LAND SOUTH OF EVERILL GATE LANE, BROOMHILL

Ecological Appraisal

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1 INTRODUCTION

1.1 Background

1.1.1 The development of fishing facilities on land south of Everill Gate Lane, Broomhill, South Yorkshire, is proposed. The site is an area of former arable agricultural land around a permanent waterbody. The Local Planning Authority have requested an assessment of the value of the site for Biodiversity to accompany the Planning Application.

1.1.2 A survey visit took place on the afternoon of the 16th of August 2013. A data search was commissioned from Barnsley Local Records Centre and additional information was sought from the Garganey Trust, managers of the adjacent Broomhill Flash Nature Reserve.

1.1.3 This Report presents the details of the survey, a description of the habitats found and an assessment of the nature conservation value of the site. An assessment of any ecological impacts of the proposed development for fishing has been made, and mitigation proposed; opportunities for wildlife habitat enhancement have been highlighted.

2 SURVEY METHODOLOGY

2.1 Extended Phase 1 Survey

2.1.1 An Extended Phase 1 Habitat and botanical survey was carried out.

2.1.2 The Phase 1 Habitat survey work was carried out on the 16th of August 2013, the habitats being classified according to Phase 1 Habitat types (Nature Conservancy Council 1990). A coloured map has been drawn up to show the extent of each type of habitat. The habitat map is presented in Figure 1. Photographs were taken, to illustrate the types of habitat present on the site. These are presented in section 5.2. Species of plants seen during the site visit are included in the written descriptions in section 5.2. Plant species were identified by reference to Stace (2011).

2.2 General Faunal Survey

2.2.1 During the site visit a walk-over faunal survey to record signs or sightings of fauna was also carried out. Any animals seen on the site were identified; a brief description of their observed activity is given in section 5.3. The site was also searched for any general signs of animal usage, such as trackways or burrows. Buildings and trees were assessed for their suitability as bat roosts.

2.3 Survey Constraints

2.3.1 Botanical and Phase 1 survey – The survey was undertaken in the later summer, an ideal time for surveying wetland habitats. Early summer (Late May to June) is the optimum season for survey of grasslands. However, given the nature of the grasslands on site (self-set grassland developed on former arable land) it is considered that an accurate Phase 1 Habitat survey was achieved in this instance.

3 NATURE CONSERVATION EVALUATION METHOD

3.1 Habitats

3.1.1 The Phase 1 Habitat survey findings were examined to establish whether any habitats or species of particular nature conservation value were present on the site. The habitats and species on the site were evaluated by reference to the primary criteria established by Ratcliffe (1977). These criteria are: rarity, diversity, size, naturalness, fragility and typicalness.

3.2 Faunal Species

3.2.1 The faunal survey data which were gathered represent a 'snapshot' view of the animals which live on, or occur within, the site. These records were not subject to an objective evaluation using defined criteria. Records of birds are either sightings or identification of bird song. Faunal sightings have been supplemented by a data search.

4 SITE CONTEXT

4.1 Location and Site Description

4.1.1 The site lies on the southern side of Everill Gate Lane, west of the village of Broomhill, South Yorkshire NGR 41325 02647. The land comprises a former arable agricultural field (now partially-grazed rough grassland) and subsidence wetland. The site boundaries are formed by hedges, the fences alongside the adjacent fields, the Trans-Pennine Trail, Industrial premises and the boundary fence alongside Everill Gate Lane.

4.2 Statutory Designated Nature Conservation Sites

4.2.1 There are no *statutory* nature conservation sites on or immediately adjacent. The nearest such site, Stairfoot Brickworks SSSI (a geological site), lies is in excess of 3km to the west.

4.3 Locally-Designated Nature Conservation Sites

4.3.1 The results of the biological records data search indicated the presence of part of a Local Wildlife Site within the application area: Broomhill Flash and Wombwell Ings Barnsley Local Wildlife Site No 36. This comprises three separate parcels of land, the largest being Wombwell Ings (a subsidence flash surrounded by flood plain meadows south of the Rivers Dove and Dearne), Broomhill Flash (a wetland Nature Reserve managed by the Garganey Trust) and Little Broomhill Flash or Pond, the smaller wetland which lies within the application site. (See Appendix 1).

4.3.2 The sizes of the waterbodies on these sites fluctuates according to season and rainfall. The larger waterbodies and the grasslands which surround them support a range of breeding birds such as Snipe, Lapwing, Redshank, Little Ringed Plover, Shoveler and Little Grebe. In winter the sites support large concentration of birds including Heron, Golden Plover, Lapwing and wintering Thrushes. Whooper Swans have also been present in the Winter months. A large number of birds use the area on passage including waders such as Green Shank, Ruff, Common, Green and Wood Sandpipers and numerous species of wildfowl. The waterbodies are also important for the diversity of aquatic plants.

4.3.3 The waterbody within the application site (referred to in this report as Little Broomhill Pond) was included within the Local Wildlife Site boundary because the swamp of bulrushes was 'a major swallow roost for birds on passage'.

