

# Appendix 10.5a

## Great Crested Newt Surveys (2004)





Ecological & Wildlife  
Consultancy

**A8 CORRIDOR: BAILLIESTON TO NEWHOUSE  
&  
BOTHWELL PARK**

Amphibian Survey

**July 2004**

*For*

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## **SUMMARY**

Thirteen ponds were subject to amphibian survey, with the emphasis on Great Crested Newts, along the A8 Corridor, Baillieston to Newhouse, and Bothwell Park.

No great crested newts were found in any pond, and in general the habitat is sub-optimal for this species.

Frogs and toads were found in eight ponds, although three of these contained only tadpoles in the first phase survey in May (general pond assessment) with no further recording in July.

Small newt species larvae (Palmate/Smooth Newt) were located in five ponds, of which three also contained frogs or toads.

Ponds containing amphibians were grouped in three general areas.

- 1      Around the Eurocentral area to the east end of the A8 corridor under survey
- 2      Newhouse
- 3      Raith Junction

## 1.0 INTRODUCTION

This report was commissioned by Young Associates (Environmental Consultants) Ltd, Edinburgh with regard to an amphibian survey of 21 areas identified by Young Associates as containing ponds along the A8 corridor from Baillieston to Newhouse, North Lanarkshire, and Bothwell Park (Figure 1).

A first phase report was produced in May 2004. This reported on a walkover of the 21 sites to determine which were suitable as amphibian sites, in particular for Great Crested Newt (*Triturus cristatus*). Following the walkover it was determined that 13 of the original 21 ponds should be re-surveyed for amphibians. The remaining sites either no longer contained ponds or are only occasionally wet and were at the time of the survey not suitable for amphibians.

This report amalgamates the findings of the first and second phases of work.

## 2.0 LEGISLATION

Great Crested Newts (GCN) are listed on Annexes II and IV of the EC Habitats Directive and Appendix II of the Bern Convention. The species is protected under Schedule 2 of the Conservation (Natural Habitats etc) Regulations 1994, Regulation 38 and 39, and Schedule 5 of the Wildlife and Countryside Act 1981.

It is an offence except as permitted by the Regulations or the Act to:

- deliberately or intentionally kill, injure or take a GCN
- deliberately disturb a GCN
- deliberately take or destroy eggs of a GCN
- damage or destroy a breeding site or resting place or intentionally damage a place used for shelter and protection
- intentionally obstruct access to such a place
- keep, transport, sell, exchange or offer for sale or advertising.

Great Crested Newts have a Species Action Plan written for them within the UK Biodiversity Action Plan.

All amphibians are protected under Schedule 5 of the Wildlife and Countryside Act 1981 but only in relation to selling of the animals.

## 3.0 METHODOLOGIES

### 3.1 First Phase

In the Phase 1 assessment previously reported on, each pond area was visited by one surveyor who recorded:

- Habitat conditions
- Approximate size
- Estimate of depth
- Substrate and vegetation
- Observed presence of amphibians
- Observed presence of fish
- Observed presence of birds (species if seen or heard)
- Observed presence of other predators such as otter
- Condition relative to the likely presence of amphibians in particular Great Crested Newt
- Digital image of the pond
- Other observations as pertinent to the pond condition.



All recording was determined or estimated from the bankside. The surrounding pond margins limited the visibility and therefore observable features on some ponds as deep muds or heavy vegetation prevented access by a single surveyor.

All Grid References have been determined using a Garmin 12XL handheld GPS receiver.

### **3.2 Second Phase**

Survey work was undertaken in July 2004.

Two surveyors attended each pond site, carrying out appropriate search techniques for each pond. These included egg searching, pond netting, refuge searches, and torching. The method used for each pond is noted in Section 4.0 (Results).

The proximity of pond sites to each other and the use of two surveyors allowed for several visits to be made in one evening.

In total eight evenings were utilised (11, 13, 15, 18, 20, 22, 25, and 27 July), during survey periods varying between the times of 1600 hours at the earliest to 0040 hours.

### **3.3 Constraints**

None of the ponds were suitable for bottle trapping methods, and pond netting was problematic in some areas because of the restrictions on access through surrounding vegetation or thick silts.

Access was denied to ponds 9 and 11 in the Chungwha compound after the first visits.

