

Controlling New Zealand pygmyweed *Crassula helmsii* in field ditches and a gravel pit by herbicide spraying at Dungeness RSPB Reserve, Kent, England

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SUMMARY

A programme was introduced to eradicate invasive New Zealand pygmyweed *Crassula helmsii* by Reglone herbicide treatment. In response, 70% of pygmyweed was killed. Follow up spraying of regrowth was partially successful but some re-growth is noticed annually.

BACKGROUND

New Zealand pygmyweed *Crassula helmsii* is an introduced plant species in the UK. It can be highly invasive and out-competes native plants on the margins of, and in, shallow standing water. *Crassula* was first found on Dungeness RSPB Reserve, (National Grid ref: TR 067185), southeast England, in 1998. It was found in two areas: along interconnected field ditches; and on the salty margins of a large, water-filled gravel pit. At the ditch site it occupied a limited area (less than 50 m²). On the gravel pit margins it was far more extensive covering an area of approximately 2000 m². A programme of herbicide treatment was introduced in 2001 in an attempt to eradicate it.

ACTION

Herbicide treatment in ditches: Attempts to control New Zealand pygmyweed *Crassula helmsii* in the field ditches began in late summer 2001. A contractor was employed to spray infested areas with herbicide using a knapsack sprayer. Reglone (a Diquat based chemical) was used to treat the *Crassula* in the

ditches. The Environment Agency (EA) stipulated that no more than 10 litres of Reglone should be used along approximately 300 m length of ditch. This spraying was carried out over two years, the main treatment in 2001 with a follow up in 2002. Spraying was undertaken in August/September.

Herbicide treatment around gravel pit margins: In 2004 the *Crassula* around the margin of the gravel pit was sprayed with glyphosate. The concentration of glyphosate used by the contractor is not known. Spraying was undertaken in August/September.

CONSEQUENCES

There was an estimated 70% kill in both the ditches and on the gravel pit margins after the first spraying. The follow up spraying of the ditches in 2002 was partially successful but some re-growth is noticed annually at both sites. Re-growth is thought to stem from some plants being missed during the spraying as it is very difficult to locate and make sure every bit of growth is hit by the herbicide.

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