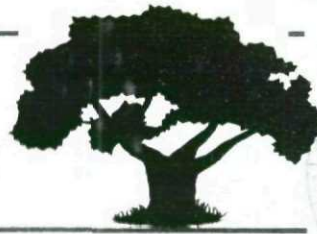


E I N C

Ecological Information
Network Consultants



PROPOSED GREEN COMPOSTING SITE

Great Crested Newt Report

August 2010

Matthew.

*Copy Newt Report
as requested.*

Richard Meadman



LAND AT LOW BARUGH, DARTON, BARNSELEY
PROPOSED GREEN COMPOSTING SITE
GREAT CRESTED NEWT REPORT

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1 INTRODUCTION

1.1 EINC was commissioned by Mr. R. Mount in March 2010, to undertake a great crested newt survey within the vicinity of a proposed green composting development at Low Barugh, Darton, Barnsley, South Yorkshire. This report is concerned with the presence of amphibians and particularly great crested newts within, or adjacent to, the proposed site. It outlines the method of survey work undertaken and describes the current baseline conditions with respect to great crested newts, considering both consultation and field survey information. The aims of this report are to provide:

- The basic information required for an evaluation of the great crested newts at Low Barugh according to their national, regional, district, parish or local ecological value.
- An impact assessment of the proposed development
- A preliminary mitigation and compensation strategy

1.2 Below is provided a summary of the legislation pertaining to great crested newts and general background information.

Legislation

1.3 The following information is reproduced from the Great Crested Newt Guidelines by English Nature (2001). The Wildlife and Countryside Act 1981 (as amended) transposes into UK law the Convention on the Conservation of European Wildlife and Natural Habitats (commonly referred to as the 'Berne Convention'). The 1981 Act was recently amended by the Countryside and Rights of Way ['CRoW'] Act 2000. The great crested newt is listed on Schedule 5 of the 1981 Act, and is therefore subject to the provisions of Section 9, which make it an offence to:

- Intentionally kill, injure or take a great crested newt [Section 9(1)]
- Possess or control any live or dead specimen or anything derived from a great crested newt [Section 9(2)]
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a great crested newt [Section 9(4)(a)]
- Intentionally or recklessly disturb a great crested newt while it is occupying a structure or place which it uses for that purpose [Section 9(4)(b)]

1.4 The Conservation (Natural Habitats, etc) Regulations 1994 (the Habitats Regulations) transpose into UK law Council Directive 92/43/EEC of 21st May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora (often referred to as the 'Habitats [and Species] Directive'). The great crested newt is listed on Annex II and Annex IV of the Directive. The former Annex relates to the designation of Special Areas of Conservation (SACs) for this species; even where great crested newts occur outside SACs, the inclusion on Annex II serves to underline their conservation significance. Inclusion on Annex IV ('European protected species') means that member states are required to put in place a system of strict protection as outlined in Article 12,

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and this is done through inclusion on Schedule 2 of the Regulations. Regulation 39 makes it an offence to:

- Deliberately capture or kill a great crested newt [Regulation 39(1)(a)]
- Deliberately disturb a great crested newt [Regulation 39(1)(b)]
- Deliberately take or destroy the eggs of a great crested newt [Regulation 39(1)(c)]
- Damage or destroy a breeding site or resting place of a great crested newt [Regulation 39(1)(d)]

1.5 The legislation applies to all life stages of great crested newts.

Ecology of Great Crested Newts

1.6 The following information is also reproduced from the Great Crested Newt Guidelines by English Nature (2001). All British amphibians, including great crested newts, spend the majority of their lives in terrestrial habitat using waterbodies only for breeding. Therefore it is important to evaluate the quantity and quality of terrestrial as well as aquatic habitat when undertaking newt surveys. Suitable terrestrial habitat includes tussocky and long grassland, scrub, woodland and hedgerows.

1.7 Adult great crested newts tend to migrate to breeding ponds at night in the period between late January and April, this being influenced mostly by weather conditions. The peak, breeding, season is normally between mid-March and mid-May. Eggs are laid individually on leaves, which are then folded to enclose the egg and offer protection. It takes approximately three weeks for the larvae to hatch and then another 2 to 3 months to complete larval development. They feed on a range of prey, including small invertebrates and other amphibian larvae/tadpoles. The adults leave the breeding ponds during the period May to August. The larvae leave the waterbody from about early August (sometimes earlier) and will remain in terrestrial habitat until they reach sexual maturity (2 – 4 years old).

1.8 All great crested newts hibernate during the colder winter months and at this time they seek shelter in a variety of places including wood piles, tree and shrub roots and mammal burrows. Outside of the hibernation period, they spend the nights foraging for invertebrates whilst resting up during the day. Great crested newts tend to live for a few years after they have reached sexual maturity, however, on occasion they will survive until they are up to 15 years old.

