

NEWINGTON NATURE RESERVE

Fire Management Strategy 2016

This strategy should be used in conjunction with aerial photography and field reconnaissance during incidents and the development of incident action plans.

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Office of Environment & Heritage

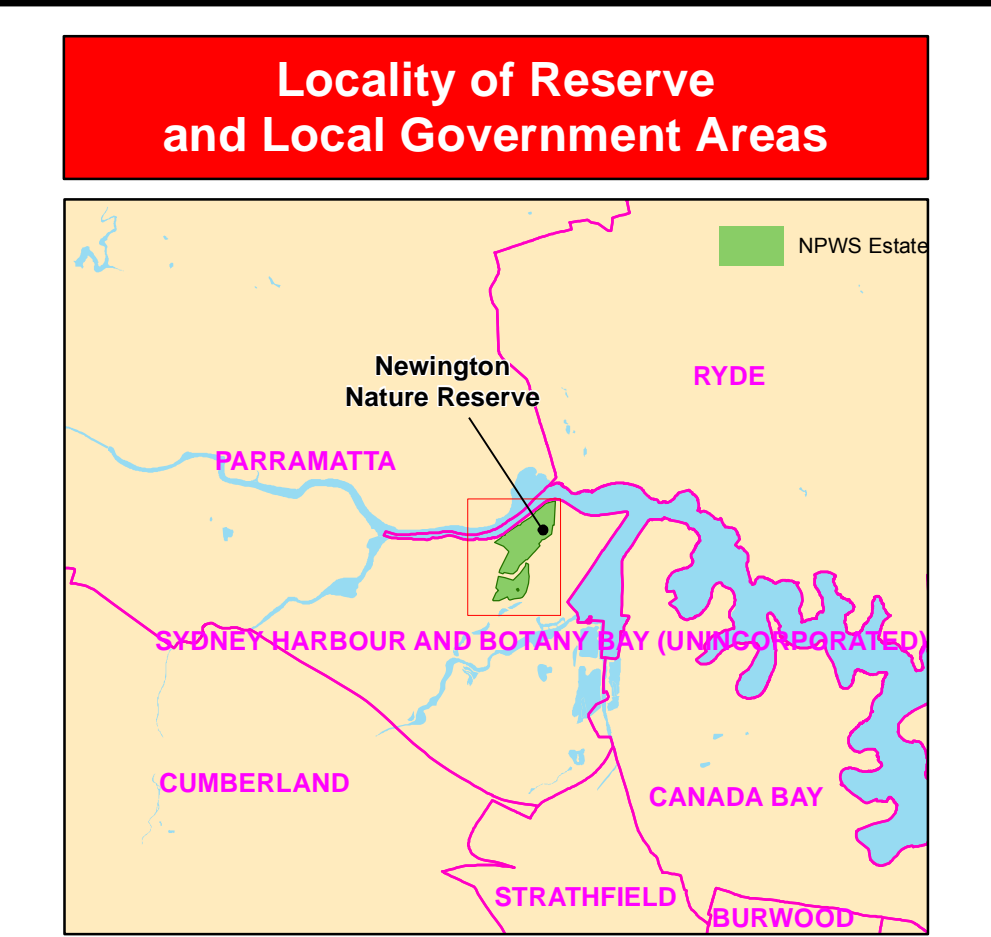
Communications Information		
Service	Channel	Location and Comments
NPWS VHF	134	• Good coverage
UHF - CB	1-99	• Available in most NPWS and RFS vehicles
Mobile Phone GSM	-	• Good coverage

Fire Season Information	
Wildfires	• The seasonal wildfire season occurs between 1 st October and 31 st March. That may be extended if weather conditions lead to increased fire danger outside of this period.
Prescribed Burning	• Prescribed burning in this area is normally undertaken in Spring through to Autumn.

