



FRANCIS STREET RESERVE PLAN OF MANAGEMENT

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SUMMARY

The Francis Street Reserve Plan of Management has been prepared in accordance with the Department of Local Government guidelines. The document includes the following key information

- Classification of land.
- Categorisation of land according to legislation.
- Summary of consultations with the broader community.
- Setting of objectives and performance targets for management of the land, specifies means of achieving performance targets (i.e. management strategies, specify method of assessing achievement of performance targets – all is summarised in a table.

In addition to this, and other information provided includes:

- history of the land and its use;
- reference to previous studies;
- reference to relevant council policies , zoning and restrictions under the EP&A Act; and
- how the land is managed in practice.

The Plan of Management separates management activities into five broad categories: Stream, pollution, biodiversity, cultural heritage and visitor management. The Plan provides management strategies, expected associated costs, and timeframes for strategy implementation.

Community consultation identified a number of areas of concern, with the following issues raising most attention and being subsequently addressed in the Plan:

- Designation of areas for protection and rehabilitation of natural features, specifically for bushland, streams and foreshores.
- Continuance of maintenance practices for existing facilities.
- Ensuring parity of access for all users.
- Access across the reserve.
- The reserve has not been officially named.

1.0 ABOUT THIS PLAN OF MANAGEMENT

1.1 Rationale

Plans of Management are a requirement under the Local Government Act, 1993. The Local Government Amendment (Community Land Management) Act 1998 reiterated council responsibilities to actively manage public lands and to involve the community in the managing and strategic development of public lands.

This Plan of Management has been prepared according to the guidelines outlined by the Department of Local Government Practice Note 1 developed to assist local councils in the management of public lands (Department of Local Government, 2000).

1.2 Purpose of this Plan

The aim of this Plan of Management is to provide management guidelines for Francis Street Reserve and to enable Hunters Hill Council to meet its statutory responsibilities in managing vacant public reserve and open space for the benefit of all users.

Its specific purpose is to:

- categorise the land;
- set management objectives that are consistent with broader strategic planning instruments guiding Council activities;
- document the strategies needed to achieve those objectives;
- identify and respond to constraints and opportunities;
- be a reference tool for Council and the community; and
- communicate the management of the area to those not directly involved.

1.3 How to Use this Plan of Management

This Plan of Management has two separate but complimentary parts – the body of the report (in which this text appears) and the technical appendices (at the rear). In order to make the body of the report easy to follow, considerable information is contained in the technical appendices. Cross-referencing between the body of the report and the technical appendices is provided to assist where readers require more information.

1.4 Management Objectives

The objective of this Plan of Management is:

to enable the local community, in association with Council, to sustainably manage the natural and cultural resources in Francis Street Reserve.

Specific management types are listed below. The primary focus is stream management that is linked with all other management types. Associated objectives (desired outcomes) and how to achieve them are described in Section 4.

- Stream management;
- Pollution management;
- Biodiversity management;
- Cultural heritage management; and
- Visitor use management.

1.5 Preparation Process

Francis Street Reserve is a place for local and regional people. To canvas the views of the community and allow for local input, community consultation has been the key to the preparation of this Plan of Management.

Francis Street Reserve has been created as a result of subdivisional activity. The creation of the reserve was subject to community consultation at the time of creation of the Pulpit Point Subdivision.

There has been considerable interest in the area leading to the preparation of the Draft Plan of management.

More specifically, the process of developing this Plan of Management followed that detailed in the “Australian Natural Heritage Charter” and is summarised as follows:

Procedural Steps	Ways in which the Plan of Management relates to the Charter
Obtain and study evidence about the place	All relevant previous investigations and planning studies were analysed and incorporated.
Identify and contact people or groups who know about, care for, or have an interest in the reserve.	The site has been subject to inspections by Council's Parks and Trees Committee, by staff and specialist consultants, and Council's General Purposes Committee to review pedestrian access.
Determine the natural significance of the reserve.	The values and significance of the reserve was determined from the National Trust Report of 1989 and subsequent updated report from Council's Environmental Officer
Assess the physical land, condition and management realities.	Site visits were undertaken with council staff and other knowledgeable individuals. Previous studies were analysed.
Monitor results and consider any new information	Monitoring of area by Environmental Officer.

