

Addendum to the final report on the delivery of Stage 1 of the Kangaroo Island *Eucalyptus globulus* wildling eradication strategy

Report to the Kangaroo Island Landscape Board

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May 2026



1. Introduction

This report is an addendum to the stage 1 final report completed in February 2026 (Taylor 2026). It documents the findings from: a) additional surveys of *E. globulus* wildling mortality resulting from the direct injection of herbicide (completed in April 2026), and b) observations of the effort required to treat wildlings resprouting after mechanical treatment (completed in March 2026).

2. The effectiveness of direct injection of herbicide

2.1 Methods

The effect of three different herbicides on wildling mortality were trialled at five sites (H13, H14, H19, H33 and H38) in accordance with the methods outlined in the management plan for stage 1 of the Kangaroo Island (KI) *E. globulus* wildling eradication strategy (KILB 2025). Under these methods four transects were established at each site and five wildlings (each >40 mm diameter at breast height and spaced > 5 m apart) were tagged along each transect (Figure 1). Treatment of these wildlings involved:

- Transect A – Direct injection of Di-bak capsules (active ingredient 700g/kg glyphosate) into the base of each wildling using a specialised Di-bak applicator as per manufacturer’s instructions (1 capsule every 100 mm around the base – typically 2 to 4 capsules per wildling).
- Transect B – Direct injection of the herbicide Roundup (active ingredient 540g/L glyphosate) mixed with water at the ratio of 1:5, into drill holes at the base of the stem of wildlings as per standard drill and fill methodology (1 drill hole every 100 to 150 mm around the base – typically 2 to 3 drill holes per wildling).
- Transect C – Direct injection of the herbicide Method (active ingredient aminocyclopyrachlor) into drill holes in the stem of wildlings at breast height as per manufacturer’s instructions (1 drill hole for every 50 mm diameter at breast height - typically 1 to 2 drill holes per wildling).
- Transect D – Control (no treatment)

Treatment of transects A and B were completed on the 16th of October 2025, while treatment of transect C was undertaken on the 28th of October 2025. Wildling mortality at each of the five treatment sites was surveyed on the 23rd of April 2026 (approximately 6 months post-treatment). The mortality of wildlings was assessed by cutting the stem at breast height and checking for the presence of live wood.

