ECOLOGY REPORT

WEMBLEY STADIUM ACCESS CORRIDOR

Prepared for

London Borough of Brent

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1. INTRODUCTION

This report documents the results of a Phase 1 ecological survey of the Wembley Stadium Access Corridor. The survey site lies along a road to the east of the stadium. Although the entire stretch of road to be widened was surveyed the Phase 1 sketch map (attached) is restricted to the area around the Brent River bridge. This is due to the sensitivity of this area and the lack of semi-natural habitat along the remainder of the route. The road over the existing bridge will be widened to include the present footpaths. A new footbridge will be constructed on either side of the bridge. The locations of these proposed footbridges are shown on the sketch map.

2. METHODS

2.1. Desk Study and Consultation

Consultation was undertaken with the London Wildlife Trust and the Hertfordshire and Middlesex Bat Group to identify habitats or species of nature conservation importance within the study site and surrounding area. This included information on:

- Statutory and non-statutory designated sites (e.g. Sites of Special Scientific Interest; Local Nature Reserves; Sites of Nature Conservation Importance Wildlife Trust Reserves);
- Records of legally protected species;
- Records of nationally rare or scarce species;
- Records of national and local Biodiversity Action Plan (BAP) priority species.

2.2. Phase 1 Habitat Survey

An ecologist undertook a walkover survey of the site on 12 November 2003. The survey was carried out based on the standard Phase 1 habitat survey methodology devised by the Nature Conservancy Council (1990) [1]. The aim of the survey was to identify the type, quality and extent of habitats present within the site and to identify the potential of the site for notable species. Target notes (See Annex 1) were recorded to provide supplementary information on species composition and structure, evidence of management and on habitats too small to map. Records of ground flora were limited due to the time of year that the survey was carried out and the difficulty of accessing vegetation at the water's edge. It must be noted that many plant species present on the site will not have been recorded due to the fact they are not visible late in the season. Any evidence to indicate the presence or potential presence of notable faunal species was also recorded.

[1] Nature Conservancy Council (1990). Handbook for Phase 1 habitat survey: A technique for environmental audit. JNCC

3. RESULTS

3.1. Desk study

Designated sites

The bridge in question borders two Sites of Nature Conservation Importance (SNCI) to the north and south. All designated sites are listed in Table 1.

Table 1. Designated sites within 2km of the study site

Designated site	Grid reference	Approx. distance from site (km)
SNCI Grade I Brent Bends	TQ202858	Borders the site to the North
SNCI Grade II Tokyngton wildflower area and the Brent	TQ201850	Borders the site to the South
Brent Reservoir SSSI	TQ212869	1.4 km NE of the site

Bats
A local Bat recorder and member of Hertfordshire and Middlesex Bat Group, Mr Peter Martin supplied the results of a bat survey along the Brent River including the survey site. The survey was carried out on three nights between the 20 and 29 September 2002 with only one bat species recorded; pipistrelle 45's *(Pipistrellus pipistrellus)*. However the following additional species are also known to occur elsewhere along the Brent River:

- Noctule (*Nyctalus noctula*)
- Pipistrelle.(*Pipistrellus pygmaeus*)
- Daubenton's bat. (*Myotis daubentonii*) - This species is known to occur around Brent Reservoir 1.4 km to the north east.

3.2. Field Survey

Summary

The survey area is a river crossing in a predominantly urban environment. However a narrow band of parkland and trees follows the river both north and south of the bridge. Around the crossing point the vegetation is predominantly patches of dense scrub, with numerous small stands of the invasive plant Japanese Knotweed (*Fallopia japonica*), and scattered trees many of which, namely Poplar (*Populus* sp) and Osier (*Salix viminalis*), have been planted.

Habitats

Dense continuous scrub
Brambles (*Rubus fruticosa* agg.) dominated most areas of scrub. The invasive non-native Japanese knotweed was also a common component as was the garden escape Butterfly-bush (*Buddleja davidii*), which dominated one bank. Other species recorded include Hawthorn (*Crataegus monogyna*), Dog Rose (*Rosa canina*) and further along the road, Blackthorn (*Prunus spinosa*).

Broadleaved plantation woodland

On the northeast side of the River a small area of broadleaved woodland is present, composed of Elder (*Sambucus nigra*), Hawthorn and Holly (*Ilex* aquifolium) under mature Poplar (*Populus* sp), which is then followed by a line of Osier beside the River. On the northwest bank of the River scattered Osier and Poplar dominate.

