Vertebrate Fauna Study

FOR THE STRATHFIELD LOCAL GOVERNMENT AREA

APRIL 2009

PREPARED FOR COUNCIL BY:
Dr Stephen Ambrose
Ambrose Ecological Services Pty Ltd
PO Box 246
RYDE NSW 1680

STRATHFIELD COUNCIL

For more information contact Council on 9748 9999
or visit www.strathfield.nsw.gov.au / 65 Homebush Road, Strathfield NSW 2135

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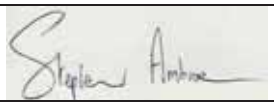
Latham's Snipe (*Gallinago hardwickii*)

Author :	Dr Stephen Ambrose
Position:	Director, Ambrose Ecological Services Pty Ltd
Signature:	
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INTRODUCTION

1.1 PURPOSE OF REPORT

The purpose of this report is to document the results of a vertebrate survey of public parks within the Strathfield Local Government Area (Strathfield LGA) and to provide recommendations on future management of these parks as habitat for native fauna.

1.2 DESCRIPTION OF STRATHFIELD LGA

1.2.1 Overview

Strathfield LGA is approximately 14.1 km^2 in area, is located about 14 km west of the Sydney CBD, half-way between the Sydney CBD and Parramatta. Its suburbs include Strathfield, Strathfield South, Homebush, Homebush West, and parts of Belfield and Greenacre.

It is bounded by Homebush Bay Drive to the north, Powell's Creek, The Boulevarde and Coronation Parade to the east, Punchbowl Road and Juno Parade to the south and Roberts Road, Chullora rail yards, Rookwood Cemetry and the Sydney Olympic Park rail line to the west (Figure 1).

European settlement of the Municipality of Strathfield area began in 1793 in an attempt to develop it as a farming area. Although there were up to 63 settler farmers in the area, attempts to farm the landscape were unsuccessful, settlers soon exhausted their resources and were living on credit, and most eventually moved away from the area.

In 1867, the Municipality of Strathfield began to be developed as a residential area, when Redmire Estate, approximately 1 km^2 in area, was subdivided for housing. Today, the Strathfield LGA is a high-density residential area whose population density is above the Sydney Metropolitan average. According to the Australian Bureau of Statistics' 2006 National Census, the population density averaged 2300.9 people/km^2, ranging from 4172/km^2 in Homebush West to 2419.3/km^2 in Homebush, while there is an average of 2217/km^2 in Strathfield South.

A breakdown in the current land-use in the Strathfield LGA is shown In Table 1.1. Most of the open space occurs as sports fields and landscaped neighbourhood parks within residential and industrial areas, highlighting the urbanized nature of the Strathfield LGA.

1.2.2 Topography, Geology and Soils

Strathfield LGA is located on a level to gently undulating alluvial floodplain formed by the ancient river system draining the Cumberland Lowlands. Local relief in the region is less than five (5) metres, with slope gradients averaging less than three (3) metres.

Figure 1 **MAP OF STRATHFIELD LGA**

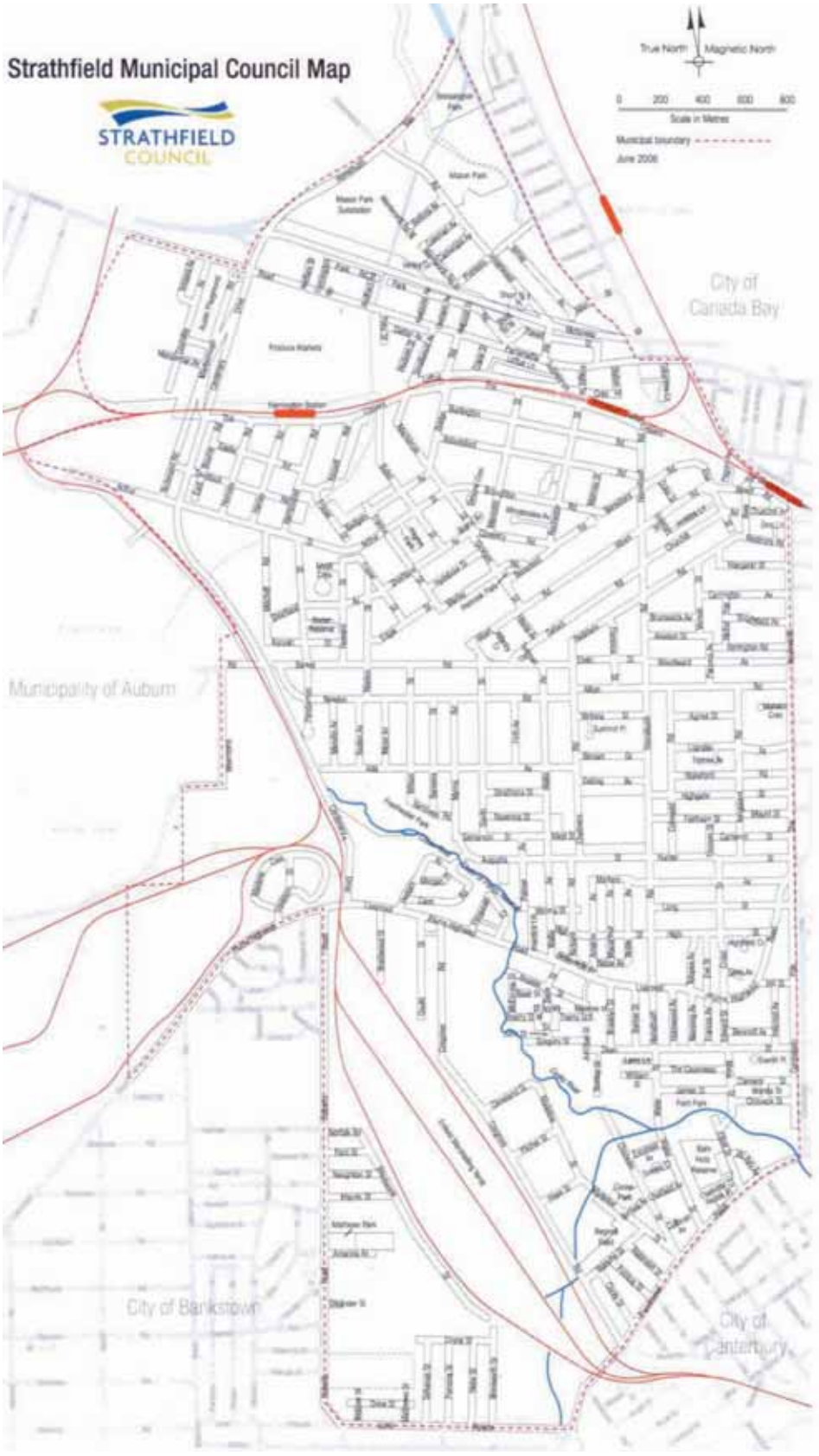

Table 1.1 **LAND-USE IN THE STRATHFIELD LGA**

Land-use	Area in Strathfield LGA	
	Hectares	% Total Area
Residential	472	33.4
Roads	319	22.6
Railway lands	182	12.9
Industrial	125	8.9
Open space	124	8.8
Educational/religious	87	6.2
Commercial	6	0.4
Other	95	6.8
TOTAL	**1410**	**100**

According to Chapman & Murphy (1989), the geology of the Strathfield LGA consists largely of:

- gently undulating rises on Wianamatta Group shales and Hawkesbury shale. Soils associated with this rock type red and brown podzolic soils on crests, upper slopes and well-drained areas, and deep yellow podzolic soils and soloths on the lower slopes and areas of poor drainage;

- disturbed terrain where original soils have been removed or buried and nearly all the original vegetation has been removed; and

- Birrong soil landscape along Cooks River, producing a level to gently undulating alluvial floodplain that drains Wianamatta Group shales. The deeper soils overlying the older alluvial terraces are yellow podzolic soils, whereas solodic soils and yellow solonetz occur on the current floodplain.

1.2.3 Hydrology

Several rivers and creeks pass through the Strathfield LGA, including Cooks River, Cox's Creek, Powell's Creek, Saleyards Creek and Boundary Creek.

The Cooks River is a 23-km long urban waterway that flows into Botany Bay. The course of the river has been altered to accommodate development along its shoreline. The river commences at Graf Park, Yagoona, then flows in an approximately north-west direction through to Chullora. It reaches its northern-most point at Strathfield, where it leads into a concrete open canal, no more than one meter wide and thirty centimetres deep, and heads towards the south-east. Part of the river, where it runs through Strathfield Golf Course, has had the concrete lining removed and the plants have returned and create an environment where the water is filtered and runs clean, and wildlife has returned.

At Belfield it joins with the Cox Creek Channel and flows in an easterly direction. The canal widens and deepens as it picks up stormwater from surrounding suburbs, such as Campsie and becomes influenced by tidal action.

Powells Creek rises as a concrete stormwater channel in Strathfield before flowing north-west through Homebush. From its beginning in Strathfield, Powells Creek remains confined to a narrow concrete culvert until just north of Allen Street, Homebush, where it then broadens into a wider concrete

channel. The creek then flows north past Bressington Park and into the suburb of Homebush Bay. At it's confluence with Saleyards Creek at the northern end of Bressington Park, Powells Creek loses its concrete banks and becomes a natural waterway lined with mangroves, continuing its course through Bicentennial Park before emptying into the Parramatta River.

Saleyards Creek rises in Strathfield and flows in a generally northward direction through Homebush. It is a concrete channel for its entire length and generally flows as little more than a trickle during dry weather. It flows under Paddy's Markets, Flemington in the form of a man-made tunnel and then re-emerges and continues under Parramatta Road and the M4 Western Motorway until finally joining Powells Creek at Bressington Park in Homebush.

1.3 URBAN PARKS OF STRATHFIELD

1.3.1 Overview

There are five main greenspace types in the Strathfield LGA, which are confined largely to urban parks and reserves. These are bush remnants, revegetated parkland, open parkland, urban neighbourhood parks, and wetland. The distribution of the main greenspace areas are shown in Figure 2.

Bush remnant sites comprise mainly remnant indigenous vegetation characteristic of Sydney Turpentine-Ironbark Forest (STIF) that existed across most of the non-tidal areas prior to clearing for rural and urban development. STIF is currently listed under the schedules of the NSW Threatened Species Act, 1995 (TSC Act) as an Endangered Ecological Community, and under the Commonwealth Environment Protection and Biodiversity Conservation Act, 1999 (EPBC Act) as a Critically Endangered Ecological Community.

Cox's Creek Bushland Reserve contains the threatened ecological community of Cooks River/Castlereagh Ironbark Forest. The floristic structure and composition of this community is described in UBM Consultants (2001),

Revegetated parkland sites consist of mostly native tree, shrub and ground cover species planted in blocks or strips along the upper Cooks River and at Mason Park. These are typically bush regeneration or beautification projects undertaken by Strathfield Council and volunteer Bushcare groups.

Open parkland sites are dominated by open grassed and paved surfaces with some areas of indigenous and exotic vegetation. These are located within residential and industrial areas of the Strathfield LGA.

A remnant wetland complex of she-oaks (*Allocasuarina* spp.), mangroves and saltmarsh fringe the mudflats, debris islands, and shallow open water at the Mason Park Wetlands.

A description of each greenspace area that was surveyed for fauna in the present study are described in Sections 1.3.1 to 1.3.5. Aerial and ground views of each park and reserve are shown in Appendices A and B, respectively.

Figure 2 **RESERVES AND PARKLANDS IN THE STRATHFIELD LGA**

1.3.2 Homebush/Homebush West Parks

(a) Airey Park, Homebush (Figure A1, Plates B2 to B4).

Airey Park is 7.75 ha in area and is bounded to the:

- north by The Crescent;
- west by Bates Street;
- south-east by the rear boundaries of residential properties along Badgery Avenue;
- south-west, in part, by Fraser Street and, in part, by rear boundaries of residential properties along that street; and
- west by the rear boundaries of residential properties along Kessell Avenue.

Airey Park was first dedicated as a public park in 1920. Most of the park is dedicated to the provision of sporting and other recreational facilities, including a cricket oval (summer activity) which doubles as rugby league and soccer grounds (winter activities), an unused bowling green, a barbecue and recreation area, community centre, two kindegartens and a small public car park. A concrete canal runs in a north-south and north-east to south-west through the long axis of the park, near the western boundary. A bicycle/path occurs on the western side of the canal, linking The Crescent with Fraser Street, and intersecting with another path that crosses the canal at one end and links up with Badgery Avenue at the other end.

Ecological Status: Open Parkland Site

(b) Bill Boyce Reserve, Homebush (Figure A2, Plate B21)

Bill Boyce Reserve, formerly known as Pomeroy Reserve, is a small park that is bounded to the:

- north-west by Pomeroy Street;
- north-east by the rear boundaries of residential properties along Underwood Road; and
- south by the M4 (Western) Motorway.

The park contains a children's playground and open space for informal recreational use.

Ecological Status: Urban Neighbourhood Park

(c) Bressington Park, Homebush (Figure A3, Plates B18 to B20)

Bressington Park is 7.9 ha in area and is bounded to the:

- north-east by Powell's Creek;
- south-east by Salesyard Creek. Mason Park and the Mason Park wetlands or on the opposite side of this creek;
- north-west by Homebush Bay Drive. Bicentennial Park, the State Sports Centre and Sydney Olympic Park occur to the north-west of Home Bush Bay Drive; and
- south-west by Underwood Road.

The Park is used largely for sports activities and passive recreation such as walking, bird-watching and flying kites. Sports fields (used for rugby, soccer and cricket) and a small car park occur in the southern half of Bressington Park, a moderately-sloping open area which is sparsely treed occurs in the northern half of the Park.

Ecological Status: Open Parkland Site.

(d) Fitzgerald Park, Homebush (Figure A4, Plate B24)

Fitzgerald Park is a small park that is bounded to the

- north by Abbotsford Road;
- south by Broughton Road;
- east by rear boundaries of properties that occur along Rochester Road; and
- west by Meredith Street.

The Park contains a children's playground, grassed netball courts, open space for informal recreational use, a child-minding centre, picnic shelters and a barbecue.

Ecological Status: Urban Neighbourhood Park

(e) Mason Park (including Mason Park Wetlands), Homebush (Figure A3, Plates B11 to B17)

Mason Park lies in an irregular triangle formed by the arms of two canalised creeks, Saleyards Creek and Powells Creek, which flow into Homebush Bay. Mason Park is separated from the adjoining Bressington Park to the north by Saleyards Creek. Powells Creek forms the eastern boundary of the park and is also the boundary between Strathfield and City of Canada Bay Councils. Powells Creek Reserve in the City of Canada Bay and Sydney Olympic Park lie to the north. Homebush Bay Drive separates Mason and Bressington Parks from Bicentennial Park within Sydney Olympic Park.

Mason Park is one of four significant parks in Strathfield local government area, together with Airey, Strathfield and Bressington Parks.

The western part of Mason Park has been developed as sports grounds and for other reacreational activities. There are three plying fields, used for soccer and touch football in winter, and cricket touch football in summer. This part of the park also contains a children's playground, an amenities block, additional lawned areas and a small car park.

The original vegetation in the western part of Mason Park was probably Sydney-Turpentine Ironbark Forest. However, nearly all of this community has been cleared from Mason Park and has been replaced by the sporting and recreational facilities. Landscape planting around the perimeter areas of the western part of Mason Park include *Casuarina*, *Eucalyptus* and *Callistemon* spp., the She-oaks (*Casuarina* spp.) being the dominant form of planting.

The eastern part of Mason Park consists of the Mason Park Wetlands. The hydrology of these wetlands and the vegetation communities that occur there are described in detail in the Mason Park Plan of Management (2008).

The wetlands are semi-natural as a resulted of altered hydrology due to past reclamation and landfilling, and the conversion of the creeklines which once fed the wetlands into concrete channels. These wetlands are influenced by partial tidal flushing by Parramatta River and stormwater discharge from the surrounding urban landscape.

The main wetland vegetation communities and their distribution are shown in Figure 3.

Mason Park is particularly significant because it is located on the floodplains of Powell's and Salesyard Creeks and the wetlands are listed on the Register of the National Estate (1998). The Statement of Significance for the Mason Park Wetlands on the Register states:

"*The wetlands of Mason Park are one of eight significant remnant wetlands (Ermington Bay / Mud Flats, Meadowbank Park Foreshore, Yaralla Bay, Majors Bay, Homebush Bay, Lower Duck River and Haslams Creek) which were once part of an extensive wetland system bordering the Parramatta River. Mangroves of the Parramatta River area represent a significant proportion of the mangroves remaining in the Sydney region.*

"The saltmarsh communities of the place are significant due to their high proportion of chenopod species which is unusual in southern NSW. Mason Park supports one of thelargest remaining populations of Wilsonia backhousei *and the restricted saltmarsh species* Lampranthus tegens *(Small Pig Face).*

*"The remnant wetlands of the Upper Parramatta River provide habitat for a diverse bird community, and have been ranked sixth in importance for waders in NSW. The place is of significance for migratory waders, providing habitat for 20 species listed in the Japan Australia Migratory Bird Agreement (JAMBA) and 19 species in the China Australia Migratory Bird Agreement (CAMBA). Two species which occur in the area – the Little Tern (*Sterna albifrons*) and the Black Tailed Godwit (*Limosa limosa*) are listed under Schedule 12 (Endangered Fauna) of the NSW National Parks and Wildlife Act 1974. The remnant wetlands support one of the two Sydney colonies of the White Fronted Chat (*Ephthianura albifrons*) and contribute habit for one of the largest populations of Chestnut Teal (*Anas castanea*) in NSW. The remnant wetlands are an important research site for environmental studies*."

Mason Park has been identified as one of the most important wetlands for migratory shorebirds in the Sydney region, despite its small size.

A bicycle/pedestrian path traverses the perimeter areas of the eastern part of Mason Park, linking the sports grounds with the car park and urban landscape that surrounds the Park.

Ecological Status: Nationally-, State- and Regionally-significant Wetland.

(f) Wentworth Reserve, Homebush (Figure A5, Plate B22)

Wentworth Reserve is a small L-shaped neighbourhood park and is bounded to the:

- north by Wentworth Road;
- south by the M4 (Western) Motorway;
- west by Bedford Street; and
- east by the rear boundaries of residential properties along Wentworth Road and Verley Drive.

Figure 3 DISTRIBUTION OF VEGETATION COMMUNITIES IN MASON PARK

Facilities in the Reserve include a children's playground and lawned open space for informal recreational use.

Ecological Status: Urban Neighbourhood Park.

(g) Melville Reserve, Homebush West (Figure A6, Plate B1)

Melville Reserve is a small reserve that is roughly L-shaped, and is bounded to the:

- west by Hamstead Road;
- south by rear boundaries of residential properties along Arthur Street;
- north by residential apartments along Kessell Avenue; and
- south-east by rear boundaries of residential properties along Fraser Street; and
- north-east by Fraser Street. Along this section of the Fraser Street, Melville Reserve links up with Airey Park, which occurs on the eastern side of Fraser Street.

Salesyard Creek, which has been made into a concrete channel runs in a roughly north-east to south-west direction through the approximate centre of the Reserve. Bicycle/pedestrian paths in the northern half of the Reserve link Hamstead Road and Fraser Street.

Melville Reserve Scout Hall occurs near the centre of the Reserve and Kurralee Child Care Centre occurs in the southern part of the reserve, both facilities occurring south of Salesyard Creek. Lawned areas surround the wall memorial in the northern part of the Reserve and the scout hall. Mature figs (*Ficus* sp) line the banks of Salesyard Creek and additional landscape tree plantings screen the perimeter areas and childlcare centre. A small car park occurs near the south-west corner of the Reserve.

Ecological Status: Open Parkland Site

1.3.3 Strathfield/Strathfield South Parks

(a) Boden Reserve, Strathfield (Figure A7, Plate B6)

Boden Reserve is a small neighbourhood park that is bounded to the:

- north by rear boundaries of residential properties along Shortland Avenue;
- south by rear boundaries of residential properties along Karuah Street;
- west by Pemberton Street; and
- east by Howard Street.

The reserve contains a children's playground and lawned areas for informal recreational use.

Ecological Status: Urban Neighbourhood Park.

(b) Chain of Ponds Reserve, Strathfield (Figure A8, Plates B31 & B32)

Chain of Ponds Reserve, formerly known as Caves Road Reserve, is a small reserve that occurs along the banks of the Cooks River channel. It is bounded to the:

- north by Augusta Street;
- east by Palmer Avenue;
- south-west by Fitzgerald Crescent; and
- west by the Cooks River channel.

It is largely an open lawned area with clumped landscape plantings of mature eucalypt trees near the centre.

Ecological Status: Revegetated Parkland Site.

(c) Edwards Park, Strathfield (Figure A9, Plate B33)

Edwards Park is a small neighbourhood park that was established in the 1950s as part of the NSW Government's Housing Commission Project in Strathfield South. It is bounded to the:

- north by High Street;
- south and east by Noble Avenue; and
- west by Macarthur Street.

The park consists of mowed lawns and landscape trees that were planted in the 1990s. Strathfield Branch Library occurs at the northern end of the park. A children's playground and barbecue facilities also occur in the park.

Ecological Status: Urban Neighbourhood Park

(d) Frank Zions Reserve, Strathfield (Figure A10, Plate B7)

Frank Zions Reserve is a small neighbourhood park which is bounded to the:

- north by Shortland Avenue;
- east by Pemberton Street;
- south by Karuah Avenue; and
- west by Mitchell Avenue.