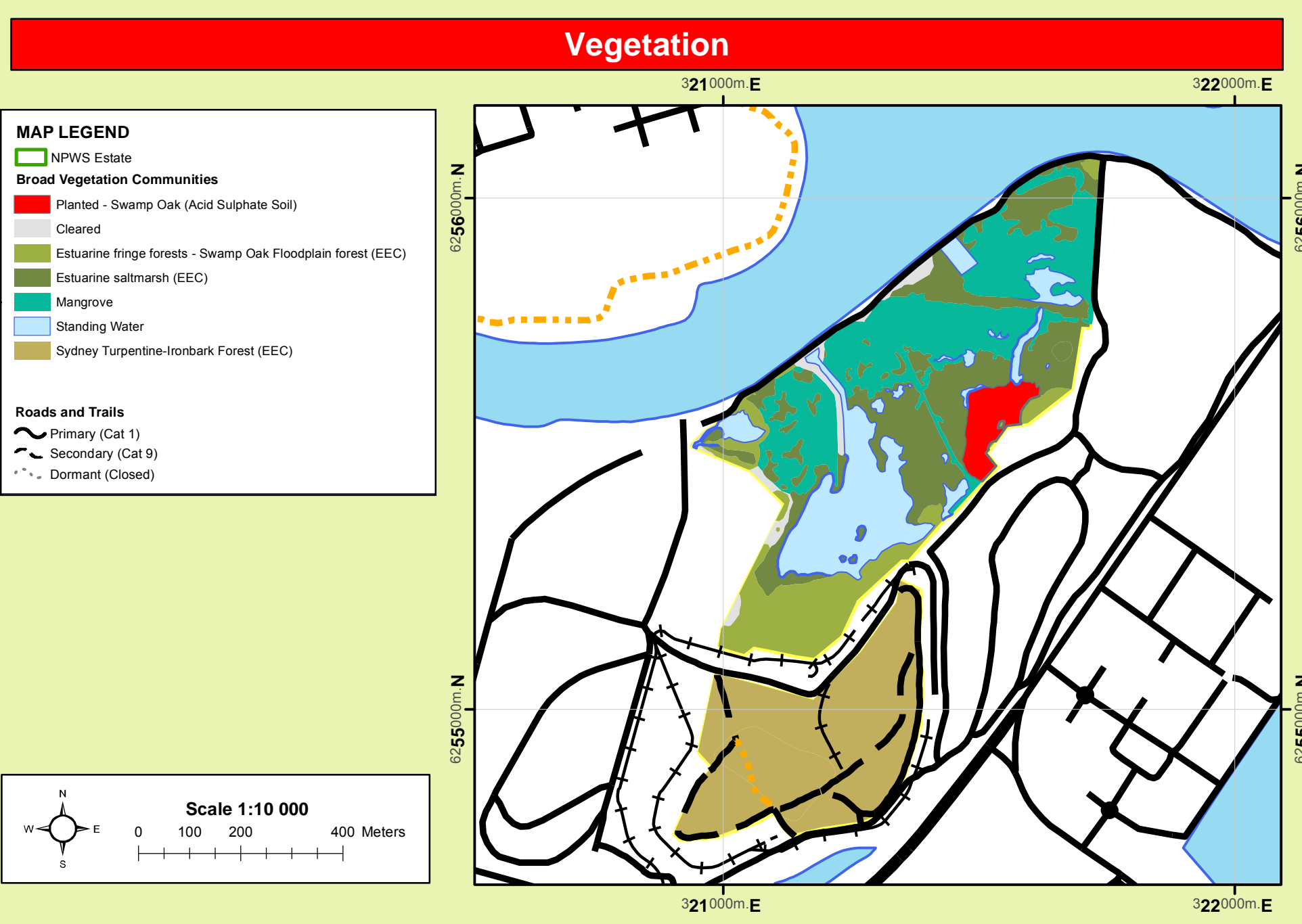
Related Documents	
• National Parks and Wildlife Service Fire Management Manual, September 2013.	• Bush Fire Management Plan for Newington Nature Reserve & Newington Activity, November 2003.
• Plan of Management for Newington Nature Reserve, January 2003.	• Heritage Conservation Management Plan for Newington Armament Depot and Nature Reserve, 2013.