1.9 Great crested newts in a given area often form a meta-population, i.e. a series of sub-populations that are linked by dispersal of individuals. Therefore great crested newts often inhabit ponds that are part of a 'pond cluster', and individuals may move between ponds with varying frequency. Although great crested newts have been known to travel for distances in excess of 1 km from their breeding pond, generally they are more likely to move only approximately 250 metres (juveniles regularly move up to 500 metres). Generally the distance they move is related to the abundance of appropriate habitat and corridors within the vicinity of their breeding waterbody. The implication is that where a pond is found to contain a population of great crested newts, one should consider all other suitable waterbodies within a radius of at least 250 metres (or even 500 metres) as appropriate habitat. This is the case even

where survey has not identified a presence (unless the survey is so conclusive and has been undertaken over more than one breeding season).

- 1.10 Finally, it should be noted that where predatory fish and a high density of waterfowl occur the value of aquatic habitat for great crested newts is reduced.

2 METHODOLOGY

2.1 Consultation

- 2.1.1 Consultation was undertaken with the Barnsley Biodiversity Trust and the Environment Agency (Biodiversity Officer, Leeds).

2.2 Field Survey

Great crested newts

- 2.2.1 The primary aim of this survey was the identification of great crested newts *Triturus cristatus*, a species protected under the Wildlife and Countryside Act 1981, the European Union's Habitats and Species Directive and the Council of Europe's Bern Convention. A secondary aim was to assess the conservation value of the various waterbodies within a kilometre of the proposed site and the surrounding terrestrial habitats for great crested newts and other amphibians. The location of the site and the various adjacent areas of standing and flowing water are illustrated in Figure 1.
- 2.2.2 It should be noted that several ponds were outside the ownership of the client and therefore inaccessible for survey (Ponds 5, 7, 10 and 11). In addition, ponds greater than 500m distance from the proposed site were sampled: in this case Ponds 1 – 4 were recorded but Ponds 12 and 13 were not. Thus, only the accessible ponds within 500m distance from the proposed site were surveyed comprehensively for great crested newts (Ponds 6, 8 and 9). Finally, it should be noted that 2-spined stickleback were recorded in Pond 1 on 27th April 2010 (which are likely to eat newt eggs) and that this pond was therefore not surveyed further.
- 2.2.3 Natural England stipulate that in order to best confirm whether great crested newts occur on a site four visits should be undertaken with at least three survey techniques used at each visit. They recommend that surveys should be undertaken between mid-March to mid-June, with at least two of these visits during mid-April to mid-May. The following survey methods were used and on each occasion Dr. Madeline Holloway undertook the survey work (Licence No. 20101831):-
- Egg Search – this method involved searching through the aquatic vegetation close to the edge of the standing water areas for great crested newt eggs. Eggs are laid singly on leaves of plants usually growing in less than 50 cm of water and can be easily distinguished from the eggs of palmate and smooth newts by both size and colour characteristics. The main spawning period for newts is between April and June. The vegetation was searched for eggs on 26 and 28th April.

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- Torchlight Survey – the perimeter of Ponds 1 – 4, 6, 8 and 9 were illuminated with a powerful torch on the evening of April 26th. The survey was undertaken during the period between dusk and a further two hours. The torch types used were Cluson Clubman CBI lamps which have a main beam 1,000,000 candlepower. Unfortunately green slime and thick marginal vegetation covered many of the ponds making it difficult to search for newts and this method was therefore abandoned in later visits.
- Bottle traps – bottle traps, constructed from two litre plastic bottles - were mostly set around the margins of Ponds 1 – 4 on 26th April 2010. On 28th April 2010 nine traps were set in Pond 9, five traps set in the adjacent ditch, sixteen traps set in Pond 6 and a further eighteen traps set in Pond 8. Finally, a further forty traps were set in Pond 8 on 11th May 2010. On each occasion the traps were then revisited early the following mornings (27th and 29th April and 12th May), thereby ensuring the safety of any newts trapped. Each trap was set at approximately 2m intervals within sections of the different emergent, and aquatic, habitats where water depth varied between 20cm - 50cm.

The common frog

- 2.2.3 For the common frog the number of spawn clumps was counted: usually each female frog lays a single clump of spawn each year. Additional evidence was the presence of any frog tadpoles and/or the presence of adult frogs.

The common toad

- 2.2.4 The presence of the common toad was determined by evidence of eggs intertwined amongst the vegetation and counting the number of adult toads. Additional evidence was the presence of toad tadpoles and/or the presence of adult toads.

Preliminary Phase 1 Habitat Survey

- 2.2.5 A preliminary Phase I Habitat Survey was undertaken using the standard methodology devised by English Nature (English Nature 1993) on 28th April 2010. At this time of year, however, many plant species will not be apparent and the results of the survey must therefore be treated with some caution. The vegetation within the vicinity of the proposed green composting site, was categorized into habitats, as far as was possible at the time of the survey. These were then mapped onto a 1:2500 scale map, using standard alphanumeric codes to produce a coded habitat map (Figure 3). Further information was described in the form of target notes which provide supplementary information on species composition and structure, evidence of management, habitats too small to map and transitional or mosaic habitats.
- 2.2.6 Notes were made on other species seen on site, including any tracks or signs of mammals, birds and invertebrates.

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3 BASELINE CONDITIONS

3.1 Consultation

- 3.1.1 The Environment Agency had no records of great crested newts within a 2 km radius of Low Barugh (pers comm.). Data from the Barnsley Biodiversity Trust is awaited at the time of writing this report.