It provides a green link between Boden Reserve (on the eastern side of Pemberton Street) and Hudson Oval and Golf Course. Landscape plantings occur around the perimeter of the reserve, but the remainder of the park is a mown lawn area that occurs a children's playground, open space for informal recreational use, barbecues, shelters and seating. The Bay to Bay Walk and Cycleway runs through Frank Zions Reserve.

Ecological Status: Urban Neighbourhood Park

(e) Freshwater Park, Strathfield (Figure A11, Plates B34 & B35)

Freshwater Park is an open parkland area that adjoins the Strathfield Golf Course. It is bounded to the:

- north by Ada Avenue;
- north-east by Wilson Street and Yarrowee Road;

- east by Augusta Street;,
- south-east by Hedges Avenue;
- south by Strathfield South High School; and
- west by Centenary Drive. Strathfield Golf Course occurs on the western side of Centenary Drive.

Cooks River runs in an approximately north-west to south-east direction through Freshwater Park. Therefore, the park is part of the river's floodplain. The area within the park that is west of Cooks River is part of the Strathfield Golf Course and contains golfing fairways that are landscaped on the edges by trees and bushes. The area east of Cooks River consists largely of mowed lawns with perimeter landscaping and contains a children's playground, open space for informal recreational use, a barbecue, shelters and seating, and a concrete cricket wicket. The Bay to Bay Cycle and Walkway runs through the Park, near the eastern boundary.

Ecological Status: Open Parkland Site

(f) Hudson Park Oval & Public Golf Course, Strathfield (Figure A12, Plates B8 to B10)

Hudson Park is located on land that was once designated as reserve land for Rookwood Cemetery. The building of the existing freight line to the west of the existing park in 1914 physically separated this land from Rookwood Cemetery. In 1930, the NSW Government gazetted the parkland for purposes of public recreation and gave Strathfield Council the responsibility for managing it.

Hudson Park is a roughly triangular piece of land that is bounded to the:

- north by Arthur Street. Residential and industrial land occurs on the northern side of this street;
- east by Mitchell Road. Residential properties occur on the eastern side of this street; and
- south-west by Centennial Drive and railway freight line. Rookwood Cemetery occurs west of these transport routes.

A sports oval used for rugby (in winter) and cricket (in summer) occurs on the north-eastern part of the Park. The remainder of the site is the Hudson Park Public Golf Course, which has mowed greens and fairways and landscape trees between the fairways.

Ecological Status: Open Parkland Site

(g) Inveresk Park, Strathfield (Figure A13, Plate B26)

Inveresk Park is a small neighbourhood park which is bounded to the:

- west by Dickson Road;
- south by Beresford Road; and
- north and east by Merley Road.

This park is an open mown area with scattered mature trees, including Grey Box (*Eucalyptus moluccana*), Woollybutt (*Eucalyptus longifolia*), White Stringybark (*Eucalyptus globoidea*), Broad-leaved Ironbark (*Eucalyptus fibrosa*) and Turpentine (*Syncarpia glomulifera*). These trees form one

of the most significant Sydney Turpentine-Ironbark remnants that presently occurs in the Strathfield LGA.

Facilities that occur in the Park include a children's playground and open space for informal recreational use.

Ecological Status: Open Parkland Site

(h) Pilgrim Park, Strathfield (Figure A14, Plate B5)

Pilgrim Park is a small rectangular Park which is bounded to the west, east and south by rear boundaries of residential properties along Frances Street, Bates Street and Shortland Avenue (respectively), and to the north by Arthur Street.

This park has a large open space area (mowed lawns) with a children's playground and concrete cricket wicket. Paperbarks (*Melaleuca* spp.) and Turpentines (*Syncarpia glomulifera)* have been planted in perimeter areas of the park.

Ecological Status: Urban Neighbourhood Park

(i) Strathfield Park, Strathfield (Figure A15, Plates B28 to B30)

This park is one of the oldest public park in Strathfield, the NSW Government dedicating the land for public use in 1914. It is presently one of the most popular parks in Strathfield and is used for sporting events, informal recreational activities, and organized social events such as Carols by Candlelight, Australia Day festivities and outdoor movies.

Strathfield Park is bounded to the:

- west by Chalmer Road;
- east by Homebush Road;
- north and south by the rear boundaries of residential properties that occur along Gelling Avenue and Augusta Street, respectively.

Three playing fields (used for playing soccer and cricket), two all weather hard ground basketball/netball courts, three netball/volleyball grass courts, two children's playgrounds, two barbecue areas, kiosk and a rotunda occur in the park. Areas between these facilities are landscaped with a mosaic of native trees, mainly eucalypts. A car park occurs along the western boundary of the park.

(j) Coronation Reserve, Strathfield South

Coronation Park is a long and narrow park on the western side of Coronation Parade and extends fromLiverpool Road in the north to Punchbowl Road/ Georges River Road in the south.

It is an open parkland with mown lawns and landscape trees, and it contains a pedestrian/cycle path along its length, a coronation arch, children's playground, Enfield War Memorial and the former Enfield Council Chambers.

Ecological Status: Open Parkland Site

(k) Dean Reserve, Strathfield South (Figure A16, Plate B36)

Dean Reserve is a small triangular-shaped park at the western end of Dean Street. The Cooks River runs along the southern boundary of the park. The land is low-lying and is prone to flooding.

The Western Suburbs Brickworks Pty Ltd operated the site as a brick pit form the late 1890s to mid-1950s. Strathfield Council operated the site as a rubbish tip after the closure of the brick pit, until the mid-1980s. The Council redeveloped the site in the early 2000s and in 2006 was opened to the public as a recreational park.

Most of the park is currently a lawned area, with landscape plantings of trees and shrubs occurring in perimeter areas. Recreational facilities that occur there include a BMX track, flying fox, playground climbing net and open space for informal recreational activity. The Bay to Bay pedestrian/cycleway passes through the park.

Ecological Status: Revegetated Parkland Site.

(l) Ford Park, Strathfield South (Figure A17, Plates B39 to B41)

Ford Park is a relatively small park through which the canalized Cooks River runs in a roughly, east-west direction. It is bounded to the north by James Street, east by Maria Street, west by Water Street and south by Bark Huts Reserve.

Most of the park is currently a lawned area, with block and lineal plantings of Black She-oaks (*Allocasuarina littoralis*), Tea-trees (*Melaleuca* sp.) and a range of eucalypt species. The Bay to Bay pedestrian/cycle path runs alongside Cooks River.

Ecological Status: Revegetated Parkland Site.

(m) St Anne's Reserve, Strathfield South (Figure A18, Plates B37 & B38)

St Anne's Reserve is a long and narrow reserve that occurs along the Cooks River and is approximately 5.4 ha in area. It is bounded to the west and south by Cooks River and to the east and north by residential development. Access to this park is via Gregory and Dunlop Streets, east of the reserve.

The reserve consists of mown grassed areas which have been revegetated with eucalypts that have been planted in dense clumps.

Ecological Status: Revegetated Parkland Site.

1.3.4 Belfield Parks

(a) Bark Huts Reserve, Belfield (Figure A17, Plates B46 & B47)

Bark Huts Reserve is about 4.05 ha in area and is one of Strathfield's largest parks. It is bounded to the:

- north by Maria Reserve and Ford Park;
- east by Elliott Street; and
- south and west by rear boundaries of residential properties that occur along Water Street and Punchbowl Road, respectively.

This park is used mostly for sporting activities and contains two playing fields, an outdoor basketball court and a childrens playground. Trees have been planted around the perimeter of the park, mainly for screening purposes.

Ecological Status: Open Parkland Site

(b) Begnell Field, Belfield (Figure A19, Plate B49)

Begnell Field is about 4.24 ha in area and is one of Strathfield's largest parks. It is bounded to the east by the Coxs Creek channel and to the south-east and north-east by the rear boundaries of residential properties that occur along Blanche and Madeline Streets, respectively. Industrial land occurs on the eastern side of the Coxs Creek channel.

Begnell Field features a large sportsground that is normally used for rugby league games. Trees have been planted around the perimeter of the park, mainly for screening purposes.

Ecological Status: Open Parkland Site

(c) Cooke Park, Belfield (Figure A19, Plates B47 & B48)

Cooke Park occurs south of the Cox's River channel and is bounded to the south-west by Madeline Street, south-east by residential properties along Birriwa Avenue and Chisholm Street to the east. The Enfield Marshalling Yards, an industrial site, occurs on the northern side of the channel. Begnell Field occurs on the south-western side of Madeline Street.

Cooke Park is one of Strathfield's largest and most popular public parks. It contains one playing field (rugby in winter, cricket in summer), two sports training fields, skateboard facilities and a children's playground. Trees have been planted around the perimeter of the park, mainly for screening purposes.

Ecological Status: Open Parkland Site

(d) Elliott Reserve, Belfield (Figure A17, Plate B44)

Elliott Reserve is a large area of open space (mown grass) on the south-western side of Cooks River River. Dense plantings of acacias, she-oaks, tea-trees and eucalypts have been planted

along the south-western bank of the river and the southern boundary of the reserve. It is a leash-free area for dogs.

The reserve is bounded to the south by Punchbowl Road, south-west by residential properties along Victory Avenue, west by Elliott Street and north-east by Cooks River. The South End Tennis Courts are on the opposite bank of Cooks River.

Ecological Status: Revegetated Parkland Site

(e) Maria Reserve, Belfield (Figure A17, Plates B42 & B43)

Maria Reserve is a small, narrow reserve that occurs on the south side of Cox's Creek channel, between Ford Park to the north and Bark Huts Reserve to the south. It is a mosaic of native planting and regeneration of Sydney Turpentine Ironbark Forest.

Elliott Reserve and Maria Reserve were developed on sites reserved in 1951 by NSW Government for a proposed roadway along the Cooks River travelling from Botany Bay to Chullora. However, this proposal was abandoned in favour of the construction of the M5 Motorway.

Ecological Status: Revegetated Parkland Site

1.3.5 Greenacre Parks

Cox's Creek Bushland Reserve, Greenacre (Figure A20, Plate B54)

Coxs Creek Reserve is a remnant bushland reserve that is approximately 1.55 ha in area. It is located in an older, mixed residential/industrial area, lying in the lower part of the broad triangle formed by Roberts Road (west), Juno Parade (south) and Wentworth Street (northeast). The site is surrounded on two (2) sides by industrial development (Finemore's Industrial Complex to the north and a Cold Storage and Distribution Facility on land formerly occupied by the Bankstown Sanitary Depot to the south). Residential development occurs to the east (Sylvanus Street, Drone Street) and west.

The site is located on the floodplain of Cox's Creek, which flows in a south-west/north-east direction through the reserve, between the remnant bushland to the south and the industrial area to the north.

The remnant vegetation communities within the reserve are described in detail by UBM Consultants (2001). The sites's remnant forest is Cooks River Clay Plain Scrub Forest (CRCPSF), which is a sub-unit of Castlereagh Ironbark Forest. It is one of the last remaining stands of Melaleuca-Ironbark scrub within the Strathfield LGA.

A second plant community, sedgeland / rushland of mixed native and weed species, occurs along Cox's Creek and its tributary watercourse.

Ecological Status: Remnant Bushland Site.

Matthews Park, Greenacre (Figure A21, Plate B50)

Matthews Park is a square-shaped park, which is located on the eastern side of Roberts Road and is surrounded to the north, south and west by industrial land. It consists of mown grass with plantings of both native and exotic trees scattered throughout the park. It provides open space for informal recreational activities and is a leash-free area for dogs.

Weerona Road, Rookwood (Figure A22, Plate B52)

Remnant bushland occurs along Weerona Road in Rookwood, between Strathfield Golf Course and Rookwood Cemetery. Vegetation in this area is dominated by dense clumps of Tick Bush (*Kunzea ambigua*) and a range of acacia species.

Davidson Street, Greenacre (Figure A23, Plate B51)

Remnant Castlereagh Ironbark Forest occurs along Davidson Street, between the Chullora railyards and Hume Highway. Native plant species that occur there include Broad-leaved Ironbark (*Eucalyptus fibrosa*) and Paperbark (*Melaleuca decora*) (canopy trees) and *Melaleuca nodosa* and Peach Heath (*Lissanthe strigosa*) in the dense shrubby understorey.

1.4 STRUCTURE OF REPORT

This report comprises four chapters and four appendices. The contents of subsequent sections of the report are as follows:

Chapter 2 outlines the methods used to survey fauna in the Strathfield LGA. This includes desktop surveys of databases and literature, and descriptions of field survey techniques.

Chapter 3 presents the results of the desktop and field surveys of fauna in the Strathfield LGA. These results are baseline reference data that can be used to assess future changes to the variety and abundance of wildlife in the LGA.

Chapter 4 provides recommendations for future projects and/or programs to protect and, where possible, increase biodiversity in the Strathfield LGA.

Appendices A and B contain aerial and ground photographs, respectively, of parks and reserves within the Strathfield LGA that were surveyed for fauna species.

Appendix C contains the common and scientific names of fauna species recorded within the Strathfield Local Government Area.

Appendix D records the methods of fauna detection and the relative abundance of fauna detected in each parkland and reserve in the two survey periods (5 to 18 May 2008 and 1 to 14 December 2008)

2

METHODS

2.1 INTRODUCTION

The present chapter outlines the methods used to survey fauna in the Strathfield LGA. This includes desktop surveys of databases and literature, and descriptions of field survey techniques.

2.2 HISTORICAL DATA

Although the purpose of the present study was to create a snap-shot of the distribution and relative abundance of fauna within the Strathfield LGA, historical data were also accessed from databases and relevant literature.

The following databases were accessed:

- Strathfield Council GIS Database
- Sydney Olympic Park Authority (SOPA) Bird Record Database (for Mason Park wetlands records);
- DECC Wildlife Atlas Database;
- NSW Field Ornithologists' Club Annual Bird Reports;
- Cumberland Bird Observer's Club Atlas Database:
- Birds Australia Atlas Database (1977-81) and (1998 onwards);
- EPBC online database; and
- Australian Museum specimen collection database.

Database records for individual species will vary in quality, reliability and accuracy of the geographic co-ordinates. Therefore, some species records are highly accurate in space and time such as the SOPA Bird Record Database and the Australian Museum Specimen Collection Database. However, others are more tentative or only contain estimates of geographical locations, for instance, records from the DECC Wildlife Atlas Database have a limited accuracy based on a 1 km^2 recording grid.

Technical reports and other literature that were reviewed for fauna data are listed in the References Section of the present report.

2.3 FIELD SURVEYS

2.3.1 Survey Times and Locations

Parks and reserves, and remnant bushland areas that were surveyed for fauna are listed and described in Section 1.3 of the present report. Surveys of each site were conducted within the following time periods: **5-18 May 2008** (autumn survey) and **1-14 December 2008** (early summer survey).

Intensive fauna surveys were conducted in both survey periods in the following parks and reserves:

- Mason Park wetlands
- Freshwater Park
- Ford Park
- Maria Reserve
- Elliott Reserve
- Airey Park (bushland and landscape areas)
- Strathfield Park
- Cox's Bushland Reserve
- Remnant bushland between Strathfield Golf Course and Rookwood Cemetery.

Intensive fauna surveys involved the use of hair-tubes to survey small ground mammals, spotlighting for arboreal mammals and use of Anabat (ultra-sonic) bat recording equipment at night, call playback trials and spotlighting for frogs (wherever there were bodies of water) and owls and other nocturnal birds, systematic surveys for day-time birds, use of reptile funnels and systematic reptile surveys, and sampling for tadpoles and freshwater fish. Each of these survey techniques are described in detail in Section 2.3.2.

Diurnal and nocturnal surveys for fauna were also conducted at the other sites, but no hair-tubes or reptile funnels were used at these locations.

2.3.2 Survey Techniques and Effort

(a) Small Ground Mammals

Single entrance, baited hair-tubes were used in all bushland areas of parks and reserves where intensive fauna surveys were conducted. The tubes were used in preference to Elliott and cage traps because they are less stressful on fauna, do not cause undue concern witht the general public and are generally not interfered with by passers-by. Hair-tubes remained at each site for a minimum of seven days and nights. Hair-tubes were used in both the May and December survey periods.

Hair samples were collected, prepared and examined in cross-section microscopically using the techniques and identification keys of Brunner *et al*. (2002).

The number of hair-tubes set out depended on the size of the parkland or reserve. Table 2.1 lists the number of hair-tubes used at each site. The locations and number of the hair-tubes used at each site were the same in both the May and December survey periods.

Triggs (1996) was used in the identification of scats, shed fur or feathers, animal tracks and markings made by ground-dwelling mammals and reptiles.

Table 2.1 **Numbers and Locations of Hair-tubes Used in Selected Parklands and Reserves, 5-18 May 2008 and 1-14 December 2008.**

Reserve or Parkland	No. of Hair-tubes	Location of Hair-tubes
Mason Park Wetlands	50	In bushland around the wetlands and alongside walking paths.
Freshwater Park	16	In riparian vegetation along the banks of the creek.
Ford Park	16	In bushland and landscaped areas.
Maria Reserve	16	In bushland and landscaped areas.
Elliott Reserve	32	In bushland and landscaped areas.
Airey Park	12	In bushland and landscaped areas.
Strathfield Park	32	In bushland and landscaped areas alongside walking paths and around the perimeter of the park.
Cox's Bushland Reserve	36	Hair-tubes set equidistantly in a 6 x 6 grid pattern throughout the bushland within the reserve.
Remnant bushland between Strathfield Golf Course & Rookwood Cemetery	32	Hair-tubes set equidistantly in a 16 x 2 grid pattern within the remnant bushland.

(b) Arboreal Mammals

Arboreal mammals were detected mainly by spotlighting at night. In general, all of the walking tracks in each reserve and parkland were walked slowly by panning a spotlight either side of the track. If an animal's eye shine was detected, the location of the animal was approached directly, keeping the spotlight on the animal so that it did not move away. In most cases, the animal could be identified visually. In a few instances (e.g. Tawny Frogmouth and Sugar Glider), the animals were identified by call.

Spotlighting was carried out during the first three hours after dusk, using a 50-watt, 12-volt spotlight. All parklands and reserves could be adequately covered in this time.

Indirect signs of the presence of arboreal mammals were detected by examining trees for scratch marks and searching for drays during the diurnal surveys.

(c) Bats

Flying-foxes were detected by spotlighting at night, whereas hand-held Anabat II Detectors were used to record microchiropteran bat calls. This latter technique was used in preference to the use of harp traps because the detectors had a greater probability of sampling bats that forage or fly above the tree canopy. Microchiropteran bats were surveyed in December only, because most species would have been hibernating or would have migrated northwards to warmer climates in May.

Bat calls that were recorded during surveys were identified with the assistance of Anabat 6.3 Software (Titley Electronics), Pennay *et al*. (2004), Richards *et al*. (1993) and Reinhold *et al*. (2001). However, the calls of bats vary in strength and frequency within and between species and one cannot always guarantee species identification from short or poor quality recordings. For instance, long-eared bat species (*Nyctophilus* spp.) are often difficult to detect because of their quiet calls, whereas freetail bat species (*Mormopterus* spp.) have similar calls, which are difficult to differentiate.

(d) Diurnal Bird Species

Both terrestrial and aquatic bird species were surveyed diurnally in both May and December 2008. All observations were made by the same experienced observer (SA) in both sampling periods using a pair of Leica 8 x 25 mm binoculars. Surveys of waterbirds on Mason Park wetlands were also conducted with the aid of a Kowa TSN-821 bird scope with a 20-60x zoom lens, which was mounted on a Manfrotto tripod.

Area searches for terrestrial birds were conducted at each site in which the observer walked at random through bushland and landscaped areas, stopping at will, with a search effort equivalent to a 2 ha coverage over a 30-minute period. All bird species that were observed or heard during each survey were noted. All area searches avoided recording the same bird more than once, particular those species that flock, live communally, or move very fast or frequently through an area (e.g. Rainbow Lorikeets, Galahs, Noisy Miners and Welcome Swallows).

Waterbird species at the Mason Park wetlands were surveyed by the observer walking once in each survey period around the perimeter of the wetland, stopping at will to observe, identify and count birds.

Opportunistic sightings of other bird species were also recorded during the course of the fauna surveys.

(e) Nocturnal Bird Species

Owl species are territorial but are difficult to detect because they are nocturnal and often have large home ranges. However, they readily respond to taped recordings of conspecifics, if they are present on or nearby the subject site and if the calls are played loud and long enough for them to hear.

Surveys for owls and other nocturnal birds were conducted in May and December 2008 in the parklands and reserves that were subject to the intensive fauna surveys. In each survey period, playback recordings were played each night for three nights using a tape recorder and 9-volt megaphone. Calls of Powerful Owls, Sooty Owls, Masked Owls, Barking Owls, Southern Boobooks and Barn Owls were broadcast at each location each night. For each species, the playback recordings were played for 15 minutes, followed by a 10-minute period of spotlighting. This procedure was repeated twice each evening for each species. If there was no response to a particular species call after three periods of broadcasting in a single evening, then it was assumed that the species was not in the reserve or parkland.

Opportunistic sightings of other nocturnal bird species (e.g. Tawny Frogmouth and Owlet-Nightjar) were also recorded during the course of the fauna surveys.

