

# **BROWNHILL RESERVE MANAGEMENT PLAN**



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# **BROWNHILL RESERVE MANAGEMENT PLAN.**

## **1. RESERVE IDENTIFICATION**

Reserve Name: Brownhill Reserve

Local Government Area: Mitcham

Title Identification: F150971/16

Size: 30.21 hectares

### **Location**

The Brownhill Reserve is situated at the southern end of Carrick Hill Drive and adjoins the Council property of McElligotts Reserve to the west, Carrick Hill Estate to the north and private land to the east and south.

### **Access**

Access to the Reserve is via an existing unmade section of Blythewood Road that runs off Carrick Hill Drive and connects with a small section of the Reserve. This track will take vehicle traffic up to the Trig Point and beyond into private property. The main track is from Carrick Hill Drive and can be accessible to vehicles and pedestrians, but at present two padlocked gates close it.



There are several walking tracks that run across this land:

- One from Carrick Hill to the Trig Point at the top of the property;
- Another from the Brownhill Creek Reserve to the Trig Point; and
- Another trail from Oakdene Reserve which also enters onto the Brownhill Reserve.

There is a major down-hill bike track on the southern side of the Reserve running into Brownhill Creek Reserve.

## 2. BACKGROUND, HISTORY & STATUS OF RESERVE.

In 1998, following some intense lobbying by community groups to save this part of the Hills Face area, Council purchased Brownhill Reserve with the assistance of both the State Government through its MOSS scheme and the Carrick Hill Foundation.

Records from the first settlers indicate that Brownhill has always been a bare hill and was used as a marker for the early settlers.

It is believed that the Aborigines used to burn this hill to encourage grasses rather than trees to grow, and allow for easy hunting of native animals.

The South Australian Company, the organisation behind the settlement of this English Colony, recognised the agricultural suitability of the valley to the south of the Brownhill Reserve through which flowed Brownhill Creek.

The land was surveyed eastwards from Mitcham Village and was laid out in 1840. In 1848 John Grainger received a land grant consisting of section 1094 of 245 acres. Since that time there have been many land holders of the area (refer Appendix 1). In 1950 this parcel of land was acquired by the Commonwealth Government for a telecommunications tower at its highest Point.

## 3. RESERVE DESCRIPTION



### 3.1 Topography / Land Form

Gentle east-west running slope from Carrick Hill drive to the Trig Point with steep slopes to the North and South. Small drainage lines are obvious on both slopes. (A contour map is included as Appendix 2)

### 3.2 Soils

Soils appear to be skeletal, having been heavily grazed and eroded over the years. In many areas there are examples of rock formations coming to the surface and these are obvious in the drainage areas.

### 3.3 Rainfall

No accurate figures are available, but it is estimated that it would be similar to Randall Park at 700mm per year.

### 3.4 Vegetation

#### 3.4.1 General Description



The native vegetation on Brownhill Reserve is very sparse. The past history including heavy grazing and pasture management has seen the overstorey and much of the native understorey disappear, with the exceptions of a small section of approx 20 *Eucalyptus microcarpa* on the Northern slope in one of the drainage areas.



These trees are significant in size and possibly represent the last of the overstorey in this area.

There are some scattered native trees (*Eucalyptus leucoxylon* and *Eucalyptus camaldulensis*) on the southern slope. These trees are not very well established and would possibly have grown over the last 15 years.

There is no evidence of any other native understorey vegetation on the site apart from some native grasses that include *Themeda triandra* (Kangaroo grass), *Stipa nodosa* (Spear grass), *Stipa scabra* (slender spear grass) and *Danthonia setacea* (Bristly Wallaby grass).

It has been suggested that the steeper rocky outcrops on the southern side and the northern side may reveal some understorey native vegetation.

This is based on the premise that these areas are very steep and are less likely to have been grazed.

### 3.4.2 Plant Species Richness

There is some native vegetation on this site at present, although it is sparse and appears to be in poor condition.

Overgrazing for many years has seen a decline in many species of native vegetation and an increase in weed species.

### **3.4.3 Significant Flora**

It is suggested that a detailed vegetation survey be undertaken on the site to establish the quality and quantity of native vegetation that has survived on this area, and to also prepare maps that clearly define the extent of native vegetation.

### **3.4.4 Significant Plant Communities.**

The Grey Box woodland plant association is considered as a priority (4) plant association in South Australia.

The value of the grey box woodland plant association cannot be emphasised enough as only approx two percent of the total area is retained in the Adelaide region.

There is some significant vegetation, particularly Grey Box woodland planting on Carrick Hill Estate and on the higher areas of the Waite Land.

The grassland that would have been on Brownhill is significant in that there are very few areas of open native grasslands obvious in the Hills Face area.

### **3.4.5 Condition of Native Vegetation**

The vegetation that has survived is competing against heavy infestations of woody weeds in amongst olives and hawthorns, and the grasses are competing against strong growing broad leaf weeds. These exotic plants are well established on the area.

If any of this existing native vegetation is to be preserved urgent action is required to reduce the spread of the exotic grasses and trees.

### **Fauna**

Nothing has been observed on the site. The Grey Box trees on the northern slope are sufficiently aged to have hollows and possibly some bird nesting areas.

Areas of olives that were cleared some years ago and left stacked on the reserve also would provide some native habitat.

It is suggested that a study be undertaken to establish a list of native fauna that is to be found on this reserve

## **4. RELATIONSHIPS TO OTHER VEGETATION.**

There are substantial stands of native vegetation on the northern side of the property within Carrick Hill and the Waite Land.

Most of this vegetation appears to be Grey Box woodland and would be an ideal seed source for any revegetation of this area.