3.2 Habitat description

- 3.2.1 A description for each pond that was available for survey within an approximate 1km distance of the proposed green composting site is given in Table 1 and their various locations are shown in Figure 1. The format of Table 1 allows the essential features of each pond (e.g. its approximate area, water depth, bank profile, vegetation and evidence of management) to be compared 'at a glance'. An overall condition assessment for each pond is given in the last column: 'Good' = 10 – 50% cover of swamp/marginal vegetation and 10 – 50% of open water; 'Medium' = 10 – 50% cover of swamp/marginal vegetation and 10 – 50% of open water but the pond is under threat e.g. of drying out; 'Poor' = <5% of swamp/marginal vegetation and/or evidence of water pollution e.g. oil; and needs active management. This is followed by a series of Target Notes which provide information on the species composition and structure of plants recorded in the adjacent area. Also included here is evidence of management, habitats too small to map and transitional or mosaic habitats.

Table 1 Description of Ponds (refer to Figure 1 for their locations)

Pond	Area (approx. m ²)	Water depth and pond substrate	Bank profile and structure	Vegetation, management and condition
1	>4200	Shallow water depth (10 – 20cm) Substrate: silt/clay.	Relatively uniform profile: banks <0.5m - high with angle of slope <30° - 90° i.e. flat, shallow and steep. Marginal vegetation dominates the banks	Open water (35% cover) surrounded by tussocks of common reed <i>Typha latifolia</i> , reed sweet-grass <i>Glyceria maxima</i> and soft rush <i>Juncus effusus</i> . Other plants recorded were hard rush <i>J. inflexus</i> and water starwort <i>Callitriche spp.</i> The adjacent drain also partly flows into this pond and sticklebacks (fish) were recorded in the water. No aquatic or submerged aquatic plants recorded. The pond could be fished, but no other obvious signs of management. Condition: medium (constant inflow of water from adjacent drain but shallow open water and silting up)
2	c. 650	Water depth shallow: 10-25cm Substrate: silt/clay	Small section of former canal still holds water at this location. Fringed by hawthorn hedges and small footpaths. Uniform bank profile: c.<1m high and <1m wide with angle of slope c. 45°	Open water (25%) but mostly choked by reed sweet-grass <i>Glyceria maxima</i> . A film of oily 'petrol' and green slime covered the surface of the water, which had an orange 'iron' colour. Overhanging willow <i>Salix spp.</i> also occurred in this part of the canal. No other aquatic or submerged aquatic plants recorded. No obvious management. Unlikely to be fished (too shallow and covered with reed sweet-grass <i>Glyceria maxima</i>) Condition: medium/poor (poor range of aquatic and marginal plants recorded, probably due to oil pollution; water levels need maintaining/raising)

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Pond	Area (approx. m ²)	Water depth and pond substrate	Bank profile and structure	Vegetation, management and condition
3	c. 5000	Water depth: 10- 35cm Substrate: silt/clay.	A shallow hollow adjacent to the southern edge of the former canal held water. Uniform profile: c. <1m high and <1m wide with angle of slope c. 45°	Open water (65% cover) but otherwise dominated by reed sweet-grass <i>Glyceria maxima</i> and a yellowish/green algal bloom. No aquatic or submerged aquatic plants recorded. No obvious management Surrounded by willow scrub; two dead standing trees occurred along its western bank together with a semi-mature oak <i>Quercus spp.</i> Condition: medium/poor (poor range of aquatic and marginal plants recorded probably due to oil pollution; water levels need maintaining)
4	c. 650	Similar to No. 2	Similar to No. 2	Similar to No. 2
5	Not included in sample			
6 (Plate 3)	c. 1300	Water depth: 10 – 50cm. Substrate: silt/clay	Small section of former canal still holds water at this location. Fringed by hawthorn hedge to the north and hawthorn, blackthorn and elder scrub to the south. Uniform profile: c. <1m high and <1m wide with angle of slope c. 45°	Open water (65% cover) and relatively clear and free from oily, algal, blooms in places. Nevertheless reed sweet-grass <i>Glyceria maxima</i> was still the dominant swamp vegetation and no other aquatic or submerged aquatic plants recorded. Other plants recorded included angelica <i>Angelica sylvestris</i> . No obvious management. Condition: medium (poor range of aquatic and marginal plants but reasonable water levels)
7	Inacc.			
8 (Plate 2)	c. 650	Water-depth: 10-30cm. Substrate: silt/clay	Similar to Pond 6	Open water (65% cover) but otherwise dominated by reed sweet-grass <i>Glyceria maxima</i> and an oily yellowish/green algal bloom. No aquatic or submerged aquatic plants recorded and no obvious management. Condition: medium/poor (poor range of aquatic and marginal plants recorded probably due to oil pollution; water levels need maintaining)