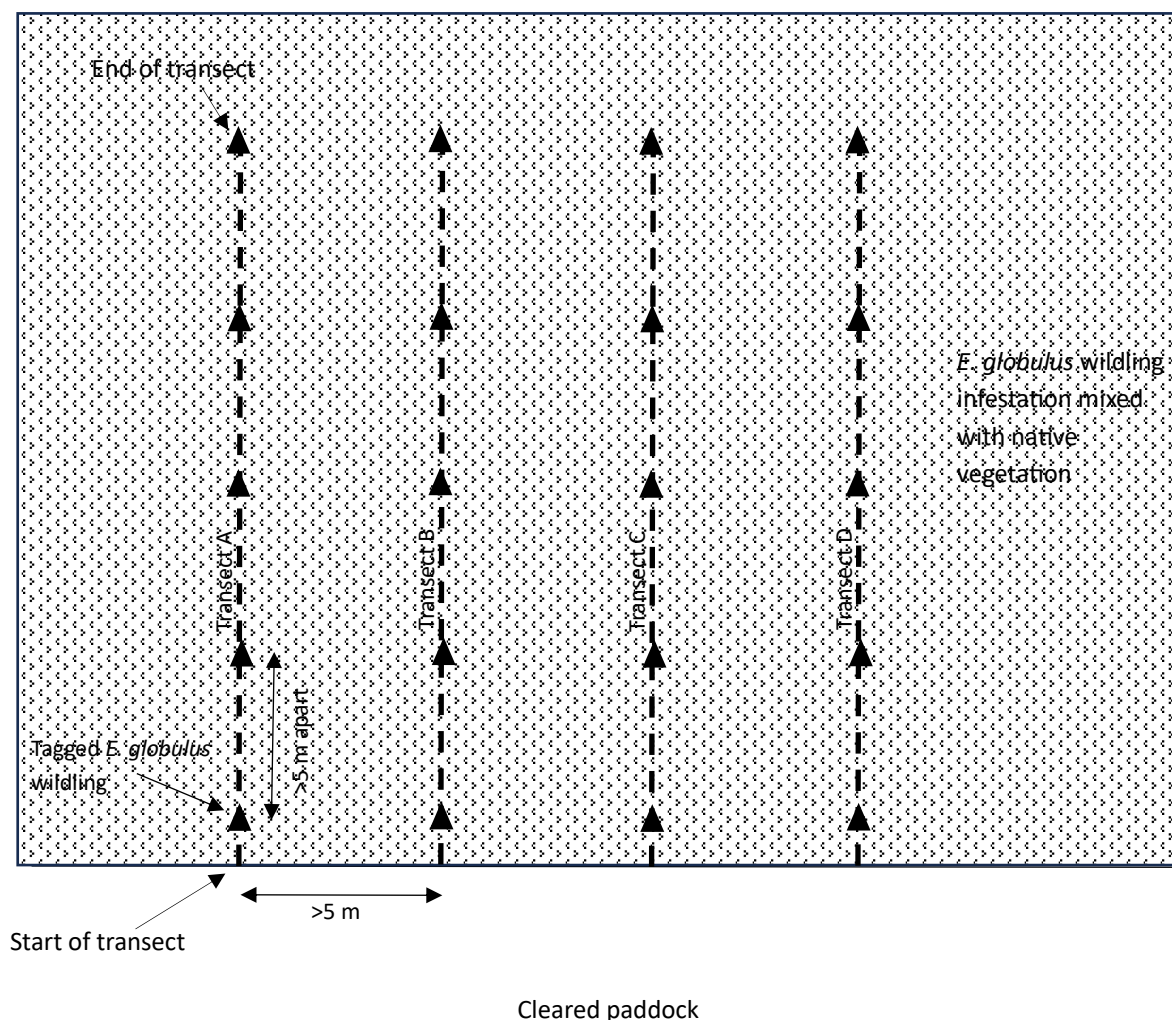


Figure 1. Layout of herbicide treatment transects at sites H13, H14, H19, H33 and H38 at the MacGill North trail site.

2.2 Results

Complete mortality of wildlings was observed on Transect C (direct injection of Method) at all five sites (Figure 2). High mortality was also recorded on Transects A and B (Di-bak and Roundup treatments) with the number of wildlings dying averaging 88% and 92% respectively across all sites. Wildlings still found to be alive on these transects were

observed to be showing heavy signs of stress, including complete canopy dieback and a significant proportion of dead stem wood at breast height and it is highly possible that these individuals may die in the coming months. No wildling mortality was observed along Transect D (control) at all five sites.

