



## Report on BPG's DRJ Planting for 2008 as of 26-Apr-09

### **INTRODUCTION**

BPG applied for an allotment of 100 DRJs (Dieback Resistant Jarrah). Alcoa confirmed BPG would get a flat (42). The 12-Jul-08 Dieback Combat Day launch and DRJ distribution was cancelled. The DRJs were made available Friday 18-Jul-08 and a BPG volunteer picked up the allotment. Another Bassendean community group, SHAG (Success Hill Action Group) applied for 50. SHAG found they were unable to carry through with the commitment for all but 7 and BPG inherited the remaining 35 of their allotment.

### **SUMMARY**

BPG planted their allotment of 42 DRJs with the additional 35 inherited from SHAG. The 77 DRJs were planted along with 100 mixed *Banksia attenuata* and *grandis* on Sunday 20-Jul-08 at Broadway Arboretum in Bassendean. This site was targeted at the request and with the assistance of the TofB (Town of Bassendean).

The site soil is grey Bassendean Sands with some buried masonry rubble. Soil moisture was adequate on planting day and follow up rains occurred within three days.

Over the next month and a half, BPG volunteers installed tree guards, moisture retention crystals, and a layer of at least 50mm of recycled garden mulch around all plants. BPG volunteers applied 1/3 teaspoon of slow-release native fertilizer to the DRJs only. The plants thrived until late December, with many already growing out of the tops of the tree guards. Attrition started after December when the drying wind conditions and hot temperatures hit.

Town of Bassendean workers attempted to hand water several times over the summer but their efforts were hindered by bore failures, a water tanker chassis change at the height of summer and staffing shortages.

The DRJ survival rate as of the date of this report to date is 1%.

### **PROJECT DETAILS**

#### **Preparation Prior to the Planting**

The TofB Parks and Gardens Supervisor offered assistance in the form of weed control spraying several weeks prior to the planting date, tree guards and stakes, water retention crystals, and the loan of a pair of Pottiputki planters. TofB also offered a selection of *Banksia* seedlings for companion planting to the DRJs. BPG elected to plant 50 *attenuata* and 50 *grandis*.

#### **Planting Day: Sunday 20-Jul-08**

A representative from TofB Parks and Gardens attended the planting day to discuss ideas on how the planting should be laid out to facilitate the first summer watering and ongoing maintenance.

11 BPG volunteers planted BPG's allotment of 42 DRJs, SHAG's allotment of 35 DRJs, 50 *Banksia attenuata* and 50 *Banksia grandis*. Tree guards were installed on most of the DRJs and some of the *Banksia*'s. Details of the day are:

**Weather conditions:** Low for the day was 1.7°C, high was predicted to be 16°C. The most recent rain was Friday 18-Jul-08. The next rain arrived at noon Wednesday 23-Jul-08, with a reported 14mm in the gauge presumably at the local measuring station at the airport.

**Soil:** Light grey Bassendean sands with the top strata darkened by accumulated leaf litter over the years. The soil contained some building rubble such as old brick pieces and small chunks of concrete, but there didn't appear to be pockets of yellow brickie's sand or other mismatched soil as is often the case when uncontrolled fill is brought in to a site. The soil was damp to a depth of at least 250mm from recent rains.

**Site Description:** The terrain is gently sloping. The location is at the east end of Broadway Arboretum in Bassendean off the corner of Troy & Scaddan Streets on a new cul-de-sac called Centenary Court. The site is infested with Caltrop that flattened the tires of BPG's four-wheel garden cart and all of the volunteer's wheelbarrows. The site has never been mapped for dieback.

**Planting Process:** DRJs were planted with the TofB loaner Pottiputkis and BPG's Hamilton tree planters. The BPG Planting Coordinator did not receive the written instructions sheet for the DRJs until later in the morning. As a result some of the early DRJs were planted without tearing off the bottom of the peat pots. The DRJ's were not soaked in accordance with the instructions, but were heavily watered prior to planting per normal practice and the root balls were saturated.

#### **First Follow-up Day: Sunday 17-Aug-08**

TofB donated a couple of front-end loader scoops of recycled garden mulch and a bag of soil water retention crystals. BPG purchased Polycote Native 9-Month Release fertilizer as recommended by the instruction sheet for the DRJs. 9 BPG volunteers spread the mulch, installed the water retention crystals and distributed the fertilizer according to the instruction sheet used on the day. Figure 6 refers. Tree guard installations continued.

#### **Second Follow-up Day: Sunday 31-Aug-08**

TofB provided two more front-end loader scoops of recycled garden mulch. 10 BPG volunteers spread the mulch around the seedlings and installed the soil water retention crystals. Training was provided on installation of tree guards.

#### **Third Follow-up Day: Sunday 14-Sep-08**

TofB provided what appeared to be as many as eight more front-end loader scoops of recycled garden mulch. 11 BPG volunteers finished spreading recycled garden mulch around the seedlings and completed installing the soil water retention crystals and tree guards.

At the completion of the project, every plant had a tree guard, 50mm thick or more layer of mulch, a teaspoon of soil water retention crystals and each DRJ had 1/3 teaspoon of slow release native fertilizer.

#### **13-Dec-08 Update**

Virtually 100% survival to this point. Some plants are starting to emerge from the tops of the tree guards. Figure 1 refers.

### 23-Jan-09 Update

At this point at least 10% of the DRJs were still alive. Most of the *Banksia attenuatas* and *grandis* had survived so far. The *Caltrop* is recovering rapidly from the spray program. Figures 2, 3 and 4 refer.

### 26-Apr-09 Update

*Caltrop* is thriving, along with Tobacco Tree, and Mexican Tea. Figure 5 shows the last surviving DRJ.

#### Survival Summary

- DRJ's: 1 out of 77 or 1% survival
- *Banksia attenuata*: 17 out of 50 or 34% survival
- *Banksia grandis*: 0 out of 50 or 0% survival

#### **LEARNINGS/SUGGESTIONS:**

- .pdf the DRJ instructions and email them prior to planting. This will ensure that any pre-planting requirements are known well in advance of arrival of the plants.
- The initial mailing stated that the fertilizer would be provided. Clarify upfront so the volunteer group can have the fertilizer on hand.
- Release the plants as early as possible to give them the strongest chance of survival. Late July was probably too late to be planting at the Broadway Arboretum site.
- Unless the summer is particularly wet, some watering appears to be required for the plants to survive. BPG is investigating low-cost reliable methods of watering for the first year's critical period from January thru March.



**Figure 1 – Broadway Arboretum Planting site in December. Plants are growing well.**



**Figure 2 – View from centre of planting area looking west. Caltrop is coming back.**



**Figure 3 – View from centre of planting area looking south.**



**Figure 4 – Alive in January, but stressed. Dead by late April.**



**Figure 5 – The sole survivor as of late April. Caltrop everywhere you look.**