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Pond	Area (approx. m ²)	Water depth and pond substrate	Bank profile and structure	Vegetation, management and condition
9 (Plate 1)	c. 60	Water-depth: 10-30cm. Substrate: silt/clay	A very small, shallow, water-filled hollow in the north-eastern corner of the same field as the proposed composting site. Uniform profile: c.<0.3m high and <0.3m wide with angle of slope c. 45°	Open water (70%cover) edged with reed sweet-grass <i>Glyceria maxima</i> . No aquatic or submerged aquatic plants recorded and no obvious management. Condition: medium/poor (poor range of aquatic and marginal plants recorded probably due to oil pollution; water levels need maintaining)
10	Inacc.			
11	Inacc.			
12	Not included in sample			
13	Not included in sample			

Target Notes

Target Note 1 (Cattle-grazed field)

3.2.2 The proposed green composting site is to be located within a heavily poached, cattle-grazed, pasture. The pasture was categorised as poor, semi-improved grassland dominated by rye-grass *Lolium perenne*. Other frequent plants recorded were creeping buttercup *Ranunculus repens*, meadow buttercup *Ranunculus acris* and clover *Trifolium spp.*. Occasional plants included field horsetail *Equisetum arvense*, creeping thistle *Cirsium arvense* and field wood-rush *Luzula campestris* with locally frequent patches of nettle *Urtica dioica*. Soft rush *Juncus effusus*, hard rush *Juncus inflexus* and occasional glaucous sedge *Carex flacca* occurred in wetter patches within the field and also beside Pond 9.

3.2.3 Other, sparser, plants recorded, often around the edge of the field, included bird's foot trefoil *Lotus corniculatus*, meadow vetchling *Lathyrus pratensis*, dock *Rumex spp.*, cock's-foot *Dactylis glomerata*, Yorkshire fog *Holcus lanatus*, dandelion *Taraxacum spp.*, ribwort plantain *Plantago lanceolata*, common ragwort *Senecio jacobaea*, white dead-nettle *Lamium album*, daisy *Bellis perennis*, vetch *Vicia spp.*, cat's-ear *Hypochaeris radicata* and creeping cinquefoil *Potentilla reptans*.

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3.2.4 Piles of railway ballast had been temporarily stored along the south western edge of this field, presumably for later use in the railway embankment stabilisation work which was currently on-going during April and May 2010.

3.2.5 This area is of medium value for foraging great crested newts, and has a low winter hibernation and daytime refuge potential for these amphibians.

Target Note 2

3.2.6 Extensive new piles of brick rubble, earth and litter had been dumped beside a newly dug trench at this location. Other similar piles of material had been dumped in the field to the north. Some of latter were often partially vegetated with tall ruderal species characteristic of recently disturbed sites, including nettle *Urtica dioica* and bramble *Rubus fruticosus* with very occasional hawthorn *Crataegus monogyna* and elder *Sambucus nigra*.

3.2.7 These areas are of medium value for foraging great crested newts, but have a high winter hibernation and daytime refuge potential for these amphibians.

Target Note 3

3.2.4 A small ditch flowed in an easterly, north-easterly, direction at this location. The shallow banks were <0.3m high and the channel mostly < 0.3m wide with a depth of mostly 5cm, although this occasionally deepened to c. 25cm. No aquatic or submerged aquatic vegetation was recorded. The banks were intermittently fringed by willow *Salix spp.* and open vegetation. The latter was dominated by marginal and tall ruderal plants such as reed canary-grass *Phalaris arundinacea*, nettle *Urtica dioica*, great willowherb *Epilobium hirsutum* and cleavers *Galium aparine*. Other more occasional plants recorded included meadowsweet *Filipendula ulmaria*, meadow vetchling *Lathyrus pratensis* and bittersweet *Solanum dulcamara*.

3.2.5 The ditch and associated habitats are of medium value for foraging great crested newts, but have a high winter hibernation and daytime refuge potential for these amphibians.

Target Note 4 (hedge)

3.2.6 A tall, straggly hawthorn *Crataegus monogyna* hedgerow (3.5 – 4m tall) fringed the western banks of the main ditch that flowed in a south-easterly direction at this location. The bushes were set at the top of the tall and steep western banks (c.3m high with an angle of slope 40° – 80°) and the ground flora here was a mix of exposed boulders and rubble interspersed by dense patches of tall ruderals (such as nettle *Urtica dioica* and bramble *Rubus fruticosus*) and seedling hawthorn *Crataegus monogyna*. The channel was c. 1.5m wide and the opposite banks much smaller (c.1.5m high). The latter was fringed by improved grassland further east.

3.2.7 The hedgerow and banks are of medium value for foraging great crested newts, but have a high winter hibernation and daytime refuge potential for these amphibians.

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Target Note 5

- 3.2.8 A cattle-grazed pasture similar in description to that of Target Note 1. A pile of manure had recently been dumped in this field, presumably for spreading at a later date. Species diversity was a little richer and occasional black knapweed *Centaurea nigra* was also recorded. In addition, the ditch fringing the eastern edge of this field was lined with marshy grassland, bringing further habitat diversity to this area. Plants recorded in the latter included frequent soft rush *Juncus effusus*, hard rush *Juncus inflexus*, great willowherb *Epilobium hirsutum*, Yorkshire fog *Holcus lanatus* and reed canary-grass *Phalaris arundinacea*. Additional wetland plants here included occasional brooklime *Veronica beccabunga*, glaucous sedge *Carex flacca*, floating sweet grass *Glyceria fluitans* and common reedmace *Typha latifolia*.
- 3.2.9 The marshy grassland had a high value for foraging great crested newts, but otherwise this area had a low winter hibernation and daytime refuge potential for these amphibians.