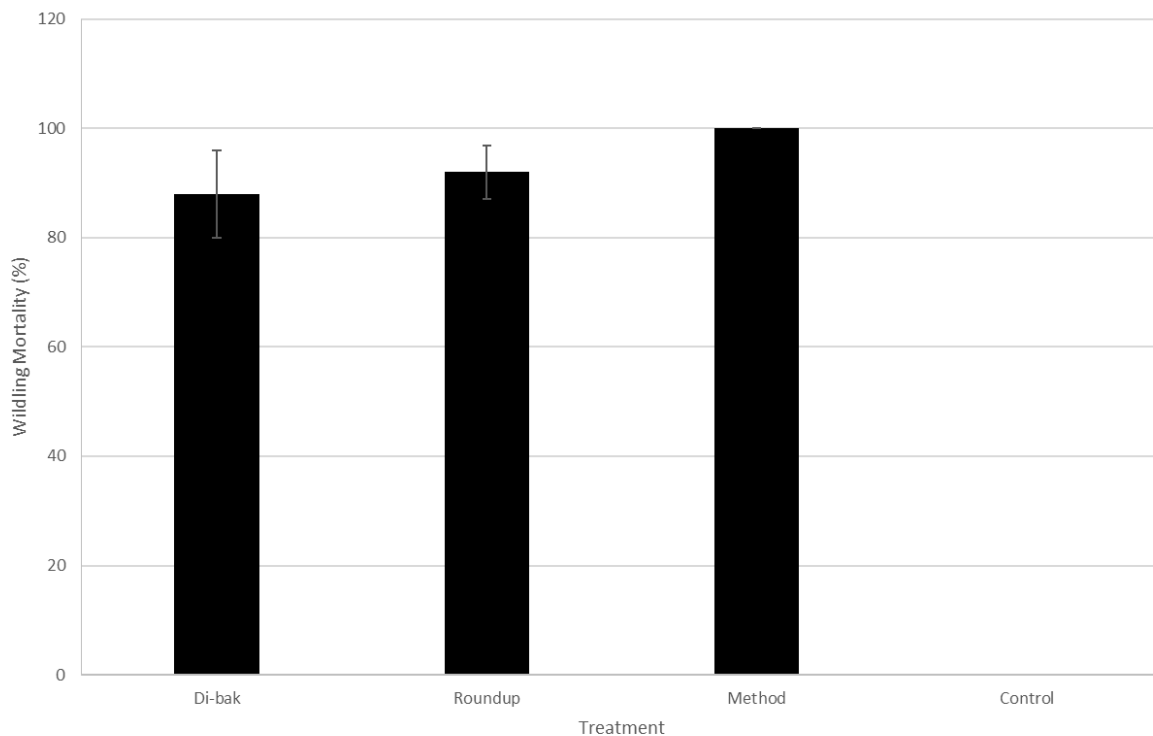


Figure 2. Average wildling mortality in response to three direct injection herbicide treatments measured approximately 6 months post treatment (+/- SEM).

3. Treatment of Resprouting Wildlings

3.1 Methods

A total of 12 segments that had been treated mechanically (either by forestry mulcher or by flail mower) in October 2025 were revisited and the foliage of resprouting wildlings sprayed by hand using a backpack sprayer during early March 2026 (Table 1). The herbicide mix consisted of herbicides and penetrants applied from a backpack at a ratio consisting of: glyphosate (200ml of Roundup containing 540g/L glyphosate), metsulfuron methyl (0.3 g), pulse penetrant (10 mL), envirodye (20 mL) and water (10L).

Both the amount of time needed to undertake this spraying and the amount of herbicide mix applied was recorded. The presence of previously untreated wildlings was also noted and these wildlings were also treated with herbicide.

3.2 Results

The average time taken for one person to apply herbicide to 100 m of interface containing resprouting wildlings following mechanical treatment was more than twice as long at high density sites (average 48.1 mins / 100 m) than at low density sites (average 20.9 mins/100 m) (Figure 3). The amount of herbicide applied at high density sites (average 7.7 L / 100 m) was also three times higher than the amount applied at low density sites (average 2.1 L/100 m) (Figure 4).

A number of wildlings that were missed during the initial treatments in October 2025 and not subject to either mechanical treatment or follow-up hand cutting and spraying were found during the process of treating resprouting wildlings in March 2026. The density of these missed wildlings appeared to be higher at low density wildling sites than at high density sites, although observations were highly variable between sites (Figure 5). These wildlings were treated with herbicide as part of the spraying process and the time taken to complete this control is included in the overall time for treating resprouting wildlings (Figure 3).

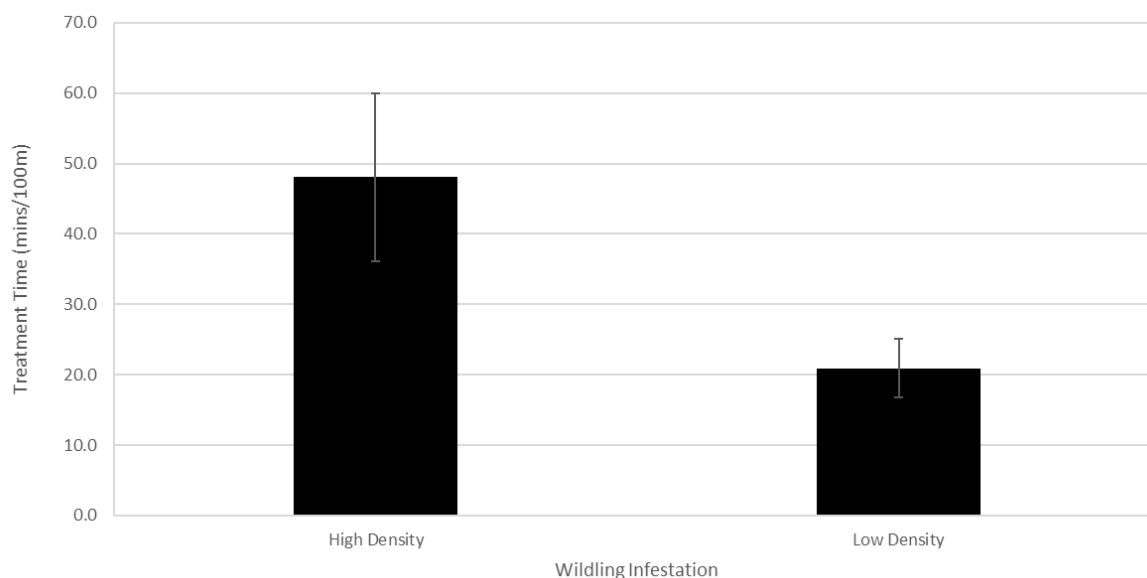


Figure 3. The average time taken to treat resprouting wildlings per 100 m of plantation interface at high and low wildling density sites during March 2026.

