following base requirements (where relevant), as well as any necessary program-specific conditions:

1. All activities associated with an event or program (people movement, signage, temporary fencing, drink stations) are restricted to turf or hardstand only – no people are to enter habitat areas; no equipment is to be placed on habitats or landscaping
2. The number of participants must be capped at a level appropriate to the nature of the habitat, and level of supervision
3. Marshalls and event staff must be briefed on the rules applicable to the particular site/event, and their responsibilities in managing crew and participants
4. Temporary fencing must be installed for large events where crowds are likely to spill out into habitat areas
5. No signage, electrical cables or similar are to be attached to frog fences or trees.
6. Additional lidded garbage bins must be installed at appropriate locations to reduce littering of habitats. Any loose litter (including cigarette butts and cable ties) must be removed daily, including during bump-in and bump-out
7. Within primary frog habitats, materials left on site overnight are to be minimised, and checked for frogs prior to removal. Any temporary fencing made of hollow pipes must be capped to prevent wildlife from sheltering within them.

8. The following areas are closed to public access between dusk and dawn (other than specialised guided tours)
  - Brickpit Ringwalk
  - River Walk adjacent to Newington Nature Reserve
  - Newington Armory rail track
9. Appropriate hygiene practices are to be incorporated into education and tour programs involving access to habitat areas
10. Lighting of habitat areas, and upwards-pointing search lights, are not permitted

## 16. WRAMS OPERATIONS

### Description of activity:

Operation and maintenance of the WRAMS system, including the Brickpit Reservoir and EWQCP;

### Environmental risks:

- Introduction of *Gambusia holbrooki* into the Brickpit
- Flooding of Brickpit habitats due to overtopping of the Reservoir
- Damage to Green and Golden Bell Frog habitat,
- Disturbance, death or injury to Green and Golden Bell Frogs, disturbance to life cycle
- Eutrophication of Brickpit, EWQCP, frog ponds

### Applicable legislative requirements:

It is illegal to harm or damage native fauna, threatened species, or habitat of a threatened species, except in accordance with Licence conditions, development consent or review of environmental factors (*NSW National Parks & Wildlife Act 1974*, s98, s118A, s118D)

Development consent DA S38/3/99 contains specific conditions relevant to WRAMS operation

### Park rules:

#### 1. Contract Management

- SOPA Contract Manager ensures works specifications specifically include compliance with this procedure.
- SOPA Project Manager ensures all personnel involved in operation of the WRAMS system attend a site briefing conducted by SOPA Environment & Ecology team detailing specific environmental requirements,
- All personnel requiring access to the Brickpit must first complete a Brickpit access induction and implement access conditions
- Repair and maintenance work proposed within the Brickpit or at the EWQCP must comply with the Standard Procedure for Minor and Major works in Frog Habitat

#### 2. Reservoir management

- The water storage shall be maintained at a level sufficient to contain runoff from the Brickpit catchment during a severe storm event and prevent overtopping and flooding of breeding and foraging habitat for the Frog. This will reduce the risk of water which may be contaminated with *Gambusia* or other contaminants from reaching Frog habitat. The normal maximum operating storage level shall be set such that the reserve storage space created above it will be sufficient to contain a 1 in 100 year storm (half hour duration). [DA S38/3/99]
- Stormwater must not be pumped into the Brickpit when the Reservoir level exceeds RL82.5. Water must be actively pumped out of the Reservoir when Reservoir level exceeds RL83.0, to prevent overtopping
- If the water depth on level 2 of the Reservoir falls to 50cm depth, it is likely to be colonised by frogs, and herpetologist advice is required before refilling

#### 3. Gambusia and water quality management

- Measures such as mechanical screening and regular monitoring of imported water, and diversion of inflow where necessary shall be undertaken to minimise the occurrence of

Gambusia and other contaminants in the storage reservoir in the Brickpit. If Gambusia are detected in the storage reservoir then measures shall be undertaken to control and if possible to eradicate them. [DA S38/3/99]

- The filter from the EWQCP must be kept in good order and repair; stormwater must not be pumped into the Brickpit if at any stage the filter is not operational.
- The applicant shall ensure that water derived from the Water Reclamation Plant and discharged into the Brickpit shall not exceed 1mg/litre of phosphorus, or such other higher level as may be agreed with the Department of health and the EPA. [DA S38/3/99]
- Should it be desired to use water from the storage pond in the Brickpit for filling frog habitat ponds, the water shall be firstly sampled and tested to confirm that it is suitable for this purpose. [DA S38/3/99]
- In the event of any discharge from the WTP to the EWQCP, the applicant shall immediately monitor the impact of the discharge on the Green and Golden Bell Frog population present. Should a suitably qualified expert consider it necessary to remove frogs and/or tadpoles, this shall be done in accordance with Condition 33(c) with the Frogs and/or tadpoles returned to the EWQCP once the threat has passed. [DA S38/3/99]
- Only harvest stormwater from the EWQCP if water levels are above:  
Winter >RL 2.7; Summer >RL 3.0

#### 4. Lighting

- Lighting associated with the landscaping and operation of the WTP and particularly the 24-hour visitor centre, shall be designed to minimise light spillage and glare and to have no adverse impact on any identified frog habitat. [DA S38/3/99]

## 17. WILDLIFE RELOCATION & RELEASE

### Description of activity:

Relocation of 'at risk' wildlife from worksites within and adjacent to Sydney Olympic Park (typically frogs and lizards); relocation of sick or injured wildlife and transport to a veterinarian; release of rehabilitated wildlife by wildlife carers.

### Environmental risks:

- Injury or death of captured and relocated animals
- Spread of pests and disease
- Displacement of existing wildlife at release site; disturbance to existing species balances
- Development of unwanted populations of released species eg snakes, possums, waterbirds

### Applicable legislative requirements:

It is illegal to harm or damage native fauna, or threatened species, except in accordance with Licence conditions, development consent or review of environmental factors (*NSW National Parks & Wildlife Act 1974*, s98, s118A)

The Office of Environment & Heritage licenses wildlife carers. The NPWS Rehabilitation of Fauna Policy addresses requirements for release of fauna.

### Park rules:

Contact SOPA Environment & Ecology or Park Rangers for advice regarding relocation of animals from worksites or sick or injured wildlife.

#### 1. Relocation of 'at risk' fauna from worksites

- Only move fauna that is at risk of injury during the works -
  - Wash your hands prior to contact. Residues of nicotine, fuels, insect repellent or sunscreen on your hands can poison frogs in particular.
  - Gently catch frogs or lizards by hand and take them immediately to the nearest suitable habitat area for release. Captured frogs of any species may be relocated to the nearest freshwater pond and released amongst dense reeds. Lizards may be relocated to the nearest area of thick grass or leaf litter.
  - Put a small amount of bottled or pond water into any container or plastic bag used to transport frogs (not enough to drown them).
  - Do not leave captured wildlife on site, or within vehicles, as they can quickly overheat and die.
  - Wash your hands after handling any animals.
  - Provide records of all wildlife relocated to the SOPA Contract manager and the SOPA Parklands Ecologist.

#### 2. Sick or injured wildlife

- Place sick or injured animals or frogs in torpor in a clean box/container and either give to SOPA staff for assessment or transport to a local veterinarian.

#### 3. Release of fauna by wildlife carers

- Release of native fauna to the habitats of Sydney Olympic Park is permitted only with written approval of SOPA Environment & Ecology personnel, and at a release site approved by the Authority

- Release of frogs or tadpoles will not generally be approved because of potential risk of disease introduction; release of snakes will not generally be approved because of potential conflicts with park visitor use
- Only native fauna species indigenous to the area will be considered for release
- Factors considered in determining an approval for release include:
  - Origin of the animals – generally only wildlife found at the Park or within 5km of it will be accepted (a copy of the call sheet location record must be provided)
  - Species, number and age of fauna
  - Reason fauna were taken into care, time in care
  - Veterinarian assessment of suitability for release and ability to survive independently in the wild
  - Potential for disease introduction
  - Availability of suitable habitat within the Park
  - Potential conflicts with existing wildlife
- No fauna will be released at Newington Nature Reserve or Newington Armory
- SOPA will record details of all fauna released, their release site, and carer name and carer's Licence number.
- A SOPA staff member must be present when wildlife is released

## 18. ZANNICHELLIA CONSERVATION

### Description of activity:

Management works within Bennelong Pond that may cause turbidity, sedimentation, water level changes, or otherwise affect *Zannichellia palustris*.