Target Note 6 (disused canal and adjacent scrub)

- 3.2.10 The mostly infilled, disused, canal was occupied by patches of tall ruderals (e.g. nettle *Urtica dioica*, bramble *Rubus fruticosus*), scattered scrub (e.g. hawthorn *Crataegus monogyna*, blackthorn *Prunus spinosa* and willow *Salix* spp.) occasional mature alder *Alnus glutinosa*, bare soil and rough grassland. The canal was bordered to the west by dense scrub.
- 3.2.11 These habitats had a combined high value for foraging great crested newts, and also a high winter hibernation and daytime refuge potential for these amphibians.

Target Note 7 (dense scrub and grassy glades)

- 3.2.12 Dense scrub occupied most of this area, interspersed by occasional grassy glades. A steep-banked, shaded, ditch bordered the southern edge of this habitat.
- 3.2.13 These habitats had a combined high value for foraging great crested newts, and also a high winter hibernation and daytime refuge potential for these amphibians.

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3.3 Field Survey

3.3.1 The results of the bottle surveys for great crested newts are summarised in Table 2.

Table 2 Great Crested Newt survey results for the ponds adjacent to the proposed Green Composting Site.

Pond	Date	Great Crested Newts		Smooth Newts	
		Male	Female	Male	Female
1	27/4/10	-	-	-	-
2	27/4/10	-	-	-	1
3	27/4/10	-	1	1	-
4	27/4/10	1	1	3	3
6	29/4/10	19	7	4	2
8	29/4/10	-	-	-	-
8	11/5/10	1	-	1	2
9	29/4/10	-	1	2	2

3.2.2 For practical purposes English Nature recommend that populations can be classed as:

- 'small' for maximum counts up to 10
- 'medium' for maximum counts between 11 and 100
- 'large' for maximum counts over 100

3.2.3 Whilst this categorisation may appear crude it is nevertheless the one currently recommended by Natural England (English Nature 2001). On this basis the population of great crested newts within Ponds 2, 3, 4, 8 and 9 are each estimated to 'small', whilst the population within Pond 6 is estimated to be at lower end of the medium size class. Reasons for the much sparser populations of great crested newts within most of the ponds surveyed are speculative. Nevertheless, they are likely to include the fact that at the time of survey (April/May 2010) water levels were relatively low in these ponds (generally below 35cm) and signs of water pollution (algal blooms and an oily surface film) were evident. In contrast, water levels in Pond 6 were up to c. 50cm and there were fewer signs of water pollution, although some algal blooms and oil were still evident.

3.4 Other fauna

3.4.1 Several birds of high nature conservation priority were recorded during the great crested newt survey and thought to be breeding within the vicinity*. These were: grasshopper warbler, linnet, lapwing, skylark and yellowhammer.

3.4.2 In addition, several birds of medium nature conservation priority were recorded and also thought to be breeding within the vicinity*: bullfinch, kestrel, oystercatcher, reed bunting, snipe, swallow, dunnoek, mistle thrush, willow warbler and goldcrest.

3.4.3 Other birds recorded included lesser whitethroat.

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* Eaton *et. al.* (2009) *The state of the UK's birds 2008*. RSPB, BTO, WWT, CCW NIEA, JNCC, NE and SNH, Sandy, Bedfordshire.

3.5 Interpretation and evaluation

Presence/absence

- 3.5.1 The survey confirmed that great crested newts *Triturus cristatus* are present in Ponds 2, 3, 4, 6, 8 and 9. Pond 9 occurs within approximately 10m of the proposed green composting site, whilst Ponds 8 and 6 occur at a distance of c.100m and c.250m from the development respectively. The location of all the confirmed ponds with populations of great crested newts is illustrated in Figure 1.

Population size class assessment

- 3.5.2 Refer to Section 3.3

Site status assessment

- 3.5.3 Refer to Section 3.3.

Constraints

- 3.5.4 The main constraint of the survey results was the poor visibility encountered within all the ponds. This meant that the evening torch light surveys were not effective and all the survey work had to be undertaken using bottle traps.

4 IMPACT ASSESSMENT

4.1 Pre- and mid- activity impacts

- 4.1.1 There are a number of operations which can affect great crested newts prior to the start of the proposed development, the details of which are illustrated in Figure 4. These include general site clearance, infilling and regrading works, all of which can seriously degrade habitats and/or kill newts.

4.2 Long-term impacts

- 4.2.1 The most obvious impact of the proposed development would be the loss of the cattle-grazed pasture described in Target Note 1. This would constitute a direct loss of terrestrial habitat that is currently available for great crested newts. Other losses may include the clearance of existing piles of rubble, earth and litter beside the access track, which would reduce hibernation, daytime refuges (and some foraging) opportunities for great crested newts.