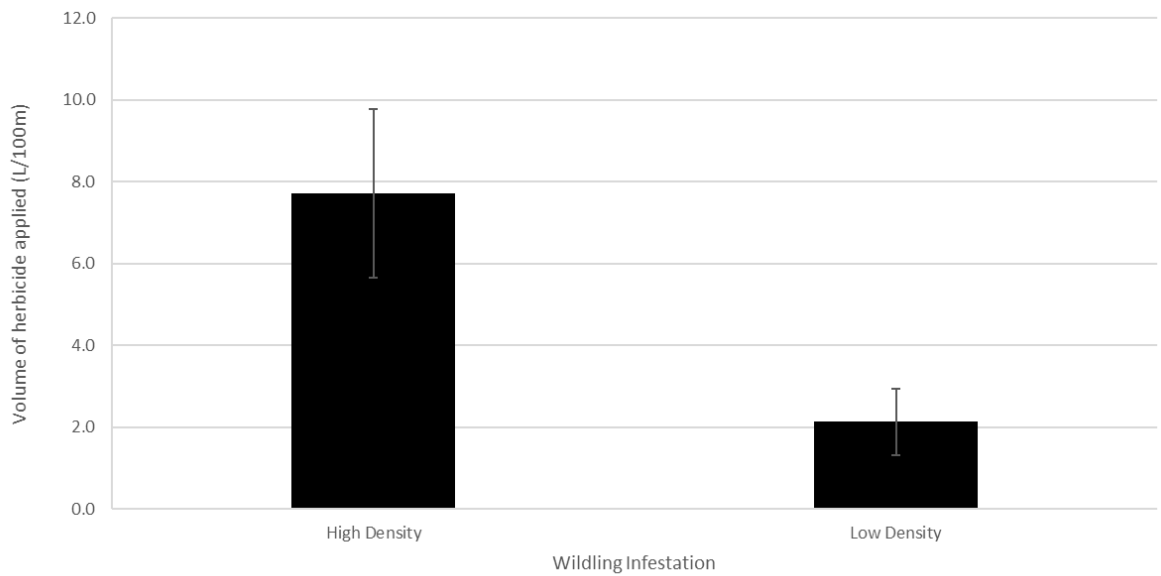


Figure 4. The average volume of herbicide applied to treat resprouting wildlings per 100 m of plantation interface at high and low wildling density sites during March 2026.

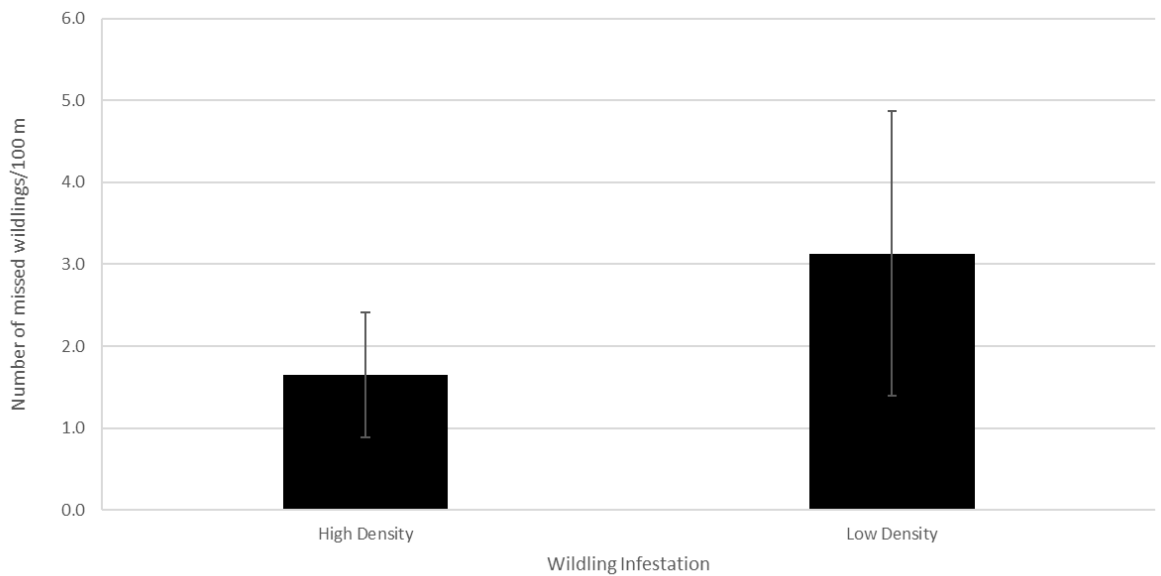


Figure 5. The number of previously untreated wildlings per 100 m of plantation interface found at high and low wildling density sites during March 2026.

