

**Wickhurst Green *Myriophyllum heterophyllum* (Various-leaved Water-milfoil) Management
Broadbridge Heath, Horsham, West Sussex
Countryside & AECOM Ltd**

BIG Biodiversity Challenge Award category: Maintenance & Management Award

Project overview

Wickhurst Green is a multi-use rural residential development in West Sussex.

Countryside and AECOM are working to enhance the ecological value of four great crested newt (*Triturus cristatus*) (GCN) mitigation ponds at Wickhurst Green, protecting the local environment by developing and implementing a comprehensive management strategy for *Myriophyllum heterophyllum*.

Myriophyllum heterophyllum is a high-impact transformer INNS. Although not currently controlled by UK or EU legislation, it is recognised as a serious threat. The record at the site is the first in the UK in recent years outside cultivation and there is currently no advice on how to deal with such an infestation.

Countryside has worked closely with AECOM to develop a management strategy that goes beyond the current normal business practice and presents a proactive approach to protecting, maintaining and enhancing the biodiversity value of the site, ensuring that this potentially highly invasive species does not spread.

What were the biodiversity conditions on site, prior to the enhancement?

Due to the diligence of an ecologist working on site, *Myriophyllum heterophyllum* was found in the GCN mitigation ponds on site. This area was designed and managed for biodiversity, including GCN. The conditions on site prior to management works were good, although other INNS species had also colonised the ponds.



Myriophyllum heterophyllum at the Wickhurst Green Site
(Clare Smith, AECOM Ltd)

Were there any specific conditions that led to you carrying out this work?

Removal of INNS is required by the site's GCN Licence Management Plan.

Crassula helmsii and *Elodea canadensis* (both listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended)), were also recorded on site. While *Myriophyllum heterophyllum* is not on the list of species of European Union concern (EU Invasive Alien Species Regulation 2015), a risk assessment has been submitted by EU Member States.

It was therefore important to act quickly to develop an effective and efficient management strategy to reduce the risk of spread - action which was commended by the Environment Agency, Natural England and Defra.

What were the biodiversity measures taken?

INNS specialists and ecologists from AECOM liaised with Countryside, the Environment Agency and Defra to develop an INNS Management Plan for the site – the first of its kind to consider *Myriophyllum heterophyllum* in the UK. The measures had to consider the presence of GCN and the requirement to safeguard and futureproof habitats of high ecological value.

Following a site assessment to determine the status of INNS on the GCN Receptor Site, a detailed method statement was drawn up for initial works to remove INNS, including *Myriophyllum heterophyllum*. Strict biosecurity protocols were followed to minimise the risk of spreading any INNS to the ecologically valuable habitats on and around the site.



Removal of Myriophyllum heterophyllum and other INNS at the Wickhurst Green Site (Clare Smith, AECOM Ltd)

The INNS Management Plan sets out the long term management for *Myriophyllum heterophyllum* and the other INNS at the site. It included regular surveillance and further management works to remove INNS from the ponds, as well as precautions to avoid the spread of INNS to or from the ponds in the future.

Appropriate management of INNS will facilitate ongoing colonisation by native species such as *Eleocharis acicularis* (needle spike-rush), a rare plant species recently recorded in the ponds on site.

What were the biodiversity measures taken? (Continued)

With Standing Fresh Water and GCN listed on the Sussex Biodiversity Action Plan (BAP), the project also has potential to contribute both towards the local BAP and provide a blueprint for the management of *Myriophyllum heterophyllum*, should it occur elsewhere in the UK.

This experience enabled AECOM to write a Technical Note on the management of this species for the Invasive Weed Control Group of the Property Care Association.

How would you best describe the project?

An enhancement - aimed at improving and futureproofing the biodiversity value of the area and reducing the chance of spread of a potentially serious INNS. A challenging project relying on the dedication and determination of the project team.

Further information

Control works to remove *Myriophyllum heterophyllum* (and other INNS) from two ponds took place in February 2016.

After careful research and consultation with colleagues in the Netherlands, where the plant is a serious problem, the control measures involved physical removal by careful hand-pulling, collecting fragments in a floating container, and removal from the pond to a tarpaulin. This was followed by raking of the pond base and netting to catch floating fragments, continuing until no more fragments were discovered.



Removal of *Myriophyllum heterophyllum* and other INNS at the Wickhurst Green Site (Mark Fennell, AECOM Ltd)

The removal was meticulous and took place under the supervision of an AECOM INNS specialist and an accredited agent on the GCN licence, who searched all the vegetation removed from the pond for amphibians.

The arisings were then stockpiled securely within tarpaulins. Where possible, vegetation suitable for GCN egg-laying (excluding any *Myriophyllum heterophyllum*) was left undisturbed.

This allowed desirable vegetation to flourish within the cleared pond and to maintain favourable habitat for GCN and other aquatic fauna in the longer term.

Multiple long-term benefits to biodiversity are anticipated as a result of clearing the pond of INNS vegetation, which had begun to choke it. Preventing the spread of INNS to the wider environment will prevent significant detriment to the surrounding environment including multiple water bodies, a river and a wet woodland. Removal of excess vegetation is beneficial to GCN and other native aquatic fauna and flora. Monitoring will allow the success of this first example of *Myriophyllum heterophyllum* control for the benefit of biodiversity in the UK to be evaluated.

What was your personal motivation for carrying out the enhancement?

Countryside wishes to be acknowledged as an industry leader in its approach to care of the environment, in the execution of its developments and in its working practices. Our objective is to ensure that development realises the desired financial returns whilst being delivered in an environmentally responsible and sustainable manner.



GCN Receptor Site Pond at the Wickhurst Green Site (Clare Smith, AECOM Ltd)