### Environmental risks:

- Trampling, desiccation, drowning, smothering by disturbed sediment

### Applicable legislative requirements:

It is illegal to harm or damage a threatened species, except in accordance with Licence conditions, development consent or review of environmental factors (*NSW National Parks & Wildlife Act 1974*, s98, s118A)

### Park rules:

#### 1. Planning

- SOPA Project Manager ensures contractor works specifications are consistent with precinct Vegetation Management Plans, and specifically include compliance with this procedure.
- SOPA Project Manager ensures all personnel attend a site briefing conducted by SOPA Environment & Ecology team detailing specific environmental requirements

#### 2. Conduct of works

- Where possible, schedule intrusive works such as dewatering the pond or works affecting areas mapped on Figure 1 as Area 1 or 2, to avoid *Zannichellia* flowering/seeding periods (September-December)
- Minimise staff/contractor entry to Bennelong Pond, and trampling of areas containing *Zannichellia*
- Demarcate the works area and restrict movement of machinery and personnel to this area
- Install silt curtains or similar around work areas and/or well-established patches
- If dewatering the pond, minimise the period that it is dry; manually water areas identified on Map 11 as high density as required to maintain *Zannichellia* viability

#### 3. Education programs

- Dip-netting and collecting within Bennelong Pond is only permitted as part of a SOPA- authorised education/tour program, is limited to the area adjacent to the central bund where *Zannichellia* is not prolific. *Zannichellia* is not to be collected for education/tour programs.



## Appendix 1 Summary of development consent conditions

Area/Precinct	Development Consent	Condition No.	Condition
All of SOP	Roads Infrastructure DA No. S38/5/95	40	<p>Prior to the commencement of the development the applicant shall prepare a Management Plan to the satisfaction of the Director General of National Parks and Wildlife to ensure that, as far as is practicable, frogs and tadpoles are removed from development areas prior to development activity occurring.</p> <p>The Management Plan shall include, but not be limited to, provisions requiring the applicant to monitor:</p> <ul style="list-style-type: none"> <li>i) the impacts associated with the construction and operation of Parkway A2 and Bennelong Road on the movement of frogs</li> <li>ii) the efficiency of the underpass and drift fences in directing frogs to alternative habitats</li> <li>iii) the patterns of movement of frogs outside the Brickpit</li> </ul>
All of SOP	Roads Infrastructure DA No. S38/5/95	47	<p>All lighting shall be designed and installed so as to minimise adverse disturbance to any fauna within the Homebush Bay area, traffic hazards on any roads within or around the site or loss of amenity to nearby residential areas.</p> <p>If at any time, in the opinion of the Director General, any adverse disturbance is being caused the intensity and/or configuration of lighting may be required to be varied to address the disturbance which meets the general requirements for lighting roads, pathways and cycleways, the subject of this consent.</p>
Golf Driving Range	State Sports Centre / Golf Driving Range R4/01/91	18	Lighting shall be designed and controlled so as to prevent traffic hazard to vehicles travelling along public roads and to have minimal impact on Bicentennial Park and other environmental conservation areas identified in Sydney Regional Environmental Plan No 24 (Homebush Bay area) gazetted 24.9.93. The applicant shall also provide buffer planting along the ridge above Australia Avenue so as to ameliorate the effect of lightspill from the site into Bicentennial park. The details of the plantings are to be determined in conjunction with HBDC.
Golf Driving Range	State Sports Centre / Golf Driving Range R4/01/91	19	Lamps used for external illumination shall be those which are designed to minimise artificial sky glow
Golf Driving Range	State Sports Centre / Golf Driving Range R4/01/91	20	If at any time, in the opinion of the Department of Planning, injury is being caused to the amenity of the area or to fauna within environmental conservation areas identified in the Sydney Regional Environmental Plan No 24 (Homebush Bay Area) the intensity and/or configuration of lighting sources shall be varied to address that injury, while meeting the general requirements for golf range lighting
Golf Driving Range	State Sports Centre / Golf Driving Range R4/01/91	21	Flood lighting of the golf range is not permitted after 11PM
Town Centre	Rail Link DA No. S38/6/95	34	All site lighting shall be designed and controlled so as to minimise adverse disturbance to any fauna within the Homebush Bay area, traffic hazards on any roads or railway lines within or around the site or loss of amenity to

## Appendix 1 Summary of development consent conditions

Area/Precinct	Development Consent	Condition No.	Condition
			nearby residential areas. If at any time in the opinion of the Director General any adverse disturbance is being caused, the intensity and/or the configuration of the lighting may be required to be varied to address that adverse disturbance.
Town Centre (RAS)	RAS DAS/38/6/96	37	All site lighting shall be designed and controlled so as to prevent adverse disturbance to any fauna within the Homebush Bay area, traffic hazards on any roads or railway lines within or around the site or loss of amenity to nearby residential areas. The approval of the Director General of the Olympic Coordination Authority will be required for events which need the main arena to be floodlit after midnight
Newington Armory, Newington Nature Reserve, Haslams Creek Flats, Narawang Wetland, Blaxland Common, Wilson Park	Wilson Park and Newington Site Area Preparation Works Stage 1 DA No. S38/8/96	2	The development shall be carried out generally in accordance with: <ul style="list-style-type: none"> <li>• Development Application No. S38/8/96</li> <li>• the accompanying Statement of Environmental Effects prepared by Perram &amp; Partners, dated June 1996</li> <li>• the accompanying Project Control Plan prepared by Waste Recycling and Processing Service of New South Wales</li> <li>• additional information provided by Perram &amp; Partners, dated 9/8/1996</li> <li>• information on waterplants for stage 1 planting at RANAD wetland presented by Waste Service NSW on 15 August 1996</li> </ul> except where amended by conditions.
Newington Armory, Newington Nature Reserve, Haslams Creek Flats, Narawang Wetland, Blaxland Common, Wilson Park	Wilson Park and Newington Site Area Preparation Works Stage 1 DA No. S38/8/96	36	The new wetland planting ( <i>along Haslams Creek</i> ) is to be monitored to ensure growth proceeds and that correct plant species have been chosen.
Newington Armory, Newington Nature Reserve, Haslams Creek Flats, Narawang Wetland, Blaxland Common, Wilson Park	Wilson Park and Newington Site Area Preparation Works Stage 1 DA No. S38/8/96	40 & 50	The applicant shall comply with and relevant conditions of licence no. TS0103 issued by the NPWS on 27 <sup>th</sup> April, 1995 under the NPW Act.
Newington Armory, Newington Nature Reserve, Haslams Creek Flats, Narawang Wetland, Blaxland Common, Wilson Park	Wilson Park and Newington Site Area Preparation Works Stage 1 DA No. S38/8/96	41	The fence that runs the length of the site's eastern boundary along the western side of Hill Road shall be constructed in a way to separate the Newington frogs from the Brickpit frogs.

## Appendix 1 Summary of development consent conditions

Area/Precinct	Development Consent	Condition No.	Condition
Newington Armory, Newington Nature Reserve, Haslams Creek Flats, Narawang Wetland, Blaxland Common, Wilson Park	Wilson Park and Newington Site Area Preparation Works Stage 1 DA No. S38/8/96	42	No tree listed as being of medium or high significance in the OCA Tree Survey Report prepared during 1995/6 shall be removed unless such removal is consistent with the recommendations of the Survey.
Newington Armory, Newington Nature Reserve, Haslams Creek Flats, Narawang Wetland, Blaxland Common, Wilson Park	Newington Stage 2 remediation DA No.S38/10/96	1	The development shall be carried out generally in accordance with: <ul style="list-style-type: none"> <li>• Development Application No. S38/10/96</li> <li>• The accompanying Statement of Environmental Effects prepared by Perram &amp; Partners, dated October 1996</li> <li>• Additional information provided by Perram &amp; Partners, dated November 1996, and specifically two drawings</li> <li>• The Species Impact Statement for the Proposed State 2 Site preparation of Newington prepared by the Australian Museum Business Services for Waste Service NSW and dated August 1996</li> </ul> except where amended by conditions.
Newington Armory, Newington Nature Reserve, Haslams Creek Flats, Narawang Wetland, Blaxland Common, Wilson Park	Newington Stage 2 remediation DA No.S38/10/96	29	An “Adaptive Management/System Program” is to be developed for the new freshwater wetlands to ensure that they become a healthy and flourishing habitat for birds, the Green and Golden Bell Frog and other native species and are shaped and revegetated to be consistent with the Millennium Park concept plan. The program is to identify responsibilities for the tasks involved and to include monitoring and maintenance programs to facilitate the modification of elements to meet these objectives.
Newington Armory, Newington Nature Reserve, Haslams Creek Flats, Narawang Wetland, Blaxland Common, Wilson Park	Newington Stage 2 remediation DA No.S38/10/96	32	Monitoring of the Newington population of Green and Golden Bell Frogs shall be an extension of the current monitoring program being undertaken in the Homebush Bay area.
Newington Armory, Newington Nature Reserve, Haslams Creek Flats, Narawang Wetland, Blaxland Common, Wilson Park	Newington Stage 2 remediation DA No.S38/10/96	36	Permanent replacement habitat shall be constructed in accordance with the Species Impact Statement.