(f) Reptiles

In December 2008, reptile funnels and drift line fencing were placed in suitable reptile habitat within each parkland and reserve that was subject to intensive fauna surveys. The numbers of reptile funnel traps used at each location are shown in Table 2.2.

Table 2.2 **Numbers and Locations of Reptile Funnels Used in Selected Parklands and Reserves, between 1 and 14 December 2008.**

Reserve or Parkland	No. of Hair-tubes	Location of Hair-tubes
Mason Park Wetlands	12	In bushland around the wetlands and alongside walking paths.
Freshwater Park	4	In riparian vegetation along the banks of the creek.
Ford Park	8	In bushland and landscaped areas.
Maria Reserve	8	In bushland and landscaped areas.
Elliott Reserve	10	In bushland and landscaped areas.
Airey Park	6	In bushland and landscaped areas.
Strathfield Park	9	In bushland and landscaped areas alongside walking paths and around the perimeter of the park.
Cox's Bushland Reserve	6	Hair-tubes set equidistantly in a 6 x 6 grid pattern throughout the bushland within the reserve.
Remnant bushland between Strathfield Golf Course & Rookwood Cemetery	6	Hair-tubes set equidistantly in a 16 x 2 grid pattern within the remnant bushland.

Reptile funnels were in use at each of these sites from mid-afternoon to mid-morning for four consecutive days. Each trap was checked for reptiles at least once every three hours during the daylight hours of operation. The traps remained closed during the very hot parts of the day to prevent exposure of reptiles to extreme weather conditions. Each reptile funnel was protected with shade cloth (dry weather) or a plastic bag with adequate drainage (wet weather) when in use.

In addition, active searches for reptiles were conducted at all sites in both survey periods in and around potential reptile shelter sites (e.g. under ground debris such as branches and rocks, searching around the bases of trees). Where possible, reptiles were caught by hand, identified and immediately released. Observations of indirect signs of the presence of reptile species (e.g. presence of shed skins, burrows and droppings) were also recorded.

(g) Frogs

Adult frog surveys were conducted at night in Cox's Creek Bushland Reserve, in and around Mason Park Wetland, Freshwater Park, Ford Park, Maria Reserve and Elliott Reserve during the December 2008 surveys.

Calling frogs were identified, non-calling frogs were caught by hand, identified and then released. Spotlighting was conducted with the aid of a head torch. Calls of frogs heard on site were also recorded on cassette tape for later identification.

Recordings of the calls of Green and Golden Bell Frogs were played for 20 minutes followed by an active period of spotlighting for three consecutive nights (8-10 December 2008, inclusive) at Cox's Creek Bushland Reserve, where this species has been recorded previously. Playback recordings were broadcast using a tape recorder and 9-volt megaphone, followed by a 10-minute listening period to hear if any Green and Golden Bell Frogs were calling in response to the recordings.

Active searches were also conducted during the day for adult frogs under potential terrestrial microhabitats (e.g. under ground debris such as branches, leaf litter and rocks, and among low-lying vegetation).

During the December diurnal surveys at each of the above-mentioned locations, tadpoles were collected from water bodies with a hand net for identification purposes. They were returned back to the water immediately once they have been identified. If they could not be identified on site, then they were taken back to the laboratory where they were examined under a stereomicroscope and identified with the assistance of Anstis (2001), and then returned to the wetland within 12 hours.

(h) Fish

Small hand nets were used to sample for fish in creeks, wetlands and pools of water in Cox's Creek Bushland Reserve, in and around Mason Park Wetland, Freshwater Park, Ford Park, Maria Reserve and Elliott Reserve during the December 2008 surveys. This sampling was conducted at the same time that the tadpole surveys were conducted.

3

RESULTS

3.1 OVERVIEW

The present chapter presents the results of field surveys of fauna in the Strathfield LGA. These results are baseline reference data that can be used to assess future changes to the variety and abundance of wildlife in the LGA.

The scientific names of all fauna species recorded in the Strathfield LGA are listed in Appendix C. Tables 3.1 to 3.7 list fauna presence and absence data for each parkland and reserve. Appendix D indicates the relative abundance of fauna species in each parkland and reserve at the time of the surveys, and the methods by which each species were detected.

3.2 MASON PARK WETLANDS & PLAYING FIELDS (Table 3.1)

Mason Park Wetlands and its surrounding vegetation is the most species-rich reserve in the whole of the Strathfield LGA. This is due largely to the presence of migratory shorebirds in the spring/summer period and the use of the wetlands by resident waterfowl and larger wading bird species.

Sixty-seven (67) vertebrate species (six mammals, 47 birds, four reptiles, five frogs and six fish) were recorded in and around the Mason Park wetlands in December 2008. Sixty of these are native species and seven are exotic species (Cat, Feral Pigeon, Spotted Turtledove, Red-whiskered Bulbul, Common Starling, Common Mynah, Plague Minnow).

The Mason Park wetland is an important component of the Homebush Bay wetland system, which consists of estuarine areas of the upper Parramatta River (including Canada Bay), the Waterbird Refuge in Bicentennial Park, Newington Wetlands and other freshwater wetlands in Sydney Olympic Park. Twelve (12) species recorded on the Mason Park wetland in December 2008 are migratory shorebirds that migrate along the East Asia Migratory Flyway from arctic tundra regions of the Northern Hemisphere to spend the austral spring and summer period in Australia and New Zealand. The Mason Park wetlands are regionally important as roosting habitat for one of these shorebird species, the Sharp-tailed Sandpiper. Although the Waterbird Refuge in Sydney Olympic Park is the key roosting spot for Grey Teals and Chestnut Teals, considerable numbers were also found roosting or loafing on the Mason Park wetlands during the day.

Thirty-two (32) vertebrate species (four mammals, 25 birds, one reptile and two amphibians) were recorded in and around the Mason Park wetlands in May 2008. These are largely resident waterfowl and wading species (egrets, herons, crakes and rails) and terrestrial insectivorous birds that are associated with the wetland vegetation communities.

The Mason Park playing fields and their fringing landscape vegetation provide habitat for far fewer fauna species. Twenty-two (22) species (two mammals, 18 birds and two reptiles) were recorded in December 2008 and 16 species (all bird species) were recorded in May 2008. Fauna inhabiting this area consists largely of birds that are highly mobile species (e.g. Galahs, Rainbow Lorikeets and Pied Currawongs) are resident woodland bird species (e.g. Noisy Miners) or species that forage in open areas (e.g. Australian White Ibis and Willie Wagtail). The fringing landscape vegetation is likely to act as a corridor for the regular movement or dispersal of some fauna species (e.g. New Holland Honeyeaters, Superb Fairy-wrens and White-browed Scrubwrens) between the Mason Park wetland vegetation habitats and the surrounding urban landscape.

3.3 REMNANT BUSHLAND SITES (Table 3.2)

Twenty-seven (27) fauna species (six mammals, 16 birds, two reptiles and three frogs) were recorded in Cox's Creek Bushland Reserve. Of significance is the detection of three Green and Golden Bell Frog individuals in the Reserve during nocturnal surveys on 3 December 2008. No Green and Golden Bell Frogs were recorded on the site on 4 and 5 December 2008, suggesting that the individuals detected on 3 December were dispersing along Cox's Creek. The Cox's Creek Reserve population was previously believed to be locally extinct because they had not been detected there for at least three years, despite targeted surveys for them (J. Muspratt, pers. comm.).

Exotic mammal species (House Mouse, Black Rat, Dog and Cat) are the only ground-dwelling mammals recorded in the Reserve. One arboreal mammal (Common Brushtail Possum) and two insectivorous bats (Gould's Wattled Bat and Lesser Long-eared Bat) were recorded in the Reserve in December 2008. Birds were a mix of insectivorous species that favour a dense understorey (e.g. Superb Fairy-wren, White-browed Scrubwren and Silvereye) and canopy forest and woodland species (e.g. Black-faced Cuckoo-shrike and Red Wattlebird). Bird species that forage in open habitats (e.g. Magpie-larks) occurred in the cleared perimeter areas of the Reserve.

The *Kunzea* scrubland at Weerona Road in Rookwood appears to provide significant habitat for fauna species of the Strathfield LGA. Twenty-four (24) fauna species (six mammals, 16 birds and two reptiles) were recorded in this remnant during the present study. Six of these species (five mammals and one bird) were exotic. The only sizeable local population of Red-browed Finches (11 individuals) recorded in the study were detected in this vegetation remnant in December 2008.

The vegetation remnant along Davidson Street, Greenacre has limited value as habitat for native fauna. No native mammals were recorded there, only one relatively common reptile species (Dark-flecked Garden Sun-skink) and six urban-generalist birds species that are widespread throughout the Sydney metropolitan area.

3.4 REVEGETATED PARKLANDS (Table 3.3)

Revegetated parklands along Cooks River, particularly Ford Park, Maria Reserve and Elliott Reserve, are significant habitat areas for native fauna in the Strathfield LGA. Collectively, they

provide a north-south wildlife corridor through the LGA, as well as shelter, foraging and breeding habitat.

Collectively, 51 fauna species (11 mammals, 28 birds, six reptiles, five frogs and one freshwater fish) were recorded in these reserves. Four fauna species (Sugar Glider, Southern Boobook and Sacred Kingfisher in Maria Reserve and Tawny Frogmouth in Elliott Reserve) were not recorded elsewhere in the Strathfield LGA during the study.

These reserves are under pressure from exotic fauna species, including at least one wild fox (observed in Maria Reserve), domesticated dogs and cats, and an apparent abundance of feral House Mice and Black Rats. Perimeter areas of these reserves are also inhabited by several exotic bird species, including the Common Mynah, Common Starling, Red-whiskered Bulbul and Spotted Turtledove.

3.5 OPEN PARKLANDS (Tables 3.4 & 3.5)

Twenty-six (26) fauna species (four mammals, 20 birds and one reptile) and forty-one (41) species (eight mammals, 26 birds, five reptiles and two freshwater fish) were recorded in open parklands in May & December 2008, respectively. The mammal fauna were dominated by exotic species (mostly House Mice and Black Rats), particularly during the May survey period. However, in December 2008 both Common Brushtail Possums and Common Ringtail Possums were recorded in Airey Park and Strathfield Park, and the Gould's Wattled Bat and White-striped Freetail Bat were recorded in Strathfield Park and the Gould's Wattled Bat in Airey Park.

The relatively high species richness and diversity of open parklands are due largely to the fauna communities in Airey Park and Strathfield Park. In December 2008, 29 fauna species (seven mammals, 18 birds and four reptiles) and 23 fauna species (eight mammals, 12 birds and 3 reptiles) were recorded in Airey and Strathfield Parks, respectively.

In comparison, in May 2008, 16 fauna species (four mammals, 11 birds and one reptile) and 13 fauna species (four mammals, eight birds and one reptile) were recorded in Airey and Strathfield Parks, respectively.

The larger contributions of Airey and Strathfield Parks to vertebrate species and richness of open parklands in the Strathfield LGA is likely to be a factor of their large sizes and the broader structural diversity of landscaped and natural habitats in these parks.

3.6 URBAN NEIGHBOURHOOD PARKS (Tables 3.6 & 3.7)

The small urban parks in residential and industrial areas of Strathfield LGA contribute little to native vertebrate species richness and diversity of the LGA.

In May 2008, only 14 fauna species (three mammals, 10 birds and one reptile) were recorded in these parks. Six of these species (42.8% of all vertebrates) were exotic species (Feral Pigeon, Spotted Turtledove, Common Mynah, Common Starling and domesticated dogs and cats).

In comparison, in December 2008, 12 fauna species (three mammals, seven birds and two reptiles) were recorded in these parks. Six of these species (50.0% of all vertebrates) were exotic species (the same as those recorded in May 2008).

Low native species richness and diversity are likely to be due to the small sizes of the parks, low structural diversity of fauna habitats, their geographical isolation from more significant fauna habitats within the LGA, disturbances to fauna s a result of recreational use of the parks by humans and their pets, and competitive exclusion by Noisy Miners and Common Mynahs.

Table 3.1 Vertebrates Recorded in Mason Park and the Mason Park Wetlands, 5-18 May 2008 and 1-14 December 2008

Species	Mason Park Wetlands		Mason Park	
	May 2008	Dec 2008	May 2008	Dec 2008
MAMMALS				
Common Brushtail Possum		X		X
Grey-headed Flying-fox		X		
White-striped Freetail Bat		X		
Gould's Wattled Bat		X		
House Mouse *	X	X		
Black Rat *	X	X		
Red Fox *	X			
Dog *				X
Cat *	X	X		
BIRDS				
Little Pied Cormorant	X	X		
Australian Pelican	X	X		
Black Swan	X	X		
Pacific Black Duck	X	X		
Grey Teal	X	X		
Chestnut Teal	X	X		
Black-fronted Dotterel	X	X		
Red-kneed Dotterel		X		
Red-necked Avocet		X		
Black-winged Stilt		X		
Masked Lapwing	X	X		
Ruddy Turnstone		X		
Ruff		X		
Marsh Sandpiper		X		
Wood Sandpiper		X		
Sharp-tailed Sandpiper		X		
Curlew Sandpiper		X		
Pectoral Sandpiper		X		
Latham's Snipe		X		
Greater Sand-plover		X		
Pacific Golden Plover		X		
Grey Plover		X		
Australian White Ibis	X	X	X	
Great Egret	X	X		
White-faced Heron	X	X		
Royal Spoonbill	X	X		
Australian Spotted Crake	X	X		
Baillon's Crake	X			
Purple Swamphen	X	X		

Species	Mason Park Wetlands		Mason Park	
	May 2008	Dec 2008	May 2008	Dec 2008
Silver Gull	X	X		
Black-shouldered Kite	X	X		
Rainbow Lorikeet			X	X
Feral Pigeon *			X	X
Spotted Turtledove *		X		X
Superb Fairy-wren	X	X	X	X
White-browed Scrubwren	X	X		
Yellow Thornbill		X		X
Spotted Pardalote		X		X
Noisy Miner		X	X	X
Red Wattlebird		X	X	X
New Holland Honeyeater	X	X	X	
Australasian Figbird			X	
Willie Wagtail	X	X	X	X
Magpie-lark	X	X	X	X
Grey Butcherbird			X	X
Australian Magpie			X	X
Pied Currawong		X	X	X
Australian Raven	X	X	X	X
Silvereye	X	X	X	X
Welcome Swallow		X		
Red-whiskered Bulbul *		X		X
Common Starling *		X		X
Common Mynah *	X	X	X	X
REPTILES				
Eastern Water Skink	X	X		
Dark-flecked Garden Sun-skink				X
Grass Sun-skink		X		X
Black-bellied Marsh Snake		X		
Red-bellied Black Snake		X		
AMPHIBIANS				
Dwarf Tree Frog		X		
Peron's Tree Frog		X		
Common Eastern Froglet	X	X		
Striped Marsh Frog	X	X		
Spotted Grass Frog		X		
FISH				
Long-finned Eel		X		
Striped Gudgeon		X		
Flathead Mullet		X		
Jumping Blenny		X		
Plague Minnow		X		

Table 3.2 Vertebrates Recorded in Remnant Bushland Sites in Greenacre, 5-18 May 2008 and 1-14 December 2008

Species	Cox's Creek Bushland Reserve		Weerona Road, Rookwood		Davidson Street, Greenacre	
	May 2008	Dec 2008	May 2008	Dec 2008	May 2008	Dec 2008
MAMMALS						
Common Brushtail Possum		X				
Gould's Wattled Bat		X		X		
Lesser Long-eared Bat		X				
House Mouse *	X	X	X	X		
Black Rat *	X	X	X	X		
Brown Rat *				X		
Dog *			X			
Cat *		X	X	X		
BIRDS						
Galah				X		
Little Corella			X			
Red-rumped Parrot				X		
Spotted Turtledove *	X	X	X	X	X	
Crested Pigeon	X	X	X	X		
Eastern Koel		X		X		
Brown Falcon			X	X		
Superb Fairy-wren	X	X	X	X		
Spotted Pardalote	X	X	X			
White-browed Scrubwren			X	X		
Noisy Miner	X	X		X		
Red Wattlebird		X			X	
New Holland Honeyeater	X	X			X	X
Black-faced Cuckoo-shrike		X				
Magpie-lark	X	X	X	X		

Species	Cox's Creek Bushland Reserve		Weerona Road, Rookwood		Davidson Street, Greenacre	
	May 2008	Dec 2008	May 2008	Dec 2008	May 2008	Dec 2008
Australian Magpie						X
Grey Butcherbird	X	X	X			
Pied Currawong	X	X			X	X
Silvereye	X	X		X		
Red-browed Finch				X		
Red-whiskered Bulbul *	X	X				
Common Starling *	X	X				
Common Mynah *	X	X		X	X	X
REPTILES						
Wall Skink						X
Eastern Water Skink		X				
Dark-flecked Garden Sun-skink				X		X
Grass Sun-skink		X		X		
Red-bellied Black Snake						
AMPHIBIANS						
Green and Golden Bell Frog		X				
Peron's Tree Frog		X				
Striped Marsh Frog		X				

Table 3.3 Vertebrates Recorded in Revegetated Parklands, 5-18 May 2008 and 1-14 December 2008

Species	Strathfield /Strathfield South								Belfield			
	Chain of Ponds Reserve		Dean Reserve		St Anne's Reserve		Ford Park		Maria Reserve		Elliott Reserve	
	May 2008	Dec 2008	May 2008	Dec 2008	May 2008	Dec 2008	May 2008	Dec 2008	May 2008	Dec 2008	May 2008	Dec 2008
MAMMALS												
Common Brushtail Possum	X	X					X	X	X	X		X
Sugar Glider										X		
Common Ringtail Possum												X
Grey-headed Flying-fox		X						X		X		
Gould's Wattled Bat								X	X	X		X
Lesser Long-eared Bat										X		
House Mouse *									X	X		X
Black Rat *								X	X	X		X
Red Fox *										X		
Dog *		X			X	X		X	X	X		X
Cat *				X				X	X	X		X
BIRDS												
Masked Lapwing			X	X								
Australian White Ibis			X		X							
Rainbow Lorikeet	X		X	X	X		X	X	X			
Spotted Turtledove *	X	X		X			X	X	X	X	X	X
Feral Pigeon			X	X	X	X					X	X
Crested Pigeon		X	X						X		X	
Southern Boobook									X	X		
Tawny Frogmouth											X	
Laughing Kookaburra											X	X
Sacred Kingfisher										X		

Species	Strathfield /Strathfield South								Belfield			
	Chain of Ponds Reserve		Dean Reserve		St Anne's Reserve		Ford Park		Maria Reserve		Elliott Reserve	
	May 2008	Dec 2008	May 2008	Dec 2008	May 2008	Dec 2008	May 2008	Dec 2008	May 2008	Dec 2008	May 2008	Dec 2008
Superb Fairy-wren			X	X			X	X	X	X	X	X
Spotted Pardalote										X		
Yellow Thornbill										X	X	
Red Wattlebird			X	X					X	X		X
Little Wattlebird											X	
Noisy Miner	X	X	X	X	X	X	X	X	X	X	X	X
New Holland Honeyeater			X	X								
Olive-backed Oriole								X			X	
Willie Wagtail				X							X	X
Magpie-lark						X		X	X			X
Australian Magpie	X	X	X	X	X	X	X	X				
Grey Butcherbird	X	X			X	X		X			X	X
Pied Currawong		X	X	X					X	X		X
Australian Raven	X	X				X			X	X	X	
Silvereye			X								X	
Red-whiskered Bulbul *											X	X
Common Mynah *	X	X	X	X					X	X		
Common Starling *								X		X		
REPTILES												
Wall Skink								X		X	X	X
Eastern Water Skink							X	X		X		X
Dark-flecked Garden Sun-skink		X				X		X		X		X
Grass Sun-skink		X		X		X						
Weasel Sun-skink										X		
Red-bellied Black Snake												

Species	Strathfield /Strathfield South								Belfield			
	Chain of Ponds Reserve		Dean Reserve		St Anne's Reserve		Ford Park		Maria Reserve		Elliott Reserve	
	May 2008	Dec 2008	May 2008	Dec 2008	May 2008	Dec 2008	May 2008	Dec 2008	May 2008	Dec 2008	May 2008	Dec 2008
AMPHIBIANS												
Dwarf Tree Frog												
Peron's Tree Frog										X		
Common Eastern Froglet								X		X		X
Striped Marsh Frog										X		X
Spotted Grass Frog												
FISH												
Plague Minnow									X	X	X	X

Table 3.4 Vertebrates Recorded at Open Parklands, 5-18 May 2008

AP = Airey Park; BP = Bressington Park; MR = Melville Reserve; FP = Freshwater Park; HP = Hudson Park Oval and Golf Course; IP = Inveresk Park: SP = Strathfield Park; CR = Coronation Reserve; BHR = Bark Huts Reserve; BF = Begnell Field; CP = Cooke Park

Species	Homebush / Homebush West			Strathfield / Strathfield West					Belfield		
	AP	BP	MR	FP	HP	IP	SP	CR	BHR	BF	CP
MAMMALS											
Common Brushtail Possum	X				X						
House Mouse *							X				
Black Rat *	X						X				
Dog *	X				X		X		X		
Cat *	X				X	X	X				
BIRDS											
Masked Lapwing	X	X							X	X	
Australian White Ibis	X			X			X		X	X	
Little Corella						X					
Eastern Rosella							X				
Rainbow Lorikeet	X			X	X	X	X				
Feral Pigeon *			X					X			
Spotted Turtledove *		X									
Crested Pigeon	X	X		X			X		X		
Laughing Kookaburra	X						X				
Red Wattlebird							X			X	X
Noisy Miner	X	X	X	X	X	X			X		
Olive-backed Oriole											X
Magpie-lark	X			X	X					X	
Grey Butcherbird					X		X				
Australian Magpie	X			X	X				X		
Pied Currawong	X			X		X	X				