Pond 10 contained an unknown substance and survey was terminated on health and safety grounds.

Pond 19 was considered to be too dangerous to undertake further survey due to extensive deep muds.

## **5.1 RESULTS**

### **5.2 Summary of Results**

Table 1 on the following page lists each pond, features that were observable during the first phase walkover, and the findings of the second phase survey work.

Following Table 1 a fuller description of each pond site is given, starting with the 13 sites subject to full amphibian survey. For consistency the same pond numbers have been used in this report as in the first phase report, hence Section 4.2 describes ponds 6, 8-12, 14-18, 20 and 21, with the remaining ponds described in Section 4.3 as per their first phase assessment.

An excel spreadsheet is attached to the end of this report which summarises the results of the 2 surveys.

Additional to this report, a report by Heritage Environmental for the Douglas Support Estate (Osborn et al 2003), discusses 16 ponds and 1 ditch located around Crowflat Wood south of the A8. Common frog, common toad, smooth and palmate newts were found. No great crested newts were located.

**Table1: Survey Results**

<b>Pond No.</b>	<b>Grid Ref (NS)</b>	<b>Approx Size</b>	<b>Approx Depth</b>	<b>Substrate</b>	<b>Vegetation</b>	<b>Amphibians</b>	<b>Fish</b>	<b>Birds</b>	<b>Otter</b>	<b>GCN Present</b>
1	700 633 (YA Ref: NS 701 634)	Not present								
2	700 657 (YA Ref: NS 691 657)	4 x 3m	20cm	Silt/mud	None	None	None	None	None	No
3	702 629 (YA Ref: NS 703 630)	Pool not present								
4	711 629 (YA Ref: NS 712 630)	Pool not Present								
5	720 618	Temporary pool - water held below ground								
6	751 624	80 x 40m	-	Silt/mud	Submerged/floating	None recorded	Yes	Mute swans, coot, moorhen	-	No
7	752 620	2 x 1m	8cm	Mud	None	None	None	None	None	No
8	753 625	8 x 5m	20cm	Silt/mud	Submerged/floating	Palmate/Smooth newt larvae, frog tadpoles, young toads		Yes	-	No
9	758 620	20 x 15m	1m	Mud	Floating	Palmate/Smooth newts	None	None	None	No
10	760 624	50 x 4m	40cm	Mud/earth	Submerged	None	None	None	None	No
11	764 615	30 x 20m	-	unknown	Floating	Palmate/Smooth newts, frogs	None	Yes	-	No
12	770 612	1 x 1m	10cm	Mud	Submerged	Palmate/Smooth newt, frogs, toads	None	None	None	No
13	774 620	Pool not present								
14	789 621	10 x 7m	25cm	Mud	Submerged/floating	Tadpoles – frogs, toads	None	None	None	No
15	794 616	30 x 8m	1.5m	Silt/mud	Submerged	Tadpoles - toad	None	Yes	None	No
<b>Raith Junction</b>										
16	710 584	2 x 1m	10cm	Mud	None	Toad tadpoles	None	None	None	No
17	711 588	15 x 12m	-	Silt/mud	Submerged/floating	Palmate/smooth newt larvae, toads & frogs	Three-spined stickleback	Yes	-	No
18	712 586	20 x 3m	25cm	Silt/mud	Submerged	None	Three-spined stickleback	-	-	No
19	713 578	30 x 10m	-	Silt/mud	None	Not accessible		Yes		No
20	714 591	2 x 2m	20cm	Silt/mud	Submerged	Tadpoles – toad and frog	None	Yes	-	No
21	716 589	60 x 35m	-	Silt/mud	Submerged	Tadpole and young toad	Yes	Mute swans, coot, moorhen	-	No

Red – Ponds subject to amphibian survey in the Second Phase.

### 5.3 Second Phase Ponds Subject to Amphibian Survey

#### Pond 6: NS751624

Orchard Farm Pool – Nature Reserve (Clyde Calders Project).