Contact Information		
Agency	Position / Location	Phone
National Parks & Wildlife Service (Primary Land Management Agency)	Regional Duty Officer (24 hour)	0413 428 204
	Commanded Area Manager	0480 2704
	Fire Management Officer	0419 203 787
	Regional Operations Coordinator	0419 482 106
Sydney Olympic Park Authority	Commanded Area Office	0421 5944
	Metropolitan West Regional Office	0419 482 276
	Business Hours	0419 482 274
	Metropolitan South-West Regional Office	0419 482 140
SES	Emergency	132 500
Police	Emergency	000
Ambulance	Emergency	000
Hospital	Autism Council	0767 8090
Council	Autism Council	0738 1522

Other Safety Considerations	
Fencing	• The Nature Reserve is bounded by a 2m chain wire perimeter fence.
Access	• Limitation imposed by fencing must be considered as part of fire management planning.
Unapproved Ordnance	• Access to the site is by way of induction only by Sydney Olympic Park Authority, which maintains the site.
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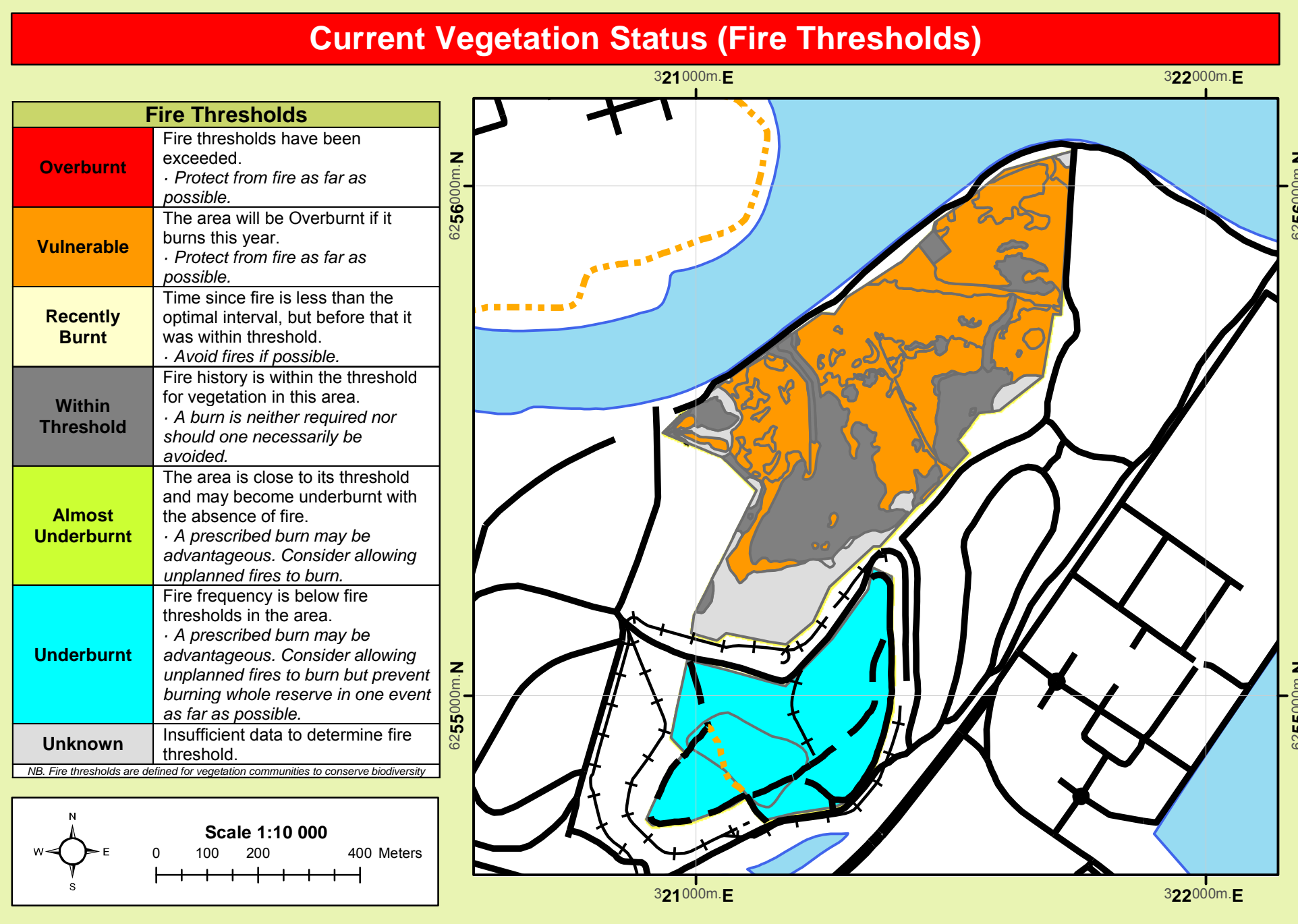
Fire Management Zones			
The objective of APZs is the protection of human life and property. This will have precedence over guidelines for the management of biodiversity. Maintain Overall Fuel Hazard at Moderate or below.			
Asset Protection Zones	Zone Name	Responsibility	
Land Management Zones	APZ 130a - APZ 130b - APZ 31 - APZ 150a - APZ 35 - APZ 39	• Manage fuels by mowing/brushcutting/chemical removal to depth of up to 20 meters. • Mow every 3-6 weeks in Spring and Summer. Mow every 10-12 weeks in Autumn/Winter. • Reduce fuels by mechanical means around heritage buildings, soft structures and/or areas. • The objective of LMZs is to conserve biodiversity and protect cultural and historic heritage. Manage fire consistent with fire thresholds.	SOPA