4.3.4 A further Local Wildlife Site, Gipsy Marsh, is located under 200 metres to the south-east. Gipsy Marsh is an area of unimproved neutral grassland, spring-fed marsh, pools, scrub and heather. It is an important area for breeding and wintering birds and is also important for invertebrates.

4.3.5 Just over 500 metres to the north-west is another Local Wildlife site Park Hill Nature Reserve, a

complex site which includes dry grassland, scrub, wet grassland, inundation communities, reedbeds and open water.

4.4 UK Biodiversity Action Plan Priority Habitats

4.4.1 There are several areas considered to be UK Priority habitats near to the site. The nearest are the grassland and mire of Gipsy Marsh Local Wildlife Site areas of floodplain grazing marsh around Broomhill Flash and Wombwell Ings.

4.5 Protected and notable species and results of data search

4.5.1 A summary of notable and protected species records from locations which are nearest to the site is provided below. From these records, it is clear that Broomhill Flash and Wombwell Ings Wildlife Sites are habitats which support a wide range of species *and* have been the subject of biological recording over many years.

European Protected Species:

Otter spraints have been reported on the River Dearne at Marles Bridge, on the edge of Wombwell Ings in 2005 and 2007.

Noctule and Pipistrelle bats have also been recorded foraging around Parkhill Nature Reserve, Old Moor and Everill Gate Lane. Roosting Daubentons have been recorded at the old Parkhill Brick Works and Pipistrelle roosts are known from Wombwell and Old Moor.

United Kingdom Biodiversity Action Plan Herptile and Mammal species:

Water Vole have regularly been seen in SE4002 at Parkhill Nature Reserve and at Gipsy Marsh. Hedgehog has been recorded from the Wombwell and Brampton area and Brown Hare have been recorded at Broomhill. Harvest Mouse have also been recorded in Barn Owl pellets found at Broomhill.

Grass Snake has frequently been seen beside the road on Everill Gate Lane.

Other mammals

Wood Mouse, Field Vole, Bank Vole, Water Shrew, Common Shrew, Brown Rat and Mole have been recorded in the locality (or their remains found in Barn Owl pellets).

Bird species:

4.5.2 Information provided by the Garganey Trust indicated that regular breeding birds for Little Broomhill Pond itself included Little Grebe, Coot, Moorhen, Mallard and Tufted Duck (last record a brood of 10 in July 2012). The most significant bird species was the confirmed breeding of Garganey in the late 1990s (brood seen by N Addey). In addition, Sedge and Grasshopper Warblers, and Reed Bunting have been annual breeders. When the site was dominated by Typha, it supported a large roost of Swallows in Autumn (mainly the 1980s and 1990s when up to 10,000 birds were estimated to roost). The site was then used as a mist-netting station for the Swallow roost. (Pers. Comm. J. Lunn).

4.5.3 A large number of UK BAP and RSPB Red and Amber listed bird species have been recorded by local birdwatchers at the nearby Broomhill Flash and Wombwell Ings. These include:

- Water fowl – Scaup, Bittern, Common Scoter, Pintail, Garganey, Graylag geese, Goldeneye, Long-tailed Duck, Bewicks Swan, Whooper Swan, Black-necked Grebe, Shoveler, Teal, Wigeon, Gadwall, Pochard, Mute Swan, Shelduck, White-fronted Goose, Pink Footed Goose, Bean Goose and Barnacle Goose.

- Waders and birds of shorelines and wet grassland habitats and birds of the uplands on migration include Purple Sandpiper, Wood Sandpiper, Green Sandpiper, Greenshank, Spotted Redshank, Redshank, Dotterel, Black-tailed Godwit, Bar-tailed Godwit, Little

Egret, Spoonbill, Little-ringed Plover, Little Plover, Ringed Plover, Golden Plover, Grey Plover, Whimbrel, Ruff Curlew, Lapwing, Oystercatcher, Ring Ouzel, Yellow Wagtail, Grey Wagtail, Turnstone, Dunlin and Knot.

- Coastal species include Mediterranean Gull, Herring Gull, Common Gull, Lesser Black-backed Gull, Great Skua, Kittiwake, Arctic Tern, Sandwich Tern, Little Tern, Black Tern, Cormorant and Gannet (presumed lost!).
- Kingfisher are frequently seen at Wombwell Ings as are House Martin, Swallow and Sand Martin.
- Birds of reedbed and rough grassland and scrub – Reed Bunting, Grasshopper Warbler, Willow Warbler and Water Rail, Snipe and Jack Snipe.
- Raptors such as Merlin, Peregrine, Osprey and Barn Owl (including a bird roosting at Broomhill in 2011), Hobby, Short-eared Owl, Marsh Harrier and Kestrel.
- Winter visitors or migratory species such as Brambling, Snowbunting. Redwing, Fieldfare, Redstart, Stonechat, Woodcock, Twite, Lesser Redpoll and Hawfinch.
- Birds of Farmland and woodland such as Tree pipit, Cuckoo, Yellowhammer, Spotted Flycatcher, House Sparrow, Grey Partridge, Turtle Dove, Skylark, Meadow Pipit, Linnet, Goldfinch, Stock Dove, Corn Bunting, Willow Tit, Green Woodpecker and Dunnock.