Survey Dates: 11, 18, 25 July  
 Weather Conditions: Dry, bright and warm  
 Method of Survey: Egg search, netting and refuge searches.  
 Amphibians: No amphibians were recorded

This is a large open body of water. A good habitat for birds – mute swan (known to be breeding), coot (known to be breeding), moorhen (known to be breeding), mallard, heron and a range of other species. Habitat conditions include swamp and marshy grassland. Bottle sedge dominates around the margins with branched bur-reed (*Sparganium erectum*), common spike-rush, rushes, water plantain (*Alisma plantago-aquatica*), willowherbs (*Epilobium* spp.), water forget-me-not (*Myosotis scorpioides*) and ragged robin. Ivy-leaved duckweed (*Lemna trisulca*) forms dense floating mats of cover over parts of the pond. The surrounding habitats include scrub and grazed grasslands. Cattle graze down to the water's edge. The pond is fished by local people and sizeable fish were seen moving on the surface. It is a potentially suitable habitat for breeding amphibians although the presence of fish would be detrimental particularly to newt species.

It is a difficult pond to survey from the margins. A floating mat of vegetation begins 2–4m from the water's edge making it difficult to reach many parts of the pond. Where the pond was accessible netting was carried out. Egg searches were carried out wherever possible.



#### Pond 8: NS753625

Survey Dates: 11, 18, 25 July  
 Weather Conditions: Dry, bright and warm  
 Method of Survey: Egg searching, netting, refuge searches and torching  
 Amphibians: Refuge search revealed two young toads (first/second year). Seven small newt larvae were netted, several frog tadpoles (6) and a second year frog.

This site consists of pools of water amongst dense vegetation. The water appears shallow overall with a thick substrate of silt. Common reed forms a large stand fronted by reed sweet grass (*Glyceria maxima*). Bottle sedge, meadowsweet and rushes form the other main stands of vegetation. The pond would

appear to be well used by duck, possibly for roosting. The surrounding habitat consists of scrub and improved grassland. It is a suitable breeding habitat for amphibians.

It is relatively easy to access large parts of the pond. Some areas with deeper silt make movement more difficult.



#### **Pond 9: NS758620**

Survey Date: 15, 18 July

Weather Conditions: Overcast but dry and warm on 15 July, otherwise dry, bright and warm

Method of Survey: Egg search, netting on 15 July. Access subsequently denied.

Amphibians: 5 small newt larvae recorded to the west side of the pond

This appears to be a SUDS (Sustainable Urban Drainage Scheme) pond for the Chungghwa industrial complex. The pond is generally deep and overall clear. The pond edges are lined with rushes, common spike-rush, some bulrush, great willowherb and duckweed. Invertebrates recorded included greater water boatmen, pondskaters, whirligig beetles and damselflies (large red and common blue). The pond would appear to be suitable as a breeding habitat for amphibians. However, no adults or tadpoles/larvae were noted at the time of the initial survey. The surrounding area is a mix of major road networks, the buildings complex and some banks of grassland.





**Pond 10: NS760624**

Survey Dates: 11 July

Weather Conditions: Dry, bright and warm

Method of Survey: Egg search, netting

Amphibians: No amphibians were recorded

This is a linear pool along the edge of a field. A track runs to the north of the pond and is lined with trees and shrubs creating shading to the pond. The pond is edged with common spike-rush, rushes, great willowherb, watercress (*Rorippa nasturtium-aquaticum*), iris, branched bur-reed and reed sweet grass. Ivy-leaved duckweed was dominant on the surface of the pool. Woodland (principally broadleaved) and grasslands (improved and semi-improved) form the surrounding habitats. Suitable as a breeding habitat for amphibians. No amphibians were recorded at the time of either the phase 1 assessment or this amphibian survey in phase 2.

The pool would appear to be polluted at this time. A bright magenta/purple colouring was noted in several parts of the pool and a decision was taken on health and safety grounds to stop survey after the first amphibian search.

**Pond 11: NS764615**

Survey Date: 15, 18 July

Weather Conditions: Overcast but dry and warm on 15 July, otherwise dry, bright and warm

Method of Survey: Egg search, netting on 15 July. Access subsequently denied.

Amphibians: 13 small newt larvae were netted in various stages of development around the pond but the main area (10 newts were found) is located to the west side of the pond. One young frog (second year) was also noted.