Species	Homebush / Homebush West			Strathfield / Strathfield West					Belfield		
	AP	BP	MR	FP	HP	IP	SP	CR	BHR	BF	CP
Australian Raven	X			X							
Welcome Swallow	X										X
Common Starling *					X						
Common Mynah *								X		X	
REPTILES											
Eastern Water Skink	X										
Grass Sun-skink							X				

Table 3.5 Vertebrates Recorded at Open Parklands, 1-14 December 2008

AP = Airey Park; BP = Bressington Park; MR = Melville Reserve; FP = Freshwater Park; HP = Hudson Park Oval and Golf Course; IP = Inveresk Park: SP = Strathfield Park; CR = Coronation Reserve; BHR = Bark Huts Reserve; BF = Begnell Field; CP = Cooke Park

Species	Homebush / Homebush West			Strathfield / Strathfield West					Belfield		
	AP	BP	MR	FP	HP	IP	SP	CR	BHR	BF	CP
MAMMALS											
Common Brushtail Possum	X						X				X
Common Ringtail Possum	X						X				
White-striped Freetail Bat							X				
Gould's Wattled Bat	X						X				
House Mouse *	X						X				
Black Rat *	X						X				
Dog *	X						X		X		
Cat *	X						X				X
BIRDS											
Masked Lapwing	X			X					X	X	X
Australian White Ibis	X						X		X		

Species	Homebush / Homebush West			Strathfield / Strathfield West					Belfield		
	AP	BP	MR	FP	HP	IP	SP	CR	BHR	BF	CP
Sulphur-crested Cockatoo						X					
Galah		X			X		X				X
Rainbow Lorikeet	X	X				X	X				
Red-rumped Parrot							X				
Feral Pigeon *	X							X			
Spotted Turtledove *	X			X		X					X
Crested Pigeon	X			X			X				
Eastern Koel	X					X	X				
Pallid Cuckoo	X										
Channel-billed Cuckoo	X										
Laughing Kookaburra	X						X				
Noisy Miner	X	X	X	X	X	X	X		X		X
Australasian Figbird	X			X	X		X				
Olive-backed Oriole	X										
Willie Wagtail		X		X						X	
Magpie-lark	X										
Black-faced Cuckoo-shrike					X						
Grey Butcherbird	X				X	X	X				
Australian Magpie	X			X	X		X		X	X	
Pied Currawong	X			X		X	X				
Australian Raven					X						
Welcome Swallow	X			X							
Common Mynah *			X			X		X	X		
Common Starling *					X						
REPTILES											
Wall Skink	X				X		X				
Eastern Water Skink	X			X							

Species	Homebush / Homebush West			Strathfield / Strathfield West					Belfield		
	AP	BP	MR	FP	HP	IP	SP	CR	BHR	BF	CP
Dark-flecked Garden Sun-skink	X			X		X	X		X		X
Grass Sun-skink	X	X	X	X	X		X				
Red-bellied Black Snake				X							
AMPHIBIANS											
Common Eastern Froglet				X							
Striped Marsh Frog				X							
FISH											
Freshwater Mullett				X							
Plague Minnow				X							

Table 3.6 Vertebrates Recorded at Urban Neighbourhood Parks, 5-18 May 2008

Species	Homebush/Homebush West			Strathfield/Strathfield West				Greenacre
	Bill Boyce Reserve	Fitzgerald Park	Wentworth Reserve	Boden Reserve	Edwards Park	Frank Zions Reserve	Pilgrim Park	Matthews Park
MAMMALS								
Common Brushtail Possum						X		
Dog *							X	
Cat *	X		X				X	X
BIRDS								
Sulphur-crested Cockatoo						X		
Galah				X				X
Feral Pigeon *								X
Spotted Turtledove *	X			X	X			
Crested Pigeon						X	X	
Noisy Miner	X	X	X		X	X		
Willie Wagtail								X
Australian Magpie		X				X		
Common Mynah *			X			X	X	X
Common Starling *								X
REPTILES								
Grass Sun-skink						X		X

Table 3.7 Vertebrates Recorded at Urban Neighbourhood Parks, 1-14 December 2008

Species	Homebush/Homebush West			Strathfield/Strathfield West				Greenacre
	Bill Boyce Reserve	Fitzgerald Park	Wentworth Reserve	Boden Reserve	Edwards Park	Frank Zions Reserve	Pilgrim Park	Matthews Park
MAMMALS								
Common Brushtail Possum	X					X		X
Dog *					X			
Cat *	X	X				X		X
BIRDS								
Feral Pigeon *								**X**
Spotted Turtledove *	**X**			**X**				
Crested Pigeon						**X**		
Noisy Miner	**X**	**X**	**X**		**X**	**X**	**X**	
Australian Magpie						**X**		
Common Mynah *	**X**		**X**			**X**	**X**	**X**
Common Starling *								**X**
REPTILES								
Dark-flecked Garden Sun-skink								X
Grass Sun-skink			X	X		X		X

4

RECOMMENDATIONS

4.1 OVERVIEW

The present chapter provides recommendations for future projects and/or programs to protect and, where possible, increase biodiversity in the Strathfield LGA.

4.2 GENERAL RECOMMENDATIONS

4.2.1 Conserving Biodiversity Through Protecting Habitats

The bushland reserves and parklands of the Strathfield LGA serve a dual, sometimes conflicting, role: they provide valuable recreation areas to the local residents by breaking up a continuous residential urban area (i.e. provision of "green space"), and they provide a conservation area for native flora and fauna. If conservation is the primary aim of these reserves and parklands, it is important to identify what to conserve.

The Strathfield LGA is a highly modified landscape. Therefore, should the aims of conserving native fauna and their habitats be to bring back fauna species and habitat quality that existed in the Strathfield LGA prior to European settlement, or should we aim to conserve as many fauna species and their habitats as possible?

Conserving existing habitats is easier to achieve, because so few habitats are represented and the area of natural or semi-natural habitat available for native fauna in the Strathfield LGA is relatively small and surrounded by an urban landscape. For instance, many of the bushland remnants that occur in the Strathfield LGA are associated with Cooks River, Cox's Creek, Powell's Creek, Saleyards Creek and Boundary Creek. These areas have been conserved largely because they are unsuitable for residential or industrial development because of the tendency for them to be flood-prone. Consequently, Sydney Turpentine-Ironbark Forest is the major habitat represented in many reserves and parklands, with Cooks River/Castlereagh Ironbark Forest occurring only in Cox's Bushland Reserve and other wetland vegetation occurring only around the Mason Park wetlands.

Key fauna habitats that need to be protected and conserved in the Strathfield LGA are all remnant dry sclerophyll forest (Turperntine-Ironbark Forest), wet sclerophyll forest and heath (Cooks River/Castlereagh Ironbark Forest), riparian vegetation (e.g. within Freshwater Park), and aquatic habitats and their associated vegetation (freshwater ponds and creeks, saltmarsh, mangroves and tidal estuarine areas).

The aim of conserving as many native fauna species is a fine ideal, but wildlife management is often complex and fraught with difficulty.

First, the amount of land available for conservation purposes is limited in the Strathfield LGA. Therefore, if a reserve or parkland is to be altered to create new habitat, then the existing habitat will be lost and not replaced elsewhere. It is also easier and cheaper to conserve existing habitats, rather than create new ones.

Secondly, each fauna species has different habitat requirements, and the conservation of one species is often done at the expense of another. For instance, the creation of mangrove habitats as spawning nurseries for fish and aquatic invertebrates, and nesting and foraging habitat for terrestrial bird species, in wetland areas can reduce the availability of foraging and roosting habitat for migratory shorebirds and waterfowl.

Thirdly, habitat requirements of native fauna are often poorly understood and may vary from year-to-year, depending on changing weather conditions, and the availability of nectar and seed. For instance, reserves and parklands in the Strathfield LGA may function as wildlife corridors for migratory and nomadic bird species in search of concentrated nectar, seed or insect food sources in some years, may be the sources of such concentrated food requirements in other years and so serve primarily as foraging and nesting habitat.

If new habitats are to be created in the Strathfield LGA, they should be in areas of bushland that have been so badly degraded that they no longer represent the original habitat. Many of the urban neighbourhood parklands fall into this category, where the only remnant habitat (if present) is provided by remnant and planted canopy trees. Fauna habitats that could be recreated in the parks and reserves of Strathfield include:

- mid-canopy shrublands;
- native grasslands;
- ephemeral freshwater habitats; and
- wet and dry heath.

All of these habitats are likely to have occurred in the Strathfield LGA prior to European settlement. Some seed and juvenile plant stock required to create these habitats would need to be sourced from neighbouring LGAs because parent plants no longer occur in the Strathfield LGA.

4.2.2 Improving Habitat Value of Existing Reserves

The existing parklands and reserves in the Strathfield LGA suffer from a loss of native wildlife. In many cases this is due to predation by introduced predators (foxes, cats, dogs and rats), a significant increase in the abundance in native predators (e.g. Pied Currawongs), and increased competition for resources by introduced species (e.g. Common Mynahs and Common Starlings) and native species (e.g. Noisy Miners).

Predation is linked to a lack of shelter sites for native fauna in parklands and reserves. Dead trees, fallen logs and branches, and rocks usually provide the best shelter habitat, along with understorey plants. In many of the Strathfield LGA's bushland reserves and larger parklands, the plant understorey is still present or has been recreated as part of the parkland landscaping, but the logs and fallen timber are absent. In some cases, they have been removed as part of a

program of reducing fuel for bushfires. In other situations, they may have been removed because they look messy and do not conform with the landscape plans of the parks and reserves. Dead trees also have the potential of falling over or shedding large limbs, thus posing a risk of injury to humans and damage to property.

Removal of ground shelters is one of the major causes of the disappearance of native fauna from small urban reserves. Given the conflicting demands on reserves and parklands, it is probable that fallen timber and branches will not be permitted to accumulate there. However, it is possible to provide non-combustible and unobtrusive artificial ground shelters in the reserves and parklands for use by ground-dwelling vertebrates (e.g. reptiles and small mammals).

Where possible, hollow-bearing trees should be retained because they are important as nesting, roosting and shelter habitat for a broad-range of hollow-dependent birds (e.g. parrots, cockatoos, owls and many passerines), mammals (arboreal mammals and microchiropteran bats), reptiles and amphibians.

Artificial nest boxes are also used widely in areas where there is a shortage of natural tree hollows. Each fauna species has specific requirements for their use of hollows (e.g. size of hollow, size of entrance, orientation and height of the hollow, position of hollow in relation to tree canopy and perches, ease at which the entrance can be reached, etc). Gibbons & Lindenmayer (2002) provide some information of the specific tree hollow requirements of individual fauna species, and Franks & Franks (2003) present nest box designs that are suitable for some fauna groups. However, Strathfield Council must consult with a suitably-qualified and experienced ecologist about where, what and how many nest boxes should be used in a particular reserve or parkland to ensure that the right boxes are used for target species, and that the risk of competition for these nest boxes from introduced species (e.g. Common Mynahs and Common Starlings) and non-target native species, and predation of nest-box contents, are minimised or avoided.

4.2.3 Connectivity of Bushland Areas

As the residential and industrial areas of the Strathfield LGA were developed, many bushland remnants became smaller and more isolated. The isolation of bushland area makes them even more susceptible to urban impacts and biota loss. An aim in the conservation of bushland area, and hence fauna habitat, should be to increase the connectivity of these sites.

Some of the bushland reserves and parklands (e.g. most of the neighbourhood urban parklands, Cox's Creek Reserve and Strathfield Park) are totally isolated from other bushland or landscaped areas. This isolation reduces significantly the capacity of long-term survival of many native fauna species within the Strathfield LGA because of their inability to disperse to suitable habitat areas. Conversely, the reserve and parkland structure along Cooks River and its tributaries does provide some capacity for migratory and dispersive species to move north-south through the Strathfield LGA, but there is limited capacity to move through the LGA in other directions.

Corridors between reserves and parklands can be created through the provision of suitable habitat outside these areas. This can be achieved in two ways:

- **Sympathetic tree planting**. Native trees that provide habitat value (either as dense canopy, food or nesting sites) should be used instead of ornamental or totally decorative trees. As most of the reserves contain woodland, the types of trees that would serve this purpose include Turpentine (*Syncarpia glomulifera*), Sydney Red Gum (*Angophora costata*), Grey Gum (*Eucalyptus punctata*) and Scribbly Gum (*Eucalyptus haemastoma*). This has been achieved to some extent in some streetscapes of Strathfield (where there are fewer parks compared with other areas of the Strathfield LGA), but is largely absent in the industrial areas and older residential areas of the LGA.

- **Sympathetic backyard planting.** Residents and business-owners who occur in areas between reserves and parklands should be encouraged by Strathfield Council to plant trees and shrubs that are suitable in creating green corridors. The Council could provide seedlings for these constituents or offer some other incentive for residents who actively convert their gardens or landscaped areas into sympathetic habitat.

  It is important to note that, where possible, garden landscapes should ideally contain native ground-cover, shrubs and understorey, as well as canopy trees. This will help facilitate the dispersal of a broad range of fauna species through the LGA, as well as provide refuge from aggressive competitors (e.g. Noisy Miners and Common Mynahs) and potential predators.

4.2.4 Bush Regeneration

Strathfield Council has undertaken an active bush regeneration program in the LGA and the positive impact of this work on native wildlife is obvious in a number of reserves (e.g. Cox's Creek Reserve, Mason Park wetlands, Ford Park, Maria Reserve, Elliott Reserve and Strathfield Park).

Bush regeneration is preferred to replanting in areas where there is a sufficient seed bank in the soil to allow the endemic plants to grow and develop under the prevailing conditions. Plant communities that establish by themselves, after the removal of weeds and introduced plants, are more capable of surviving in the long-term than deliberately planted species, thus increasing the chance of creating suitable fauna habitat for the long-term.

The disadvantage of bush regeneration practices is that it is a slow and time-consuming process. The gradual replacement of unwanted plants by native species is a sequential process and the results of this change are not immediately obvious. Consequently, bush care officers and nearby residents are often tempted to speed up the process by removing all unwanted plants at once and/or planting trees and shrubs rather than allowing natural regeneration. Such actions can cause soil erosion, contamination of waterways, wetlands and neighbouring bushland areas, a temporary (but sudden) lack of essential habitat for native fauna, and further colonisation of habitat by weeds. In worst-case scenarios, this could cause local extinctions of fauna populations (e.g. some reptile populations, small passerines, small mammals and amphibians) which are unable to disperse to other areas because of the geographical isolation of the reserve or parkland.

Therefore, bush regeneration should be staggered and only affect relatively small areas at a time. Bush regeneration teams must have a plan of what areas are to be regenerated, how long these areas should be left to recover and what follow-up works are likely to be required. Ideally, these teams should constantly switch their efforts between and within reserves and parklands to create the optimum bush regeneration outcomes.

4.2.5 Controlled Re-planting

Although bush regeneration is the preferred means of creating fauna habitat in reserves and parklands, it may be necessary to landscape areas through replanting, especially when native plants cannot naturally re-establish themselves. Replanting is most often used to:

- quickly cover an area that is bare or has been cleared;
- create a buffer zone around bushland areas;
- create habitats that have been lost from an area; or
- replace non-breeding or diseased endemic plants (through seed collection and propagation).

This approach has been adopted in many of the Strathfield LGAs larger parks and reserves and have been variously successful in providing habitat for native fauna and spectacularly successful in providing an aesthetic environment for humans.

4.2.6 Buffer Planting of Habitat Edges

The edges of habitats suffer from weed invasion, human damage and illegal rubbish dumping, mowing and slashing, herbicide and other contaminant runoff, nutrient-rich stormwater and wind and soil erosion. These factors remove fragile native plant species, open up habitats to further weed infestation, soil erosion, and soil and water contamination.

Many of the bushland reserves in the Strathfield LGA contain woodland with an open understorey. The wide spacing of the ground plants make it easy for weeds to become established and eventually become the dominant ground-cover. Buffer planting by hardy, native, non-invasive plants can provide a buffer to the bushland. A buffer zone of tall, dense shrubs such as *Kunzea*, *Hakea*, *Melaleuca* and *Grevillea* species (locally native species, not cultivars or hybrids) can reduce greatly the weed seed load entering the reserves and parklands and provide a physical barrier containing environmentally-sensitive plants.

4.2.7 Creating Habitats

Creating new habitats within the Strathfield LGA would be difficult because of the lack of suitable land. However, if land was made available to the Council for the purposes of conservation, then it is preferable to create the following fauna habitats that are likely to have existed in the LGA prior to European settlement:

- **Tall heath**. A small Kunzea heath remnant does occur along the power line easement alongside the Strathfield Golf Course, on Weerona Road, Rookwood, but is not protected from being cleared. This habitat type is important for birds that inhabit dense undergrowth

(e.g. Superb Fairy-wrens, White-browed Scrubwrens and Brown Thornbills), reptiles and ground-dwelling mammals.

- **Native grasslands.** Remnant grasslands have largely disappeared from the Strathfield LGA because of past clearing and invasion of some of these areas by exotic grasses. This habitat type is important for small seed-eating birds (e.g. Red-browed Finches, Crested Pigeons) and reptiles (e.g. grass skinks).

- **Wetlands.** Since its establishment, Mason Park wetland has become an important habitat for migratory shorebirds, waterfowl and other aquatic wildlife, and is particularly important as part of the Homebush Bay wetland ecosystem. It has clearly demonstrated that the creation of a wetland, if properly designed and managed environmentally, can increase biodiversity of the Strathfield LGA.

4.2.8 Feral Species Control

Bandicoots and native rodents are conspicuous in their absence from the Strathfield LGA. The apparent diversity and richness of reptile species is also very low. In the absence of ground-dwelling native mammals, introduced rats and the House Mouse have become the dominant terrestrial mammals within reserves and parklands of the LGA.

While the disappearance of native ground-dwelling mammals and some reptiles may be in part due to habitat clearance, fragmentation and degradation, it is likely that past heavy predation by foxes, cats and dogs have also had a significant impact.

In the present study, a fox was detected at night at the Mason Park Wetlands and fox scats were detected in bushland areas of Elliott Reserve, but no fox dens were found.

Foxes will never be eradicated from bushland reserves but their numbers can be culled. In other Sydney LGAs, efforts to control foxes have been most successful when fox dens are targeted. Dens are located and, during the day when the foxes are inside, are sealed and cyanide pellets released inside the den. Cyanide works quickly and death is very rapid. The dens are left sealed for several days during which residual cyanide is broken down and rendered inactive. The den is then filled in.

By making dens the focus of the fox control program, foxes are not being replaced by the next generation. Vagrant foxes will still be present and these should be culled through a baiting program. Urban foxes are often attracted to food scraps; therefore, the general community should be encouraged to adequately dispose of food scraps left in outside areas, including uneaten pet food.

4.2.9 Control of Domestic Animals in Reserves

Cats are able to hunt birds and mammals effectively, especially under the cover of darkness at night. Many cats that were observed in reserves and parklands during the present study appeared to be domesticated rather than feral cats. Therefore, residents that live close to these areas must be encouraged by Strathfield Council to keep their cats inside at night. Several

councils in Australia make cat runs available to residents, which allow cats to exercise while being contained within garden environments.

Roaming or uncontrolled dogs disturb wildlife and their constant presence in reserves can cause native animals to abandon these areas. Dogs are known to kill some wildlife species and it is likely that they have contributed to the decline in the abundance of Blue-tongued Lizards in some urban areas of Sydney. Dogs should be excluded from the following areas of the Strathfield LGA if native wildlife is to be protected from disturbance and mauling:

- All areas of the Mason Park wetland, including surrounding bushland and landscape areas and pedestrian/cycle pathways.
- All areas of Maria Reserve and Ford Park, and bushland areas of Elliott Reserve; and
- All areas of Cox's Creek Reserve.

A scheme whereby dog-owners can take dogs into other parklands and reserves needs to be prepared by Strathfield Council and advertised to constituents.

4.2.10 Compost Heaps as Habitats

Compost heaps, particularly those left by bush regeneration teams and covered with black plastic sheeting, are often used by small skinks and geckoes for shelter and as foraging habitat. Instead of removing the green wastes, it may be more beneficial to ensure that there are always a few compost mounds available in each reserve or parkland, especially over the winter months, because the decaying material generates its own heat that can help small vertebrates, especially reptiles, to thermoregulate.

4.2.11 Street and Backyard Lighting

Many bushland animals are nocturnal and street and backyard lighting can affect their behaviour. Most nocturnal vertebrates avoid street- and barkyard-lit areas. Light pollution can force owls and Ring-tailed Possums to abandon bushland reserves. In contrast, Tawny Frogmouths and Maasked Lapwings can benefit from light pollution by being concealed in the shadows and preying on moths that are drawn to the light.

Street lighting should not be aimed into the reserves and parklands. Shielding on the back of street lights greatly reduces the amount of light entering bushland or landscaped areas. Where pathways cross parklands (e.g. Maria Reserve, Mason Park Wetland and Strathfield Park), lighting should be directed downwards to minimise light penetration into the rest of the parkland. Where possible, those reserves that do not have lighting should not have lighting introduced.