  (Avocet have also been recorded in recent years).

Amphibians

4.5.4 There are records of Common Frog at Gipsy Marsh and Wombwell Ings.

Invertebrates

4.5.5 The area has many records of invertebrates (including BAP Species of moth (Shaded Broadbar and Cinnabar), and a number of beetles, butterflies, Odonata, bugs, flies and spiders.

Other notable Faunal Records:

4.5.6 Footprints of introduced American Mink have been recorded in mud under Marles Bridge on the River Dearne in 2005.

Plants

4.5.7 Historic records for the Little Broomhill Pond site (1983) indicate the site was dominated by an extensive bed of burush (Typha latifolia) with, in addition, a good swamp habitat around the southern margin including water mint (Mentha aquatica), gipsywort (Lycopus europaeus), skullcap (Scutellaria galericulata) (frequent), marsh willowherb (Epilobium palustre), greater willowherb (E. hirsutum) , common spikerush (Eleocharis palustris), false fox sedge (Carex otrubae) and grey and goat willow (Salix cinerea and S. caprea). The open water was described as inaccessible. (Pers. Common J. Lunn).

4.5.8 Notable plant species for area include several recorded from the nearby Gipsy Marsh, a site noted for the diversity of sedges including Carnation Sedge (Carex panicea), Heather (Calluna vulgaris), Common Cottongrass (Eriophorum angustifolium) and swarms of Marsh Orchids include Northern and Southern Marsh Orchids, Common Orchids and Heath Spotted Orchids (Dactylorhiza sp). There is also a record of True Fox Sedge (*Carex vulpina*) – a Red Data Book Species at this site in 2009.

4.6 Natural Area

4.6.1 The site lies within the Coal Measures Natural Area. Natural Areas are defined by their unique combination of geology, wildlife, landuse and cultural heritage. Natural England's

'natureonthemap' website provides the following description of the Natural Area:

- 'This Natural Area is characterised by dense populations centred on a number of towns and cities that developed largely as a result of the underlying coal fields. These are deposits of shales and sandstones of late Carboniferous age (c. 320-295 million years old) which were deposited in equatorial swamps. Peat accumulated in these swamps and has subsequently been converted to coal. Associated shales yield rich and important fossil floras and the Coal Measures Natural Area is an important area for Earth heritage features.
- The topography of the Natural Area is gently undulating and the network of towns and cities is characterised by a matrix of acidic ancient and secondary woodlands, valley wetlands, neutral and acid grasslands, and mixed agriculture. canals, mill-ponds and natural rivers are also important features.'

4.6.2 Within this Natural Area, key nature conservation features of National Significance are:

- earth heritage.

4.6.3 Within this Natural Area, key nature conservation features of Local Significance are:

- lowland heathland.
- acid grassland.
- fen marsh and swamp.
- neutral grassland.
- wet woodland.
- rivers and streams.
- Standing open water and canals.

5 BASELINE ECOLOGICAL CONDITIONS

5.1 Habitat Types

5.1.1 The site of the proposed development itself includes a range of Phase 1 Habitat types (a coloured Phase 1 Habitat Map is presented in Figure 1). The habitats listed below were mapped **within the site (as delineated by the broken pink line in Figure 1).** Alpha-Numeric Codes used in the map key are given in brackets:

Scattered broadleaved trees (A3.1) – along eastern field boundary.
Continuous scrub (A2.1) – along Trans-Pennine Trail.
Scattered Scrub (A2.2) – dominated by willows around waterbody.
Marshy Grassland (B5) – creeping bent with abundant soft rush, around edges of waterbody.
Species-poor Semi-improved neutral grassland (B6) – dominated by coarse grasses in places. Limited number of flowering herbs.
Tall ruderals (C3.1) – coarse grasses, nettle, creeping thistle, docks and bramble.
Swamp (F1) – bulrush.
Inundation Vegetation (F2.2) – Juncus species and amphibious bistort on bare mud.
Open Water (G1) – with shallow margins and small islands.
Ephemeral/short perennial (J1.3) – on recently disturbed area.
Introduced Shrubs (J1.4) – Japanese knotweed abundant along western edge.
Bare ground (J4) – around recently-disturbed areas and tracks.
Species-poor Intact hedge (J1.2) Dominated by blackthorn.
Species-poor hedge(J2.2) – Dominated by hawthorn.
Dry Ditch (J2.6) recently re-excavated – with some sections of ponded water at the pond inlet.
Buildings (J3.6) – Horse Shelter.

5.1.2 Other habitats which lie immediately **adjacent** to the site include:
Improved Grassland (B4) – Adjacent Farmland.

5.1.3 Photographs of the various habitats and site features are provided within the habitat descriptions below. Affinities to National Vegetation Classification Plant communities are highlighted.