2.0 LAND AND PLANNING ISSUES FOR THIS PLAN OF MANAGEMENT

2.1 Location and Description of the Land

The area comprises approximately 1 hectare, incorporating the slopes below Tiree Avenue extending west to Francis Street and East to privately owned land adjacent to Nelson Parade. The area has a SW aspect and is consequently fairly sheltered. The slopes are moderately steep and extend above and below the large sandstone outcrop which runs from west to east.

The western area of the reserve is fairly disturbed and degraded, while the bushland in the eastern 0.6ha forms the central core of the remnant vegetation in the reserve. The vegetation here mirrors that found in Kelly's Bush, which is characterised by Open Forest with dominants of *Eucalyptus piperita* (Sydney Peppermint) and *Eucalyptus gummifera* (Red Bloodwood), plus areas of Kunzea Scrub, while in the western section the vegetation would have been characterised by closed forest of *Ficus rubiginosa* (Port Jackson Fig) and *Banksia integrifolia* (Coast Banksia).

The rocky foreshore soils are, for the most part shallow. However rock crevices combined with damper conditions provided by natural watercourses and seepages, provide niche habitat for a number of plants that do not otherwise occur in significant numbers in Hunters Hill and particularly on the peninsula.

“Today, although the peninsula has many trees resulting from street and garden retention and planting, only a few small patches of bushland remain” Benson, D. & Howell, J. *Taken for Granted*.

No fauna studies have been undertaken at the site but various bird species have been sighted at or near the site including Sea Eagle (DK 2001).

In a local setting, Francis Street Reserve is located in the suburb of Hunters Hill on the eastern end of a waterfront reserve created with the subdivision of Pulpit Point Estate.

Hunters Hill Municipality is described as Australia's oldest "garden suburb" and has a distinctive appearance created by its canopy of large trees (*Hunters Hill Council, 1997*).

The reserve was created as a condition of development for the subdivision and was created as part of a continuous waterfront reserve in accordance with Council's reserve planning policy of the time.

The reserve contains remnant bushland of varying degrees of condition and forms a link between the road reserves of Francis Street, St. Malo Avenue, Tiree Avenue, The Roy Stuckey Walk, and the waterfront of the Parramatta River.

The reserve generally slopes downwards to the west from the rear of the properties in Nelson Parade, Tiree Avenue and Gladstone Avenue.

Slopes are generally moderate to steep and precipice is evident and an impediment to track development in the reserve.

The reserve is transversed by a small watercourse with a small urban catchment. North of St. Malo Avenue, the watercourse is in a natural state, although the levels and streambed have been highly disturbed since pre-European settlement. The southern part of the site has piped drainage. A characteristic of the site is the overland flow over the rockshelf on the southern part of the site.

The southern end of the reserve has a significant area of remnant vegetation and the issues with the management of this area are addressed later in the document.

Features worthy of note near the site include:

- Waterfront reserve near Pulpit Point.
- Foreshore to the Parramatta River and continuous public access to Pulpit Point Reserve.
- Part of remnant vegetation area.
- Provides an opportunity for pedestrian access to a number of adjoining road reserves.

2.2 Land Classification

Under the Local Government Act 1993, Plans of Management for Council areas need to classify the land to which they refer. The study area within Francis Street Reserve can be classified as follows:

"A modified area of public open space which is in parts degraded and in need of rehabilitation and management to realise its full recreational and environmental potential"...

and which has the following characteristics:

- Stream water course adjacent floodplain (largely stable though polluted and some weed infestation);
- Remnant bushland which is important from a local and regional biodiversity perspective;
- Cultural heritage which needs protection and interpretation;
- Passive recreational potential that needs to be enhanced;
- Corridor reserve for walk linkages

The whole Reserve is "Zone 6a Open Space" according to Hunter's Hill Council's Local Environment Plan 1992.

2.3 Categorisation of the Community Land

Land categorisation is an effective way in which to focus on the essential aspects of each area of land. Public land broadly falls into five categories according to the guidelines in the Act (LGA 1993) and its regulations (LGGR 1999). The categorisations for Francis Street Reserve are outlined in Figure 3 (map of the area and its categories) and described below, and details for each category are outlined in Appendix 1).

2.3.1 Natural Areas

Areas in Francis Street Reserve defined as *natural* areas (as defined in the LGA Act 1993 Sect 36) include:

Bushland – Remnant stand of bushland above rockshelf in southern end of reserve.