## Appendix 1 Summary of development consent conditions

Area/Precinct	Development Consent	Condition No.	Condition
Kronos Hill, Town Centre	Construction of EWQCP, SWQCP & SPS 1082, and Abattoir Carrier Amplification DA No. S38/11/96	3	<p>The development shall be carried out generally in accordance with:</p> <ul style="list-style-type: none"> <li>the Homebush Bay Masterplan consent (DA S38/3/95)</li> <li>Development Application No. S38/11/96</li> <li>the Statement of Environmental Effects for the Water Cycle Homebush Bay dated November 1996, submitted with the development application and prepared by ERM Mitchell McCotter Pty Ltd as amended by a report by ERM Mitchell McCotter dated January 1997</li> <li>the strategies for drainage and stormwater, public domain, construction traffic and parking, management and control of waste, and management of events, prepared in accordance with the requirements of the Masterplan Consent</li> </ul> <p>except where amended by this consent.</p>
Archery Park	Archery Centre DA No. S38/2/97	16	Lighting of the site shall ensure that light spill shall not create an adverse impact on adjacent residential development and on adjacent natural habitats
Archery Park	Archery Centre DA No. S38/2/97	25	<p>An Events Management Plan is to be prepared prior to the holding of the first operational event, giving particular consideration to National and State Championships.</p> <p>The Plan should identify measures to:</p> <ul style="list-style-type: none"> <li>minimise the impacts of noise and light generation, especially for events that continue after 10pm, as the affect <ul style="list-style-type: none"> <li>(i) any proposed residential development across Bennelong Road</li> <li>(ii) any fauna habitats within the Homebush Bay area</li> </ul> </li> <li>minimise waster generation</li> <li>prevent parking on Bennelong Road.</li> </ul>
Wentworth Common, Brickpit	Horse Trail and Exercise Area Construction and Operation DA No. S38/7/97	1	<p>The development shall be carried out generally in accordance with:</p> <ul style="list-style-type: none"> <li>Development Application No. S38/7/97</li> <li>the details contained in the Statement of Environmental Effects for the construction and operation of a Horse Trail and Exercise Area at Homebush Bay dated September 1997 submitted with the development application and prepared by Rose Saltmann Urban Planners, the accompanying plan by Equus 2000, drawing number SK02 issue B, dated 30 June 1997</li> <li>the strategies for drainage and stormwater, public domain, construction traffic and parking, management and control of waste, and management of events, prepared in accordance with the requirements of the</li> </ul>

## Appendix 1 Summary of development consent conditions

Area/Precinct	Development Consent	Condition No.	Condition
			Masterplan consent.
Wentworth Common, Brickpit	Horse Trail and Exercise Area Construction and Operation DA No. S38/7/97	9	The applicant shall ensure that sediment and runoff controls are position between the frog ponds and the horse trail during the construction and operation of the horse trail.
Wentworth Common, Brickpit	Horse Trail and Exercise Area Construction and Operation DA No. S38/7/97	10	No surface water shall enter the Brickpit from the proposal.
Wentworth Common, Brickpit	Horse Trail and Exercise Area Construction and Operation DA No. S38/7/97	11	The applicant shall ensure the preparation and implementation of a Waste Management Plan detailing the measures proposed to manage horse solid waste generated during the operation of the horse trail and exercise area. The plan shall include details of the collection and disposal of solid waste on a daily basis and plans for its disposal. The plan shall be implemented prior to the first RAS event.
Wentworth Common, Brickpit	Horse Trail and Exercise Area Construction and Operation DA No. S38/7/97	12	The applicant shall ensure that monitoring of the nutrient levels in the ponds A1, A2, A3 and A4 and the Eastern Water Quality pond shall be undertaken on a regular basis to establish any changes in water quality associated with the proposal. If on further analysis the measures provided by the monitoring show an increase in nutrient levels in the ponds then appropriate measures shall be taken.
Wentworth Common, Brickpit	Horse Trail and Exercise Area Construction and Operation DA No. S38/7/97	13	The site shall be fenced to ensure public safety during the operation of the horse trail and exercise area. Fencing shall be of a type that where appropriate allows the movement of frogs between ponds.
Wentworth Common, Brickpit	Horse Trail and Exercise Area Construction and Operation DA No. S38/7/97	16	The horse trail and exercise area shall be consistent with the concept design plan for Millennium Parklands. The applicant shall provide drainage and sediment controls to prevent erosion and reinstate surfaces to meet park requirements in conjunction with the Royal Agricultural Society each year.

## Appendix 1 Summary of development consent conditions

Area/Precinct	Development Consent	Condition No.	Condition
Wentworth Common, Brickpit	Horse Trail and Exercise Area Construction and Operation DA No. S38/7/97	17	The applicant shall comply with all relevant conditions of Licence No. TS0076 and Licence No. TS0103 issued by the NPWS under Section 120 of the National Parks and Wildlife Service Act 1974.
Wentworth Common, Brickpit	Horse Trail and Exercise Area Construction and Operation DA No. S38/7/97	18	The applicant shall comply with OCA's Frog Management Plan. Habitats shall be provided consistent with the Frog Management Plan. Unless proven not to be harmful to frogs and their habitats, chemicals or top dressing shall be confined to areas which do not drain to frog ponds or the Brickpit.
Wentworth Common, Brickpit	Horse Trail and Exercise Area Construction and Operation DA No. S38/7/97	19	The horse trail and horse exercise area shall operate only in association with the period of the Royal Easter Show. The horse trail and exercise area shall only be used in daylight hours.
Kronos Hill	Northern Water Feature Development and Operation DA No. S38/12/97	2	The development shall be carried out generally in accordance with: <ul style="list-style-type: none"> <li>the Masterplan Consent (DA S38/3/95)</li> <li>Development Application No. S38/12/97</li> <li>the Statement of Environmental Effects for the Northern Water Feature submitted with the development application, prepared by Woodward-Clyde dated October 1997</li> <li>the strategies for drainage and stormwater, public domain, construction traffic and parking management and control of waste and management of events, prepared in accordance with the requirements of the Masterplan consent</li> </ul> except where amended by conditions.
Kronos Hill	Northern Water Feature Development and Operation DA No. S38/12/97	30	Water quality flowing from the outlet pond into Haslams Creek shall satisfy the standards for "Secondary Contact" recreational quality as specified in the ANZECC Australian Water Quality Guidelines for Fresh and Marine Waters (November 1992).

## Appendix 1 Summary of development consent conditions

Area/Precinct	Development Consent	Condition No.	Condition
Kronos Hill	Northern Water Feature Development and Operation DA No. S38/12/97	32	<p>The abstraction of the fountain make-up water from the ponds shall not have an adverse impact on the health of the wetland system. A monitoring program is to be implemented to ensure maintenance of the water quality standards established in the Drainage and Stormwater Strategy or any revision of that Strategy agreed to by the EPA and the Department of Health. The program shall include monitoring of:</p> <ul style="list-style-type: none"> <li>• the effect of chlorine on aquatic life</li> <li>• the health and effectiveness of the macrophytes in the wetland</li> <li>• water quality at the inflow</li> <li>• water quality from the Aquatic Centre</li> <li>• water quality at the outflow to Haslams Creek, transfer to the Brickpit</li> <li>• the fountain pools and the fountain</li> <li>• the potential for algal blooms</li> </ul> <p>Should water quality not meet the chosen criteria in any section, investigation and rectification of the problem should take place.</p>
Kronos Hill	Northern Water Feature Development and Operation DA No. S38/12/97	35	The applicant shall comply with any relevant conditions of licence No. TS0103 issued by the National Parks and Wildlife Service on 27 April 1995 under section 120 of the NPW Act 1974.
Kronos Hill	Northern Water Feature Development and Operation DA No. S38/12/97	46	An operational Maintenance Manual for the Water Quality Control Pond shall be prepared and implemented to ensure that the objectives of the NWF – water quality improvement, aquatic habitat, conservation and passive recreation are achieved. It shall be based on the principles of an adaptive management system.
Town Centre	RAS Carnival Site DA S38/14/97	24	All site lighting and lighting fixtures shall be designed and controlled to minimise any adverse disturbance to fauna and loss of amenity to residential areas. Lighting shall be oriented away from the Brickpit.
Town Centre	RAS Carnival Site DA S38/14/97	7	No surface water shall enter the Brickpit from the proposal
Town Centre	RAS Carnival Site	35	The applicant shall comply with all relevant conditions of Licence No. TS0076 and Licence No. TS0103 issued by