This is a well-vegetated pond. The surface has a cover of pondweed (*Potamogeton* spp) and ivy leaved duckweed (*Lemna trisulca*). The pond is surrounded by bottle sedge (*Carex rostrata*) and common spike-rush (*Eleocharis palustris*), with rushes (*Juncus* spp.), water plantain (*Alisma plantago-aquatica*), mare's-tail (*Hippuris vulgaris*) and yellow water-lily (*Nymphaea* sp.). Willows (*Salix* spp.), alder (*Alnus glutinosa*) and hawthorn (*Crataegus monogyna*) stand around the margins of the pond. The pond does not appear to be particularly deep although the survey on 15 July was restricted to the margins and therefore the exact depth cannot be confirmed. A small island has formed in the centre of the pond. There was no direct access on 18 July.

A moorhen, and young, were noted on the pond.



**Pond 12: NS770612**

Survey Date: 15, 20, 27 July

Weather Conditions: Overcast but dry and warm on 15 July, light to heavy rain and warm on 20 July, otherwise dry, warm and bright

Method of Survey: Egg searching, netting and refuge searches

Amphibians: 1 small newt larvae, 1 frog tadpole, 2 young frogs, toad tadpoles.

This site consists of small areas of shallow open water within dense vegetation. The pond appears to be drying up as the vegetation thickens. Rushes dominate, with bulrush, floating sweet grass (*Glyceria fluitans*) and great willowherb all recorded. In addition to newt larvae, frog and toad tadpoles were recorded.



**Pond 14: NS789621**

Survey Dates: 11, 18, 27 July

Weather Conditions: Dry, bright and warm

Method of Survey: Egg searching, netting, refuge searches and torching

Amphibians: A few frog and toad tadpoles were recorded in May. No amphibians in July.

This is a pond with open shallow water. Floristically, the pond is well developed with stands of bulrush at either end of the pond and branched bur-reed, common spike-rush, rushes, great willowherb and water forget-me-not around the margins. Pondweed (*Potamogeton*) was noted within the pond. The surrounding habitat consisted of rough grassland, occasional shrubs and a hedgerow nearby.

The tadpoles that were recorded in May were noticeably smaller than at other sites.

**Pond 15: NS794616**

Survey Date: 15, 18, 27 July

Weather Conditions: Overcast but dry and warm on 15 July, otherwise dry, warm and bright

Method of Survey: Egg searching, netting, refuge searches and torching

Amphibians: A few tadpoles were seen swimming in the pond in May. No amphibians in July.

This is a former reservoir pond. The reservoir has been partly filled in and an island would appear to have been created. Water to the south and east of the reservoir is shallow. Elsewhere, the water is relatively deep > 1/1.5 metres. The water was clear at the time of the initial survey and therefore a check of the pond margins could be easily undertaken. However, the stone banking around the water is steep – approximately 60°. Sweet grass spp., rushes, common spike-rush and some bulrush were the main species around the edge. Considering the clarity of the water and the small number of toad tadpoles recorded in May, it would appear to indicate that it is not a significant breeding site.

Coot and moorhen nests were recorded in the vicinity of the pond during the survey.



**Pond 16: NS710584**

Survey Date: 15, 20, 22 July

Weather Conditions: Overcast but dry and warm on 15 July, light to heavy rain and warm on 20 July, otherwise dry, warm and bright

Method of Survey: Egg searching, netting and refuge searches

Amphibians: No amphibians were recorded

There is one main pool, which appears to be disturbed by horses grazing the adjacent fields, amongst several small areas of open water. The pond is disappearing as a result of colonisation of vegetation, in particular rushes. Branched bur-reed and water plantain were also noted. The area would appear to be suitable for frogs and toads. However, no tadpoles were recorded.





**Pond 17: NS711588**

Survey Date: 15, 22, 25 July

Weather Conditions: Overcast but dry and warm on 15 July, otherwise dry, warm and bright

Method of Survey: Egg search, netting and refuge searches.

Amphibians: 9 small newt larvae from approximately 13mm to 40mm. Toads and frogs.

This is an area with several open pools of water surrounded by bulrush, water horsetail (*Equisetum fluviatile*), common spike-rush, mare's-tail, water forget-me-not, brooklime, water mint (*Mentha aquatica*) and meadowsweet. Several eggs of a small newt species were located on water forget-me-not leaves close to the fence line and the banking up to the M74 motorway. A refuge search revealed five toads of varying stages of development and one young frog (second year) under a sheet of boarding. Habitat surrounding the ponds consists of rough grassland and a good scrubby cover up the banking to the west.