	LMZ 1	• Maintain fire regime specific to vegetation communities outlined in the Vegetation Communities and Biodiversity Thresholds table. • Implement the threatened species management strategies specified in the Operational Guidelines table as required. • Hand tool lines around Aboriginal and heritage sites. • Prescribed burning operations to occur outside of breeding season (May - August).	NPWS
	LMZ 2 & LMZ 3	• To protect hollow bearing trees and prevent fire in canopy through appropriate fire prescriptions. • Suppress all fire within the canopy.	SOPA
	LMZ 4	• Maintain fire regime specific to vegetation communities outlined in the Vegetation Communities and Biodiversity Thresholds table. • Exclude fire from the wetland area.	NPWS
	LMZ 5	• Maintain fire regime specific to vegetation communities outlined in the Vegetation Communities and Biodiversity Thresholds table. • Exclude fire from the Estuarine Fringe Forest Swampy Oak Floodplain (EEC).	NPWS
LMZ 6	• Maintain fire regime specific to vegetation communities outlined in the Vegetation Communities and Biodiversity Thresholds table. • Implement the threatened species management strategies specified in the Operational Guidelines table as required. • Implement the cultural and historic heritage management strategies specified in the Operational Guidelines table as required.	SOPA	
LMZ 7	• Hand tool lines around Aboriginal and heritage sites. • White-bellied Sea Eagle (Haliaeetus leucogaster). • Protect nesting and roosting trees through rake hole line around base of tree during fire planning preparation.	NPWS	
LMZ 8	• Prescribed burning operations to occur outside of breeding season (May - August).	NPWS	
LMZ 9	• Hand tool lines around Aboriginal and heritage sites. • White-bellied Sea Eagle (Haliaeetus leucogaster). • Protect nesting and roosting trees through rake hole line around base of tree during fire planning preparation.	NPWS	



Operational Guidelines

Refer to Strategy for Fire Management 2003 and Fire Management Manual 2006. Brief all personnel involved in suppression operations on the following issues:

Resource	Guidelines
Aboriginal Cultural Heritage Site Management (NPWS FMM 4.2.7)	• As far as possible protect site from fire. • Earthmoving or unacceptable (handheld) construction is allowed. • Use of fuels, wetting agents and retardant is not permitted (other than in hand-held extinguishers).
IS	• As far as possible protect site from fire. • Earthmoving or unacceptable (handheld) construction is allowed. • Use of fuels, wetting agents and retardant is not permitted (other than in hand-held extinguishers).
Historic Heritage Management (NPWS FMM 4.2.7)	• As far as possible protect site from fire. • Earthmoving or unacceptable (handheld) construction is allowed. • Use of fuels, wetting agents and retardant is not permitted (other than in hand-held extinguishers).
H2	• Maintain fuel reduction zones to a minimum width of 3m, including at buildings, roads and adjacent water bodies. • The use of earthmoving machinery is unacceptable. • Avoid driving vehicles over 1 tonne in weight over wooden rail lines established in bushland. All other vehicles should choose these lines perpendicular to the lines where possible. • Avoid damage to these structures from vehicles where possible. • Use of fuels, wetting agents and retardant is not permitted (other than in hand-held extinguishers).
H3	• Avoid all ground disturbances including the use of earthmoving machinery, herbicide control and/or other such activities. • Site may be burnt by bush fire, back burn or prescribed burn. • Heritage site priority to be established by the site manager. • All ground disturbances, including the use of earthmoving machinery is strictly prohibited. • Exclude fire from the site where possible.
H6 (LUX Area)	• Fire suppression from adjacent areas is acceptable, such as hotting from the fence outside this area. • Fires within this area are not to be put out from adjacent areas by the reserve as they are only to be extinguished by water bombing from a rotary winged aircraft. • Use of fuels, wetting agents and retardant is not permitted (other than in hand-held extinguishers).
Threatened Fauna Management (NPWS FMM 4.2.7 and 5.4)	• Avoid high intensity fires that consumes the canopy. • Avoid fires in areas of high biodiversity value. • No slashing or littering or earthmoving equipment. • Protect logs and fallen timber and dead standing timber. • Maintain appropriate fire frequencies to prevent dense undergrowth. • No slashing or littering or earth-moving equipment. • Avoid fires during the breeding season (August - January). • Avoid fires intervals < 3 years. • Protect large old, hollow-bearing trees. • Avoid smoke and fire near roosting trees, roost sites and during the breeding season (spring/summer). • Avoid high intensity fire that consumes the canopy and frequent fires over large areas. • Protect logs and fallen timber. • No burning within 100m of wetland. • Avoid frequent fires adjacent to wetlands. • Avoid smoke and fire during the breeding season (spring/summer). • No use of chemical or foam retardants for fire suppression. • No slashing or littering or earthmoving works.
Threatened Flora Management (NPWS FMM 4.2.7)	• Exclude fire. • No slashing or littering. • No use of earth moving machinery. • No use of fuels, wetting agents and retardant. • No use of chemical or foam retardants for fire suppression. • No use of earth moving machinery.
Threatened Property Management (NPWS FMM 4.2.7)	• Exclude fire. • No slashing or littering. • No use of earth moving machinery. • No use of fuels, wetting agents and retardant. • No use of chemical or foam retardants for fire suppression. • No use of earth moving machinery.



Suppression Strategies

Current FDR Forecast FDR	Strategy
Low - Mod	• As far as possible, undertake indirect, parallel or direct attack along existing control lines. • As far as possible, minimise area burnt without threatening assets, including biodiversity. • Identify and survey backup control lines.
Low - Mod	• Undertake indirect, parallel or direct attack to minimise the time taken to contain the fire. • Construct new control lines if necessary to minimise the time to contain the fire. • Identify and survey backup control lines.
High	• Undertake indirect attack along existing or newly constructed control lines. • Secure and deepen control lines along the next predicted downward side of the fire. • Identify and survey backup control lines. • Ensure there is sufficient time to secure control lines before the fire gets to them. • If there is insufficient time to secure control lines, fall back to the next potential control line.
All	• As far as possible, implement threatened species and cultural heritage management guidelines.