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- 4.2.2 It is predicted that without appropriate mitigation the loss of terrestrial habitats and the possible loss of adjacent current hibernation sites may lead to a local reduction of great crested newts in this part of Barnsley.

4.3 Post-activity interference impacts

- 4.3.1 Without mitigation It is likely that the proposed green composting site would result in an increase in the disturbance, and possible damage to, the adjacent small pond (Pond 9).

4.4 Summary of impacts at the site level

- 4.4.1 The main, site level, impacts of the proposed green composting site are as follows:

- loss of great crested newt terrestrial habitat within <50m of a breeding pond (high impact);

- 4.4.2 Provided the mitigation measures that are described in this report are implemented, however, the scale of estimated damage to population viability is considered to be low / negligible.

4.5 Summary of impacts in a wider context

- 4.5.1 Provided the mitigation measures described in this report are implemented no permanent, long-term impact to the existing population of great crested newts *Triturus cristatus* at the proposed green composting site at Low Barugh, Barnsley, is envisaged. Refer to Section 5 for further details.

5 MITIGATION AND COMPENSATION

5.1 Mitigation Strategy

- 5.1.1 It is recommended that the works required for the proposed development are covered by a Great Crested Newt Licence from Natural England. The licence application should include a comprehensive Method Statement which should incorporate the mitigation measures that are outlined in this report. These are aimed at ensuring that no net loss of the existing great crested newt *Triturus cristatus* population occurs as a result of the proposed residential development. Natural England (English Nature 2001) notes that there are two elements to this process:

- Mitigation – which, in the strict sense, refers to practices which reduce or remove damage (e.g. by changing the layout of a scheme, or by capturing newts to avoid killing).
- Compensation – which refers to works which offset the damage caused by the development (e.g. by the creation of new habitat and subsequent establishment of increased populations)

- 5.1.2 The proposed mitigation measures of this report relate to works that can be carried out both prior to and during the development process:

PROPOSED GREEN COMPOSTING SITE, LOW BARUGH, BARNLEY GREAT CRESTED NEWT REPORT

- 1 Temporary newt fencing should be erected around the entire perimeter of the proposed green composting site in April/early May, when most great crest newts will be concentrated in their breeding ponds, before any development proceeds. The design of the fencing should meet the specifications recommended in Natural England's 'Great crested newt mitigation guidelines' (English Nature 2001). The aim of the fencing would be to exclude any newts from re-entering the proposed green composting site (after breeding), and it should therefore remain in place until the development has been completed.
- 2 The proposed settlement tank should, if possible, be re-designed to retain a significant volume of water all the time. It should also include the creation of shallow areas for the colonisation (or deliberate planting) of a variety of marshland wetland plants covered in about 15 – 30cm of water. The settlement tank/pond should also not be stocked with fish. Good practice guidelines advocated by the Environment Agency for the creation and management of ponds and/or the guidance given by Natural England in their great crested newt mitigation guidelines is recommended (Environment Agency 1997 and England Nature 2001 respectively).
- 3 Any spoil arising from digging the settlement tank/ponds should be left on site as un-compacted mounds or banks. Some of it should be mixed with other materials such as clean brick rubble to provide additional good newt shelter/hibernation sites, with cracks and fissures. This would enhance the retained area for great crested newts.
- 4 Native trees and shrubs should be densely planted around the periphery of the composting site. This would enhance the retained area for great crested newts by providing further good newt foraging, shelter and hibernation sites.
- 5 The existing railway access track should be used to access the proposed green composting site. Thus, any additional mortality to newts caused, for example, from coming into contact with "traps" such as the gully pots that are often used with new roads and other hard landscape schemes should be avoided.
- 6 All the above mitigation measures should be supervised by a licensed great crested newt holder. In addition, a monitoring plan should be put in place to assess whether the great crested newt population has responded favourable to the mitigation, and to inform ongoing management. Similar methods of population assessment should be undertaken to those used prior to the development. Thus a series of bottle-trap surveys should be undertaken within the surrounding ponds (and also the settlement tank/pond) at the appropriate time of year following completion of the development.

6 SUMMARY

- 6.1 A small population of great crested newts *Triturus cristatus* were identified as breeding in many of the ponds adjacent to the proposed green composting site at Low Barugh, Barnsley, South Yorkshire.
- 6.2 It is recommended that the works required for the proposed development are covered by a Great Crested Newt Licence from Natural England. The licence

application should include a comprehensive Method Statement which should incorporate the mitigation measures that are outlined in this report. These are aimed at ensuring that no net loss of the existing great crested newt *Triturus cristatus* population occurs as a result of the proposed development.

7 REFERENCES

English Nature (1993) *Phase 1 Habitat Survey*. English Nature, Peterborough.