Residences that back onto bushland areas should not have backyard spotlights pointing into reserves and parklands. A single backyard spotlight can dislocate fauna for 50 metres either side of the light source. In the present study, a Southern Boobook was observed avoiding parts of Maria Reserve where there was light pollution from backyards of neighbouring residences. Strathfield Council needs to advise occupants of residences that are adjacent to reserves and

parklands to direct spotlights away from these areas and to turn their backyard lights off when not in use.

4.2.12 Stormwater Overflow Areas

Many stormwater systems overflow into the Parramatta River and bushland reserves (e.g. Freshwater Park). Often the discharge from these systems is short-lived but dynamic. To reduce the erosional effects of these rapid discharges of stormwater, concrete troughs and basins have been created to disrupt the energy of the water. These structures could easily be modified to also provide habitat for frogs.

A concrete basin, off-centre to the main flow, would cater for the more generalist frog species. After heavy rain, the basin would fill and retain water for many weeks. Fringing plants need to be established around the ponds to help frogs avoid predators. These ponds would also serve as drinking and bathing stations for other species, such as bush birds.

4.2.13 Fallen Timber and Rocks

As mentioned in Section 4.2.2, fallen timber is usually removed from parklands and reserves of the Strathfield LGA because it looks messy or poses a fire risk. This deprives many animal species of shelter and foraging habitat. Fallen timber could still be removed from the edges of bushland and landscaped areas, but not taken out of larger areas that are hidden from public view. Fallen timber can also be used to create timber stacks or wood rows in areas where they do not constitute a fire hazard.

Rocks substrates are also valuable basking and foraging substrates for small reptiles, such as skinks and geckoes. Sandstone rocks have been added to landscaped areas of Strathfield Park and this approach should be considered in other landscaped parks within the LGA. This bushland rock most not be sourced from other bushland areas of the Strathfield LGA.

4.2.14 Community Care of Bushland Areas – Publication Education Campaign

The health and longevity of reserves and parklands is often dependent on community interest and support. Without it, Council finances will be redirected to other purposes. Accordingly, low-level education campaigns need to be maintained to make residents aware of the conservation value of bushland, wetlands and appropriately-landscaped areas. Local conservation groups need to be encouraged to work with Council in protecting these areas. Community awareness programs have been developed by Strathfield Council, but need to be further developed.

As part of this campaign, residents should be educated about the need to provide suitable garden habitats for native species, especially bird species, rather than feeding them with artificial feeding stations. For instance, provision of food for birds (e.g. commercial seed mixes, raw meat, dog food and honey/sugar water) attracts aggressive bird species to gardens (e.g. Pied Currawongs, Laughing Kookaburras, Australian Magpies, Rainbow Lorikeets, Noisy Miners and Common Mynahs. These competitively exclude other bird species from gardens, as

well as increasing predatory pressure on small passerines. Concentrations of birds at artificial food sources can also lead to the spread of wildlife diseases and parasites, and malnourishment of individual birds. Planting of locally-native plant species in gardens and landscaped areas that provide a range of food sources, e.g. nectar, seeds and fruits, and habitat for insects, is more effective in attracting native wildlife to the garden and neighbourhood parks, than is the provision of artificial food sources.

4.2.15 Monitoring the Use of Parklands and Reserves

It is difficult to obtain information about the level of use of each reserve and parkland. This information would be useful because it would provide a quantitative measure for assessing the resilience of bushland, landscaped and wetland areas. Such information will become increasingly important as the population density of the Strathfield LGA increases in the future. A census of the public use of parklands and reserves would consist of monitoring pedestrian and bicycle traffic along pathways, and the use of picnic and other recreational areas. Knowledge of the level of visitation of reserves will help planners to rationalise the use of these public lands.

The present fauna survey and the bird survey conducted by InSight Ecology (2008) have provided snapshots of the state of the fauna in the Strathfield LGA. It is likely that the distribution and relative abundance of species will change over time, and the changes may not be predictable. However, this study has provided a set of base figures with which subsequent fauna studies can be compared. As the methods in the present study are repeatable, any changes in the fauna detected by future studies are likely to reflect real changes in the biota and not merely sampling bias in the survey.

The fauna survey should be repeated every five years. However, the next survey should be sooner if it is believed that major environmental changes (e.g. major bushfires, pollution of wetlands or creeks, large-scale clearing of native vegetation, wildlife disease) have occurred.

4.3 SPECIFIC RECOMMENDATIONS

4.3.1 Recommendations of Previous Fauna Studies

InSight Ecology (2008) provided a comprehensive set of recommendations for the protection of native bird species, and for the protection and enhancement of their habitats, in the Strathfield LGA. The present study supports all of these recommendations because their implementation will not just help conserve locally native bird species and their habitats, but all locally-native fauna species and their habitats.

These recommendations are not reproduced in the present report in the interests of brevity and should be obtained directly from InSight Ecology (2008). Additional specific recommendations are presented in Section 4.3 of the present report.

4.3.2 Develop a Strathfield LGA Sustainability Management Plan

- The Sustainability Management Plan (SMP) should cover all parks and reserves that contain native bushland, wetlands and creeks and waterways.
- The SMP should identify existing vegetation communities and fauna habitats, especially those of threatened, migratory, regionally-rare and locally-rare fauna species.
- The SMP should develop a strategy for protecting existing habitats and, where possible, restore lost habitats (e.g. soil-contaminated areas of Bressington Park).
- Bushland restoration and management needs to continue in bushland reserves and around Mason Park Wetland and the SMP should identify where and when areas are to be subjected to bushland regeneration work, so that the works do not result in displacing native fauna from those areas. The co-ordination of these works means that regeneration and vegetation management sites do not overlap and do not become a major disturbance impact in the park or reserve.
- The SMP should identify areas where buffer plantings are required and recommend suitable species; at present buffer strips are required around the edges of Bressington Park, north of Mason Park wetland and along the eastern edge of the bushland in Elliott Park.
- The SMP should develop a program of feral animal control, especially foxes and cats. The control plan should integrate activities between reserves and between adjoining LGAs.
- The SMP should develop a policy for the control of domestic animals in the bushland reserves, wetland areas and landscaped parklands. This may include dog and cat exclusion zones and the capacity to trap and remove free-roaming animals in the reserves at night. Information signs and educational brochures about the impact of dogs, dog scent and droppings on native fauna may be required to explain to residents why these actions have been taken.
- The SMP should review all stormwater sites in bushland and landscaped areas in parklands and reserves and recommend measures to reduce erosion and improve water quality in the parks, creeks and wetlands.
- The SMP should address issues relating to street and house lighting that affects the reserves. In particular, backyard spotlights or other excessive lighting that impacts on bushland areas should be brought to the attention of residents who neighbour these reserves. If necessary, screen planting, either in the reserve or neighbouring property, may be required to reduce light pollution in particular areas.
- The SMP should develop a plan for promotion and planting of street trees, and residential and business property trees, to create or develop fauna corridors, especially in industrial and older residential areas of the Strathfield LGA.
- The SMP should expand on the already relatively successful means of involving community groups in the maintenance and protection of bushland and wetland areas.

4.3.3 Provision of Artificial Shelter Sites

- Nest boxes for parrots, possums and microchiropteran bats are required in all the significant parks and reserves (Mason Park Wetlands, Cox's Creek Reserve, Dean Reserve, St Anne's Reserve, Ford Park, Maria Reserve, Elliott Reserve, Strathfield Park and bushland areas of Hudson Park Golf Course).
- Ground cover items such as logs and timber stacks could be created in areas around the Mason Park wetland, and in Cox's Creek Reserve, Dean Reserve, Maria Reserve, Elliott

Reserve, where they are not likely to become a target for arsonists or become an undesirable feature in the reserve.

- Covered compost heaps are recommended to be added or retained in all parklands and reserves in areas away from regular public use.
- Sandstone rock piles can be created in landscaped areas of parks where ground cover is sparse.

4.3.4 Restoration of Degraded Areas

- **Bressington Park.** The northern and eastern perimeter areas of this park are highly degraded and are in need of habitat restoration.

  Bushland along the northern boundary is highly infested with weeds, particularly weedy vines, that have invaded the park from the adjoining RTA road reserve. Past dumping of fill along that boundary has facilitated dense infestations of other weed species and exotic grasses. These weeds need to be removed and the understorey needs to be bush regenerated by appropriately-qualified and experienced bush regenerators. If possible, the bushland corridor should be widened to provide a more effective wildlife corridor with the roadside vegetation along the southern side of Homebush Bay Drive.

  The eastern boundary area of Bressington Park is overgrown with exotic grasses and shrubby weeds. This area has not been managed for environmental or landscaping purposes because it is likely to contain contaminated soils and fill. A management plan for the containment, removal and appropriate disposal of the contaminants from this area should be developed by Strathfield Council. Once the contaminants have been removed, the Council should bush-regenerate this area to create a fauna habitat link between the Homebush Bay Drive roadside reserve and Mason Park wetland vegetation.

- **Mason Park Car Park.** A narrow corridor of casuarinas (single-tree width) occurs along the concrete drainage line, along the northern boundary of the existing car park. This vegatation has little or no value as a wildlife corridor because it is too narrow and has little habitat diversity. Strathfield Council should consider widening this vegetative corridor and adding greater structural and native floristic diversity to it as part of its works upgrade of the carpark. This may assist in the movement of native fauna, particularly bird species to move between landscaped areas of Bressington and Mason Parks.

- **Mason Park Wetlands.** Mangroves are migrating into the southern area of the Mason Park wetlands and potentially threaten the status of the salt marsh in the area. Salt marshes provide important foraging habitat for a range of bird species, particularly migratory shorebirds, and loafing and roosting habitat for other waterbirds. The current Vegetation Management Plan for the wetland should be updated and implemented to control the spread of mangroves into environmentally-sensitive areas of the wetland.

  The northern bank of the Mason Park Wetlands is heavily infested with exotic grasses and shrubby weeds. Even though this provides actual habitat for Latham's Snipe, a listed migratory species under the EPBC Act, the exotic plants threaten the overall ecological integrity of the wetland. It is recommended that a staged removal of exotic plants/planting

of locally native aquatic grasses, rushes and sedges be implemented in this area. This will still provide habitat for Latham's Snipe, as well as providing potential foraging habitat for rails, crakes and frogs.

4.3.5 Habitat Creation

- Restore native grass areas in uncleared woodland areas of Hudson Public Golf Course. This will provide foraging habitat for grass seed-eating birds (e.g. Red-browed Finches, Red-rumped Parrots and Crested Pigeons) and shelter for small skinks.

- Remove exotic grasses and weeds from Inveresk Park and replace with locally-native grass species, to improve this locally-significant isolated remnant of Turpentine Ironbark Forest as habitat for native fauna.

4.3.6 Bird Hide at Mason Park Wetland

Mason Park Wetland is regionally-important as habitat for native waterbirds (waterfowl, migratory shorebirds, and resident wading birds). It is also important in educating the public about wetland ecology and as a recreational area for bird-watchers. There is potential of establishing a bird hide, similar in design to the one at the Waterbird Refuge in Sydney Olympic Park, to be located at the northern end of the Mason Park Wetlands. Bird hides allow observers to study birds on wetlands without significant disturbances to the birds. This will assist in the closer observation of wetland birds and, thus further assess the importance of the wetland as bird habitat, as well as provide educational and further recreational opportunities for nature-loving members of the public.

4.3.7 Repeat Fauna Study

The Fauna Study should be repeated in five years time, earlier if significant changes or impacts occur in bushland, wetland or major creeks before then.

4.3.8 Establishment of Fauna Database

Strathfield Council needs to further develop a digital fauna database that will allow it to make informed decisions for future management issues in important habitat areas within the LGA. The database should have two components:

- a general databse that records all opportunistic sightings made by Council staff and the Council's constituents; and
- scientifically-based database based on systematic surveys of fauna communities within each parkland and reserve. The data from these surveys should be entered into the database in a manner that allows statistically-valid comparisons between sites and between years.