## Appendix 1 Summary of development consent conditions

Area/Precinct	Development Consent	Condition No.	Condition
	DA S38/14/97		the NPWS under Section 120 of the National Parks and Wildlife Act 1974.
Town Centre	RAS Carnival Site DA S38/14/97	36	The applicant shall comply with OCA's Frog Management Plan. Unless proven not to be harmful to frogs and their habitats, chemicals or top dressing shall be confined to areas which do not drain to frog ponds or the Brickpit.
Town Centre	Plaza Pylons DA S38/2/98	24	All lighting shall be designed and controlled so as to minimise adverse disturbance to any fauna within the Homebush Bay area, traffic hazard on any roads or railway lines within or around the Pylons site or loss of amenity to nearby residential areas.
Town Centre (Abattoir heritage precinct)	OCA Administration Centre Gardens DA s/12/97	12	All site lighting is to be designed and controlled to minimise artificial sky glow and adverse impacts on fauna and nearby residential areas
Parklands	Millennium Parklands Concept Plan DA No. S38/3/98	1	The development shall be carried out generally in accordance with: <ul style="list-style-type: none"> <li>• Development Application No. S38/3/98</li> <li>• the Statement of Environmental Effects for the Millennium Parklands submitted with the development application, prepared by Perram and Partners, dated January 1998</li> <li>• the strategies for drainage and stormwater, public domain, construction traffic and parking management and control of waste and management of events, prepared in accordance with the requirements of the Masterplan consent</li> </ul> except where amended by conditions.
Parklands	Millennium Parklands Concept Plan DA No. S38/3/98	25	Any lookout over the Brickpit shall be set back from the rim and shall not be located in any unstable areas. Construction shall not commence until a geotechnical survey of the location has been completed.
Parklands	Millennium Parklands Concept Plan DA No. S38/3/98	34	Final landscape design and management shall have regard to the principles of mosquito management established for other projects at Homebush Bay.
Parklands	Millennium Parklands Concept Plan DA No. S38/3/98	36	The applicant shall comply with any relevant conditions of licence No. TS0103 and No. TS 0076, issued by the National Parks and Wildlife Service on 27 April 1995 under section 120 of the NPW Act 1974.



## Appendix 1 Summary of development consent conditions

Area/Precinct	Development Consent	Condition No.	Condition
Parklands	Millennium Parklands Concept Plan DA No. S38/3/98	37	Each development site shall be surveyed prior to commencement of works and any frogs found on the site shall be dealt with in accordance with the "Green and Golden Bell Frog Management Strategy".
Parklands	Millennium Parklands Concept Plan DA No. S38/3/98	38	A Management Plan for the Newington Woodland and Wetland is to be prepared in consultation with NPWS. The Management Plan shall incorporate a survey for Aboriginal archaeology. Controlled public access to the woodland shall be in accordance with the requirements of the Management Plan.
Parklands	Millennium Parklands Concept Plan DA No. S38/3/98	39	No development shall be permitted in the Brickpit except for minor work as described in the SEE. A separate DA will be required for future development.
Parklands	Millennium Parklands Concept Plan DA No. S38/3/98	40	The public pathway along the Parramatta River next to the wetland shall be designed, and its use managed, to minimise the impact on bird species using the wetland. Interpretive/educational signs shall be installed at either end of the wetland to explain the importance of the habitat.
Parklands	Millennium Parklands Concept Plan DA No. S38/3/98	46	Lighting in the Parklands shall be designed to minimise the effect on residents and on the sensitive ecological areas.
Bicentennial Park	Various works DA No. 80-11-98	1	The development shall be carried out generally in accordance with: <ul style="list-style-type: none"> <li>• Development Application No. 80-11-98</li> <li>• the details contained in the Statement of Environmental Effects for the Bicentennial Park Development prepared by Perram &amp; Partners, dated November 1998</li> </ul> except where amended by conditions.
Bicentennial Park	Various works DA No. 80-11-98	33	A Management Plan is to be developed for the leachate storage area to ensure that the leachate does not affect the water quality or the growth and maintenance of wetland vegetation in the Park's waterbodies. This Plan is to be prepared prior to the implementation of the proposal and to the satisfaction of the EPA and include proposals for the monitoring of the drainage and other systems required for the interception of any leachate.
Bicentennial Park	Various works	35	All lighting in the park shall be designed to avoid sky-glow and to minimise the effect on the sensitive ecological

## Appendix 1 Summary of development consent conditions

Area/Precinct	Development Consent	Condition No.	Condition
	DA No. 80-11-98		areas.
Bicentennial Park	Various works DA No. 80-11-98	39	A separate development application must be lodged for any activity with the potential to generate a significant noise activity, be likely to be offensive to the neighbours, put the safety of park users at risk, or risk damage to the ecology of the Park.
Brickpit/ Wentworth Common	Water Reclamation and Management Scheme (WRAMS) and Frog Habitat Works DA No. S38/3/99	2	The development shall be carried out generally in accordance with: <ul style="list-style-type: none"> <li>• Remediation Action Plan, Badu Mangroves, Homebush Bay, prepared by URS Australia P/L, November 2003</li> <li>• the Masterplan consent</li> <li>• the development application</li> <li>• the Statement of Environmental Effects prepared by PPK Environment &amp; Infrastructure, dated June 1999</li> <li>• the Species Impact Statement prepared by Australian Museum Business Services, dated April 1999</li> </ul> except as modified by other conditions
Brickpit/ Wentworth Common	Water Reclamation and Management Scheme (WRAMS) and Frog Habitat Works DA No. S38/3/99	26	The management plans prepared for the operation of WRAMS shall include provision for monitoring and management of blue green algae. Such provisions shall be prepared in consultation with the Department of Health.
Brickpit/ Wentworth Common	Water Reclamation and Management Scheme (WRAMS) and Frog Habitat Works DA No. S38/3/99	29	Lighting associated with the landscaping and operation of the WTP, and particularly the 24 hour visitor centre, shall be designed to minimise light spillage and glare and to have no adverse impact on any identified frog habitat.
Brickpit/ Wentworth Common	Water Reclamation and Management Scheme	30	The applicant shall ensure that water derived from the Water Reclamation Plant and discharged into the Brickpit shall not exceed 1mg/litre of phosphorous, or such other higher level as may be agreed with the Department of Health and the EPA.

## Appendix 1 Summary of development consent conditions

Area/Precinct	Development Consent	Condition No.	Condition
	(WRAMS) and Frog Habitat Works DA No. S38/3/99		
Brickpit/ Wentworth Common	Water Reclamation and Management Scheme (WRAMS) and Frog Habitat Works DA No. S38/3/99	34(e)	Should it be desired to use water from the storage pond in the Brickpit for filling frog habitat ponds, the water shall be firstly sampled and tested to confirm that it is suitable for this purpose.
Brickpit/ Wentworth Common	Water Reclamation and Management Scheme (WRAMS) and Frog Habitat Works DA No. S38/3/99	35	The water storage shall be maintained at a level sufficient to contain runoff from the Brickpit catchment during a severe storm event and prevent overtopping and flooding of breeding and foraging habitat for the Green and Golden Bell Frog. This will reduce the risk of water which may be contaminated with Gambusia or other contaminants from reaching frog habitat. The normal maximum operating storage level shall be set such that the reserve storage space created above it will be sufficient to contain a 1 in 100 year storm (half hour duration).
Brickpit/ Wentworth Common	Water Reclamation and Management Scheme (WRAMS) and Frog Habitat Works DA No. S38/3/99	36	Measures such as mechanical screening and regular monitoring of imported water, and diversion of inflow when necessary shall be undertaken to minimise the occurrence of Gambusia and other contaminants in the storage reservoir in the Brickpit. If Gambusia are detected in the storage reservoir then measures shall be undertaken to control and if possible eradicate them.
Brickpit/ Wentworth Common	Water Reclamation and Management Scheme (WRAMS) and Frog Habitat Works DA No. S38/3/99	37	All development shall comply with the conditions attached to Licence No.s TS0103 and TS0076 issued by the Director-General of National Parks and Wildlife under s.120 of the National Parks and Wildlife Act 1974.

## Appendix 1 Summary of development consent conditions

Area/Precinct	Development Consent	Condition No.	Condition
Brickpit/ Wentworth Common	Water Reclamation and Management Scheme (WRAMS) and Frog Habitat Works DA No. S38/3/99	38	Monitoring of the frog habitat works shall be undertaken in accordance with the relevant section of the Species Impact Statement, prepared by Australian Museum Business Services, dated April 1999, and the Frog Management Plan.
Brickpit/ Wentworth Common	Water Reclamation and Management Scheme (WRAMS) and Frog Habitat Works DA No. S38/3/99	39	In the event of any discharge from the WTP to the EWQCP, the applicant shall immediately monitor the impact of the discharge on the Green and Golden Bell Frog population present. Should a suitably qualified expert consider it necessary to remove frogs and/or tadpoles, this shall be done in accordance with Condition 33(c), with the frogs and/or tadpoles returned to the EWQCP once the threat has passed.
Town Centre	Homebush Bay Southern Threshold DA No. S38/6/99	1	The development shall be carried out generally in accordance with: <ul style="list-style-type: none"> <li>• Development Application No. S38/6/99</li> <li>• the details contained in the Statement of Environmental Effects for the Homebush Bay Southern Threshold prepared by AGC Woodward-Clyde Pty Ltd dated 23 August 1999 and the Addendum Report dated 20 September 1999</li> </ul> except where amended by this consent.
Town Centre	Homebush Bay Southern Threshold DA No. S38/6/99	27	All site lighting shall be designed to minimise sky glow and to minimise the impact on sensitive ecological areas in Bicentennial Park.
Wilson Park	Wilson Park Stage 2 Remediation DA No. S38/08/99	2(a)	The development shall be carried out generally in accordance with: <ul style="list-style-type: none"> <li>• Development Application No. S38/04/99</li> <li>• the details contained in the Statement of Environmental Effects for Wilson Park, Silverwater – Stage 2 Remediation dated October 1999</li> </ul>