5.2 Habitat Descriptions

5.2.1 The waterbody in the centre of the site has been re-modelled in recent years (2011) to draw back the margins and remove some of the dense swamp of emergent vegetation which formerly surrounded the waterbody (ref. aerial photographs of the site available on Googlemaps). It is likely that this re-modelling has significantly increased and deepened the area of open water. There are extensive shallow margins currently free of vegetation, and an un-vegetated island. The water itself appears to be clear, with a dense growth of fine-leaved submerged aquatic plant species. There are also a few zones of floating-leaved aquatics. The water levels appear to fluctuate and there were extensive muddy draw-down or inundation areas which were exposed at the time of survey. The highly invasive alien plant Crassula helmsii is present and this is likely to spread across the draw-down zone. There are areas of scrub on the water's edge.



5.2.2 Species recorded in these open water and surrounding margins:

Aquatic Plants
broadleaved pondweed (Potamogeton natans) Occasional
fennel-leaved pondweed (Potamogeton pectinatus) Abundant
lesser pondweed (Potamogeton pusillus) Abundant
New Zealand pigmyweed (Crassula helmsii) Locally-Abundant

Inundation Areas
jointed rush (Juncus articulatus) Locally-Abundant
toad rush (Juncus bufonius) Locally-Abundant
compact rush (Juncus conglomeratus) Frequent
soft rush (Juncus effusus) Abundant
amphibious bistort (Persicaria amphibia) Occasional

Marginal
water plantain (Alisma plantago-aquatica) Occasional
greater willowherb (Epilobium hirsutum) Frequent
marsh bedstraw (Galium palustre) Occasional
soft rush (Juncus effusus) Frequent
gypsywort (Lycopus europaeus) Occasional
tufted forget-me-not (Myosotis laxa) Occasional
amphibious bistort (Persicaria amphibia) Occasional
reed canary-grass (Phalaris arundinacea) Locally-Abundant
common fleabane (Pulicaria dysenterica) Occasional
watercress (Rorippa nasturtium officinale) Occasional
celery-leaved buttercup (Ranunculus sceleratus) Locally-Abundant
clustered dock (Rumex conglomeratus) Locally-Abundant
curled dock (Rumex crispus) Locally-Abundant
water figwort (Scrophularia auriculata) Occasional
bittersweet (Solanum dulcamara) Occasional
bulrush (Typha latifolia) Abundant

Scrub
silver birch (Betula pendula) Occasional
goat willow (Salix caprea) Frequent
grey willow (Salix cinerea) Abundant

5.2.3 Around the perimeter of the waterbody are areas of damper grassland with abundant rushes indicative of MG10 grassland Community:

Marshy Grassland
creeping bent (Agrostis stolonifera) Locally-Dominant
trifid bur-marigold (Bidens tripartita) Occasional
marsh thistle (Marsh thistle) Occasional
marsh cudweed (Gnaphalium uliginosum) Occasional
Yorkshire fog (Holcus lanatus) Abundant
soft rush (Juncus effusus) Abundant
hard rush (Juncus inflexus) Frequent
hoary ragwort (Senecio erucifolius) Occasional
perennial sowthistle (Soncus arvensis) Occasional



5.2.4 Surrounding the perimeter of the waterbody is a bund of soil presumably arising from the re-modelling work. This soil has started to be colonised by a mixture of ruderals species and marginal plants regrowing from fragments of root or rhizome in the soil. Behind this bund is an area of compacted soil vegetated by a sparse coverage of ephemeral and short-perennial species. Elsewhere, arisings from the excavations have been piled around the perimeter of the site, particularly along the southern and eastern boundaries.

Ruderals
michaelmas daisy (Aster sp.) Occasional
wild oat (Avena fatua) Occasional
rosebay willowherb (Chamerion angustifolium) Locally-Frequent
creeping thistle (Cirsium arvense) Abundant
spear thistle (Cirsium vulgare) Frequent
teasel (Dipsacus fullonum) Occasional
cleavers (Galium aparine) Ocacsional
red shank (Persicaria maculosa) Occasional
bristly oxtongue (Helminthotheca echioides) Occasional
broadleaved dock (Rumex obtusifolius) Frequent
prickly sowthistle (Sonchus asper) Occasional
nettle (Urtica dioica) Locally-Frequent
charlock (Sinapis arvensis) Frequent

Ephemeral Short-perennial
scarlet pimpernel (Anagalis arvensis) Occasional
American willowherb (Epilobium ciliatum) Occasional
sun spurge (Euphorbia helioscopa) Occasional
petty spurge (Euphorbia peplus) Occasional
pineappleweed (Matricaria discoidea) Frequent
red bartsia (Odontites vernus) Frequent
knotgrass (Polygonum aviculare) Abundant
groundsel (Senecio vulgaris) Frequent
scentless mayweed (Tripleurospermum inodorum) Frequent
colt's-foot (Tusilago farfara) Locally-Abundant

5.2.5 The remainder of the site is a species-poor largely self-seeded grassland which has presumably developed on former arable land since cropping ceased. (Aerial photographs indicate that the field was under arable cultivation in 2002). The grassland includes a high proportion of coarse grasses with a limited range of flowering herbs and frequent ruderals. The northern part of the site is grazed by ponies.