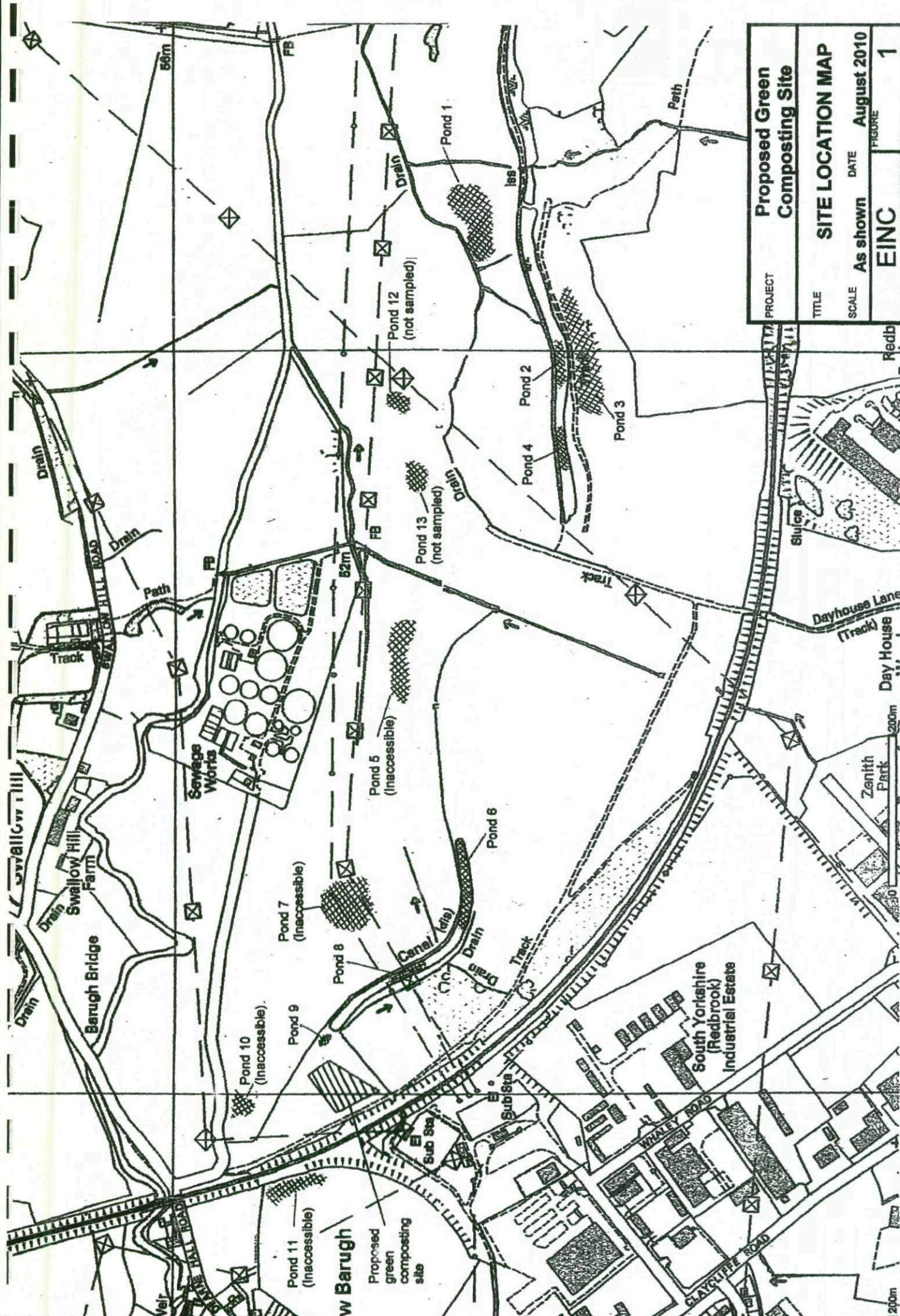
English Nature (2001) *Great Crested Newt Mitigation Guidelines*. English Nature, Peterborough.

Environment Agency (1998) *Ponds and Conservation*. Environment Agency.

Gent, T. and Gibson, S. (1998) *Herpetofauna Workers' Manual*. Joint Nature Conservation Committee.

Langton, T. Beckett, C and Foster, J. (2001) *Great Crested Newt Conservation Handbook*. Froglife.

Stace, C. (1997) *New Flora of the British Isles – 2nd Edition*. Cambridge University Press.



PROJECT		Proposed Green Composting Site	
TITLE		SITE LOCATION MAP	
SCALE		As shown	DATE August 2010
FIGURE		EINC	1

Redb

200m



PROJECT	Proposed Green Composting Site		
TITLE	AERIAL PHOTO		
SCALE	As shown	DATE	August 2010
EINC	FIGURE		2