## Appendix 1 Summary of development consent conditions

Area/Precinct	Development Consent	Condition No.	Condition
Wilson Park	Wilson Park Stage 2 Remediation DA No. S38/08/99	7	A Landscape Management Plan shall be prepared by the applicant in consultation with Auburn Council. The plan shall provide details of landscaping particularly around the perimeter of the site, the maintenance and monitoring of the landscaped areas and the plant material and methods to be used. The applicant shall ensure that the predominant tree and shrub species used in the proposed landscaping of the site are those indigenous to the local area.
Wilson Park	Wilson Park Stage 2 Remediation DA No. S38/08/99	9	The applicant, in consultation with Council, shall prepare a Mosquito Management Plan that addresses the issue of mosquito control for the subject site.
Newington Armory, Narawang Wetland	Extension and Adaptive Reuse of Light Rail, Adaptive Reuse of Buildings, and other works DA 328-7-2003	G1	The applicant shall carry out monitoring by persons with expertise in bird monitoring of the effects of the use of light rail on the bird fauna within the Narawang Wetland. This monitoring shall be carried out regularly throughout the initial 12 month period and a copy of the results of the monitoring are to be provided to the consent authority and the National Parks and Wildlife Service of NSW. Should the monitoring identify that the use of the light rail is causing disturbance to bird fauna, the applicant is to investigate the use of mitigation measures such as screening of wetland areas or potentially limiting the use of the light rail. The development and implementation of any necessary mitigation measures are to be carried out in consultation with the National Parks and Wildlife Service of NSW.
Newington Armory, Narawang Wetland	Extension and Adaptive Reuse of Light Rail, Adaptive Reuse of Buildings, and other works DA 328-7-2003	G2	The applicant shall carry out monitoring by persons with expertise in fauna monitoring of the effects of the use of light rail on the bird and animal fauna within the Wanngal Woodland. This monitoring shall be carried out regularly throughout the initial 12 month period and a copy of the results of the monitoring are to be provided to the consent authority and the National Parks and Wildlife Service of NSW. Should the monitoring identify that the use of the light rail is causing disturbance to bird or animal fauna, the applicant is to investigate the use of mitigation measures such as screening of woodland areas or potentially limiting the use of the light rail. The development and implementation of any necessary mitigation measures are to be carried out in consultation with the National Parks and Wildlife Service of NSW.
Newington Armory, Narawang Wetland	Extension and Adaptive Reuse of Light Rail, Adaptive Reuse of Buildings, and other works DA 328-7-2003	G3	The applicant is to instigate an education campaign for users of the Newington Armory Precinct on the potential impacts of uncontrolled dog activity on the fauna of the locality. This campaign is to commence upon opening of the new pathway system.

## Appendix 1 Summary of development consent conditions

Area/Precinct	Development Consent	Condition No.	Condition
Badu Mangroves	Remediation, Earthworks and Landscaping, Bennelong Road, Sydney Olympic Park DA 488-11-2003	A2	The development shall be generally in accordance with development application number 488-11-2003, and in accordance with the supporting documentation submitted with that application including, but not limited to, the following: submitted by the applicant on 10 September 2004 and in accordance with the following: <ul style="list-style-type: none"> <li>Statement of Environmental Effects entitled Badu Pathway Statement of Environmental Effects prepared by APT Planning, dated November 2003</li> <li>Remediation Action Plan, Badu Mangroves, Homebush Bay, prepared by URS Australia P/L, November 2003</li> <li>Landscape Drawings prepared by Mather &amp; Associates Landscape Architects</li> </ul>
Brickpit	Brickpit Ring Walk and associated works DA 215-9-2004	A2	The development shall be in accordance with development application number DA 215-9-2004 submitted by the applicant on 10 September 2004 and in accordance with the following: <ul style="list-style-type: none"> <li>Statement of Environmental Effects entitled Brickpit Ring Project Statement of Environmental Effects prepared by MG Planning dated September 2004</li> <li>Specified design drawings</li> </ul>
Brickpit	Brickpit Ring Walk and associated works DA 215-9-2004	F4	Any outdoor lighting and night illumination shall be designed to minimise impacts to critical habitat within the Brickpit and the nearest residential receptor. Prior to installing any lighting or night illumination, a report by a Lighting Consultant/Engineer demonstrating compliance with these requirements is to be submitted to the satisfaction of the Certifying Authority prior to the installation and use of the lighting.
Bicentennial Park	Wisteria Café Redevelopment DA 307-12-2004	B7	A detailed acoustic assessment for the facility will be prepared which measures the existing background noise levels to establish the appropriate acoustic criterion. The Acoustic Assessment shall be submitted to the Authority for approval by the Executive Director, Place Management prior to the issue of a Construction Certificate and shall address the following matters: <ul style="list-style-type: none"> <li>The proximity and likely impacts of noise generated by the facility during both construction and operation on sensitive ecological communities in the Park, in particular migratory birds in the Badu Wetlands and waterbirds in Lake Belvedere</li> </ul>
Bicentennial Park	Wisteria Café Redevelopment DA 307-12-2004	F1	The applicant is required to prepare, in consultation with the Authority a detailed OEMP, which is to be submitted for the approval of the Executive Director, Place Management, prior to occupation of the premises or commencement of the use.  The Plan shall address, but not be limited to, the following matters where relevant: <ol style="list-style-type: none"> <li>noise management (including appropriate noise levels, mitigation measures etc, refer condition B7 for</li> </ol>

## Appendix 1 Summary of development consent conditions

Area/Precinct	Development Consent	Condition No.	Condition
			additional detail) 5. the requirements of the Plan of Management approval
Haslams Reach	Off Road Bike Track DA No. 121-5-2005	A2	The development shall be generally in accordance with development application number 121-5-2005 submitted by the applicant on 6 June 2005, and as amended by the applicant on 7 July 2005 and in accordance with the supporting documentation submitted with that application, including, but not limited to, the following: <ul style="list-style-type: none"> <li>- Statement of Environmental Effects entitled...</li> <li>- Plan of Management Compliance Assessment...</li> <li>- Flora and Fauna Assessment for proposed Off-Road Bike Track, Sydney Olympic Park, prepared by Biosis Research, dated June 2005</li> <li>- Design Drawings...</li> </ul>
Haslams Reach	Off Road Bike Track DA No. 121-5-2005	C1	Prior to the commencement of any fencing/barrier works (apart from building site fencing, see condition C2), a Fencing/Barrier Strategy is to be prepared and submitted to SOPA's Executive Director, Place Management and SOPA's Director, Urban Design for approval. The Fencing/Barrier Strategy must provide justification for the location and installation of the following: <ul style="list-style-type: none"> <li>- Perimeter fencing and/or barriers to deter access to the leachate evaporation ponds, adjoining terrestrial frog habitat and Haslams Creek</li> </ul>
Haslams Reach	Off Road Bike Track DA No. 121-5-2005	D5	All erosion and sediment control measures are to be effectively maintained at or above design capacity for the duration of the construction works and until such time as all ground disturbed by the works has been stabilised and rehabilitated so that it no longer acts as a source of sediment.
Haslams Reach	Off Road Bike Track DA No. 121-5-2005	F3	The applicant is required to prepare, in consultation with the Authority, a detailed OEMP, which is to be submitted for the approval of the Executive Director, Place Management, prior to commencement of the use. The Plan shall address, but not be limited to, the following matters where relevant: <ul style="list-style-type: none"> <li>8. mitigative measures and monitoring requirements outlined in Section 5 of the Statement of Environmental Effects for "Sydney Olympic Park Authority Off-Road Bike Track" prepared by PSB, dated 6 June 2005</li> <li>9. compliance with the Frog Management Plan (recognising that the proposal is within Supplementary GGBF habitat)</li> </ul>
Haslams Reach	Off Road Bike Track	G1	Operation, maintenance, and enhancement of the facility must comply with the Parklands Plan of Management. New activities (enhancements, leases and licences, events, programs, maintenance activities) must be assessed