5.2.6 The southern part is currently ungrazed and comprises a zone of MG1 grassland community and an uneven terrain of unconsolidated piles of arisings covered by a dense growth of tall grasses, including reed canary-grass, ruderals (listed previously) and soft rush (see photo below left). Several clumps of Japanese knotweed (Fallopia japonica) grow in the spoil mounds in the south-western corner of the site and this highly-invasive alien plant also grows in profusion all along the western perimeter fence (see photo below right).





<u>Species-poor Semi-improved Grassland</u>
Grasses:
false oat-grass (Arrhenatherum elatius) Abundant
couch (Elytrigia repens) Locally-Abundant
creeping soft grass (Holcus mollis) Locally-Frequent
perennial ryegrass (Lolium perenne) Frequent
reed canary-grass (Phalaris arundinacea) Locally-Frequent
annual meadow grass (Poa annua) Frequent
rough-stalked meadowgrass (Poa trivialis) Frequent

Sedges and Horsetails:
glaucous sedge (Carex flacca) Occasional
field horsetail (Equisetum arvense) Locally-Frequent

Flowering Herbs:
daisy (Bellis perennis) Occasional
common mouse-ear (Cerastium fontanum) Frequent

field bindweed (Convolvulus arvensis) Occasional
wild carrot (Daucus carota) Occasional
cut-leaved crane's-bill (Geranium dissectum) Occasional
dove's-foot crane's-bill (Geranium molle) Locally-Frequent
common cat's-ear (Hypochaeris radicata) Frequent
bird's-foot trefoil (Lotus corniculatus) Occasional
orange hawkweed (Pilosella aurantiaca) Occasional
ribwort plantain (plantago lanceolata) Frequent
greater plantain (Plantago major) Occasional
meadow buttercup (Ranunculus acris) Occasional
creeping buttercup (Ranunculus repens) Adundant
ragwort (Senecio jacobaea) Frequent
hedge woundwort (Stachys sylvatica) Occasional
tansy (Tanacetum vulgare) Occasional
dandelion (Taraxacum officinale agg.) Frequent
lesser trefoil (Trifolium dubium) Occasional
alsike clover (Trifoium hybridum) Occasional
red clover (Trifolium pratense) Occasional
tufted vetch (Vicia cracca) Locally-Frequent
hairy tare (Vicia hirsuta) Occasional
common vetch (Vicia sativa) Occasional
smooth tare (Vicia tetrasperma) Occasional

5.2.7 There is a section of species-poor hedge alongside Everill Gate Lane and sections of gappy hedge along the eastern and southern boundaries. A line of scrub forms the southern boundary of the site, alongside the Trans-Pennine Trail.

Hedgerows
hawthorn (Crataegus monogyna) Frequent
ash (Fraxinus excelsior) Occasional
aspen (populus tremula) Occasional
dogrose (Rosa canina) Occasional
bramble (Rubus fruticosus agg.) Locally-frequent
elder (sambucus nigra) Occasional
blackthorn (Prunus spinosa) Locally-Abundant

5.3 Fauna

5.3.1 A limited range of fauna was observed during the site visit. Birds seen on the water were: Tufted Duck (pair plus 8 ducklings), Moorhen, Canada Geese (3) and Mallard (8). Blackbird, and Magpie were also seen and Pheasant was heard. Common Darter Dragonfly and Blue-tailed Damselfly were seen around the open water. The water contained small fish fry. Common blue butterfly, Meadow Brown, Small Tortoiseshell butterfly and Peacock butterfly were disturbed from the grassland. A Brown Hare was disturbed from the grazed grassland to the north of the open water. The animal ran towards the north-eastern gateway, across Everill Gate Lane and into Broomhill Flash Nature Reserve.

6 NATURE CONSERVATION EVALUATION

6.1 Size and diversity

6.1.1 The habitats within the moderately-sized grazed and ungrazed grassland and areas of disturbed soils are of common and widespread occurrence and are of limited intrinsic botanic diversity. The areas of scrub, hedgerows and tall herbage around the southern perimeter may provide some nesting opportunities for a range of birds and this vegetation evidently provides cover for large mammals such as Brown Hare. The areas of tall unmanaged grassland are also likely to support a population of small mammals. The areas dominated by reed canary grass is potentially suitable for Harvest Mouse. Although there are no positive records from this site there are records of Harvest Mouse in Barn Owl pellets collected in the Broomhill area. The open water is now of a moderate size and supports a reasonable diversity of aquatic species. Although still at an early stage of recolonisation following the work on the pond edges, the water margins support a good diversity of plant species and evidently provide nesting habitat for waterfowl and a habitat for damselflies and dragonflies.

6.2 Rarity - with particular reference to Protected Species

6.2.1 The background data search suggests that this site was notable for the extensive swamp habitat which provided a roost for Swallows. It was also notable for the presence of breeding garganey and other birds such as Reed Warbler and Grasshopper Warbler. The area still provides habitat suitable for breeding water fowl but its suitability for some of the aforementioned species is likely to have been reduced by the loss of cover caused by the recent vegetation removal works.

6.2.2 Since the recent works, it is also possible that the site has become *more* suitable for a range of notable and rarer waders and water margin bird species usually seen on the more open shallower-margined waterbodies at Broomhill Flash and Wombwell Ings. No signs of protected species were found during the survey but, if the margins become better vegetated there are likely to be areas *suitable* for Water Voles. The pond is considered to be a habitat of Local significance (it is designated a Local Wildlife Site) and the habitats present are also of local significance in the Coal Measures Natural Area.