The area to the south of Brownhill Creek is heavily infested with exotic vegetation and McElligotts Reserve is heavily infested with pines that have been established on the old quarry areas

### **5. RESERVE VALUES**

#### **Conservation Values**

While at present there is minimal conservation value in the vegetation, the area known as Brownhill has some significant links to the history of European settlement. Early settlers used the hill as a guide and reference point when navigating or traversing the area.

Mitcham Village was one of the first areas to be settled outside of the Adelaide region and the Brownhill land has a history associated with many early pioneers of the area.

### **6. ADJOINING LAND USES AND BOUNDARY TREATMENTS.**

The Carrick Hill land is at present associated with tourism in the Carrick Hill estate and house, landscaped gardens and art works. There is an area of 45 acres of native vegetation on which dedicated groups are working to preserve and enhance quality remnant vegetation.

The area is fenced with cyclone fencing with gates included in fence line. The area to the north-east of Brownhill is owned and controlled by the University of Adelaide Waite Campus. There are good sections of native vegetation and areas where introduced species have been cleared.

The western end of the Reserve adjoins McElligotts Reserve and the associated quarries in this area.

The quarry area is in need of fencing, especially where there are adjacent steep and sheer slopes of over 20 metres in height.

The remaining land has been grazed for many years as one property and there are no fences on the boundaries with the Brownhill area. On a recent tour of the area cattle were still seen to be grazing in this area.

### **7. RESERVE MANAGEMENT OBJECTIVES**

The management objectives are derived from the significant natural feature that is Brownhill, its history and its importance to the Adelaide community as a whole.

The following legislation and planning controls apply:

- Hills Face Zone objectives and principles apply to this area;
- A condition of the State Government subsidy is that the land will be recognised as a MOSS open space and cannot be used for any purpose other than open space without the joint consent of the Minister and Council; and
- Indigenous vegetation is subject to the native Vegetation Act 1991.

**Objectives**

- (1) To preserve the area known as Brownhill as a cleared focal point for the City of Adelaide.
- (2) To identify and protect the historic significance of this site.
- (3) To maintain a backdrop of the Brownhill grass area.
- (4) To maintain the area for use by the public for passive recreation and enjoyment of the natural surroundings.
- (5) To establish habitat values for the Reserve and to establish habitat linkage with other woodland areas and grassland areas.
- (6) To implement a comprehensive weed management strategy which promotes natural regeneration of the indigenous grassland plant communities which could be found in this area and the establishment of associated woodland areas.
- (7) To establish a grassland nursery on the area for future revegetation.

**8. MANAGEMENT ISSUES AND ACTIONS**

**Vegetation**

The area has a diversity of indigenous native vegetation that forms an important link to other large areas of Grey Box woodland ie The Waite Land, Carrick Hill and Brownhill creek area. It is important to preserve and enhance the local indigenous vegetation in this area.

**Actions**

- Conduct a vegetation survey of Brownhill land.
- Seek information on remnant vegetation on Carrick Hill Land and proposed land management plan.
- To seek information on remnant vegetation and management plan for the Waite land.
- To ensure that the management of Brownhill vegetation will enhance the existing vegetation.

**Recreation**

The land is currently used by walkers and mountain bike riders. The challenge is to protect the area from possible erosion and further weed infestations while ensuring that any recreational activities on the area have a minimal impact.

**Actions**

- Conduct a survey and clearly mark the area boundaries;
- Properly signpost walking trails;
- All bike trails to be designated use only;
- Minimise erosion potential on trails
- Restrict vehicle access to the site.
- Ensure that there is adequate pedestrian access provided alongside existing locked gates

**Removal of exotic vegetation**

It is recognised that there are substantial infestations of exotic woody weeds and grasses on this area.

**Actions:**

- Identification of exotic weeds and grasses as part of the vegetation survey
- Removal of Identified woody weeds on a priority basis using minimal disturbance techniques;
- Disposal of all woody weed material from the site by either burning on site (over winter) or mulching and removing from the area
- Stumps to be poisoned;
- Follow up work on the regrowth in the area for at least ten years after initial clearing.
- Clearing may have to be spread over a number of years due to cost constraints and issues regarding soil stability;
- Removal of adjoining weeds source ie pines from McElligotts Reserve;
- Chemical control of the grass type weeds suggests that a small area be treated and planted to native grasses (nursery area).
- Only the area that can successfully be regenerated in a season be cleared in order to minimise any potential erosion problems.

**Planting Native Vegetation**

**Actions:**

- Information gathered in the vegetation survey be used as a basis for identifying potential seed source for this area
- Seed collection be undertaken, carefully labelled and made available to growers
- Vegetation should include not only Eucalypts but the range of native trees and understorey plants found in this area;
- A small grass nursery area should be established on the site with seed collected from local provenance plants;
- This nursery to provide a range of native grasses and understorey plants that can be replanted in this area;

*Note: It is important to maintain the stability of the soil in the area and reduce the exotic grasses while encouraging the native grasses.*

### Fire Control

It is important to recognise the fire potential of this area and as such develop appropriate firebreaks by slashing grasses in the later months of each year.

It should also be noted that over the years on the northern area many olive trees have been pushed over and left in heaps.

While this provides some protection for some native birds it also adds to the heavy fuel load in this area with the potential to increase fire risk.

The potential fire risk is also compounded by the amount of exotic growth such as olives and pines that in a fire incidence can add heat and momentum to a fire.



#### Actions

- Olive trees removed prior to Council taking over reserve are to be burnt over the winter periods.
- As soon as possible exotic vegetation to be removed from site or at least cleared to minimise fire risks.
- Each year Council staff to establish fire breaks on the exiting access track up the centre of the reserve and also mow a large section around the trig point as a refuge area.
- The track from Carrick Hill Drive to be graded and maintained as access for fire vehicles.