## Appendix 1 Summary of development consent conditions

Area/Precinct	Development Consent	Condition No.	Condition
	DA No. 121-5-2005		against the Plan of Management for determination prior to commencement.
Haslams Reach	Off Road Bike Track DA No. 121-5-2005	G2	Adjacent grassy habitat and leachate ponds within Haslams Reach must be managed in accordance with the mitigative measures described in Section 5 of the Statement of Environmental Effects for “Sydney Olympic Park Authority Off-Road Bike Track” prepared by PSB, dated 6 June 2005: <ul style="list-style-type: none"> <li>- Maintenance of the terrestrial landscape and leachate ponds will be in accordance with relevant protocols for Primary Frog Habitat; and</li> <li>- Any works proposed within the leachate ponds will be undertaken in consultation and under guidance of a specialist herpetologist, such that mitigative measures are implemented to ensure that frog habitat and frog viability is maintained within the Parklands.</li> </ul>
Haslams Reach	Off Road Bike Track DA No. 121-5-2005	G4	The use and hours of operation shall be restricted to: <ul style="list-style-type: none"> <li>- a free-to-public facility between dawn and dusk;</li> <li>- excluding special events which are scheduled to be held a maximum of four times per year, up to 10.00pm</li> </ul>
	Off Road Bike Track DA No. 121-5-2005	G5	Compliance report – The Applicant, or any party acting upon this consent, shall submit to the Sydney Olympic Park Authority a three monthly report addressing compliance with all relevant conditions of this consent.
Haslams Reach	Off Road Bike Track DA No. 121-5-2005	AN1	Any other development activities within the site are to be conducted in accordance with the provisions of the Frog Management Plan, with particular consideration given to the cumulative effects of removal or reduction of Frog Habitat within Haslams Reach and the Parklands.
Blaxland Common	Blaxland Common Riverside Park MP No. 05_0013	A1	Development must be carried out consistent with the procedures, safeguards and mitigation measures identified in the Statement of Commitments as amended by the conditions of approval.
Blaxland Common	Blaxland Common Riverside Park MP No. 05_0013	A2	The development will be undertaken in accordance with the Environmental Assessment dated October 2005 prepared by MG Planning Pty Ltd (including accompanying Appendices) and the (listed) drawings
Blaxland Common	Blaxland	B6	Details of environmental enhancement works and maintenance shall be in accordance with the Proponent’s



## Appendix 1 Summary of development consent conditions

Area/Precinct	Development Consent	Condition No.	Condition
	Common Riverside Park MP No. 05 0013		Statement of Commitments and the supplementary report submitted 18 November entitled “re: DEC issues regarding ecological assessment of Blaxland Common redevelopment”, author: Biosis Research Pty Ltd submitted to the satisfaction of the Works Manager prior to the commencement of these works.
		Statement of Commitments (extract)	<p><b>4.1 General</b></p> <p>B SOPA is committed to the principles of sustainability as defined in the <i>Local Government Act 1993</i>. The construction and operation of the proposed park will be undertaken in accordance with SOPA’s Environmental Guidelines and Sustainability Strategy</p> <p><b>Flora and fauna</b></p> <p><b>A</b> All frog ponds, soaks and surrounding terrestrial habitat will be designed in accordance with the recommendations of an appropriately experienced herpetologist</p> <p><b>B</b> The planted grassland corridor proposed in the south-east corner of Fig Common will extend to the north, to provide a broad, straight link between the Correctional Facility and Armory drainage lines</p> <p><b>C</b> Liaison with Silverwater Correctional Centre will be undertaken in relation to maintaining, in the long term, a corridor suitable for frog movement where it currently exists within the Centre.</p> <p><b>D</b> Speed limit restrictions and enforcement will be put in place and may include as necessary speed humps, grids, fines and other methods</p> <p><b>E</b> The designated frog corridor will be developed and maintained to provide an area with an open grassland community dominant. Tree and/or shrub plantings within the corridor will generally be minimal, in accordance with the recommendations of a herpetologist and provided mainly for the purposes of enhancing the value of the area for other fauna (such as bush birds)</p> <p><b>F</b> At this stage, no lighting is proposed. However if at a later stage SOPA considers that lighting may be required, any lighting near frog habitat and corridors will be minimal and designed appropriately to avoid excess spill</p> <p><b>G</b> Road widths will be determined in consultation with a herpetologist. Road widths may be narrowed in key locations to slow traffic and minimise potential impacts on frog movements.</p> <p><b>H</b> In order to off-set impacts associated with potential habitat removal, SOPA will undertake to improve the structural complexity and species diversity of the plantings in the park. SOPA will prepare a comprehensive Vegetation Management Plan (VMP) for the site which will:</p> <ul style="list-style-type: none"> <li>• Be informed by a qualified and experienced bush regenerator</li> <li>• Be informed by an ecologist, familiar with Sydney Olympic Park</li> <li>• Have as its paramount objective the provision of long-term habitat for native flora and fauna</li> <li>• Encompass all the areas of planted vegetation (excluding those areas where functional requirements other than providing flora and fauna habitat are paramount ie Fig Common, Picnic Banks, Play Hills, Foreshore Esplanade, Wharf Plaza, flat areas near the proposed toilets and adjacent to the foreshore</li> </ul>

## Appendix 1 Summary of development consent conditions

Area/Precinct	Development Consent	Condition No.	Condition
			<p>path)</p> <ul style="list-style-type: none"> <li>• Include the recommendations of fauna specialists in relation to the Green and Golden Bell Frog and bush birds in the design</li> <li>• Incorporate the advice of persons with knowledge of the success or failure of previous plantings at Sydney Olympic Park</li> <li>• Review the appropriateness of the existing plantings and recommend alterations as required</li> <li>• Use characteristic species of plant communities originally occurring in the area, such as Mangrove Saltmarsh Complex species on low-lying areas near the foreshore and Turpentine Ironbark Forest Species on built-up areas, and</li> <li>• Provide a detailed methodology for treatments applied to specific areas, including (but not limited to) thinning or other modifications to existing vegetation; soil and landscape presentation; number, size and stage of stock; planting densities and planting regime; establishment, management and monitoring; weed management; and a detailed timeframe for implementation that takes existing ecological values into consideration</li> </ul> <p>I To minimise the potential impacts of the proposed pontoon and redevelopment of Blaxland Common and the Newington Armory Wharf on the aquatic ecology values of the study site and surrounding area, the following measures are recommended:</p> <ul style="list-style-type: none"> <li>• The pontoon will be designed to allow light to penetrate to the substrate to reduce the localised impact of shading on benthic invertebrates and microbes</li> <li>• Existing mangrove and saltmarsh habitats will be protected during construction and through any increased usage of the foreshore</li> </ul> <p><b>Operation</b></p> <p><b>A</b> An Operational Environmental Management Plan (OEMP) will be prepared prior to the opening of the park to the public. The Plan will address but not be limited to the following matters:</p> <ul style="list-style-type: none"> <li>• Protection of flora and fauna</li> <li>• Lighting</li> </ul>

## Appendix 2 – FMA Act Permit



### Department of Primary Industries

Permit No: P12/2259  
INW12/16271; OUT12/11816

8 June 2012

David Young  
Sydney Olympic Park Authority  
8 Australia Avenue  
Sydney Olympic Park NSW 2127

Dear Mr Young

**Re: P12/2259 for harm of marine vegetation associated with mangrove maintenance works and harm of mangroves for educational purposes at Sydney Olympic Park – Parramatta River**

I refer to your application dated 24 May 2012 for a permit under Part 7 of the *Fisheries Management Act 1994* (FM Act). NSW Primary Industries (DPI) assesses applications for dredge and reclamation in accordance with Part 7 of the FM Act, Part 14 of the *Fisheries Management (General) Regulation 2010* and the *Policy and Guidelines for Aquatic Habitat Management and Fish Conservation (1999)*.

An invoice will be emailed to Sydney Olympic Park Authority for the statutory minimum permit fee of \$310.

Please find enclosed a permit under Part 7 of the *Fisheries Management Act 1994* for harm of marine vegetation associated with mangrove maintenance and educational purposes at Sydney Olympic Park – Parramatta River.

Please carefully read and note the conditions included in the permit. **If you agree that all the conditions are reasonable, appropriate and achievable, you must sign and date the attached sheet (Acceptance of Conditions) and return it to the Contact Officer as soon as possible. If you believe that you cannot comply with all the conditions then you must not commence work.** Instead, you should contact the Contact Officer listed on the first page of the permit so that your concerns can be considered.

If you intend to have the work undertaken by a contractor, please ensure that the contractor receives a full copy of the permit and understands the importance of abiding by the conditions. As the permit holder, you are responsible for ensuring compliance with all Conditions therein and with any other relevant legislative obligations. **Breaching a condition of a permit can incur an on-the-spot penalty notice of \$500 or up to \$11,000 through the courts pursuant to clause 259 of the *Fisheries Management (General) Regulation 2010*.**

The extent of work is to be restricted to that outlined in the application and plans submitted to the Unit. **If for any reason, other works are required, or the works need to be extended to other areas, you must seek specific approval beforehand.** We will require information as to why these variances are required.