Threatened Flora Fire Ecology

Label	Name	Fire Ecology
FL	Wilsonia capricornensis Palm-leafed Wilsonia (Vulnerable)	• Salt tolerant occurring in inter-tidal saltmarsh • Flowering occurs in Spring and Summer • Probably killed by fire
FL	Pectocoma argentea Blakeslee's Samaras (Culturally Significant)	• Flowers Spring to early Summer • Tolerant of high salinity levels
FL	Lamprolaima marginata Puffin (Culturally Significant)	• Flowers from June to August • Tolerant of high salinity levels

Threatened Fauna Fire Ecology

Label	Name	Fire Ecology
FA	Migratory waterbirds Black-billed Gull (Vulnerable)	• Migratory waterbirds arriving in Australia around August and leaving by March/April. • Roosts and bays on low banks of mud, sand and shell bars. • Forages in soft mud or shallow water.
FA	Curlew (Endangered)	• Migratory waterbirds arriving in Australia August and departing March/April. • Forages in shallow water, occasionally on exposed mud flats or waterways, or on banks of beach cast seaweed. • Feeds on detritus and invertebrates.
FA	Minivaca subsericeus renewiensis Eastern-bonneted Bat (Vulnerable)	• Primarily cave roosting but may also utilise man-made structures particularly for overwintering. • Females congregate at a select number of maternity sites during spring/summer to give birth and rear young. • Forages predominantly on moths and other insects in open areas e.g. above wetlands and above forest and woodland openings within forests and woodlands.
FA	Microgaleus rotundifrons Eastern-freetail Bat (Vulnerable)	• Roosts predominantly in tree hollows. • Females give birth November, young are free-flying by Jan. • Forages on flying insects in natural and man-made openings within forests and woodlands.
FA	Semi aquatic species	• Usually breeds in summer when conditions are warm and wet. Females produce a raft of eggs that initially float before settling to the bottom, often amongst vegetation. • Inhabits marshes, dams, and stream sides particularly those fringed with tall rushes or sedge-rushes. • Habitat includes water-bodies that are unshaded, have a grassy bank, healthy and diverse shoreline vegetation. • Feeds on invertebrates, often in large roosting camps that are commonly found in gullies, close to water, in conjunction with a dense canopy.
FA	Phrynosoma marmoratum Grey-headed Flying Fox (Vulnerable)	• Making commences Jan and conception occurs April/May with a single young born September. Dispersal young remain at roost sites and are weaned around late March. • Feed on the nectar and pollen as well as fruit, predominantly foraging in the canopy and sub-canopy. • Inhabits eucalypt forests and woodlands. • Feeds on arthropods gleaned from crevices in rough or decorticated bark, dead branches, standing dead trees and small branches and twigs in the tree canopy. • Breeding season spring/summer. Builds a cup-shaped nest in an upright tree fork high in the living tree canopy. • Sensitive to habitat loss, reduced patch size and habitat simplification including reductions in tree species diversity, tree canopy cover, shrub cover, ground cover, logs, fallen fruit and seed.
FA	Daphnorhina chrysozona Varied Stotia (Vulnerable)	• Currently only known in two areas in Sydney Metro CMA (Newington Nature Reserve and Toorak Nature Reserve). Newington NR population probably now less than 1 individual. • Inhabits saltmarsh and occasionally sited in grasslands. • Inhabits saltmarsh and occasionally sited in grasslands. • Inhabits saltmarsh and occasionally sited in grasslands. • Breeding season July/March, with 'open-cup' nests built in low vegetation, but also in low wooded mangroves. • Primarily roosts in tree hollows but may also use man-made structures. • Forages for insects high above forest and woodland canopy but forages lower in open areas.
FA	Ephialtes albifrons White-bellied Cat (Endangered) Ecological Podivivore	• Opportunistic carnivores feeding on a wide variety of animals although fish, turtles, sea snakes and water birds may form part of its diet. • Inhabits saltmarsh and occasionally sited in grasslands. • Inhabits saltmarsh and occasionally sited in grasslands. • Inhabits saltmarsh and occasionally sited in grasslands. • Breeding season July/March, with 'open-cup' nests built in low vegetation, but also in low wooded mangroves. • Primarily roosts in tree hollows but may also use man-made structures. • Forages for insects high above forest and woodland canopy but forages lower in open areas.
FA	Saccolaimus brevirostris Yellow-bellied Shearwater Bat (Vulnerable)	• Opportunistic carnivores feeding on a wide variety of animals although fish, turtles, sea snakes and water birds may form part of its diet. • Inhabits saltmarsh and occasionally sited in grasslands. • Inhabits saltmarsh and occasionally sited in grasslands. • Breeding season July/March, with 'open-cup' nests built in low vegetation, but also in low wooded mangroves. • Primarily roosts in tree hollows but may also use man-made structures. • Forages for insects high above forest and woodland canopy but forages lower in open areas.
FA	Haliastur argenteus Mangrove White-bellied Sea Eagle (DAMBA)	• Opportunistic carnivores feeding on a wide variety of animals although fish, turtles, sea snakes and water birds may form part of its diet. • Inhabits saltmarsh and occasionally sited in grasslands. • Inhabits saltmarsh and occasionally sited in grasslands. • Breeding season July/March, with 'open-cup' nests built in low vegetation, but also in low wooded mangroves. • Primarily roosts in tree hollows but may also use man-made structures. • Forages for insects high above forest and woodland canopy but forages lower in open areas.