Marginal vegetation

Small patches of marginal vegetation were visible amongst stands of tall ruderals. Marginal vegetation recorded includes Hemlock Water-dropwort (*Oenanthe crocata*), a very small (<1m^2) patch of Common reed (*Phragmites australis*) and Comfrey (*Symphytum officinale*). Although more species may well have been present, the season in which field work was carried out and the lack of safe access to the water's edge limited the survey.

Tall ruderal

The wet gravel banks beside the River have been colonised predominately by tall ruderals with no single species dominating. Common species include Nettles (*Urtica dioica*), Broad-leaved Dock (*Rumex obtusifolia*) and Mugwort (*Artemisia vulgare*).

Invasive non-native species

As previously mentioned a number of small patches of Japanese knotweed were found, both around the River and further down the road to the east. Additionally one Giant Hogweed plant (*Heracleum mantegazzianum*) was recorded on the south side of the bridge, as were a number of plants of the invasive Himalayan Balsam (*Impatiens glandulifera*).

Notable Species

The following section discusses the notable or protected species which are known, or have the potential, to be present within the study site based on a review of records received from consultees and the Phase 1 survey undertaken. A brief description of the conservation status of each species, the level of protection afforded by legislation and the implications for development are described in Section 4 where appropriate.

Birds

During the walkover survey a number of bird species were recorded. Of particular interest were Sparrow Hawk (*Accipiter nisus*), Great spotted Woodpecker (*Dendrocopus major*) and the non-native Ring Necked Parakeet (*Psittacula krameri*) which has become increasingly widespread in London to the detriment of native bird species. None of these species are protected or BAP priority species. However the former two indicate that the river corridor and associated habitats are likely to support a good range of bird species.

Bats

The river habitat provides ideal foraging habitat for bats, and mature trees or suitable bridges may provide roost sites. The bridge in question and neighbouring areas of scrub to be affected by works do not support suitable roost sites for bats.

Badger

No signs of this species were detected on site.

Water voles

Concrete walls with vegetated gravel banks below bordered the river channel around the survey area. This did not present suitable burrowing habitat for Water Voles, and therefore it is not considered likely that they are present.

Great Crested Newts

The River Brent is fast flowing and likely to support fish which would feed on newt eggs and larvae. The combination of these factors and the lack of suitable foraging habitat in the survey area mean that Great Crested Newts are not considered likely to be present at this site.

Reptiles

The site holds a low potential for Grass snake (*Natrix natrix*), Common Lizard (*Lacerta vivapara*) and Slow Worm (*Anguis fragilis*). Although little foraging or basking habitat was observed reptiles may use piles of old wood or dead scrub below areas of dense scrub as hibernation sites or refugia. Grass snake may forage around the watercourse, however the fast flowing nature of the Brent at this location reduces likelihood of this.

4. ASSESSMENT

The issues identified at this site are:

Invasive non-native plants, of particular relevance here is Japanese Knotweed which is within the construction corridor. See below for further details

Nesting Birds. Scrub clearance should be carried out between September and early March

Reptiles. Low potential for reptiles was identified and advice on how to minimise possible impacts is given

Bats. No negative impacts on bats are anticipated. However advice is given on how benefits for bats could be incorporated within the proposed new footbridges.

Though Great Crested Newts, Water Voles and Badger were considered these were ruled out as explained in section 3.3 and therefore do not present implications for development. Each issue is discussed in more detail below.

Invasive non-natives

Japanese Knotweed, Giant Hogweed and Himalayan Balsam were all found within the survey area. However works are only likely to cause disturbance to the former. It is worth noting the location of the other two species (Target notes 1 and 2) so as to avoid disturbance of these and seek professional advice if disturbance is anticipated.

In 1981, the Wildlife and Countryside Act made it illegal to spread Japanese Knotweed. This species can be spread through the disturbance of its root systems (even a small fragment of roots can sprout into a new plant) or from soil containing root fragments. Any excavated soil

from areas were Japanese Knotweed has established, therefore, must be disposed of at a licensed landfill site and not reused in further construction or landscaping.

As the root system can spread up to 7m horizontally it is recommended that works maintain a safe distance of 8 m from Knotweed plants. Alternatively if it is necessary to disturb plants, as it will be in this case, then a method of control will need to be implemented. The environment agency should be contacted for further information on this species, how it should be controlled and where is should be safely disposed of locally.

Nesting Birds

Birds and their nests are protected by the Wildlife and Countryside Act 1981 (as amended). This Act gives protection to all species of bird with regard to killing and injury, and to their nests and eggs with regard to taking, damaging and destruction.

Scrub removal/tree felling should be undertaken between late September and early March, to avoid the season during which birds are most likely to nest. If scrub clearance is necessary during the bird breeding season then the area to be cleared should first be surveyed for nesting birds by an ecologist or other appropriate person.