Foreshores – all the foreshore of the Parramatta River which borders the Reserve up to the high water mark at the southern end.

Sportsground – not applicable

Parkland – not applicable

Areas/items of cultural significance - nil

General community use – possible development of walkway links

2.4 Planning Instruments and their Relationship to this Plan of Management

Planning instruments such as Local and Regional Environmental Plans (LEPs and SREPs), State Environmental Planning Policies (SEPPs), and Development Control Plans (DCPs) directly relate to this document. Examples of development control planning instruments affecting this Plan of Management include:

- Hunters Hill Council LEP No.1 (includes Foreshore Protection zones (building lines);
- Hunters Hill Council DCP15 Residential Development;
- DCP Sydney Harbour and Parramatta River (Department of Urban Affairs and Planning);
- SREP No. 22 Parramatta River;
- SREP No. 23 Sydney Harbour and Lane Cove River
- SEPP No. 19 Urban Bushland.

The Plan is in accordance with a number of Regional and State strategies and plans and their objectives, including:

- Green Web Sydney (1997) – encourages natural regeneration on public and private land with a particular focus on riverine environments.
- Sydney Harbour Regional Strategic Plan (1998) – to achieve integrated ecologically sustainable natural resource management in the Sydney Harbour catchment by prioritising issues such as declining quality and quantity of urban bushland, remnant and other vegetation;
- Parramatta River Foreshores Manual (1997) – maintain and enhance the ecological values of the river system by developing and implementing management strategies that recognise the existing natural and cultural features of the whole catchment.
- Lane Cove and Lower Parramatta River Stormwater Management Plans (1999) – identity that protection of river and bushland environment, including associated native flora and fauna, are high priority values and that objectives include improved vegetation management and improved community awareness of the values of systems.

- Sydney North Regional Weed Strategy (1998) – aimed at applying the National and State weed management strategies by promoting the coordination and environmental weed management at both the regional and catchment levels.
- NSW Biodiversity Strategy - where objectives include
 - community consultation, involvement and ownership
 - conservation and protection of biodiversity
 - threatening processes and their management
 - biodiversity conservation and natural resource management.

2.5 Natural Significance of the Reserve

Francis Street Reserve is an ideal place to gain an understanding of Hunters Hill's pre-European landscape, as part of the original vegetation of the Parramatta River. This bushland forms an important habitat link between on the Parramatta River.

Examples of ecological communities within the Reserve are significant in that many such communities are at risk in the Sydney region.

Remnant bushland is considered to be an area where the original (pre-17788) bushland still survives. The definition of bushland is broad to encompass all habitats within it including soils, rocks and live and dead vegetation. Microscopic life and the seed store are also included. The presence of remnant bushland in the reserve is quite significant locally and also from a regional perspective. Vegetated corridors between riverine environments and terrestrial ecosystems are becoming increasingly rare as foreshore lands are developed.

3.0 WHAT ARE THE KEY CONSTRAINTS?

3.1 Lack of Knowledge and Understanding of Ecological Systems

While there has been some significant research undertaken on natural systems, interactions in urban bushlands are complex and not well understood. Further, specific ecological studies of the ecosystems in Francis Street Reserve are not extensive. Therefore, in making decisions about management of natural systems, it is equally necessary to be guided by research and state-of-art practices as it is to consider the precautionary principle (that is, where there are threats of serious damage, lack of scientific certainty should not be used as a reason for postponing cost-effective measures to prevent environmental degradation). This management plan is part of that process. Management decisions should be monitored and evaluated to provide feedback on effectiveness and to refine practices and decisions into the future.

3.2 A Highly Modified System

Although the Reserve has varying degrees of ecosystem health, all adjacent lands and their ecosystems are highly modified from human use.

In particular the following are all relevant:

- filling and raising of the northern part of Francis Street Reserve has completely modified the area's topography and has caused disruption to the original watercourse;
- the impact of weeds in the streams and in forested areas has resulted in the displacement of native plant species, and possibly the loss of some species altogether;
- the presence of humans, domestic and feral animals has probably caused the displacement and loss of several species of fauna; and

- the absence of fire that would have been a key factor in native plant regeneration has probably caused a change in forest structure.
- dumping of garden rubbish from adjacent properties both historically and ongoing has lead to weed infestations.
- disturbance has been caused through clearing of a sewerage easement (fenced) which carries Sydney Water's pipes. An overstorey of native plants has now re-established itself through much of the easement's length.