Vegetation Communities and Biodiversity Thresholds

Region	Vegetation Community	Biodiversity Thresholds	Fire Behaviour	Year Burne	Area (ha)
A	Sydney Turpentine-ironbark Forest (EEC)	• No fire more than once every 11 years • Avoid inter-fire periods > 30 yrs • Avoid 3 or more consecutive fires with each fire < 6 years apart • Avoid 2 or more consecutive fires with each fire > 15 years apart • Avoid inter-fire periods > 30 yrs • Avoid 2 or more consecutive fires that consume < 10% of surface fuel	Moderate	Unburnt	13.02
B	Estuarine Fringe Forest Swampy Oak Floodplain (EEC)	• No fire more than once every 11 years • Avoid inter-fire periods > 30 yrs • Avoid 3 or more consecutive fires with each fire < 6 years apart • Avoid 2 or more consecutive fires with each fire > 15 years apart • Avoid inter-fire periods > 30 yrs • Avoid 2 or more consecutive fires that consume < 10% of surface fuel	Moderate	Unburnt	4.79
C	Estuarine Saltmarsh Community	• NO BURNING PERMITTED	-	Unburnt	9.98
NI	Cleared Bank (Uninv) Sand/Water	• Not applicable	-	Unburnt	11.48

Threatened Fauna Fire Ecology

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FA2	Migratory waterbirds Black-billed Gull (Vulnerable)	• Migratory waterbirds arriving in Australia around August and leaving by March/April. • Roosts and bays on low banks of mud, sand and shell bars. • Forages in soft mud or shallow water.
FA3	Curlew (Endangered)	• Migratory waterbirds arriving in Australia August and departing March/April. • Forages in shallow water, occasionally on exposed mud flats or waterways, or on banks of beach cast seaweed. • Feeds on detritus and invertebrates.
FA5	Minivaca subsericeus renewiensis Eastern-bonneted Bat (Vulnerable)	• Primarily cave roosting but may also utilise man-made structures particularly for overwintering. • Females congregate at a select number of maternity sites during spring/summer to give birth and rear young. • Forages predominantly on moths and other insects in open areas e.g. above wetlands and above forest and woodland openings within forests and woodlands.
FA7	Microgaleus rotundifrons Eastern-freetail Bat (Vulnerable)	• Roosts predominantly in tree hollows. • Females give birth November, young are free-flying by Jan. • Forages on flying insects in natural and man-made openings within forests and woodlands.
FA12	Semi aquatic species	• Usually breeds in summer when conditions are warm and wet. Females produce a raft of eggs that initially float before settling to the bottom, often amongst vegetation. • Inhabits marshes, dams, and stream sides particularly those fringed with tall rushes or sedge-rushes. • Habitat includes water-bodies that are unshaded, have a grassy bank, healthy and diverse shoreline vegetation. • Feeds on invertebrates, often in large roosting camps that are commonly found in gullies, close to water, in conjunction with a dense canopy.
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