6.2.3 The are no opportunities for bat roosts on the site and no signs to indicate the presence of Badgers were found. No records to suggest the pond itself supports amphibian species has come to light as a result of the data search. The site is, however, likely to support common amphibian species such as Common Frog and is potentially suitable for Common Toad (although no records of this species were provided by the Barnsley Local Records Centre). There are no records of any newt species being present in the area but this may be due to lack of recording effort.

6.2.4 The extensive swamp habitat which used to surround the pond would have been excellent foraging ground for Grass Snake and there are likely to be suitable hibernations sites for this species located nearby. Grass Snake has been described as 'regularly seen' beside Everill Gate lane. Despite the removal of some of the surrounding swamp vegetation the site remains a good habitat for this species, although the absence of covers on the barer areas to the north of the pond reduces the connectivity to the habitats outside the site.

6.3 Naturalness and typicalness

6.3.1 The original habitats on much of the site represent the results of natural colonisation by plants with a clear zonation from open water to swamp and eventually willow carr woodland. These habitats have all developed over time due to a lack of intervention. Elements of all these plant communities and the fauna that they support still remain on the site but the proportion of open water has been significantly increased and the emergent swamp zone decreased. It should be noted that the recent work has retained the pockets of willow scrub around the water margin and islands have been created.

6.4 Fragility

6.4.1 Grassland is a habitat which is reliant upon regular cutting (or grazing) management. Without such maintenance, the area will rapidly change to scrub and eventually to woodland. At present the grassland to the south is not grazed and is becoming dominated by tall ruderals. The dominance of coarse ruderal species has been encouraged by the deposition of material excavated from the pond margins. The northern part of the site is undergrazed and is starting to develop some extensive areas of ruderals and areas of young scrub.

6.4.2 Without intervention waterbodies naturally develop through progressively drier habitat stages until they reach woodland with no open water at all. Recent intervention has returned the pond to the earlier successional stages. Without continued intervention the area will rapidly develop margin swamp vegetation. The presence of the invasive alien plant, New Zealand Pigmyweed, is likely to mean that shallow margins become dominated by this species at the expense of native plant species.

6.4.3 The intermittent hedgerow on the northern boundary appears to be occasionally trimmed on its outer side but appears to have received little other maintenance and is generally not in a stock-proof condition. Without maintenance the hedge will develop into a line of scattered shrubs with little woody growth at the base.

6.4.4 Without control, the colonies of the highly invasive alien plant Japanese Knotweed will continue to expand into the grassland and new clumps will develop where plant fragments have been inadvertently spread via recent soil moving operations.

7 IMPACTS OF DEVELOPMENT

7.1 Description of Proposals

7.1.1 The proposal is to develop the site as a fishing facility with a small car park, cafe and toilet block and access of Everill Gate Lane.

7.1.2 Under this planning application a small opening in the hedge would be created and the north-eastern corner of the site surfaced for car parking. The erection of a small building in this corner of the site is also proposed.

7.2 Impacts upon Habitats

7.2.1 The impacts of the proposals would include:

- Loss of common and low quality habitats mentioned in Section 5.2.
- Installation of fishing pegs and perimeter footpath between pegs with link to the car park

7.3 Impacts upon Local Biodiversity

7.3.1 Based on present survey evidence, the loss of the above habitats to car parksing ansd site facilities will have very limited direct impact on local biodiversity (primarily a loss of very small length of hedge (potential bird nesting habitat) and a small area of species-poor grassland. This impact is considered to be of minor significance in a wider ecological setting and a number of mitigation and enhancement measures can be taken to make sure that there is no overall loss of biodiversity on the site in the medium to long term.

7.3.2 Based on current survey evidence there is no potential risk of disturbance to protected species.

7.3.3 The development would directly affect a non-statutory sites of nature conservation importance (identified and described in Section 4, above). The de-silting and vegetation removal works which have taken place already have altered the character of the site by reducing the proportion of swamp vegetation. The proposal to stock the waterbody with fish would further alter the ecology of the site. However, this may not necessarily be to the detriment of wildlife, *provided* that the site is stocked with suitable balance of fish species AND sufficient margin plant growth is allowed to regrow between the proposed fishing pegs.

7.4 Impacts upon Wider Environment

7.4.1 The development is unlikely to have a direct impact on the nature conservation interests of the other nearby Local Wildlife Sites although the stocking of the pond with fish carries with it the risks of inadvertently introducing invasive aquatic animal and plant species and diseases. Transfer of invasive species to and from the site via poorly cleaned fishing tackle is also a potential risk. The site is in very close proximity to the existing Nature Reserves at Old Moor and Broomhill Flash/Wombwell Ings. There is likely to be free and constant movement of bird species to and from the different waterbodies including the proposed fishing pond, increasing the risk of transfer of pests and disease into the waterbodies of the wider area.