**Pond 18: NS712586**

Survey Date: 15, 20, 22 July

Weather Conditions: Overcast but dry and warm on 15 July, light to heavy rain and warm on 20 July, otherwise dry, warm and bright.

Method of Survey: Egg search, netting and refuge searches

Amphibians: No amphibians were recorded

This is an area of open, relatively shallow water with little vegetation. One large pool of water is formed along with several smaller pools. It is difficult to access easily due to the depth of silt. The vegetation around the margins consisted of rushes, bulrush, water plantain, mare's-tail, false fox sedge (*Carex obtrubae*), great willowherb, brooklime (*Veronica becca-bunga*), marsh ragwort (*Senecio aquaticus*) and marsh yellow-cress (*Rorippa palustris*). Small sticklebacks were noted in high numbers through the pools. The surrounding area consists of rough grassland and occasional shrubs, close to the access road to the M74 motorway. Habitat conditions are suitable for amphibians although none were found.

**Pond 20: NS714591**

Survey Dates: 13, 20, 25 July

Weather Conditions: Dry then light to heavy rain, cool to warm on 13 July, light to heavy rain on 20 July, otherwise dry, warm and bright

Method of Survey: Egg search, netting and refuge searches.

Amphibians: Toad tadpoles recorded in May. No amphibians noted in July.

The site contains some small areas of open water. The pond is densely vegetated with water horsetail, bulrush, great willowherb, watercress, meadowsweet and mare's-tail. A heron was noted feeding at the pond and a pair of mallard flew up on approach. The surrounding habitat consists of open rough grassland areas and scattered and dense scrub. Sticklebacks were netted.



**Pond 21: NS716589**

Survey Dates: 13, 20, 25 July

Weather Conditions: Dry then light to heavy rain, cool to warm on 13 July, light to heavy rain and warm on 20 July, otherwise dry, warm and bright

Method of Survey: Egg search, netting, and refuge searches

Amphibians: Toad tadpoles noted May. Young toads leaving the pond area during this survey.

This is a large body of water with the margins dominated by bulrush with common reed, bottle sedge, water horsetail, meadowsweet and great willowherb. Mare's-tail (*Hippuris vulgaris*) was also noted. Mute swan, moorhen, coot and mallard were all recorded on the pond. The surrounding habitat consists of open rough grassland areas and scattered and dense scrub. Survey is restricted somewhat by the floating mat of vegetation surrounding the water. Three-spined sticklebacks (*Gasterosteus aculeatus*) were netted and there was evidence of people fishing and therefore the likelihood of larger fish species.

**6.0 CONCLUSIONS**

While several of the surveyed ponds are suitable as habitat for amphibians, Great Crested Newt habitat is generally lacking. Where ponds would be suitable such as Ponds 6 and 21, fish and birds are prevalent both mitigating against Great Crested Newts being present.

Pond 6 did not return any amphibian species. However given the difficulties of access and that Pond 8 is only 30m to the east and holds three amphibian species, the likelihood is that Pond 6 will hold frogs, toads, and possible small newt species.

Ponds 9 and 11 both contain newt species (not GCN).

Pond 10 held no amphibian species and pollution may be problematic.

Ponds 12, 16 and 20 are similar in that they all hold small pools of water and are all heavily vegetated. All three ponds hold amphibians, with small newts in Pond 12. However the three ponds have little in the way of open water and are an unlikely habitat for future colonisation by Great Crested Newts. No amphibians were noted in July in Pond 20.

Ponds 14 and 15, whilst containing tadpoles in May, held very low numbers of tadpoles. No signs of amphibians were noted in July. The tadpole size in May was noted as small relative to other sites and these tadpoles may not have survived.

Ponds 17 and 18 have more areas of open water, although both were found to contain fish. Small newt larvae were netted in Pond 17.

Amphibian positive ponds were grouped in three general areas.

- 1 Around the Eurocentral area to the east end of the A8 corridor under survey - 50% (4 of 8) ponds contain newts or newts with frogs/toads.
- 2 Newhouse – both ponds contain frogs/toads.
- 3 Raith Junction – 66% (4 of 6) ponds contain newts or frogs/toads. At Raith Junction it is possible that Pond 19 (too dangerous to survey) also contains amphibians, which would make 5 of the 6 ponds positive.