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Appendix A

Aerial Views of Parks and Remnant Bushland Areas Surveyed for Fauna

Figure A1 Airey Park, Homebush

Figure A2 Bill Boyce Reserve, Homebush

Figure A3 Bressington Park, Mason Park and Mason Park Wetlands, Homebush

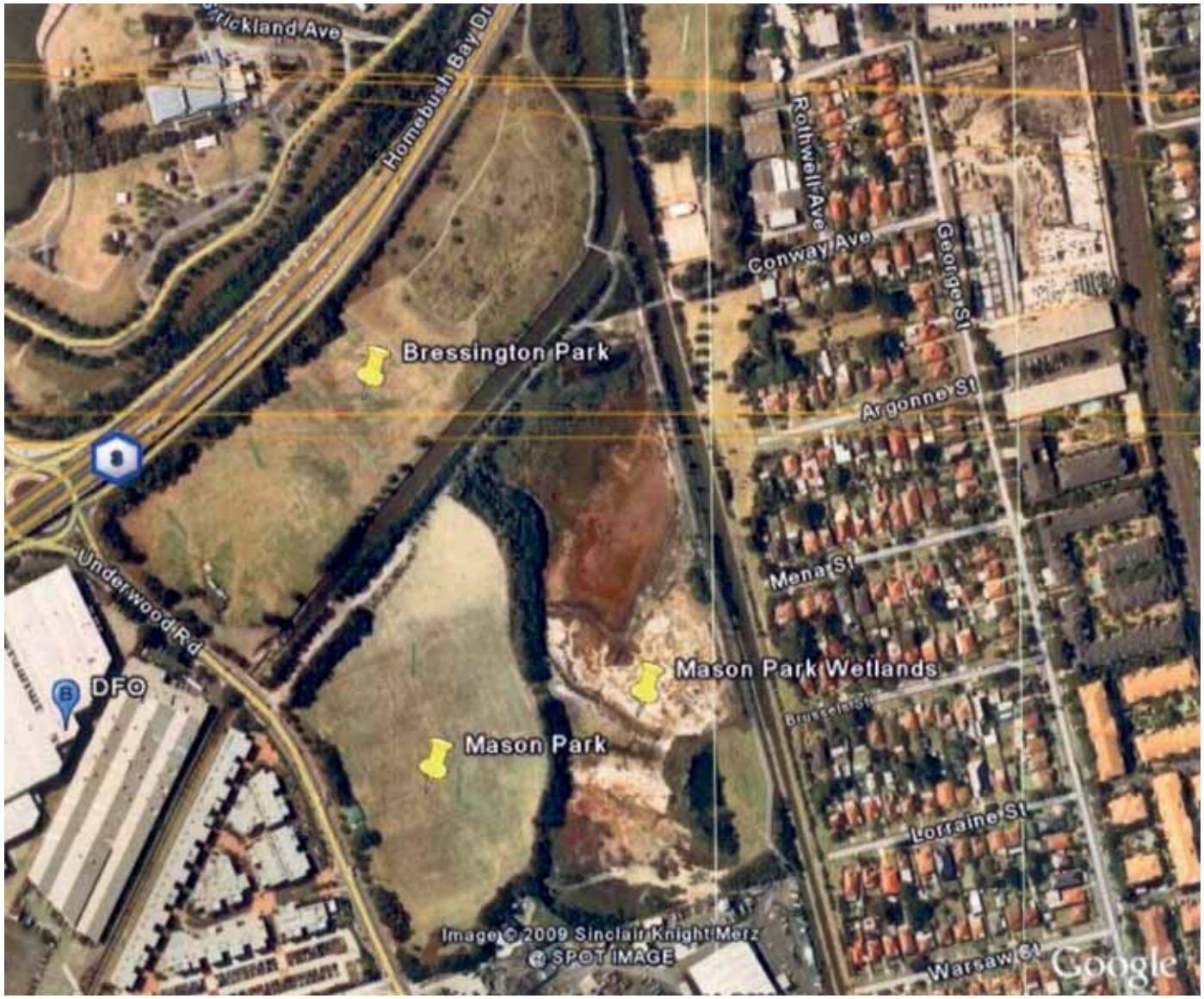

Figure A4 Fitzgerald Park, Homebush

Figure A5 Wentworth Reserve, Homebush

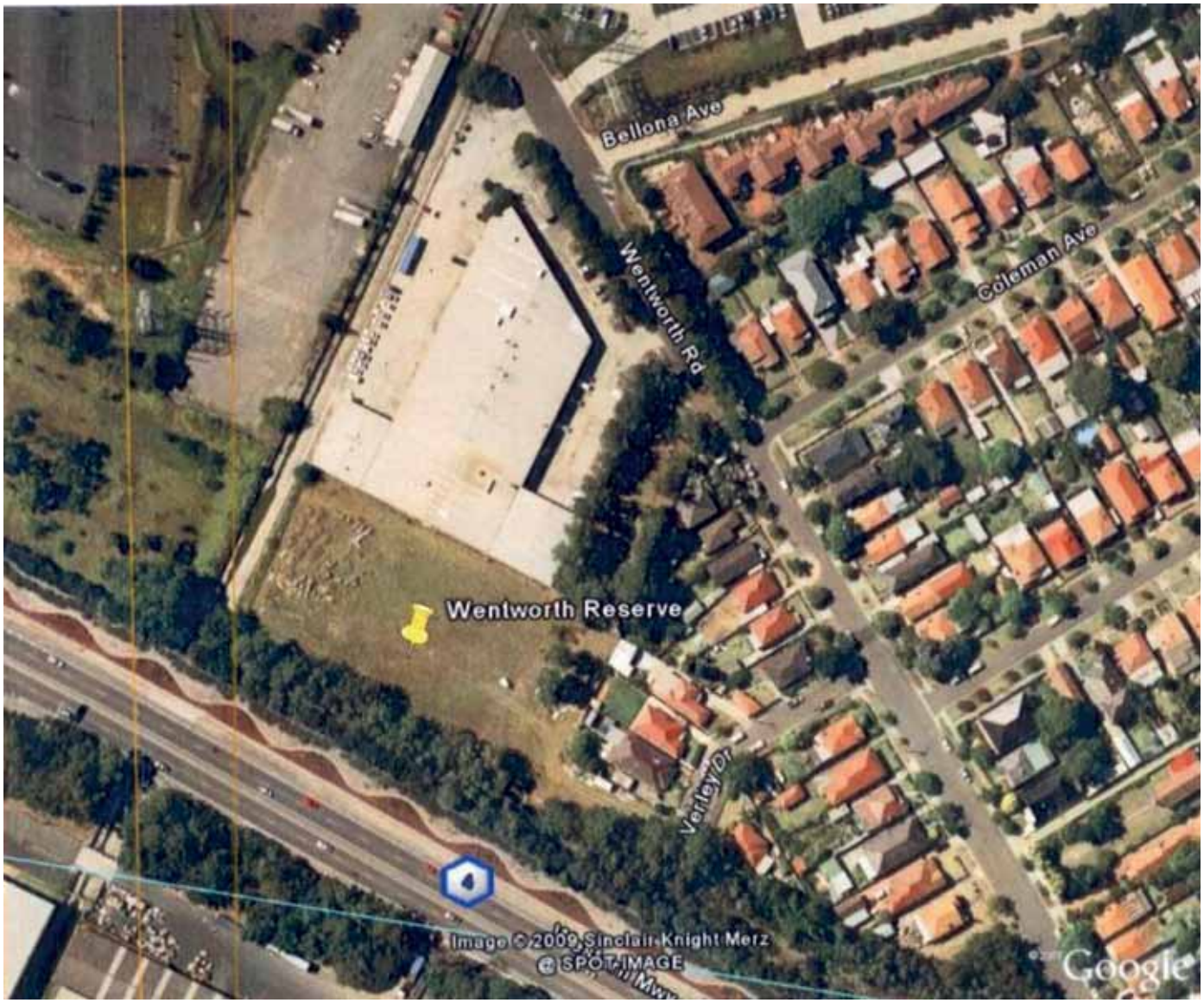

Figure A6 Melville Reserve, Homebush West

Figure A7 Boden Reserve, Strathfield

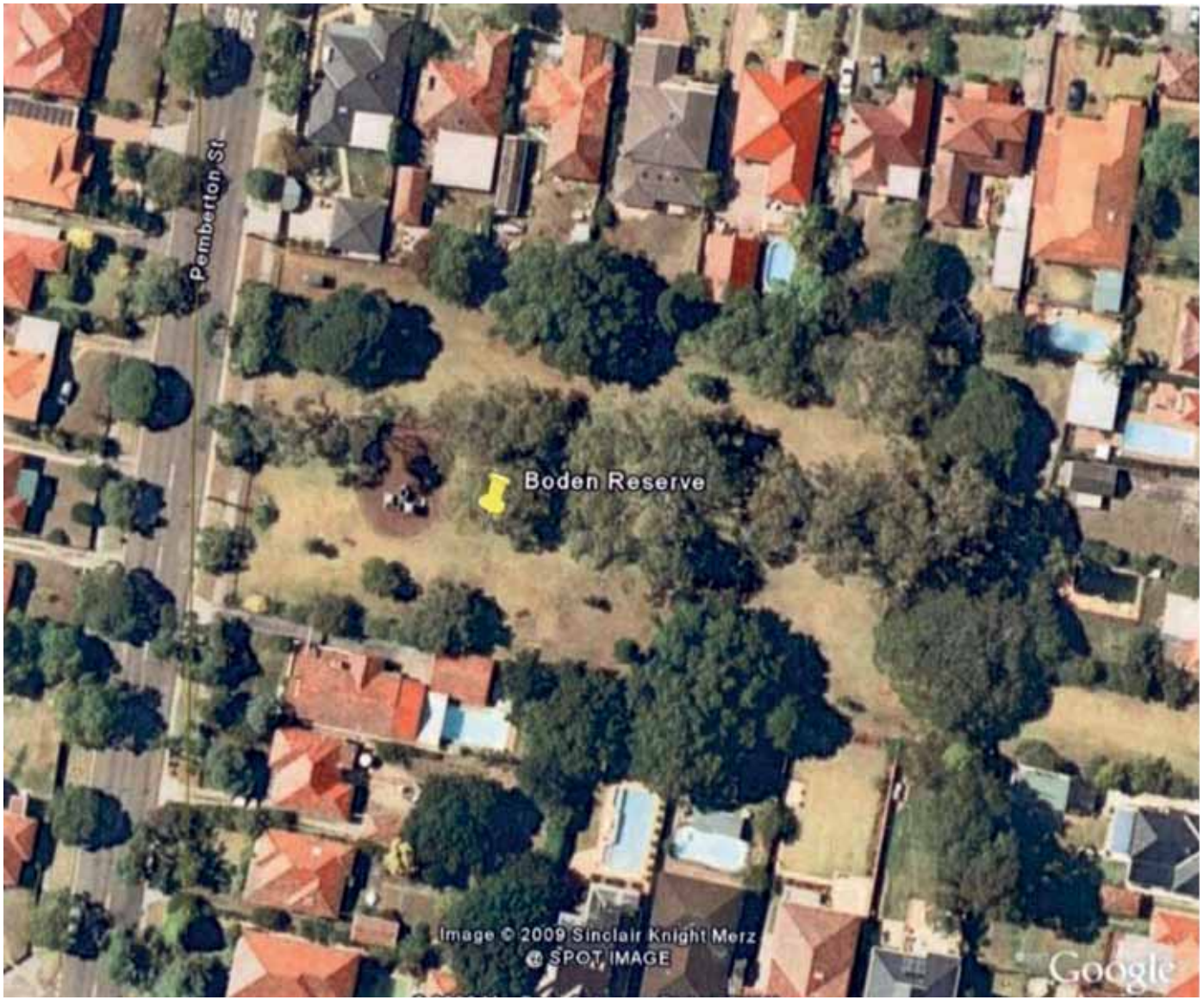

Figure A8 Chain of Ponds Reserve, Strathfield

Figure A9 Edwards Park, Strathfield

Figure A10 Frank Zions Reserve, Strathfield

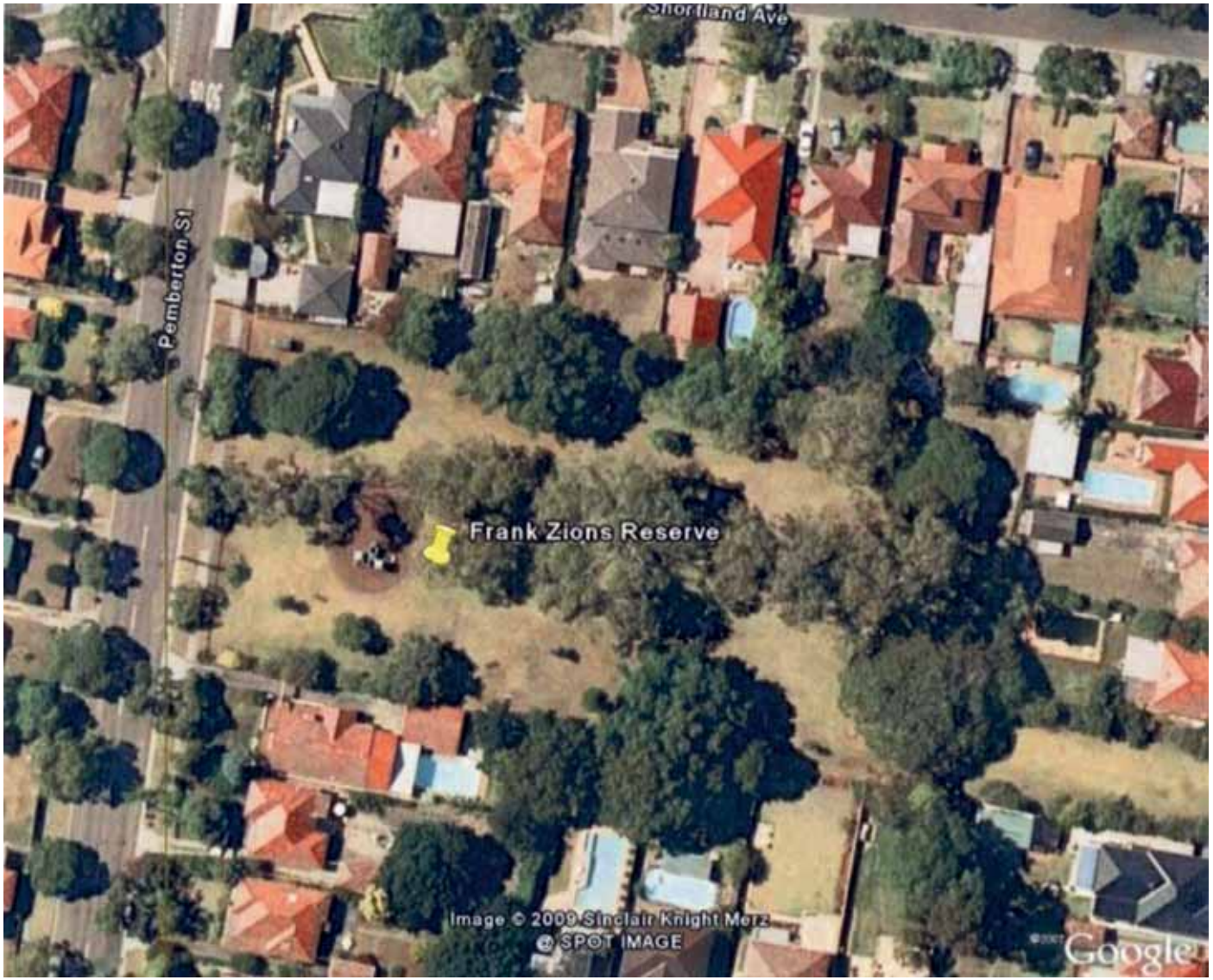

Figure A11 Freshwater Park, Strathfield

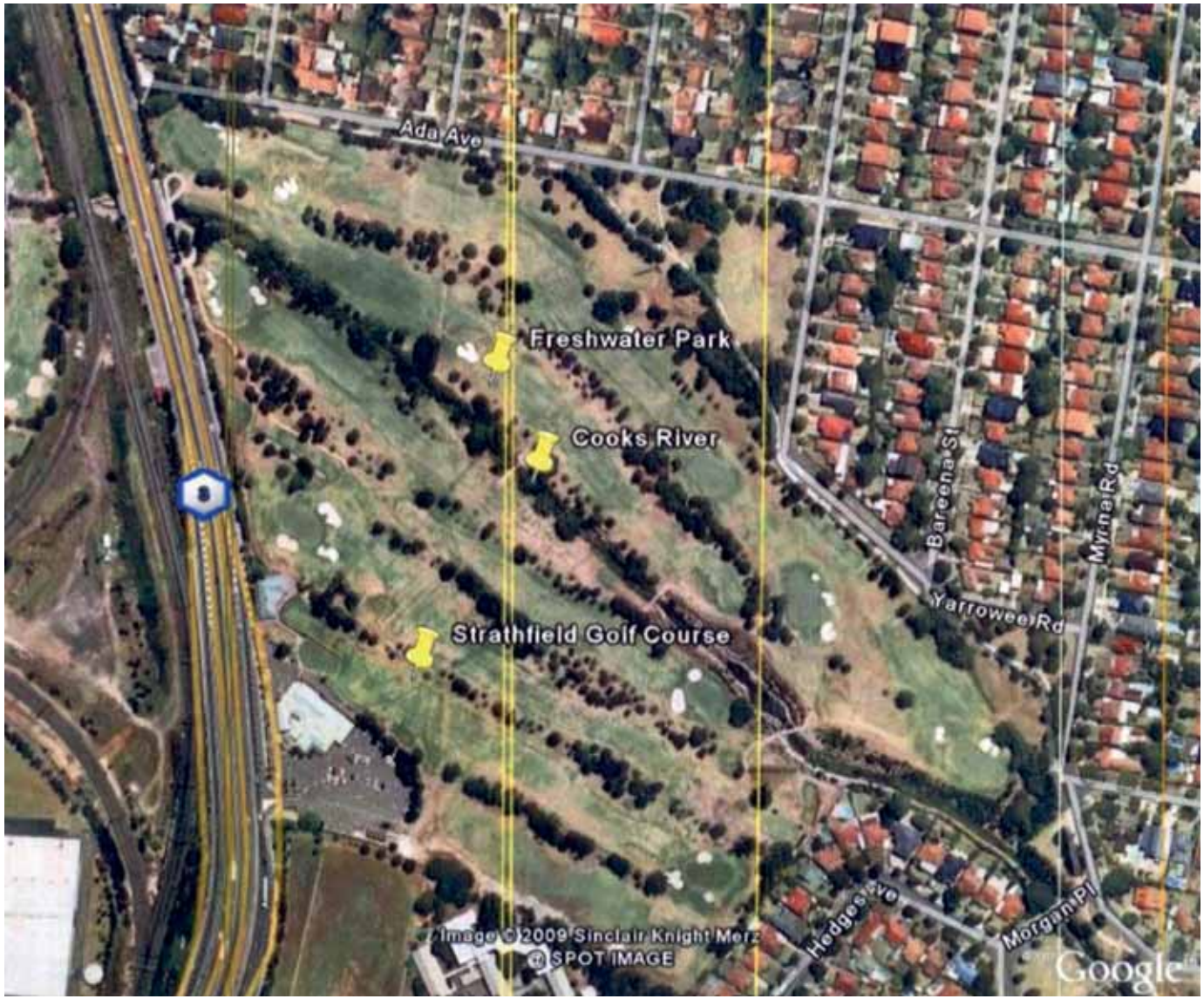

Figure A12 Hudson Park Oval and Public Golf Course, Strathfield

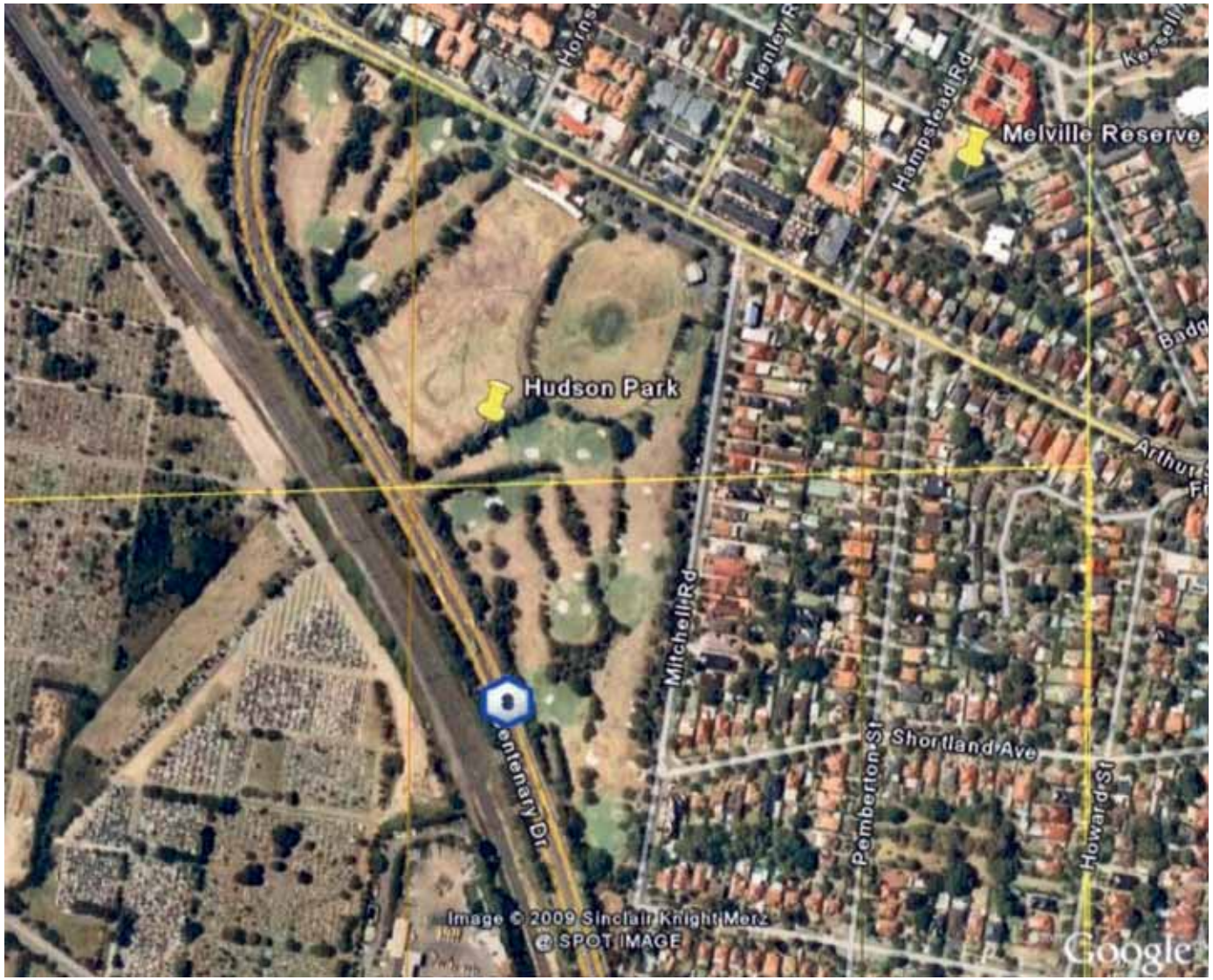

Figure A13 Inveresk Park, Strathfield

Figure A14 Pilgrim Park, Strathfield

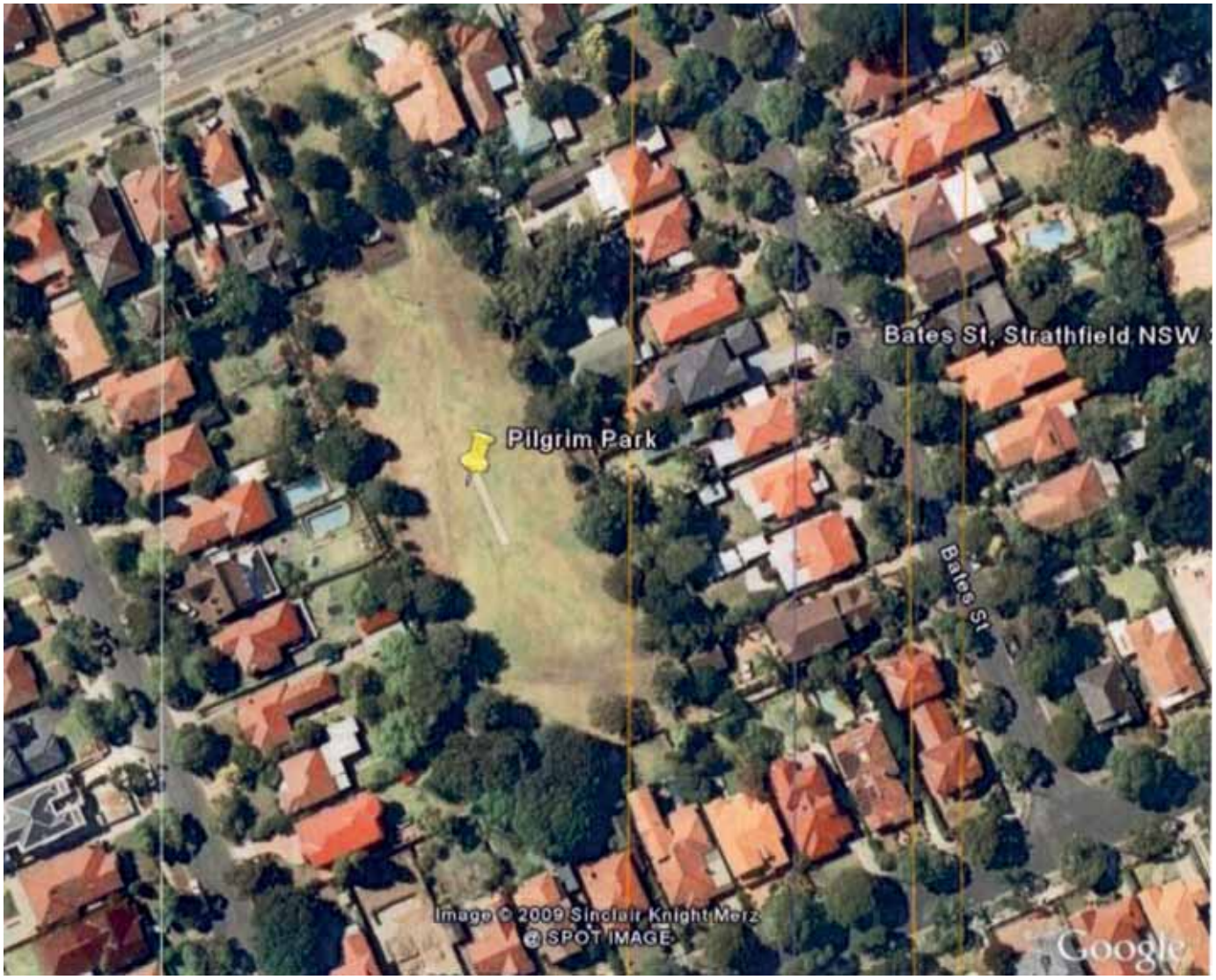

Figure A15 Strathfield Park, Strathfield

Figure A16 Dean Reserve, Strathfield South

Figure A17 Ford Park, Maria Reserve, Bark Huts Reserve and Elliott Reserve, Strathfield South