NSW Department of Primary Industries – Cronulla Fisheries Centre  
PO Box 21, Cronulla NSW 2230  
202 Nicholson Parade, Cronulla NSW  
Tel: 02 9527 8552 Fax: 02 9527 8576  
ABN 72 189 919 072 www.dpi.nsw.gov.au

DPI places particular importance upon the need to minimise the harm to the natural environment both at the work site and downstream/adjacent waters. We expect implementation of Best Management Practice with respect to marine vegetation management. This includes aspects of:

- Removed mangrove trees or trimmed branches are to be mulched and deposited appropriately on land.
- Mangroves are to be removed using hand tools only.

If you have any queries please contact Carla Ganassin on (02) 9527 8552 or [carla.ganassin@dpi.nsw.gov.au](mailto:carla.ganassin@dpi.nsw.gov.au).

Yours sincerely



Scott Carter  
**Senior Conservation Manager**  
Authorised delegate of the Minister for Primary Industries

Cc: Paul Schuettrumpf, Fisheries Officer Sydney North, Wollstonecraft





## Department of Primary Industries

### Permit under Part 7 of the FISHERIES MANAGEMENT ACT 1994

**Permit Number:** P12/2259

**Permit Holder:** David Young  
Sydney Olympic Park Authority  
8 Australia Avenue, Sydney Olympic Park NSW 2127  
Phone: Jennifer O'Meara – 9714 7926

**Permit Area:** Sydney Olympic Park, Parramatta River

**Permit Activity:** Harm of marine vegetation as proposed in your application of 24 May 2012.

**Contact Officer:** Carla Ganassin  
PO Box 21  
CRONULLA NSW 2230  
Ph: (02) 9527 8552 Fax: (02) 9527 8576  
Email: carla.ganassin@dpi.nsw.gov.au

**Unless cancelled or suspended sooner, this permit shall remain in force until: 15 June 2017**

This permit is subject to the following conditions:

#### ADMINISTRATIVE CONDITIONS

1. The **Acceptance of Conditions** form (attached) must be completed and returned to the nominated Contact Officer before any works authorised by this permit commence.  
*Reason – To remove any doubt that the Permit Holder understands and accepts the Conditions before work commences.*
2. The permit holder must ensure that all works authorised by this permit are restricted to the permit area and are undertaken in a manner consistent with those described in the application made to DPI Fisheries dated 24 May 2012. Other works, which have not been described, are not to be undertaken.  
*Reason – This permit has been granted following an assessment of the potential impacts of the described works upon the aquatic and neighbouring environments. Other works, which were not described in the application have not been assessed and may have significant adverse impacts.*
3. An annual report providing detail of mangrove removal and pruning undertaken within Sydney Olympic Park must be submitted to DPI Fisheries over the course of this permit.

NSW Department of Primary Industries – Cronulla Fisheries Centre  
PO Box 21, Cronulla NSW 2230  
202 Nicholson Parade, Cronulla NSW  
Tel: 02 9527 8552 Fax: 02 9527 8576  
ABN 72 189 919 072 www.dpi.nsw.gov.au

4. This permit (or a true copy) must be carried by the permit holder or sub-contractor operating on-site at all times during work activity in the permit area.  
*Reason – A DPI Fisheries Officer may wish to check compliance of works with imposed conditions.*

#### WORK IN WATERS

5. Machinery is not to enter, or work from the waterway unless in accordance with works proposed in your application for the permit and the requirements of this permit.  
*Reason – To ensure minimal risk of water pollution from oil or petroleum products and to minimise disturbance to the streambed substrate.*

#### AVOIDING HARM TO SNAGS, MARINE AND RIPARIAN VEGETATION

6. When working near marine vegetation (seagrass, mangroves and saltmarsh), riparian vegetation or water land these areas need to be identified and appropriately delineated as "No Go" areas (with the aim of avoiding harm to these areas). Harm to marine vegetation, riparian vegetation or water land outside the work footprint approved under the authority of this permit is not permitted and any harm caused is to be documented and reported to the contact officer. Any harm caused is to be restored in accordance with directions provided by the contact officer.  
*Reason – To ensure that impacts on aquatic habitats and the riparian zone are minimised.*
7. No snags<sup>1</sup> are to be removed, realigned or relocated without first obtaining the written authority of the Senior Conservation Manager (Central).  
*Reason – "Removal of large woody debris from NSW rivers and streams" is listed as a Key Threatening Process under the provisions of the FM Act. This approval has been granted on the basis that snags are not to be removed.*

#### FISH KILL CONTINGENCY

8. A visual inspection of the waterway for dead or distressed fish (indicated by fish gasping at the water surface, fish crowding in pools or at the creek's banks) is to be undertaken twice daily during the works. **Observations of dead or distressed fish are to be immediately reported to the Contact Officer by the Permit Holder.** In such a case all works are to cease until the issue is rectified and approval is given to proceed. If requested, the Permit Holder is to commit resources to the satisfaction of the Contact Officer for an effective fish rescue, if in the view of that officer, a fish kill event is imminent and likely to occur within or adjacent to the works area due to conditions associated with weather, water quality and other parameters.  
*Reason – DPI needs to be aware of fish kills so that it can assess the cause and mitigate further incidents in consultation with relevant authorities. They are also potentially contentious incidents from the public perspective. Work practices may need to be modified to reduce the impacts upon the aquatic environment.*

#### IMPORTANT NOTE:

##### INCONSISTENCY BETWEEN DOCUMENTS

In the event of any inconsistency between:

- the conditions of this approval and the drawings / documents referred to above, the conditions of this approval prevail to the extent of the inconsistency;
- any Government publication referred in this permit, the most recent document, shall prevail to

<sup>1</sup> "Snags" is a term used to describe **large woody debris** from trees and shrubs, including whole fallen trees, broken branches and exposed roots that have fallen or washed into a waterway and are now wholly or partially submerged by water. Snags also includes submerged large rocks (of greater than 500 mm in two dimensions).



the extent of the inconsistency; and  
- the conditions of this approval and the proponent's mitigation measures outlined in the application, the conditions of this approval prevail to the extent of the inconsistency.

#### STOP WORK ORDERS

A Fisheries Officer or other appropriate delegate who has reasonable cause to suspect that the conditions of this permit have not been complied with, **may order the work to stop immediately**. The order may be given to the permit holder or any person who informs the officer that they are acting in any capacity on behalf of the permit holder. Any damage caused to the habitat outside the specified permit area, or the carrying out of works not in accordance with the conditions specified in this permit and/or the application and that were accepted by the permit holder, could result in a breach of the *Fisheries Management Act 1994* or *Regulations*, and penalties of up to \$220,000 may apply. Orders may also be made requiring work to rectify any damage caused by unauthorised works. **Breaching a condition of a permit can incur an on-the-spot penalty notice of \$500 or up to \$11,000 through the courts pursuant to clause 259 of the *Fisheries Management (General) Regulation 2010*.**

Yours sincerely



Scott Carter  
**Senior Conservation Manager**  
Authorised delegate of the Minister for Primary Industries

8 June 2012



## Department of Primary Industries

### **Acceptance of Conditions specified in Permit No. P12/2259 issued under Part 7 of the *Fisheries Management Act 1994***

PLEASE COPY THIS PAGE AND RETURN TO DPI

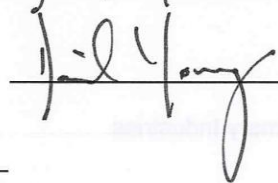
**In reference to Permit No. P12/2259 to harm marine vegetation for mangrove  
maintenance and educational activities at Sydney Olympic Park – Parramatta:**

I the undersigned, acknowledge that I have read and understood and agree to comply with the conditions specified. I understand that penalties can be imposed for non-compliance with conditions.

Permit Holder's name:

DAVID YOUNG

Permit Holder's signature:



Date:

13.6.2012

**Please COPY AND SIGN this page and email, mail or fax to:**

Carla Ganassin  
Cronulla Fisheries Centre  
PO Box 21  
CRONULLA NSW 2230  
Ph: 9527 8552 Fax: 9527 8576  
Email: carla.ganassin@dpi.nsw.gov.au

District Fisheries Officer, Southern Sydney Fisheries Office  
Email: amie.hibberd@dpi.nsw.gov.au  
Fax: (02) 9529 6246



## Appendix 3 – NPW Act Licence



Office of  
Environment & Heritage  
NSW National Parks & Wildlife Service



### SCIENTIFIC LICENCE

NATIONAL PARKS & WILDLIFE ACT, 1974  
Section 132c

Name and postal address of principal licensee

Mr David Young  
Sydney Olympic Park Authority  
8 Australia Ave  
SYDNEY OLYMPIC PARK NSW 2127

Nominated premises (where appropriate)

Your licence number is: SL100244

This licence is valid from: 01 August 2013

This licence will expire on: 31 July 2016

**Additional authorisations:**

**Project Title:** Park Management

**This licence authorises the following activities:** Pick protected flora for identification and propagation purposes; Conduct bush regeneration activities (including maintenance of planted areas); Harm, observe protected fauna.

This licence authorises the principal licensee and any associates named in **Attachment A** to conduct those activities authorised above, to those species, communities or materials listed in **Attachment B**, at the locations specified in **Attachment C** of this licence.

