# **Botany Greenhouse Capabilities**

## **Botany Greenhouse (S004)**

There are three bays, two of equal size and the third half the size of the others. The small bay has two benches with mist and heat beds. There is a potting area on the eastern end.

Temperature control in this greenhouse cannot be set for consistent temperatures. The maximum and minimum desired temperatures can be set and the heating and cooling systems will attempt to prevent these temperature settings being exceeded. The actual temperature will vary between the set temperatures depending on the ambient weather conditions.

Between September and March, shadecloth is positioned over the glasshouse. This helps to keep temperature maxima at desired levels.

In the winter months, particularly, many of the benches are in shade for much of the day.

There is rainwater available on tap.

### Heating

Gas powered under-floor heating is installed in all bays and the temperatures for each bay can be set independently.

## Cooling

Each large bay has two evaporative coolers, and the small bay one. These are not able to reduce the temperature below about 32 °C on hot summer days.

## Lighting

There is no artificial lighting available.

#### **Alarms**

The only alarm is one triggered by the failure of the gas boiler.

### **Benches**

There are two bench sizes. Those on the northern side of each bay are 1.75 m x 0.9 m  $(1.6 \text{ m}^2)$ ; those on the southern side are 2.0 m x 0.9 m  $(1.8 \text{ m}^2)$ .

The eastern bay has 6 benches with a total bench area of 9.8 m<sup>2</sup>.

## Mesocosm (S044)

There are three equal-sized zones and a potting area on the eastern end. Heating, cooling and lighting are all computer controlled with alarms to FMS and Safety and Security if temperatures fall below or exceed trigger settings. Only 'town' water is available.

### **Heating**

Heating is provided by individual fan-forced gas heaters in each zone. These are effective in maintaining a minimum temperature.

## Cooling

Individual evaporative coolers cool each zone. On hot summer days these limit the temperature to about 32 °C regardless of the maximum temperature set.

## Lighting

Zones 1 and 2 have supplementary lighting.

### **Benches**

Side rows: 4 benches 1.9 m x 0.9 m (6.8 m<sup>2</sup>)

Centre rows: 3 benches 1.9 m x 1.1 m (6.27 m<sup>2</sup>)

## Shadehouse

The dimensions of the shadehouse are  $8.4~m\times4.8~m$ . It is covered with 50% shadecloth. The bench arrangement is flexible.

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