Ponds at the Bargeddie end of the corridor were deemed not suitable for amphibian survey.

Referring to the report by Heritage Environmental (Osborne et al, 2003), no great crested newts were located in their survey area in 16 ponds. It would therefore appear likely that great crested newts are not present along this stretch of the A8.

## **7.0 RECOMMENDATIONS**

- 1 The main recommendation with regard to any ponds along the A8 corridor is to ensure that water quality is maintained and where possible improved.
- 2 Links between pond groups should be considered as all amphibian species migrate between wetland areas for breeding purposes. Where works along the corridor may isolate pond groupings further than may already occur, appropriate mitigation should be considered.
- 3 Ponds found to contain breeding amphibians, particularly where several species were noted, should be avoided during any development works. The groupings noted in Section 6.0 indicate potential localised breeding grounds.

## **8.0 REFERENCES**

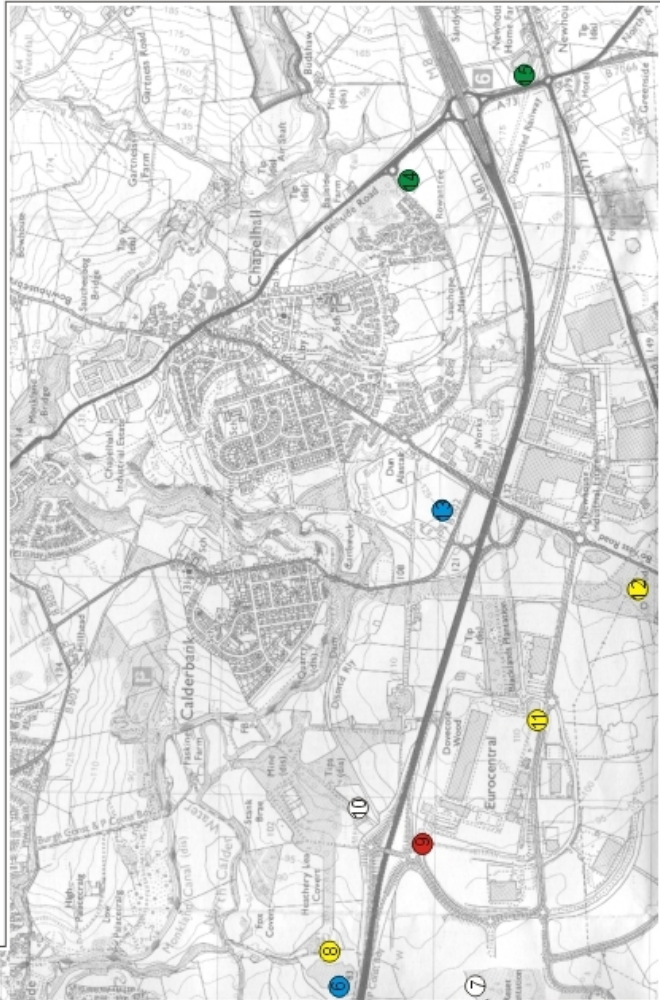
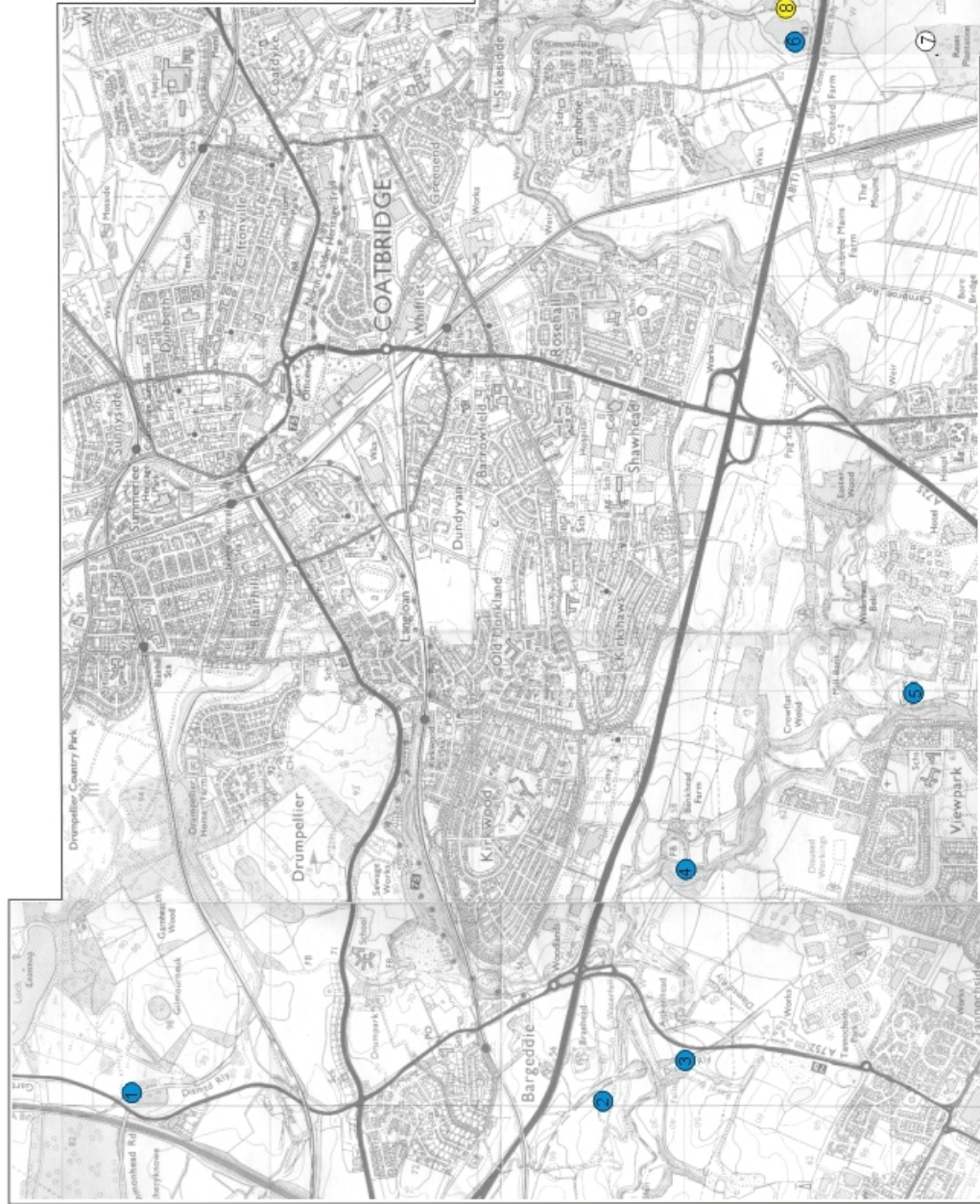
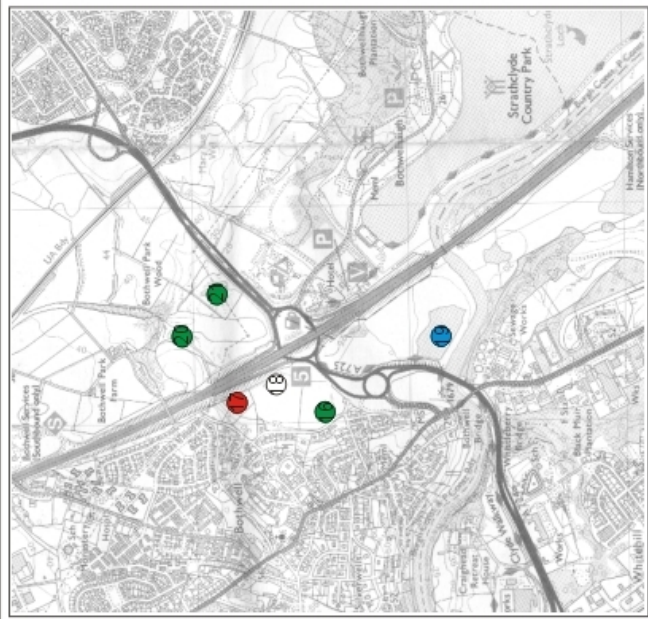
Osborn, R.L., Bates, M.A., Stronach, P.L., Black, D.J. (2003) Douglas Support Estate: Concept Masterplan Ecological Impact Assessment, June 2003. Heritage Environmental Ltd, Auchterarder.

