

1.1 Biodiversity Action Plan (BAP) Implementation

As part of the Danvm Drainage Commissioners Biodiversity Action Plan implementation, Bramwith Rands Pond and Tilts Bridge Pond were surveyed on 14th April by two ecologists.

1.2 BAP Action 21.3 – Undertake monitoring of Great Crested Newt population at Bramwith Rands

Great Crested Newt *Triturus cristatus* monitoring was undertaken at the pond which has previously held a breeding population of Great Crested Newts and which was subject to mitigation works in 2009. The monitoring involved conducting a Great Crested Newt survey at the pond, including visual checks, egg searching and refugia checks around the pond and within the adjacent habitat.

Evidence of Great Crested Newt egg laying was found on the submerged leaves of Water Mint *Mentha aquatica* within the pond margins, confirming presence of this species in the pond and breeding activity.



Figure 1: Pond at Bramwith Rands in which Great Crested Newts are present.

1.3 BAP Action 9.1 - Undertake quality surveys of ponds within the drainage district using appropriate standardised techniques

1.3.1 Methodology

A pond quality assessment based on the Big Pond Dip methodology was carried out at Tilts Bridge pond.

The Big Pond Dip invertebrate survey is a simple biological quality assessment which aims to assess the overall 'naturalness' of the ponds and is based on the methods used for the National Pond Survey and PSYM system.

The survey involves taking samples of the aquatic invertebrates. The assessment of the pond quality is then based on the assemblage of invertebrates collected in the samples, using a scoring system. The scoring method of the Big Pond Dip survey assigns high scores to invertebrates that are typically found within high quality waterbodies and are more sensitive to pollution. Table 1 shows the sensitivity and scores for each group of aquatic invertebrates that are included within the Big Pond Dip. The scores of each group present within the pond are added to give an overall score of the pond; the higher the score the better the pond (Table 2).

NOTE TO FILE

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Table 1: Invertebrate groups used for the Big Pond Dip

Group	Pond quality indication	Score
Caddis larvae	High	10
Alderfly larvae	High	10
Dragonfly larvae	High	10
Damselfly larvae	High	10
Water beetles (adult and larvae)	Medium	5
Water bugs (excluding pond skaters)	Medium	5
Pond skaters (adults or nymphs)	Medium	5
Mayfly larvae	Medium	5
Freshwater shrimps	Medium	5
Water slaters	Low	1
Water snails	Low	1
'Wiggles' (worms, fly larvae, leeches)	Low	1

Table 2: Interpretation of the Big Pond Dip score

Overall Score	Pond Quality Band
0-17	Low Quality
18-34	Moderate Quality
35-51	Good Quality
52-68	Excellent Quality

Tilts Bridge Pond was surveyed using a 'D' net and samples of invertebrates were taken at intervals along the southern bank. No samples were taken from the northern bank due to difficult access. Invertebrate identification was confirmed using Guide to Freshwater Invertebrates (Dobson et al. 2012). A list of invertebrate groups that were present within the pond, as shown in the above table, was compiled from the survey.

1.3.2 Results

Pond Description

There are two ponds that comprise Tilts Bridge pond, separated by an earth bank. At the time of the survey there was little floating vegetation present within the ponds, with only very small amounts of Yellow Water-lily *Nupha lutea* apparent in the eastern most pond. Also, invasive non-native water-weed *Elodea* sp. was found to be present. All *Elodea* species are listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).

The banksides are dominated by common ruderal species and there is an encroaching fringe of emergents including Reedmace *Typha latifolia*, Branched Bur-reed *Sparganium erectum* and Reed Sweet-grass *Glyceria maxima*. Some Common Reed *Phragmites australis* is also present. There is a small amount of Water Mint within the margin, however there is generally a poor abundance of broadleaved aquatics within the pond.

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Figure 2: View of Tilts Pond

Pond Quality

The following table provides the results of the invertebrate sampling.

Table 3: Invertebrate groups present within Tilts Pond

Group	Pond quality indication	Score
Caddis larvae	High	10
Dragonfly larvae	High	10
Pond skaters (adults or nymphs)	Medium	5
Water snails	Low	1
'Wiggles' (worms, fly larvae, leeches)	Low	1
Overall Score		27

The score of the pond falls within the Moderate quality band. The pond holds a good diversity of species and contained good numbers of dragonfly and caddis fly larvae which are sensitive to pollution and thus score highly.