Figure A18 St Anne's Reserve, Strathfield South

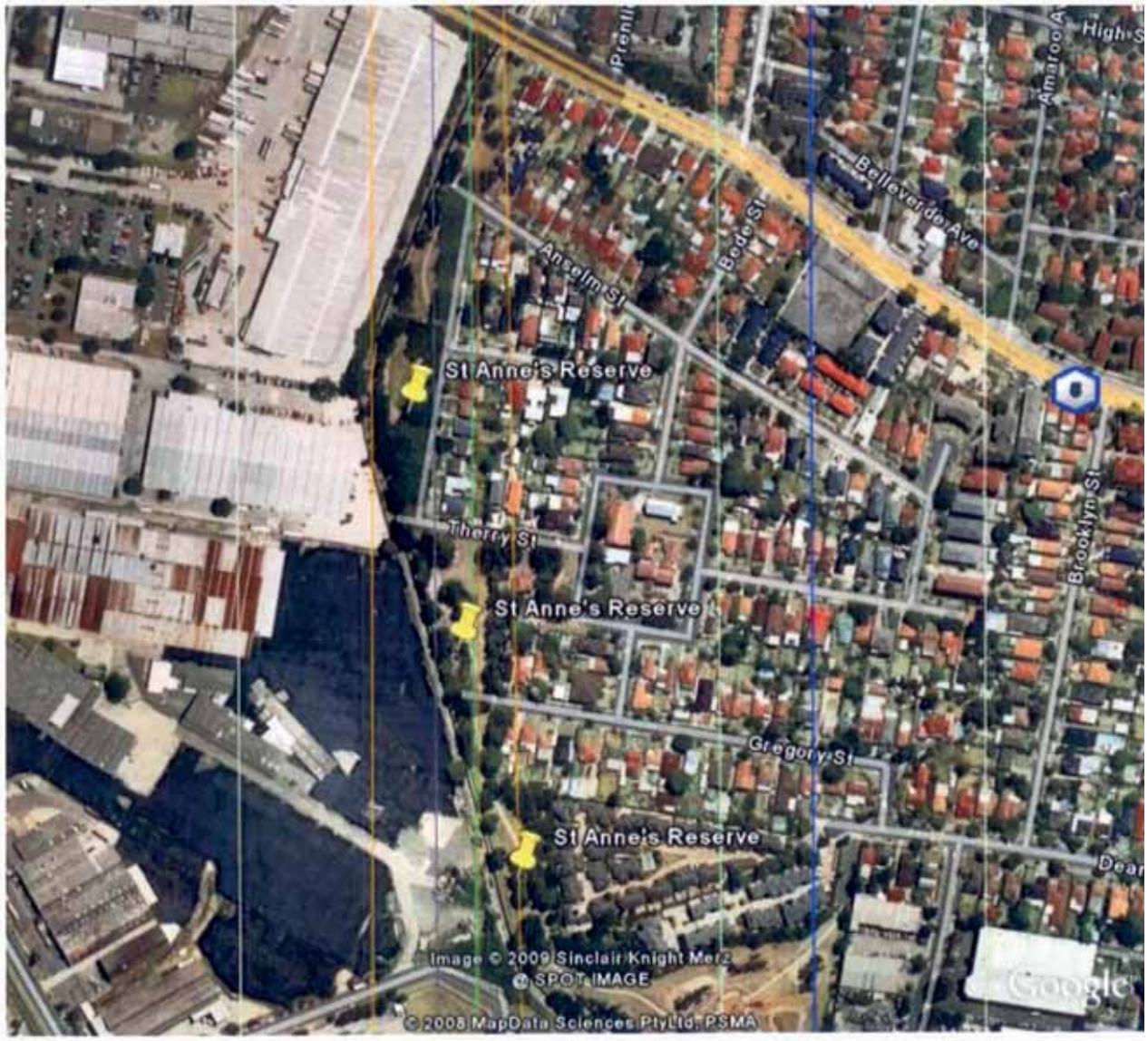

Figure A19 Begnell Field and Cooke Park, Belfield

Figure A20 Cox's Creek Bushland Reserve, Greenacre

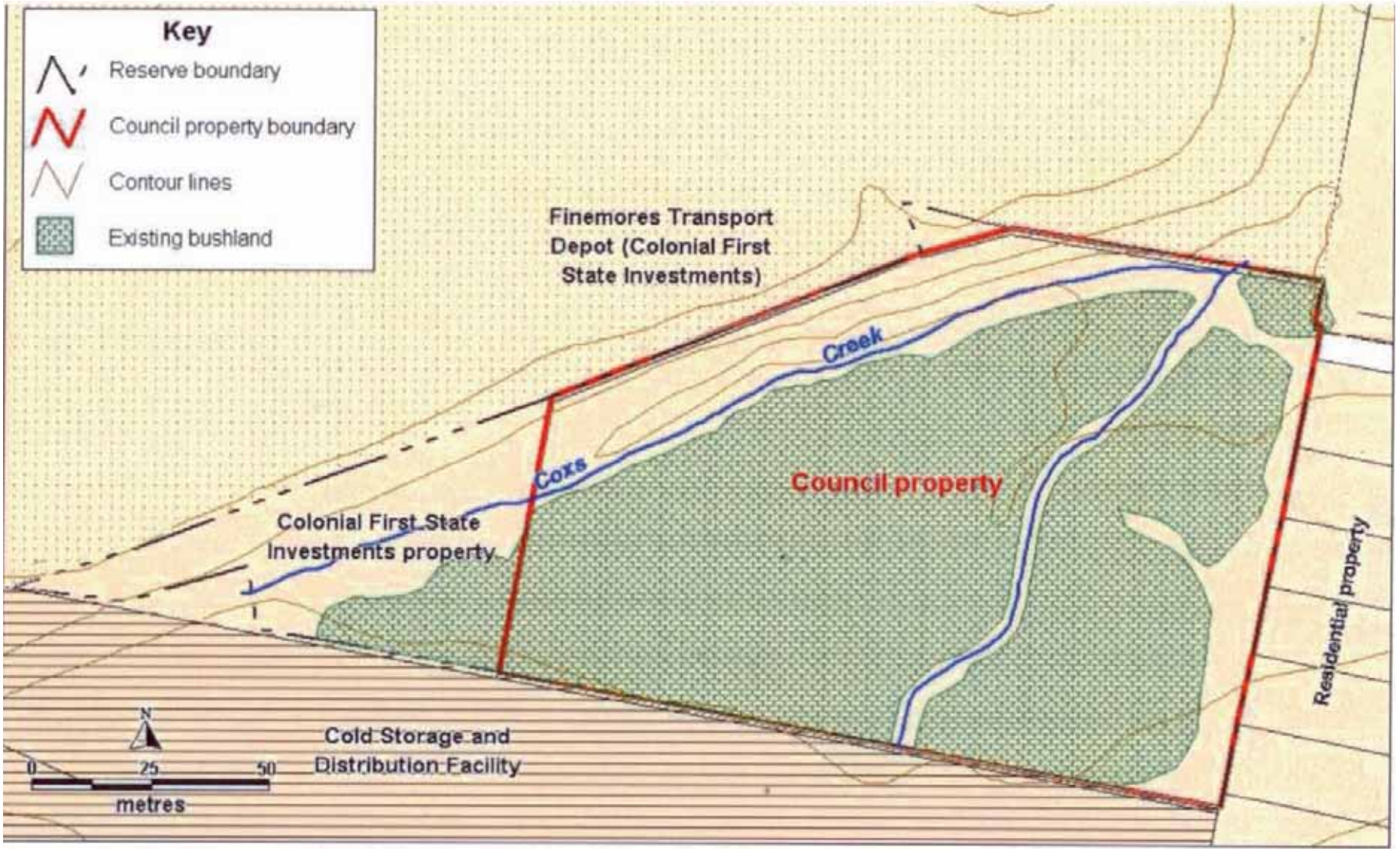

Figure A21 Matthews Park, Greenacre

Figure A22 Remnant Bushland Along Weerona Road, Rookwood

Figure A23 Remnant Bushland Along Davidson Street, Greenacre

Appendix B

Ground Views of Parks and Remnant Bushland Areas Surveyed for Fauna

Plate B1 Melville Reserve

Plate B2 Landscaped Area of Airey Park

Plate B3 Landscaped Area of Airey Park

Plate B4 Landscaped Area of Airey Park

Plate B5 Pilgrim Park

Plate B6 Boden Reserve

Plate B7 Frank Zions Reserve

Plate B8 Hudson Golf Course

Plate B9 Hudson Oval

Plate B10 Hudson Oval

Plate B11 Landscape Area of Mason Park

Plate 12 Landscape Area of Mason Park

Plate B13 Landscape Area of Mason Park

Plate B14 Mason Park Wetland

Plate B15 Mason Park Wetland

Plate B16 Mason Park Wetland

Plate B17 Mason Park Wetland

Plate B18 Bressington Park

Plate B19 Bressington Park

Plate B20 Bressington Park

Plate B21 Bill Boyce Reserve

Plate B22 Wentworth Reserve

Plate B23 Ismay Reserve

Plate B24 Fitzgerald Park

Plate B25 Davey Square Reserve

Plate B26 Inveresk Reserve

Plate B27 Wallis Reserve

Plate B28 Landscape Area, Strathfield Park

Plate B29 Landscape Area, Strathfield Park

Plate B30 Landscape Area, Strathfield Park

Plate B31 Chain of Ponds Reserve

Plate B32 Chain of Ponds Reserve

Plate B33 Edwards Park

Plate B34 Landscape Area, Freshwater Park

Plate B35 Landscape Area, Freshwater Park

Plate B36 Dean Reserve

Plate B37 St Anne's Reserve

Plate B38 St Anne's Reserve

Plate B39 Ford Park

Plate B40 Ford Park

Plate B41 Ford Park

Plate B42 Maria Reserve

Plate B43 Maria Reserve

Plate B44 Elliott Reserve

Plate B45 Bark Huts Reserve

Plate B46 Bark Huts Reserve

Plate B47 Landscape Area, Cooke Park

Plate B48 Landscape Area, Cooke Park

Plate B49 Landscape Area, Begnell Field

Plate B50 Matthews Park

Plate B51 Davidson Road, Chullora

Plate B52 Powerline Easement, Weeroona Road, Greenacre

Plate 53 Strathfield Golf Course

Plate B54 Cox's Creek Bushland Reserve

Appendix C

Fauna Species Recorded in the Strathfield LGA

Appendix C Common and Scientific Names of Vertebrate Species Recorded in the Strathfield Local Government Area

Family	Common Name	Scientific Name
FISH		
Anguilidae	Long-finned Eel	*Anguilla reinhardtii*
Eliotridae	Striped Gudgeon	*Gobiomorphus australis*
Eliotridae	Firetailed Gudgeon	*Hypseleotris galii*
Gobiidae	Oriental Goby	*Acanthogobius flavimanus*
Mugulidae	Bully Mullet (Flathead Mullet)	*Mugil cephalus*
Mugulidae	Freshwater Mullett	*Myxus petardi*
Poecillidae	Mosquito Fish (Plague Minnow)	*Plagusia holbrookii*
Psedomugulidae	Blue Eye	*Pseudomugil signifer*
Tripterigiidae	Eastern Jumping Blenny	*Lepidoblennius haplodactylus*
AMPHIBIANS		
Hylidae	Green and Golden Bell Frog	*Litoria aurea*
Hylidae	Dwarf Tree Frog	*Litoria fallax*
Hylidae	Perons Tree Frog	*Litoria peronii*
Myobatrachidae	Common Eastern Froglet	*Crinia signifera*
Myobatrachidae	Striped Marsh Frog	*Limnodynastes peronii*
Myobatrachidae	Spotted Grass Frog	*Limnodysnastes tasmaniensis*
REPTILES		
Scincidae	Wall Skink	*Cryptoblepharus virgata*
Scincidae	Eastern Water Skink	*Eulamprus quoyii*
Scincidae	Dark-flecked Garden Sun-skink	*Lampropholis delicata*
Scincidae	Grass Sun-skink	*Lampropholis guichenoti*
Scincidae	Weasel Sun-skink	*Saproscincus mustellinus*
Elapidae	Black-bellied Marsh Snake	*Hemiaspis signata*
Elapidae	Red-bellied Black Snake	*Pseudechis porphyriacus*
BIRDS		
Pelecanidae	Australian Pelican	*Pelecanus conspicillatus*
Phalacrocoracidae	Little Black Cormorant	*Phalacrocorax sulcirostris*
Anseranatidae	Black Swan	*Cygnus atratus*
Anatidae	Grey Teal	*Anas gracilis*
Anatidae	Chestnut Teal	*Anas castanea*
Anatidae	Pacific Black Duck	*Anas superciliosa*
Rallidae	Australian Spotted Crake	*Porzana fluminea*
Rallidae	Baillon's Crake	*Porzana pusilla*
Rallidae	Purple Swamphen	*Porphyrio porphyrio*
Ardeidae	Great Egret	*Ardea alba*
Ardeidae	White-faced Heron	*Egretta novaehollandiae*
Threskiornithidae	Royal Spoonbill	*Platalea regia*
Threskiornithidae	Australian White Ibis	*Threskiornis molucca*
Scolopacidae	Ruddy Turnstone	*Arenaria interpres*
Scolopacidae	Sharp-tailed Sandpiper	*Calidris acuminata*
Scolopacidae	Curlew Sandpiper	*Calidris ferruginea*

Family	Common Name	Scientific Name
Scolopacidae	Pectoral Sandpiper	*Calidris melanotis*
Scolopacidae	Ruff	*Philomachus pugnax*
Scolopacidae	Wood Sandpiper	*Tringa glareola*
Scolopacidae	Marsh Sandpiper	*Tringa stagnatalis*
Scolopacidae	Latham's Snipe	*Gallinago hardwickii*
Charadriidae	Greater Sand-plover	*Charadrius leschenaultii*
Charadriidae	Black-fronted Dotterel	*Elseyornis melanops*
Charadriidae	Red-kneed Dotterel	*Erythrogonys cinctus*
Charadriidae	Pacific Golden Plover	*Pluvialis fulva*
Charadriidae	Grey Plover	*Pluvialis squatarola*
Charadriidae	Masked Lapwing	*Vanellus miles*
Recurvirostridae	Black-winged Stilt	*Himantopus himantopus*
Recurvirostridae	Red-necked Avocet	*Recurvirostra novaehollandiae*
Laridae	Silver Gull	*Larus novaehollandiae*
Accipritidae	Collared Sparrowhawk	*Accipiter cirrocephalus*
Accipritidae	Black-shouldered Kite	*Elanus axillaris*
Falconidae	Australian Kestrel	*Falco cenchroides*
Falconidae	Australian Hobby	*Falco longipennis*
Falconidae	Peregrine Falcon	*Falco peregrinus*
Falconidae	Black Falcon	*Falco subniger*
Columbidae	Rock Dove (Feral Pigeon)	*Columba livia* *
Columbidae	Crested Pigeon	*Ocyphaps lophotes*
Columbidae	Superb Fruit-Dove	*Ptlinopus superbus*
Columbidae	Spotted Turtle-Dove	*Streptopelia chinensis* *
Cacatuidae	Sulphur-crested Cockatoo	*Cacatua galerita*
Cacatuidae	Yellow-tailed Black-Cockatoo	*Calyptorhynchus funereus*
Cacatuidae	Galah	*Eolophus roseicapilla*
Psittacidae	Eastern Rosella	*Platycercus adscitus eximius*
Psittacidae	Rainbow Lorikeet	*Trichoglossus haematodus*
Psittacidae	Red-rumped Parrot	*Psephotus haematonotus*
Apodidae	White-throated Needletail	*Hirundapus caudicutus*
Halcyonidae	Sacred Kingfisher	*Todiramphus sanctus*
Halcyonidae	Laughing Kookaburra	*Dacelo novaeguinea*
Cuculidae	Pallid Cuckoo	*Cuculus pallidus*
Cuculidae	Eastern Koel	*Eudynamys orientalis*
Cuculidae	Channel-billed Cuckoo	*Scythrops novaehollandiae*
Strigidae	Southern Boobook Owl	*Ninox noaveseelandiae*
Podargidae	Tawny Frogmouth	*Podargus strigoides*
Maluridae	Superb Fairy-wren	*Malurus cyaneus*
Pardalotidae	Spotted Pardalote	*Pardalotus punctatus*
Acanthizidae	White-browed Scrubwren	*Sericornis frontalis*
Acanthizidae	Yellow Thornbill	*Acanthiza nana*
Acanthizidae	Yellow-rumped Thornbill	*Acanthiza chrysorrhoa*
Meliphagidae	Eastern Spinebill	*Acanthorhynchus tenuirostris*
Meliphagidae	Red Wattlebird	*Anthochaera carunculata*
Meliphagidae	Little Wattlebird	*Anthochaera chrysoptera*
Meliphagidae	White-fronted Chat	*Epthianura albifrons*

Family	Common Name	Scientific Name
Meliphagidae	White-plumed Honeyeater	*Lichenostomus penicillatus*
Meliphagidae	Noisy Miner	*Manorina melanocephala*
Meliphagidae	New Holland Honyeater	*Phylidonyris novaehollandiae*
Dicruridae	Magpie-lark	*Grallina cyanoleuca*
Dicruridae	Willie Wagtail	*Rhipidura leucophrys*
Oriolidae	Australasian Figbird	*Sphecotheres vielloti*
Oriolidae	Olive-backed Oriole	*Oriolus sagittatus*
Campephagidae	Black-faced Cuckoo-shrike	*Coracina novaehollandiae*
Artamidae	Australian Magpie	*Gymnorhina tibicen*
Artamidae	Grey Butcherbird	*Cracticus torquatus*
Artamidae	Pied Currawong	*Strepera graculina*
Corvidae	Australian Raven	*Corvus coronoides*
Hirundinidae	Welcome Swallow	*Hirundo neoxena*
Hirundinidae	Fairy Martin	*Petrochelidon ariel*
Sylviidae	Australian Reed-warbler	*Acrocephalus australis*
Sylviidae	Rufous Songlark	*Cinclorhampus mathewsi*
Passeridae	House Sparrow	*Passer domesticus* *
Estrildidae	Nutmeg Mannikin	*Lonchura punctata* *
Fringillidae	European Goldfinch	*Carduelis carduelis* *
Zosteropidae	Silvereye	*Zosterops lateralis*
Pycnonotidae	Red-whiskered Bulbul	*Pycnonotus jocotus* *
Muscicapidae	Eurasian Blackbird	*Turdus merula* *
Sturnidae	Common Myna	*Acridotheres tristis* *
Sturnidae	Common Starling	*Sturnus vulgaris* *
MAMMALS		
Phalangeridae	Common Brushtail Possum	*Trichosurus vulpecula*
Petauridae	Sugar Glider	*Petaurus breviceps*
Pseudocheiridae	Common Ringtail POssum	*Pseudocheirus peregrinus*
Pteropidae	Grey-headed Flying-fox	*Pteropus poliocephalus*
Molossidae	White-striped Freetail Bat	*Tadarida australis*
Vespertilionidae	Gould's Wattled Bat	*Chalinolobus gouldii*
Vespertilionidae	Lesser Long-eared Bat	*Nyctophilus geoffroyi*
Muridae	House Mouse	*Mus musculus* *
Muridae	Black Rat	*Rattus rattus* *
Muridae	Brown Rat	*Rattus norvegicus* *
Canidae	Dog	*Canis lupus familiaris* *
Canidae	Red Fox	*Canis vulpes* *
Felidae	Feral Cat	*Felis catus* *
Bovidae	Sheep	*Ovis aries* *
Leporidae	European Rabbit	*Oryctolagus cuniculus* *

Appendix D

Methods of Detection and Relative abundance of fauna in each parkland and reserve

Table D1 Vertebrate Species Recorded During First Survey Period (5 to 18 May 2008)

Parkland/Reserve	Method of Detection						
	Hair-tube	Spotlighting	Bats (Anabat Surveys & Spotlighting)	Birds (Systematic & Opportunistic Surveys)	Reptiles (Reptile Traps & Systematic Surveys)	Frog Surveys (Adult Calls, Spotlighting, Tadpole Searches)	Fish (Hand Nets)
WETLANDS							
Mason Park Wetlands	House Mouse (4) Black Rat (6)	Red Fox (1) Cat (1)		Litlle Pied Cormorant (2); Australian Pelican (4); Black Swan (2); Pacific Black Duck (2); Grey Teal (16); Chestnut Teal (22); Black-fronted Dotterel (7); Masked Lapwing (8); Australian White Ibis (3); Great Egret (1); White-faced Heron (1); Royal Spoonbill (1); Australian Spotted Crake (1); Baillon's Crake (1); Purple Swamphen (5); Silver Gull (10); Black-shouldered Kite (1); Superb Fairy-wren (12); White-browed Scrubwren (2); New Holland Honeyeater (4); Willie Wagtail (4); Magpie-lark (2);	Eastern Water Skink (3)	Common Eastern Froglet (3); Striped Marsh Frog (3).	

Parkland/Reserve	Method of Detection						
	Hair-tube	Spotlighting	Bats (Anabat Surveys & Spotlighting)	Birds (Systematic & Opportunistic Surveys)	Reptiles (Reptile Traps & Systematic Surveys)	Frog Surveys (Adult Calls, Spotlighting, Tadpole Searches)	Fish (Hand Nets)
				Australian Raven (2); Silvereye (6); Common Mynah (5).			
Mason Park		Common Brushtail Possum (1); Dog (1)		Rainbow Lorikeet (4); Feral Pigeon (3); Superb Fairy-wren (6); Noisy Miner (6); Red Wattlebird (1); New Holland Honeyeater (2); Australasian Figbird (2); Willie Wagtail (2); Magpie-lark (2); Grey Butcherbird (1); Australian Magpie (3); Pied Currawong (2); Australian Raven (1); Silvereye (4); Common Mynah (5).			
REMNANT BUSHLAND SITES							
Cox's Creek Bushland Reserve	House Mouse (4); Black Rat (6).			Spotted Turtledove (2); Crested Pigeon (1); Superb Fairy-wren (5); Spotted Pardalote (2); Noisy Miner (7); Red Wattlebird (3); New Holland Honeyeater (4); Black-faced Cuckoo-shrike (2);			

Parkland/Reserve	Method of Detection						
	Hair-tube	Spotlighting	Bats (Anabat Surveys & Spotlighting)	Birds (Systematic & Opportunistic Surveys)	Reptiles (Reptile Traps & Systematic Surveys)	Frog Surveys (Adult Calls, Spotlighting, Tadpole Searches)	Fish (Hand Nets)
				Magpie-lark (1); Grey Butcherbird (1); Pied Currawong (2); Silvereye (10), Red-whiskered Bulbul (2); Common Starling (3); Common Mynah (2).			
Weerona Road, Rookwood	House Mouse (2); Black Rat (4); Dog (1); Cat (3).	Dog (1); Cat (1).		Little Corella (5); Spotted Turtledove (2); Crested Pigeon (4); Brown Falcon (1); Superb Fairy-wren (16); White-browed Scrubwren (2); Magpie-lark (3); Pied Currawong (4).			
Davidson Street, Greenacre				Spotted Turtledove (1); Red Wattlebird (3); New Holland Honeyeater (6); Pied Currawong (2); Common Mynah (3).			
REVEGETATED PARKLANDS							
Chain of Ponds Reserve		Common Brushtail Possum (1);		Rainbow Lorikeet (3); Spotted Turtledove (1); Noisy Miner (4); Australian Magpie (3); Grey Butcherbird (1);			

Parkland/Reserve	Method of Detection						
	Hair-tube	Spotlighting	Bats (Anabat Surveys & Spotlighting)	Birds (Systematic & Opportunistic Surveys)	Reptiles (Reptile Traps & Systematic Surveys)	Frog Surveys (Adult Calls, Spotlighting, Tadpole Searches)	Fish (Hand Nets)
				Australian Raven (1); Common Mynah (3).			
Dean Reserve				Masked Lapwing (2); Australian White Ibis (1); Rainbow Lorikeet (2); Feral Pigeon (2); Crested Pigeon (1); Superb Fairy-wren (4); Red Wattlebird (2); Noisy Miner (4); New Holland Honeyeater (2); Australian Magpie Pied Currawong (2); Silvereye (2); Common Mynah (2).			
St Anne's Reserve		Dog (1).		Australian White Ibis (1); Rainbow Lorikeet (2); Feral Pigeon (2); Noisy Miner (6); Australian Magpie (2); Grey Butcherbird (1).			
Ford Park	Common Brushtail Possum (3)			Rainbow Lorikeet (4); Spotted Turtledove (1); Superb Fairy-wren (4); Noisy Miner (5); Australian Magpie (2).			