Ends

## FIGURES







- Ponds containing small newts
- Ponds containing frogs or toads
- Ponds containing newts and frogspawn
- Ponds with no amphibian record
- Ponds not subject to amphibian survey

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Scale: 1:50,000  
 Date: 21/11/04  
 Author: JDC  
 Project: A8 Corridor  
 Drawing: 001/04

Figure 1: Survey Results

Project: A8 Corridor

Dwg No: 001/04  
 Date: 24 August 2004





## ANNEXE

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## Annexe 1

### Description of Ponds Not Subject to Amphibian Survey

#### Pond 1: NS700633

##### Site A

Situated on the line of a former track. It is clear that water is retained here at times although no water was held at the time of survey. The area lies below an ash (*Fraxinus excelsior*) tree with hawthorn (*Crataegus monogyna*) and elder (*Sambucus nigra*) scrub. The ground has been poached by cattle. This site is not suitable for breeding amphibians.

##### Site B

A low lying area dominated by rushes. Seepage of water from the land above keeps the whole area wet but no pooling of water is formed. The vegetation consists of meadowsweet (*Filipendula ulmaria*), creeping buttercup (*Ranunculus repens*), marsh thistle (*Cirsium palustre*) and angelica (*Angelica sylvestris*). The ground is poached by cattle (cattle were grazing the grassland at the time of survey) and is not suitable for breeding amphibians.



Site A



Site B

#### Pond 2: NS700657

There is virtually no water at this site. The site is part of a dismantled railway track. Pooling of water takes place under the cover of willow (*Salix*) scrub and into the tunnel that lies beneath the road. The surrounding habitat consists of woodland and rough grassland. As a result of drying up of the pools it cannot be considered generally suitable for breeding amphibians although frogs may use the pools.



**Pond 3: NS702629**

The site held very little water at the time of survey. The site is heavily overgrown with bulrush (*Typha latifolia*) and great willowherb (*Epilobium hirsutum*). The former pond is sited in a hollow (on part of a dismantled railway line) between two fields with a fence-lines and scrub on either side. This area is not suitable for breeding amphibians.

**Pond 4: NS711629**

This is a low lying area dominated by meadowsweet and common nettles (*Urtica dioica*), Iris (*Iris pseudacorus*), reed canary grass (*Phalaris arundinacea*) and bittersweet (*Solanum dulcamara*). There is no open water. A path (part of the National/Regional Cycle network) dissects the low lying area between the raised ground to the west and the Calder Water to the east. This site is not suitable for breeding amphibians.





**Pond 5: NS720618**

This is a former pool now with no surface water. Densely vegetated at the time of survey, with bottle sedge (*Carex rostrata*), bulrush, rushes (*Juncus* spp.), angelica and great willowherb. Ragged robin (*Lychnis flos-cuculi*) was also noted. Water is held just below the surface but dry above. The site is not suitable for breeding amphibians.

**Pond 6: NS752620**

Ground that has been subject to grading/levelling in recent years. The conditions are very open with little developed vegetation over the whole area. Settling and compaction has led to lower lying areas that retain some water. The pools are generally small and very shallow. Several plant species have colonised the margins including bulrush, common spike-rush (*Eleocharis palustris*), rushes, floating sweet grass (*Glyceria fluitans*) and bulrush (*Schoenoplectus lacustris*). This is a potential habitat for frogs to exploit but no tadpoles were recorded. The pools are likely to dry up in the summer and the conditions overall are not considered to be wholly conducive for breeding amphibians.



**Pond 13: NS774620**

No water. The area would appear to hold water at times, the ground conditions reflecting that. The moist, soft soil is dominated by rushes, buttercups, with some sneezewort and great willowherb. Not a suitable breeding habitat for amphibians.

**Pond 19: NS713578**

A large pool. The water would appear to relatively shallow and is surrounded by an extensive margin of mud. Plants around the edge include bulrush and reed canary grass. Meadowsweet begins to dominate away from the margins along with common nettles, reed canary grass and great willowherb. Access was impossible due to the mud. However, given the conditions of relatively open, shallow water away from vegetation cover and what appears to be a lack of plant cover within the water, it is unlikely that the habitat would be suitable for breeding amphibians.