Table 1. Segments of wildling infestation (primarily resprouting wildlings) at MacGill North subject to the tertiary treatment of herbicide spraying during March 2026 as part of Stage 1 of the KI *E. globulus* wildling eradication strategy.

Site	Density	Length (m)	Estimated Width (m)	Estimated Area (ha)	Primary Treatment (Oct 2025)	Secondary Treatment (Oct 2025)	Tertiary Treatment (Mar 2026)
H1a	High	188	15	0.3	Forestry Mulcher (DEW)	Hand Cutting and Spraying	Herbicide Spraying
H2	High	145	10	0.1	Forestry Mulcher (DEW)	Hand Cutting and Spraying	Herbicide Spraying
H5	High	69	15	0.1	Forestry Mulcher (DEW)	Hand Cutting and Spraying	Herbicide Spraying
H6	High	257	20	0.5	Forestry Mulcher (Correll)	Hand Cutting and Spraying	Herbicide Spraying
H9	High	161	10	0.2	Flail Mower (Morgan)	Hand Cutting and Spraying	Herbicide Spraying
H31a	High	55	20	0.1	Forestry Mulcher (Correll)	Hand Cutting and Spraying	Herbicide Spraying
H35	High	295	15	0.4	Forestry Mulcher (Correll)	Hand Cutting and Spraying	Herbicide Spraying
L28	Low	261	5	0.1	Forestry Mulcher (Correll)	Hand Cutting and Spraying	Herbicide Spraying
L29a	Low	707	10	0.7	Forestry Mulcher (Correll)	Hand Cutting and Spraying	Herbicide Spraying
L33	Low	301	10	0.3	Forestry Mulcher (Correll)	Hand Cutting and Spraying	Herbicide Spraying
L34a	Low	655	15	1.0	Forestry Mulcher (Correll)	Hand Cutting and Spraying	Herbicide Spraying
L36a	Low	527	10	0.5	Forestry Mulcher (Correll)	Hand Cutting and Spraying	Herbicide Spraying

4. Implications for Stage 2 of the KI *E. globulus* wildling eradication strategy

4.1 The effectiveness of direct injection of herbicide

Taylor (2026) recommended that the direct injection of the herbicide Method be considered for future control works pending further assessment of the effectiveness of this technique in killing wildlings and measurement of any off-target impacts. This survey found that 100% wildling mortality rates were achieved using Method. This finding suggests that the application of Method should be included in stage 2, pending:

- further assessments of the off-target impacts of this herbicide (currently planned for October 2026), and
- an additional survey of the treated wildlings 12 months post treatment (October 2026) to confirm that there has been no unexpected resprouting from the lignotuber.

4.2 Treatment of resprouting wildlings

This study measured the average time needed to treat wildlings resprouting following mechanical clearance at both high and low wildling density sites. These figures included the time taken to treat a small number previously untreated wildlings that were found in addition to the resprouting wildlings during the treatment process. The labour cost of treating these resprouting wildlings (calculated based on hourly rate figures in Taylor (2026)) (Table 2) should be integrated into the calculation of wildling treatment costs under stage 2. This study also measured the amount of herbicide required to treat resprouting wildlings and this cost should also be included in future budget estimates.

The discovery of previously untreated wildlings at mechanically treated sites demonstrates the requirement for repeated treatments before complete eradication of wildlings can be achieved.

Table 2. The average labour cost of spraying resprouting wildlings 6 months after machine works and untreated wildlings (missed during previous control works), per 100 m of plantation interface at high and low density wildling sites. Cost per hour sourced from Taylor (2026).

Herbicide Treatment	Treatment Duration (mins/100m)	Cost per hour	Cost/100m
High density sites (KILB), 1 person	48.1	\$84.51 ⁺	\$67.73
Low density sites (KILB), 1 person	20.9	\$84.51 ⁺	\$29.43

⁺Hourly rate based on figures in Taylor (2026) and includes wages, oncosts, vehicle costs and travel time.

References

- Kangaroo Island Landscape Board (2025) 'Management plan – Delivery of Stage 1 of the Kangaroo Island *Eucalyptus globulus* wildling eradication strategy.' (South Australian Government)
- Taylor D (2026) 'Delivery of Stage 1 of the Kangaroo Island Eucalyptus globulus wildling eradication strategy – Report to the Kangaroo Island Landscape Board.' (Taylor Ecology, Bathurst NSW)