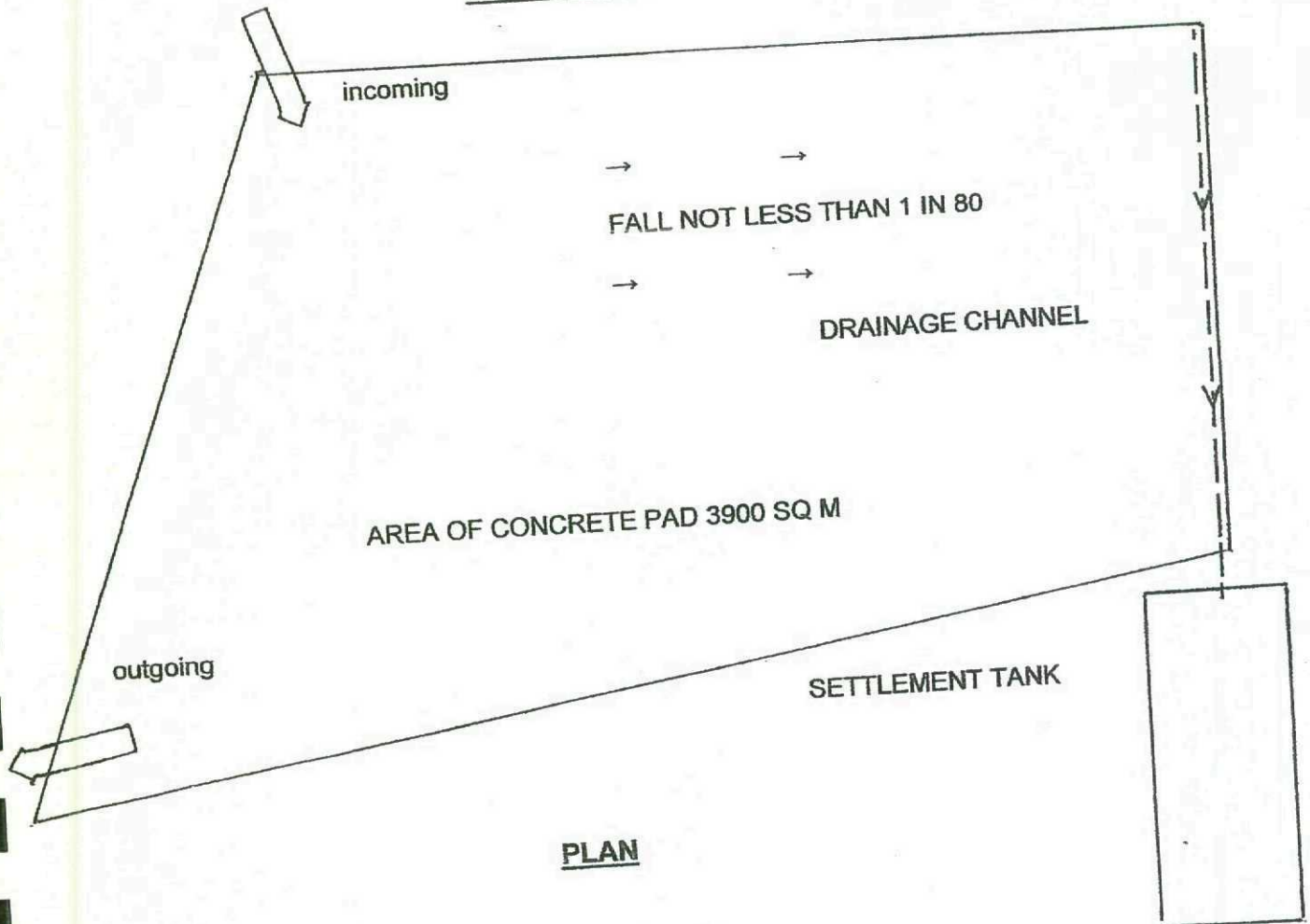
Proposed Green Composting Site

Key to the Phase 1 Habitat Map – Figure 3

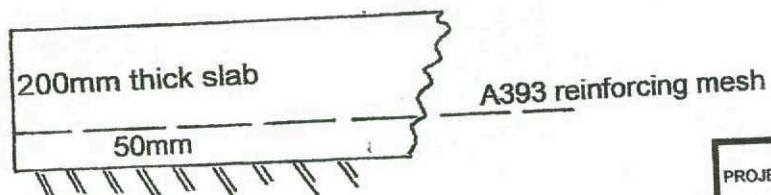
	Broadleaved woodland
	Dense scrub
	Scattered scrub
	Young plantation
	Hawthorn hedge (refer to Target Note 4)
	Individual mature tree
	Recently felled woodland
	Tall ruderals (e.g. nettles, brambles and rough grassland)
	Semi-improved grassland
	Marshy grassland
	Open water
	Running water
	Piles of rubble, earth and litter, partially vegetated (or manure)
	Stored piles railway ballast (temporary)
	Target Note

Ag	Alder <i>Alnus glutinosa</i>
Ap	Sycamore <i>Acer pseudoplatanus</i>
Po	Poplar spp. <i>Populus</i> spp.
Sx	Willow <i>Salix</i> spp.

CONCRETE PAD DETAILS
SCALE 1/500



PLAN



SECTION

PROJECT	Proposed Green Composting Site		
TITLE	CONCRETE PAD DETAILS		
SCALE	As shown	DATE	August 2010
EINC		FIGURE	4

LANCASTERS POWELL
7 MORSTON CLAYCLIFFE OFFICE PARK
WHALEY ROAD, BARUGH GREEN
BARNSELY S75 1HQ
Tel: 0870 143 0720

Plate 1 Pond 9 – looking from southeast to northwest



Plate 2 Pond 8 – looking from north to south



Plate 3 Pond 6 – looking from west to east