8 MITIGATION PROPOSALS

8.1 Pre-Development

Further Survey

8.1.1 Whilst there are no known records of protected amphibian species on the site or in the locality, it is not clear whether the pond in this area have ever been specifically-surveyed for amphibians. The introduction of predatory fish populations into a pond which supports a healthy population of the more common amphibians species would be considered detrimental without appropriate mitigation. Therefore it is recommended that a survey be undertaken in the Spring months to establish whether there are breeding amphibians on the site. Further guidance should be sought from the Local Records Centre and Natural England as to whether a full Protected amphibian survey is required in this instance.

Invasive Plant Control

8.1.2 An immediate programme of treatment to eradicate Japanese Knotweed should commence on the site. Populations of Japanese knotweed in areas affected by any excavations or soil movement should be eradicated prior to any ground or soil disturbance. (Any soil or plant material excavated from the site will need to be treated as waste and disposed of in accordance with Environment Agency guidance).

Site Layout and Design

8.1.3 The nature of the proposed development and the low quality of the vegetation directly affected means that alterations to the general layout of the access and parking area are not considered necessary. Vegetation loss could be minimised if it is feasible to relocate the access point to a hedge-less section of the northern boundary (depending on traffic management and entrance visibility requirements). To compensate for the conversion of grassland habitat to hard standing and buildings and hedge loss, mitigation to improve the habitats on other parts of the site are suggested. Hedge loss could be compensated for by planting-up the whole of the northern boundary of the site with a native hedge.. Some further mitigation options are set out in 8.3 below.

8.1.4 Assuming that development of a fishery proceeds at the site, the location of fishing pegs should be chosen to avoid the loss of existing willow scrub. Ideally, fishing platforms should extend some distance into the water so as to allow a wide band of emergent plants to develop 'behind' the fishing point (to minimise the need constantly to clear vegetation). Where tree management is necessary, this should take the form of coppicing or pollarding rather than wholesale scrub removal.

8.1.5 The presence of overhead power lines is likely to limit the location of possible fishing pegs. Guidance on the location of fishing pegs will need to be sought from the relevant overhead line owners. A 30 metre distance is the usually default no-fishing zone but this can be adjusted provided there is control over the type of rods used and the fisheries owner has the capacity to 'police' equipment use. Further guidance is available from the energy networks association: www.energynetworks.org/electricity/she/safety/safety-advice/angling.html

8.1.6 Within the no-angling zone the management of the pond should be focussed on maximising the wildlife value whilst preserving the fisheries interests. These zones could be allowed to develop as extensive swamp areas which would reinstate the vegetation cover favoured by breeding birds such as reed bunting, sedge and grasshopper warbler and provide sheltered zones for fish fry development. Guidance on the management of these areas could be sought from the Garganey Trust (contact Jeff Lunn) and RSPB.

Timing and methods of vegetation-clearance and protection of habitats

8.1.7 Any vegetation clearance work should be undertaken outside the bird breeding season, i.e.

between the end of August and end of February.

8.2 Development Phase

8.2.1 An inspection of the sections of pond bank directly affected by the construction of fishing pegs should be undertaken immediately prior to any works to check for presence of nesting waterbirds or signs of wildlife usage. Appropriate mitigation should be drawn up to avoid negative impacts.

8.2.2 Vehicle movements around the vegetation which is to be retained should be minimised.

8.2.3 Noisy machinery such as generators should be positioned away from the ponds and noise baffles used to reduce noise affecting on the adjacent Broomhill Flash Nature Reserve.

8.2.4 Modifications to the pond margins have already taken place and the material arising from the work has been mounded around the site without an attempt to create a natural landscape. Nor has any attempt yet been made to re-establish vegetation on this material. Consequently, these areas have allowed ruderal and 'weed' species to dominate. It would be preferable to reshape the material into more gradually-sloping landform so as to allow the establishment of a mowable grassland (occasional mowing being a useful aid to the management of grazed grasslands). Ideally, the grassland to the north of the pond should continue to be managed as pasture. Areas of uneven terrain to the south of the pond could be levelled to re-instate grazed grassland or, alternatively, the areas could be levelled and some sections planted up as wet woodland. (A survey for harvest mouse is advised before any tree planting is considered).

8.3 Operational Phase & Contribution to Local Biodiversity

8.3.1 The choice of fish to be stocked should be guided by the need to create a balanced eco-system with good water quality and a diversity of aquatic and emergent plants. Care will need to be taken to ensure that fish introduced to the site are healthy and disease free. Care will also be needed to avoid the accidental introduction of alien plants and animals or transfer of these organisms to other sites.

8.3.2 Given the proximity to important wetland Nature Reserves and the designation of the site itself as a Local Wildlife Site, there is a need to ensure that invasive alien species present on the site are controlled. The presence of *Crassula helmsii* is a particular risk since tiny fragments of this plant caught on fishing tackle, nets or even fragments trapped in mud on shoes and boots can introduce this plant to new sites. However, it should be noted that this species is alreadywell established at Broomhill Flash and Old Moor. Therefore, in this instance the primary aim of control should be a) to prevent inadvertent transfer to other wetland sites and fishing lakes by visiting anglers, and b) to work in conjunction with the adjacent local Nature Reserve ***if*** a co-ordinated attempt is made to eradicate this species from the area.