Parkland/Reserve	Method of Detection						
	Hair-tube	Spotlighting	Bats (Anabat Surveys & Spotlighting)	Birds (Systematic & Opportunistic Surveys)	Reptiles (Reptile Traps & Systematic Surveys)	Frog Surveys (Adult Calls, Spotlighting, Tadpole Searches)	Fish (Hand Nets)
Maria Reserve	Common Brushtail Possum (5); House Mouse (1); Black Rat (3); Dog (2); Cat (1).	Cat (1).	Gould's Wattled Bat (2 recordings).	Rainbow Lorikeet (3); Spotted Turtledove (2); Crested Pigeon (1); Southern Boobook (1); Superb Fairy-wren (12); Red Wattlebird (4); Noisy Miner (3); Magpie-lark (2); Pied Currawong (2); Australian Raven (2); Common Mynah (3).			Plague Minnow (4).
Elliott Reserve				Spotted Turtledove (3); Feral Pigeon (3); Crested Pigeon (4); Tawny Frogmouth (1); Laughing Kookaburra (2); Superb Fairy-wren (14); Yellow Thornbill (6); Little Wattlebird (1); Noisy Miner (7); Olive-backed Oriole (2); Willie Wagtail (6); Grey Butcherbird (2); Australian Raven (2); Silvereye (6); Red-whiskered Bulbul (3).	Eastern Water Skink (2).		Plague Minnow (3).
OPEN PARKLANDS							

Parkland/Reserve	Method of Detection						
	Hair-tube	Spotlighting	Bats (Anabat Surveys & Spotlighting)	Birds (Systematic & Opportunistic Surveys)	Reptiles (Reptile Traps & Systematic Surveys)	Frog Surveys (Adult Calls, Spotlighting, Tadpole Searches)	Fish (Hand Nets)
Airey Park	Common Brushtail Possum (2); Black Rat (2); Dog (2); Cat (1).	Dog (1); Cat (1).		Masked Lapwing (3); Australian White Ibis (2); Rainbow Lorikeet (6); Crested Pigeon (6); Laughing Kookaburra (1); Noisy Miner (6); Magpie-lark (3); Australian Magpie (3); Pied Currawong (2); Australian Raven (2); Welcome Swallow (5).	Eastern Water Skink (2).		
Bressington Park				Masked Lapwing (4). Spotted Turtledove (2); Crested Pigeon (4); Noisy Miner (6).			
Melville Reserve				Feral Pigeon (1); Noisy Miner (5).			
Freshwater Park				Australian White Ibis (3); Rainbow Lorikeet (5); Crested Pigeon (3); Noisy Miner (6); Magpie-lark (3); Australian Magpie (4); Pied Currawong (2); Australian Raven (2).			
Hudson Park Oval and Golf Course		Brush-tailed Possum (2); Dog (2); Cat (1).		Rainbow Lorikeet (10). Noisy Miner (12); Magpie-lark (4);			

Parkland/Reserve	Method of Detection						
	Hair-tube	Spotlighting	Bats (Anabat Surveys & Spotlighting)	Birds (Systematic & Opportunistic Surveys)	Reptiles (Reptile Traps & Systematic Surveys)	Frog Surveys (Adult Calls, Spotlighting, Tadpole Searches)	Fish (Hand Nets)
				Grey Butcherbird (2); Australian Magpie (4); Common Starling (10).			
Inveresk Park		Cat (1).		Little Corella (16); Rainbow Lorikeet (3); Noisy Miner (6); Pied Currawong (2).			
Strathfield Park	House Mouse (2); Black Rat (5); Dog (3; Cat (1)			Australian White Ibis (3); Eastern Rosella (2); Rainbow Lorikeet (3); Crested Pigeon (4); Laughing Kookaburra (2); Red Wattlebird (3); Grey Butcherbird (1); Pied Currawong (2).	Grass Sunskink (3).		
Coronation Reserve				Feral Pigeon (5); Common Mynah (5).			
Bark Huts Reserve		Dog (2).		Masked Lapwing (3). Australian Ibis (2). Crested Pigeon (4). Noisy Miner (6). Australian Magpie (3).			
Begnell Field				Masked Lapwing (2); Australian White Ibis (1); Red Wattlebird (1); Grey Butcherbird (1); Common Mynah (4).			
Cooke Park				Red Wattlebird (1). Olive-backed Oriole (1).			

Parkland/Reserve	Method of Detection						
	Hair-tube	Spotlighting	Bats (Anabat Surveys & Spotlighting)	Birds (Systematic & Opportunistic Surveys)	Reptiles (Reptile Traps & Systematic Surveys)	Frog Surveys (Adult Calls, Spotlighting, Tadpole Searches)	Fish (Hand Nets)
				Welcome Swallow (2).			
UBBAN NEIGHBOURHOOD PARKS							
Bill Boyce Reserve		Cat (1).		Spotted Turtledove (1). Noisy Miner (3).			
Fitzgerald Park				Noisy Miner (4). Australian Magpie (1).			
Wentworth Reserve		Cat (1).		Noisy Miner (2). Common Mynah (2).			
Boden Reserve				Galah (1). Spotted Turtledove (1).			
Edwards Park				Crested Pigeon (1). Noisy Miner (3).			
Frank Zions Reserve		Common Brushtail Possum (1).		Sulphur-crested Cockatoo (2). Crested Pigeon (2). Noisy Miner(4). Australian Magpie (1) Common Mynah (3).			
Pilgrim Park		Dog (1). Cat (1).		Crested Pigeon (1). Common Mynah (4).			
Matthews Park		Cat (2).		Galah (4). Feral Pigeon (6). Willie Wagtail (1). Common Mynah (3). Common Starling (4).	Grass Sunskink (1).		

Table D2 Vertebrate Species Recorded During Second Survey Period (1 to 14 December 2008)

Parkland/Reserve	Method of Detection						
	Hair-tube	Spotlighting	Bats (Anabat Surveys & Spotlighting)	Birds (Systematic and Opportunistic Surveys)	Reptiles (Reptile Traps & Systematic Surveys)	Frog Surveys (Adult Calls, Spotlighting, Tadpole Searches)	Fish (Hand Nets)
WETLANDS							
Mason Park Wetlands	Common Brushtail Possum (12); House Mouse (4); Black Rat (6); Cat (1)	Common Brushtail Possum (6); Grey-headed Flying-fox (3); Cat (2).	White-striped Freetail Bat (4 recordings); Gould's Wattled Bat (16 recordings);	Little Pied Cormorant (2); Australian Pelican (6); Black Swan (2); Pacific Black Duck (6); Grey Teal (11); Chestnut Teal (13); Black-fronted Dotterel (8); Red-kneed Dotterel (3); Black-winged Stilt (12); Avocet (6); Masked Lapwing (10): Ruddy Turnstone (5); Ruff (1); Marsh Sandpiper (1); Wood Sandpiper (1); Sharp-tailed Sandpiper (26); Curlew Sandpiper (5); Pectoral Sandpiper (3); Latham's Snipe (1); Greater Sand-Plover (1); Pacific Golden Plover (4);	Esatern Water Skink (8); Grass Sun-skink (15); Black-bellied Marsh Snake (1); Red-bellied Black Snake (1).	Dwarf Tree Frog (1); Peron's Tree Frog (4: Common Esatern Froglet (19); Striped Marsh Frog (24); Spotted Grass Frog (4).	Long-finned Eel (1); Striped Gudgeon (3); Flathead Mullet (1); Jumping Blenny (1); Plague Minnow (10)

Parkland/Reserve	Method of Detection						
	Hair-tube	Spotlighting	Bats (Anabat Surveys & Spotlighting)	Birds (Systematic and Opportunistic Surveys)	Reptiles (Reptile Traps & Systematic Surveys)	Frog Surveys (Adult Calls, Spotlighting, Tadpole Searches)	Fish (Hand Nets)
				Grey Plover (2); Australian White Ibis (6); Great Egret (2); White-faced Heron (2); Royal Spoonbill (1); Australian Spotted Crake (1); Purple Swamphen (3); Silver Gull (30); Black-shouldered Kite (1); Spotted Turtledove (2); Superb Fairy-wren (15); White-browed Scrubwren (3); Yellow Thornbill (4); Spotted Pardalote (3); Noisy Miner (8); Red Wattlebird (3); New Holland Honeyeater (6); Willie Wagtail (4); Magpie-lark (2); Pied Currawong (2); Australian Raven (2); Silvereye (6); Welcome Swallow (8); Red-whiskered Bulbul (3); Common Starling (8); Common Mynah (6)			

Parkland/Reserve	Method of Detection						
	Hair-tube	Spotlighting	Bats (Anabat Surveys & Spotlighting)	Birds (Systematic and Opportunistic Surveys)	Reptiles (Reptile Traps & Systematic Surveys)	Frog Surveys (Adult Calls, Spotlighting, Tadpole Searches)	Fish (Hand Nets)
Mason Park		Common Brushtail Possum (2); Cat (1).		Rainbow Lorikeet (6); Feral Pigeon (4); Superb Fairy-wren (8); Yellow Thornbill (4); Spotted Pardalote (1); Noisy Miner (8); Red Wattlebird (1); Willie Wagtail (2); Magpie-lark (2); Grey Butcherbird (3); Australian Magpie (3); Pied Currawong (1); Australian Raven (3); Silvereye (1); Red-whiskered Bulbul (1); Common Starling (3); Common Mynah (5).	Grass Sun-skink (6); Dark-flecked Garden Sunskink (2).		
REMNANT BUSHLAND SITES							
Cox's Creek Bushland Reserve	Common Brushtail Possum (6); House Mouse (6); Black Rat (6); Cat (4)	Cat (1)	Gould's Wattled Bat (3 recordings); Lesser Long-eared Bat (1 recording);	Spotted Turtledove (1); Crested Pigon (1); Eastern Koel (1); Superb Fairy-wren (10); Spotted Pardalote (1); Noisy Miner (3); Red Wattlebird (1); New Holland Honeyeater (6); Black-faced Cuckoo-shrike (1); Magpie-lark (1);	Eastern Water Skink (3); Grass Sun-skink (3).	Green and Golden Bell Frog (3); Peron's Tree Frog (2); Striped Marsh Frog (1).	

Parkland/Reserve	Method of Detection						
	Hair-tube	Spotlighting	Bats (Anabat Surveys & Spotlighting)	Birds (Systematic and Opportunistic Surveys)	Reptiles (Reptile Traps & Systematic Surveys)	Frog Surveys (Adult Calls, Spotlighting, Tadpole Searches)	Fish (Hand Nets)
				Grey Butcherbird (1); Pied Currawong (2); Silvereye (12); Red-whiskered Bulbul (1); Common Starling (1); Common Mynah (2).			
Weerona Road, Rookwood	House Mouse (3); Black Rat (6); Brown Rat (2);		Gould's Wattled Bat (6 recordings)	Red-rumped Parrot (3); Spotted Turtledove (2); Crested Pigeon (2) Eastern Koel (1); Brown Falcon (1); Superb Fairy-wren (18); White-browed Scrubwren (3); Noisy Miner (4); Magpie-lark (1). Silvereye (10); Red-browed Finch (11); Common Mynah (5).	Dark-flecked Garden Sunskink (2); Grass Sunskink (7).		
Davidson Street, Greenacre				Black-faced Cuckoo-shrike (1); Australian Magpie (2); Pied Currawong (1); Common Mynah (4).	Wall Skink (1) Dark-flecked Garden Sunskink (1).		
REVEGETATED PARKLANDS							
Chain of Ponds Reserve		Common Brushtail Possum (2); Grey-headed Flying-fox (2); Dog (1)		Spotted Turtledove (2); Crested Pigeon (3); Noisy Miner (6); Australian Magpie	Dark-flecked Garden Sunskink (1). Grass Sunskink (3).		

Parkland/Reserve	Method of Detection						
	Hair-tube	Spotlighting	Bats (Anabat Surveys & Spotlighting)	Birds (Systematic and Opportunistic Surveys)	Reptiles (Reptile Traps & Systematic Surveys)	Frog Surveys (Adult Calls, Spotlighting, Tadpole Searches)	Fish (Hand Nets)
				(1); Grey Butcherbird (1); Pied Currawong (2); Australian Raven (1); Common Mynah (3).			
Dean Reserve		Cat (1).		Masked Lapwing (1); Rainbow Lorikeet (3); Spotted Turtledove (1); Feral Pigeon (1); Superb Fairy-wren (5); Red Wattlebird (1); Noisy Miner (5); New Holland Honeyeater (1); Willie Wagtail (1); Australian Magpie (2); Pied Currawong (1); Common Mynah (3).	Grass Sunskink (2).		
St Anne's Reserve		Dog (1).		Feral Pigeon (2); Noisy Miner (6); Magpie-lark (1); Australian Magpie (3); Grey Butcherbird (1); Australian Raven (1).			
Ford Park	Brush-tailed Possum (5); Black Rat (3); Dog (1); Cat (2).	Brush-tailed Possum (2); Grey-headed Flying-fox (1); Cat (1).	Gould's Wattled Bat (2 recordings)	Rainbow Lorikeet (5); Spotted Pardalote (1); Superb Fairy-wren (5); Noisy Miner (6); Olive-backed Oriole (1) Magpie-lark (1);	Wall Skink (1). Eastern Water Skink (2). Dark-flecked Garden Sunskink (2).	Common Eastern Froglet (1).	

Parkland/Reserve	Method of Detection						
	Hair-tube	Spotlighting	Bats (Anabat Surveys & Spotlighting)	Birds (Systematic and Opportunistic Surveys)	Reptiles (Reptile Traps & Systematic Surveys)	Frog Surveys (Adult Calls, Spotlighting, Tadpole Searches)	Fish (Hand Nets)
				Australian Magpie (2); Grey Butcherbird (1) Common Starling (2).			
Maria Reserve	Common Brushtail Possum (6); House Mouse (3); Black Rat (5); Red Fox (1) Dog (1)	Sugar Glider (1); Common Brushtail Possum (2); Grey-headed Flying-fox (1); Red Fox (1); Cat (2).	Gould's Wattled Bat (4 recordings); Lesser Long-eared Bat (2 recordings).	Spotted Turtledove (2); Southern Boobook (1); Sacred Kingfisher (1); Superb Fairy-wren (12); Spotted Pardalote (3); Yellow Thornbill (3); Red Wattlebird (3); Noisy Miner (3); Pied Currawong (2); Australian Raven (2); Common Mynah (3); Common Starling (1).	Wall Skink (2); Eastern Water Skink (4); Dark-flecked Garden Sunskink (3); Weasel Sunskink (1).	Peron's Tree Frog (2). Common Eastern Froglet (6). Striped Marsh Frog (6).	Plague Minnow (7).
Elliott Reserve	Common Brushtail Possum (7); House Mouse (2); Black Rat (6); Dog (1); Cat (1).	Common Brushtail Possum (1). Common Ringtail Possum (2).	Lesser Long-eared Bat (4 recordings)	Spotted Turtledove (2); Feral Pigeon (1); Laughing Kookaburra (2); Superb Fairy-wren (14); Red Wattlebird (4); Noisy Miner (6); Willie Wagtail (4); Magpie-lark (3); Grey Butcherbird (2); Pied Currawong (5); Red-whiskered Bulbul (3).	Wall Skink (2); Eastern Water Skink (4); Dark-flecked Garden Sunskink (3).	Common Eastern Froglet (7); Striped Marsh Frog (4).	Plague Minnow (3)
OPEN PARKLANDS							
Airey Park	Common	Common Ringtail	Gould's Wattled Bat	Masked Lapwing (2);	Wall Skink (2);		

Parkland/Reserve	Method of Detection						
	Hair-tube	Spotlighting	Bats (Anabat Surveys & Spotlighting)	Birds (Systematic and Opportunistic Surveys)	Reptiles (Reptile Traps & Systematic Surveys)	Frog Surveys (Adult Calls, Spotlighting, Tadpole Searches)	Fish (Hand Nets)
	Brushtail Possum (3); House Mouse (1); Black Rat (5); Dog (3); Cat (1).	Possum (2).	(3 recordings).	Australian White Ibis (2); Rainbow Lorikeet (6); Feral Pigeon (4); Spotted Turtledove (2); Crested Pigeon (4); Eastern Koel (1); Pallid Cuckoo (1); Channel-billed Cuckoo (1); Laughing Kookaburra (2); Noisy Miner (4); Australasian Figbird (2); Olive-backed Oriole (1); Magpie-lark (2); Grey Butcherbird (1); Australian Magpie (3); Pied Currawong (2); Welcome Swallow (7).	Eastern Water Skink (2). Dark-flecked Garden Sunskink (1); Grass Sunskink (4).		
Bressington Park				Galah (14); Rainbow Lorikeet (4); Noisy Miner (6); Willie Wagtail (2).	Grass Sunskink (4).		
Melville Reserve				Noisy Miner (4); Common Mynah (1).	Grass Sunskink (1).		
Freshwater Park				Masked Lapwing (4); Spotted Turtledove (2); Crested Pigeon (3); Noisy Miner (7);	Eastern Water Skink (5); Dark-flecked Garden Sunskink (3);	Common Eastern Froglet (12); Striped Marsh Frog (8).	Freshwater Mullet (3); Plague Minnow (6).

Parkland/Reserve	Method of Detection						
	Hair-tube	Spotlighting	Bats (Anabat Surveys & Spotlighting)	Birds (Systematic and Opportunistic Surveys)	Reptiles (Reptile Traps & Systematic Surveys)	Frog Surveys (Adult Calls, Spotlighting, Tadpole Searches)	Fish (Hand Nets)
				Australasian Figbird (1); Willie Wagtail (2); Australian Magpie (3); Pied Currawong (2); Welcome Swallow (5).	Grass Sunskink (3); Red-bellied Black-Snake (1).		
Hudson Park Oval and Golf Course				Galah (30); Noisy Miner (9); Australasian Figbird (1); Black-faced Cuckoo-shrike (2); Grey Butcherbird (1); Australian Magpie (4); Australian Raven (3); Common Starling (6).	Wall Skink (2); Grass Sun-skink (8).		
Inveresk Park				Sulphur-crested Cockatoo (2). Rainbow Lorikeet (2). Spotted Turtledove (1). Eastern Koel (1). Noisy Miner (4). Grey Butcherbird (1). Pied Currawong (1). Common Mynah (3).	Dark-flecked Garden Sunskink (2).		
Strathfield Park	Common Brushtail Possum (12). Common Ringtail Possum (1). House Mouse (2).	Common Brushtail Possum (3). Dog (3). Cat (1).	White-striped Freetail Bat (1 recording). Gould's Wattled Bat (6 recordings).	Australian White Ibis (3) Galah (11) Rainbow Lorikeet (6); Red-rumped Parrot (3). Crested Pigeon (6);	Wall Skink (4). Dark-flecked Garden Sunskink (5). Grass Sunskink (11).		

Parkland/Reserve	Method of Detection						
	Hair-tube	Spotlighting	Bats (Anabat Surveys & Spotlighting)	Birds (Systematic and Opportunistic Surveys)	Reptiles (Reptile Traps & Systematic Surveys)	Frog Surveys (Adult Calls, Spotlighting, Tadpole Searches)	Fish (Hand Nets)
	Black Rat (4). Dog (3). Cat (1).			Eastern Koel (2); Laughing Kookaburra (2); Noisy Miner (9); Australasian Figbird (2). Grey Butcherbird (2). Australian Magpie (6); Pied Currawong (5).			
Coronation Reserve				Feral Pigeon (6).			
Bark Huts Reserve		Dog (3).		Masked Lapwing (2). Australian White Ibis (1). Noisy Miner (4). Australian Magpie(1). Common Mynah (3).	Dark-flecked Garden Sunskink (2).		
Begnell Field				Australian White Ibis (1); Willie Wagtail (2); Australian Magpie (3).			
Cooke Park		Common Brushtail Possum (1). Cat (1).		Masked Lapwing. Galah Spotted Turtledove Noisy Miner	Dark-flecked Garden Sunskink (2).		
UBBAN NEIGHBOURHOOD PARKS							
Bill Boyce Reserve		Common Brushtail Possum (1). Cat (1).		Spotted Turtledove (1). Noisy Miner (4). Common Mynah (2).			
Fitzgerald Park		Cat (1).		Noisy Miner (4).			
Wentworth Reserve				Noisy Miner (3).			

Parkland/Reserve	Method of Detection						
	Hair-tube	Spotlighting	Bats (Anabat Surveys & Spotlighting)	Birds (Systematic and Opportunistic Surveys)	Reptiles (Reptile Traps & Systematic Surveys)	Frog Surveys (Adult Calls, Spotlighting, Tadpole Searches)	Fish (Hand Nets)
				Common Mynah (3).			
Boden Reserve				Spotted Turtledove (1).	Grass Sunskink (1).		
Edwards Park		Dog (1).		Noisy Miner (6).			
Frank Zions Reserve		Common Brushtail Possum (1). Cat (1).		Crested Pigeon (3). Noisy Miner (3). Australian Magpie (2). Common Mynah (2).			
Pilgrim Park				Noisy Miner (3) Common Mynah (2).			
Matthews Park		Common Brushtail Possum (1). Cat (1).		Feral Pigeon (2). Common Mynah (3). Common Starling (4).	Dark-flecked Garden Sunskink (1). Grass Sunskink (2).		