3.3 Existing Urbanisation

The prospect of increased residential development in the vicinity of Francis Avenue and its associated catchment is limited by Council planning instruments, including:

- Hunters Hill Council Local Environment Plan No.36; and

The area is well developed and other than specific renovations and improvements for single dwellings, extensive residential consolidation is unlikely.

Current use results in impacts in the form of pollution (litter, dogs and stormwater) and pressure on the natural elements of the Reserve. Stormwater from the minor developments may potentially cause pollution events, and the effects of accumulated pollutants and their escape in times of high flows may be an issue.

Table 1. Urban pressures and effects at Francis Avenue Reserve

Type of Pressure	Effect
Fragmentation (from tracks, etc)	Spreads weeds, soil compaction, erosion, rubbish dumping, damages flora/fauna
Clearing for development track	Fragments habitat and remnant bushland, erosion, sedimentation, weed invasion
Existing developments	Increased runoff, altered nutrient levels, weeds and feral/domestic animals
Urban runoff	Nutrients, heavy metals, pathogens, toxicants, sediment, weed propagules. Reduced oxygen levels result which affect fauna.
Fire (altered regimes)	Reduced species diversity, sclerophyllic plants die out and seeds do not germinate, leading to domination by mesophyllic plants.
Removal of bush materials (soil, plants, animals, etc)	Loss of habitat and biodiversity.
Herbicide use	Loss of non-target organisms, decreased biodiversity, pollution of waterways.
Lack of maintenance/management	Weed and feral animal proliferation, loss of biodiversity
Recreational use	Trampling of ecosystems, damage and erosion of tracks, introduction of weeds.
Unrestricted pets	Droppings contaminate water by increasing nutrients, plants trampled, native fauna/flora disturbed or attacked.
Foxes/cats	Predation on native fauna.
Chemicals (herbicides, pesticides and fertilisers)	Accumulation in food chain.
Aggressive native birds (territorial currawongs and minors)	Affects habitat availability for other species.
Fishing/collecting	Reduced abundance/biodiversity.

3.4 Stormwater Issues

- The provision of energy dissipation in the natural watercourse.
- Gross pollutant trap
- Silt control measures

4.0 WHAT ARE THE KEY OPPORTUNITIES?

4.1 Community Involvement and Participation

Community participation in this Plan of Management is one of its objectives. This is consistent with broader community interest, involvement and participation in Francis Street Reserve. The community has been very active in its desire and actions to protect the features of the Reserve. See the development of the reserve including the development of constructed pedestrian links, in particular the provision of the Tiree Avenue – St. Malo Avenue link has been of concern.

As part of the community consultation strategy, a community meeting was held at Council Chambers in February 2000 to consider the development of pedestrian linkage.

Strong representation was made and a unanimous vote made on the provision of the linkage from Tiree Avenue to St. Malo Avenue.

- Consultation has been made with Hunters Hill Bushcare Group who place a high value on the remnant bushland.

4.2 Active Recreation Opportunities

The question of establishing walking tracks in the reserve is limited by the following constraints:

1. The need to preserve the existing significant area of bushland on the eastern area of the reserve.
2. The topography of the reserve.

Possible desired lines in the reserve are:

LINKAGE	IMPACT
Francis Street to St. Malo Avenue	Open access, reasonable grades – steps required on one embankment.
St. Malo Avenue to waterfront	Access dependant on steps over rock ledge. Adverse impact on bushland system. Adverse impact on natural visual qualities from waterfront.
St. Malo Avenue to Tiree Avenue	Steeply graded. Set of steps required. Provision of steps is condition of development consent.
See drawings of proposal enclosed	
Tiree Avenue to St. Malo.	Corridor of land not available to east of reserve. Adverse impact on remnant bushland.

4.3 Active Recreation Issues

Management of the Site

Although not large, this reserve forms an important corridor link along the Parramatta River to Kellys Bush, through the Horse Paddock and on to Clarkes Point Reserve. There are still many plant species present at the site and despite neglect, species diversity appears to have been only slightly impaired, although some species numbers are in decline.

Given the resilience of other bushland reserves in the area which have suffered from similar neglect, should funding become available to implement a management regime including weed clearance using recognised bush regeneration techniques, the health and viability of the remnant could be improved. A burning regime would also need to be reintroduced to the site, pile burns would be the most appropriate form of fire for a reserve of this size. Any fire activity would have to take into account the presence of *Leucopogon amplexicaulis* which tends to occur in damp areas that have not had fire, and so may require a fire exclusion zone.