8.3.3 There is an opportunity to create, small fish-free ponds, shallow pools and marshy grassland around the north-eastern margin of the existing main pond, on the area of bare soil, ephemerals and short perennials created during the recent re-modelling works. It should be possible to work with the Dearne Valley Green Heart Nature Improvement Area Team and Garganey Trust to create an area which would be of high wildlife value and which, along with the large angling pond, be a valuable wildlife resource which would be another point of attraction for bird watchers and other visitors who already visit Broomhill Flash and Old Moor. The provision of some visitor facilities (e.g. a bench or a simple shelter overlooking the wetlands) would be an option. This could attract bird watchers to the site thereby helping to provide additional custom to site facilities, such as the proposed cafe. There may be an opportunity for the NIA to provide assistance in the creation of wet woodland or the establishment of new wet grassland habitats. Contact should be made with Peter Wall of the RSPB NIA team Pete.Wall@rspb.org.uk or Jeff Lunn of the Garganey Trust (contactable via the NIA) to discuss potential options for co-operation on this project.

9 REFERENCES

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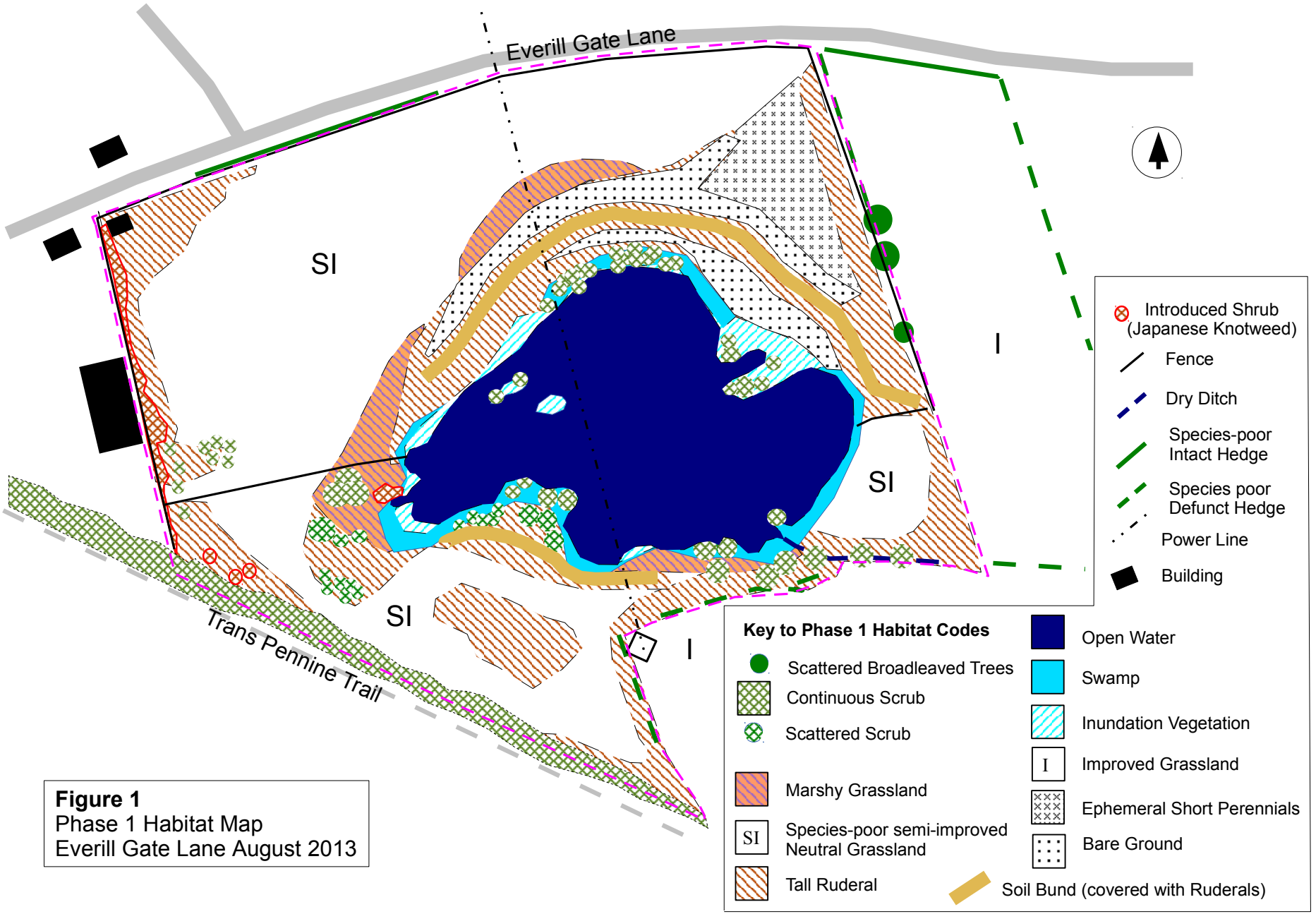

Figure 1
Phase 1 Habitat Map
Everill Gate Lane August 2013