This licence also authorises the principal licensee to import or export those species, or materials listed in **Attachment B** interstate as provided under s126 of the *National Parks and Wildlife Act 1974* (NPW Act) and to conduct research on park under clause 23 of the *National Parks and Wildlife Regulation 2009* (NPW Reg), where this forms part of a project approved by a delegated officer of OEH.

This licence is issued subject to the provisions of NPW Act, NPW Reg, the general conditions listed below, any special conditions as may be notified in writing to the licensee by the Director General of the Department of Premier and Cabinet ("Director General") or a 'delegated officer' of OEH ("delegated officer") and the OEH "Scientific Licensing" policy.

Signature of Delegated Officer

Date: 27 February 2014

Signature of Principal Licensee\*

Date: 10.3.2014.

\* This licence is not valid unless it is signed by the principal licensee. By signing this licence the licensee agrees that they have read, understood and agree to comply with all of the conditions listed on the licence.

## LICENCE CONDITIONS

### **Specific**

- a) All activities to be conducted in accordance with the conservation actions, threat abatement measures and standard procedures (protocols) of the SOPA Biodiversity Management Plan, except where otherwise directed by the conditions of licence.
- b) The licensee may authorise other people (staff, contractors, volunteers) to work under this licence, and must maintain a signed register of the people authorised under this licence. The register must also identify the activities performed by each party.
- c) It is the responsibility of the licensee to inform all other parties of the licence conditions.
- d) The NPWS Frog hygiene protocol is to be followed when working in habitat likely to contain frogs.
- e) The licensee may only conduct fauna survey activities that do not require the complementary approval of an animal care and ethics committee (ACEC). This condition may be reviewed on production of a relevant ACEC permit.
- f) Work must be undertaken by suitably qualified and experienced persons or under their direct supervision.
- g) Bush regeneration (including maintenance of areas containing protected flora) activities are covered under this licence in accordance with the vegetation management plans submitted to the OEH Wildlife Licensing and Management Unit, also indicating proposed works and methods for each site.
- h) A five metre spray buffer is to be used around any individually listed threatened species.
- i) Seed may be collected as per Florabank guidelines, on site for reuse on site, excluding individually listed threatened species.
- j) Plants of local provenance are to be used for revegetation purposes wherever possible.
- k) Prior to accessing Newington Nature Reserve (NNR), SOPA must liaise with the NPWS Cumberland Area Office to develop an access agreement for the reserve.
- l) The Cumberland Area Office should be consulted to develop an agreed ecological burn schedule for the reserve/parklands.
- m) Two planting zones identified "Demonstration garden" (Map 10, beige) and "Revegetation sector" (Map 10, purple) in the SOPA Biodiversity Management Plan may be established using material collected from the NNR Sydney Turpentine-Ironbark Forest community.
- n) Material, including ROTAP species, collected from the primary NNR source should, where possible, be used for all revegetation purposes within a 300m radius of the reserve, to create a genetic and species buffer.
- o) SOPA must clearly mark and record the origin of planted material such that this can be used as a secondary source for future plantings away from the NNR and the 300m radius.
- p) For plantings outside the 300m buffer zone, secondary source material can be used as required. Primary source material may only be used for external plantings with area manager approval.
- q) SOPA to provide OEH with a yearly "wish list" of target plant species and quantities to be collected from the NNR.
- r) SOPA is encouraged to liaise with managers of developments in and around the Olympic site to encourage the use of local provenance material.
- s) A full report is to be submitted at the end of the project. The report must include assessment of the status of the Green and Golden Bell frog population at the park.

### **General**

1. Only the person/s named on the licence, or authorised to operate under the terms and conditions of the licence, may undertake the work. This licence is not transferable except with written confirmation from Wildlife Licensing & Management Unit ("WLMU").
2. The principal licensee may vary the associated parties authorised during the term of the licence only by maintaining a signed and dated register of the associates. A copy of the register must be provided to WLMU at renewal or on request by an authorised officer.
3. The licensee must carry this licence at all times whilst work is being undertaken in the field. Where multiple parties are listed, photocopies will suffice provided some other proof of identity can be provided e.g. Driver's licence.
4. The licensee must provide other parties authorised to conduct the specified activities with a copy of this licence.
5. The licensee must obtain the permission of the owner, manager or occupier of lands upon which research is conducted (for persons working on NPWS lands see also conditions 18-20).
6. Specimens or samples taken under this licence must not be sold, bartered, given, lent or promised to others without the prior written approval of the Director General or delegate.
7. Collections or research shall, as far as is possible, be carried out away from the view of the public.
8. The licensee shall indemnify and keep indemnified, so far as the law allows, Her Majesty Queen Elizabeth II, the Minister administering the National Parks and Wildlife Act 1974, the Government of New South Wales, the



Director General of the Department of Premier and Cabinet, and the National Parks and Wildlife Service and its servants, agents or contractors (herein jointly and severally referred to as "OEH"), FROM AND AGAINST all lawful suits, claims, demands, proceedings, costs, (including solicitor - client costs) and expenses of any nature whatsoever which the OEH may suffer or incur in connection with loss of life, personal injury or damage to property from an occurrence in connection with any land, premises, vehicle or other mode of conveyance or other item under the care, control or management of the OEH, and arising either directly or indirectly from any negligent or wrongful act or omission of the licensee in the course of an operation or activities pursuant to the licence or otherwise.

#### Reporting requirements

9. The licensee undertaking survey, research or other biodiversity assessment works must provide a full report of the work carried out under this licence in the standard OEH excel format available at <http://www.environment.nsw.gov.au/resources/nature/scientificLicenceDatasheet.xls>
10. The licensee must ensure that data submitted to OEH in the above format is accurate to **not less than 100m** (without suitable justification).
11. The licensee must submit reports online using a secure login acquired from OEH Wildlife Data Unit. Contact [atlas@environment.nsw.gov.au](mailto:atlas@environment.nsw.gov.au) for account details and guidelines.
12. Licensees undertaking work that cannot be supplied in the above format must provide a report to the OEH specifying:
  - a. Title of the project
  - b. A precise description of the locality including geographic coordinates where practical
  - c. Results of the project
13. The licensee may also be required to complete a metadata proforma for works on NPWS estate.
14. Licensees undertaking permanent/semi-permanent marking, banding or tagging must provide marking details (e.g. tag number, date, location, species) to OEH with any renewal application.
15. The licensee must provide a copy of any final report and/or any scientific papers relating to this work to the Director General (marked "attention Wildlife Licensing & Management Unit") when the study is completed.

#### Additional reporting requirements for consultants

16. Licences issued to consultants and consulting companies for survey and assessment purposes are required to provide a list of the sites where work was conducted and a list of the reports produced. A copy of these reports may be requested.
17. Reports in accordance with licence conditions 9. to 16. must be provided annually, from the "valid from" date of the licence.

#### Projects undertaken on NPWS managed land

18. The licensee may only undertake works in NPWS managed lands with the prior written approval of the relevant Area Manager and comply with any imposed restrictions or conditions.
19. The licensee must maintain regular contact with the NPWS Area office throughout the project as park management activities and other events may affect access to research locations. Access to reserves may be restricted during management activities or other while the reserve is closed for other reasons.
20. The licensee must only use vehicles on public roads unless otherwise approved by an authorised officer.

It is an offence under the *National Parks & Wildlife Regulation 2009* to breach any of the conditions of this licence, issue any false receipt, make a false entry in any record, or otherwise keep a false record or provide false or misleading records or information (Maximum Penalty \$3300).

#### Records, notifications and inquiries should be directed to:

Wildlife Licensing and Management Unit  
Office of Environment and Heritage  
PO Box 1967  
Hurstville NSW 1481

Phone: 02 9585 6406  
Fax: 02 9585 6401  
Email: [wildlife.licensing@environment.nsw.gov.au](mailto:wildlife.licensing@environment.nsw.gov.au)

#### Additional Information for licence holders

It is the licence holder's responsibility to ensure they are familiar with any other relevant statutory or regulatory provisions relevant to this licence such as the *National Parks and Wildlife Regulation 2009* particularly with respect to activities undertaken on NPWS managed lands, the *Firearms Act 1999*, any local council, building and health requirements and codes of practice under the *Prevention of Cruelty to Animals Act 1979* as well as specific requirements under the *Animal Research Act 1985*. On the expiration of your permit the onus is on you to renew. While OEH forwards renewal notices to permit holders, it will not be responsible for the non-receipt of such a notice.

It is the licensee's responsibility to inform themselves of any likely hazards and ensure that appropriate risk management and emergency procedures are developed and in place for works undertaken on NPWS managed lands. The risk management and emergency procedures will also extend to cover OEH staff and any other third parties which may be impacted by the licensee's works. OEH accepts no responsibility for any event which results in the licensee suffering any loss. The licensee will be held liable for any damages resulting from their works which have impacted on OEH staff or any other third party.