

# Environmental Standard Operating Procedure 21

## Australian Swamp Stonecrop Control

Australian Swamp Stonecrop (*Crassula helmsii*) is an invasive non native species capable of spreading rapidly within waterbodies and marshes. During control works, it is important to ensure that colonisation to new areas is prevented and that no damage to species of conservation value occurs.

### Aim

To prevent Australian Swamp Stonecrop becoming dominant, out-competing native plants and prevent it spreading to new areas.

### Environmental Risk

Impact	Likelihood	Mitigation
Small fragments colonising new areas	High	All equipment and foot wear washed before leaving site. Use a fine mesh to prevent fragments escaping the works area when working in water
Danger of damaging non-target species of conservation value	High	Vegetation survey to be completed before works commence



### Delivery Method

- Glyphosate used on its own, will control the spread of the invasive but will not eradicate it
- Various control methods as follows:
  - Shade method
  - Burial method
  - Excavation
  - Flooding with salt water
  - Hot foam treatment
  - Treatment with glyphosate
- Choose the appropriate method based on the site and where the plant is growing (terrestrial, emergent, submerged). The shade/burial methods are the most effective and should always be considered first.

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### Standard Procedure

- Carry out a survey to identify if any species of conservation concern are growing in with the invasive species;
- The delivery will vary according to the method adopted.
- **Shade method:**
  - cover all growth for 6 months with an opaque material e.g. thick carpet or black polythene;
  - ensure the material is anchored appropriately with weights or pinned around the edge;
- **Burial method:**
  - cover all growth with an opaque material and cover with spoil to depth of at least 20cm.
- **Excavation** of small infestations is possible, as the plant is shallow rooted, with burial on a drier part of the site.
- **Treatment with glyphosate:**
  - Treat regularly with Glyphosate between March and October
  - Where rare/protected species occur, spot treat with herbicide (See ESOP 15)
- When *Crassula* occurs underwater use the shade method, or if possible lower water levels, allow to dry out, treat with glyphosate, cover with black polythene and bury.
- Ensure that all equipment and PPE is cleaned to avoid spreading between sites.

### Consultation Required

- **Environment Agency** – when glyphosate method is used in/near water contact EA and fill out a AqHerb01 form (Refer to ESOP 15)
- **Natural England** – Works within SSSI's

### Further Information

<http://www.norfolkbiodiversity.org/nonnativespecies/australianswamp.asp>  
[x](#)  
[http://www.ceh.ac.uk/sci\\_programmes/documents/AustralianSwampStonecrop.pdf](http://www.ceh.ac.uk/sci_programmes/documents/AustralianSwampStonecrop.pdf)