The size of the remnant also makes it particularly important that no further disturbance or fragmentation take place, as this could impact on its future viability. It is therefore important to limit any paths or tracks. If access is required it should not be through the good core vegetation, but be directed well away through weedy edges only. Siting of any paths would need to be undertaken in conjunction with the Council's Bushland Management Officer. Further to this, the construction of any track should take into account drainage disturbance (off the track) and should be sympathetically constructed. Any tracks should be constructed to have the least impact on the site, i.e. boardwalks. Failing this, only material indigenous to the reserve such as sandstone or wood mulch should form the basis for the track - no blue metal or concrete should be used.

Residents abutting the reserve should be encouraged not to use invasive plant species in their gardens and to plant species indigenous to the reserve to form a buffer edge, thus lessening the impacts of upslope development. Further, residents should be encouraged to form a bushcare group to help protect, maintain and enhance the remnant vegetation in the reserve.

Any new or additional development on public or private land should ensure that natural watercourses are not disturbed and that stormwater drainage into the reserve is not increased. It should be ensured that the nutrient load carried by the stormwater is reduced prior to the water being released downslope either into the reserve or the Parramatta River.

Native Plant Species List for Francis Street Reserve

Recorded 1989 by National Trust (NSW)

TREES & SHRUBS

<i>Acacia suaveolens</i>	Sweet-scented Wattle
<i>Acacia terminalis</i>	Sunshine Wattle
<i>Allocasuarina littoralis</i>	Black She-Oak
<i>Banksia integrifolia</i>	Coast Banksia
<i>Crocea saligna</i>	
<i>Dillwynia retorta</i>	Heathy Parrot Pea
<i>Dodonaea triquetra</i>	Hop Bush
<i>Epacris longiflora</i>	Native Fuschia
<i>Eucalyptus gummifera</i>	Red Bloodwood
<i>Eucalyptus resinifera</i>	Red Mahogany
<i>Ficus rubiginosa</i>	Port Jackson Fig
<i>Glochidion ferdinadi</i>	Cheese Tree
<i>Grevillea sericea</i>	Pink Spider Flower
<i>Hakea dactyloides</i>	Broad-leaved Hakea
<i>Helichrysum diosmifolium</i>	Paper Daisy
<i>Kunzea ambigua</i>	Tick Bush
<i>Lasiopetalum ferrugineum</i>	Rusty Petals
<i>Leucopogon amplexicaule</i>	
<i>Omalanthus populifolius</i>	Bleeding Heart
<i>Pimelea linifolia</i>	Rice Flower
<i>Pittosporum undulatum</i>	Sweet Pittosporum
<i>Polyscias sambucifolius</i>	Elderberry Panax
<i>Pultenaea daphnoides</i>	Bush Pea
<i>Rapanea variabilis</i>	Muttonwood
<i>Syncarpia glomulifera</i>	Turpentine
<i>Viminaria juncea</i>	Golden Spray

FERNS, HERBS, GRASSES ETC.

<i>Culcita dubia</i>	Soft Bracken
<i>Cyathea cooperi</i>	Straw Treefern
<i>Gleichenia dicarpa</i>	Coral Fern
<i>Historopsis incisa</i>	Batswing Fern
<i>Dianella caerulea</i>	Blue Flax Lily
<i>Euphorbia peplus</i>	
<i>Gnaphalium purpureum</i>	Cudweed
<i>Gonocarpus tetragynus</i>	Poverty Raspwort
<i>Juncus sp.</i>	
<i>Lomandra longifolia</i>	Mat Rush
<i>Opercularia aspera</i>	Thin Stink Weed
<i>Dichelachne micrantha</i>	Weeping Grass
<i>Entolasia marginata</i>	
<i>Themeda australis</i>	Kangaroo Grass

CLIMBERS

<i>Pandorea pandorana</i>	Wonga-Wonga Vine
<i>Hardenbergia violacea</i>	False Sarsaparilla
<i>Kennedia rubicunda</i>	Dusky Coral Pea
<i>Billardiera scandens</i>	Apple Berry
<i>Eustrephus latifolius</i>	Wombat Berry
<i>Smilax glycyphylla</i>	Native Sarsaparilla