Reptiles

Although the potential for reptiles on this site is considered to be low, Grass snake, Common Lizard and Slow worm may occur here. These species receive partial protection under Part 1 Section 9 of the Wildlife and Countryside Act 1981 (as amended). This legislates against the killing and injury of all three species.

Due to the low potential for these species it is not considered necessary to carry out further reptile survey but rather a precautionary approach should be taken during construction. Work on sites which have reptile potential should ideally be carried out from April to October when reptiles are active and able to escape possible injury caused by works.

Suggested mitigation during this period (April to October) would entail careful scrub clearance carried out by hand or where necessary with a metal-bladed strimmer. Any suitable vegetation will be disturbed to encourage reptiles to leave the site. Other areas of suitable habitat (such as log piles or piles of dead scrub) should also be carefully cleared by hand.

Prior to construction, areas of suitable vegetation will be strimmed to a low level to reduce the habitat suitability of the site for reptiles. This will reduce the likelihood of reptiles using the area while construction works are underway. Strimming should be undertaken from the centre of the site outwards so that reptiles are encouraged to move into adjoining habitat.

There is a small risk that reptiles may be found on the site after site clearance. In the event that this occurs, the following procedure must be followed:

- Do not touch the reptile; rather allow it to move off.
- Stop works in the vicinity until given the all clear.
- Telephone an environment manager or an ecologist for advice if the reptile does not leave the area.

If winter working is unavoidable, however, the following working methods are recommended to reduce the risk of disturbance.

- A responsible member of the site construction staff should be briefed on the possible presence of reptiles.

- If a reptile is discovered during the course of site clearance it should be removed carefully using gloves and placed in a box with a loose fitting lid. The environmental manager or an ecologist should be contacted immediately for advice. If the reptile is active it can be released into nearby habitat. If it is hibernating, advice from an ecologist should be sought on potential hibernacula.

Bats

The proposed works are not anticipated to have negative impact on bats. However, there is an opportunity to for the works to incorporate positive measure for them. A generic Biodiversity Action Plan (BAP) exists for bats within London in an attempt to encourage an increased number and diversity. Daubenton's bat is a species generally found associated with river habitats and is known to occur further north within the Brent Reservoir SSSI. Present works are aiming to improve the habitat along this river and it is hoped that this species can be encouraged to move down river.

It is recommended that the proposed new footbridges incorporate bat boxes designed for this species. A useful reference to guide this work is a report prepared by Geoff Bellington & Geoff Norman for English nature in 1997 entitled " The Conservation of Bats in Bridges Project"[1]. It is very comprehensive and deals with how to build roosts in both modern and stone bridges.

It is also recommended that the site of Riverside House (which will be demolished) is surveyed by a bat specialist approximately 8 weeks before demolition is schedule. In the unlikely event that bats are present then there will be sufficient time to obtain the necessary license to remove them.

Possible bat boxes include:

- The Schwegler 2F-DFP available from Alana Ecology (www.alanaecology.com).
- "Belfry Bat Box", made to order and available from Peter Smith, 01873 890598, suitable for masonry structures such as the underside of bridges.
- A two part bat roost that is all brick unit sizes, for use in new build work. It is made by Marshalls Clay Products 01132 203535

An Ecologist, member of a local bat group or experiences bat worker should be consulted on the location of bat box within the bridges. It is important that a number of roosts are incorporated in the structure, as Daubenton bats move roosts regularly.

5. Conclusion

No significant ecological effects arising from the proposed highway works have been identified. Recommendations are nonetheless included in the report relating to the timing of and procedures for undertaking the works, as well as opportunities for ecological enhancement. These are all matters which can be addressed through the imposition of appropriate planning conditions.

[1] (EN Cumbria phone no 01539 792800). It is considered the bible of bridge work for bats. It is intended to be widely circulated and may be freely copied. If quoted, acknowledgement of source should be given as:- Billington,G E & Norman,G M (1997).

Annex 1

Target notes

Target note no	Target notes
1	Tall ruderal vegetation, predominately Nettles (*Urtica dioica*) and Broad-leaved Dock (*Rumex obtusifolia*) dominate this area with a small stand of Common Reed (*Phragmites* australis) and numerous Himalayan Balsam (*Impatiens glandulifera*) plants.
2	Tall ruderal vegetation and a small number of marginals including Hemlock Water-dropwort (*Oenanthe crocata*). I plant of the invasive Giant Hogweed plant (*Heracleum mantegazzianum*) was recorded to the south of the road bridge nearer the railway bridge.