



## **LOWER THAMES CROSSING ROUTE CONSULTATION 2016 - COMMENTS FROM THE RSPB**

**22 March 2016**

We are pleased to take this opportunity to provide the RSPB's comments on the current consultation on the route of the proposed Lower Thames Crossing.

### **General observations**

In a letter to the Department for Transport in July 2013 the RSPB raised concerns that a further road-based crossing of the Lower Thames is not environmentally sustainable, and these concerns still stand. We believe that new large infrastructure projects such as this should capitalise on the opportunity to encourage a shift towards lower emission forms of transport, such as rail and other modes of public transport, and cycling.

That said, we are setting out in our response a number of comments on the options set out in the consultation documents. The RSPB's remit relates principally to the conservation and enhancement of biodiversity, and our response concentrates on the impacts of the proposal on habitats and species, particularly statutorily designated sites. For this reason we have not offered substantive comments on wider environmental considerations (such as air quality and noise, and implications for the built environment and cultural heritage).

We have structured our response under the following headings:

#### **1. A crossing in Location A**

#### **2. A crossing in Location C**

- a. the significance of and implications for the Thames Estuary and Marshes Special Protection Area and Ramsar site and other designated sites**
- b. potential impacts north of the river**
- c. potential impacts south of the river**

#### **3. Summary and conclusions**

## **1. A crossing in Location A**

Our comments on a crossing in this location (i.e. at or near the existing Dartford crossing) are made having regard to the conclusion in the consultation (Para 2.7, Summary Business Case) that such an approach would not meet the key objectives of the project.

Because of the remoteness of Location A from sites designated for nature conservation at European and international level, its potential for having an adverse impact on such sites is relatively low compared to Location C (see below) although in the event of a bridge crossing being constructed the loss of or hydrological changes to functionally linked habitat, along with potential disturbance impacts, may give rise to indirect impacts (Para. 3.4.5 – 3.4.7, Pre-consultation Scheme Assessment Report, Volume 6). Many of these potential impacts would be mitigated or avoided if a bored tunnel was implemented (Para. 3.4.8 – 3.4.10, *ibid*).

The associated infrastructure to the north and south of a new crossing at Location A would potentially impact on a number of Local Wildlife Sites and/or ancient woodland sites (Para. 3.4.1 – 3.4.4, *ibid* and references therein). Ancient woodland is irreplaceable and any loss of or damage to this habitat would be an adverse impact on biodiversity that would be difficult or impossible to compensate for.

Looked at in the round, a crossing at Location A would have significantly less potential to impact adversely on biodiversity (particularly if it was a bored tunnel) than a crossing further to the east. We are however (notwithstanding the scope of our comments as mentioned above) aware of the serious concerns about other environmental issues, notably air quality and noise, at this location.

## **2. A crossing in Location C**

### **a. the significance of and implications for the Thames Estuary and Marshes SPA and Ramsar site and other designated sites**

We are keen for Highways England to pursue an option that causes the least damage to the environment. With this in mind our primary concern relates to potential impacts on the Thames Estuary and Marshes SPA and Ramsar site, and the species for which they are notified, whether on site or on functionally-linked land. A full Habitats Regulations Assessment (HRA) would need to have regard to the fact that the network of intertidal habitats throughout this area of the Thames acts as a linked set of habitats that are used by bird populations from a number of SPA/Ramsar sites. We welcome the fact that Counsel's advice has been sought on the implications of the Habitats Regulations and that this advice has been reflected in the construction option selected for public consultation.

We note that the sensitivity to disturbance of the bird populations of the SPA has been identified (Para. 4.2.8, Volume 2, and Para. 3.4.9, Volume 6, Pre-consultation Scheme Assessment Report), and are keen to see this issue reflected properly in the assessment of any scheme that is brought forward.

We are concerned about the potential loss of functionally-linked grazing marsh resulting from the construction of the northern tunnel portal (Para. 3.4.10, Volume 6, *ibid*). We also note that there may be issues affecting groundwater, requiring dewatering during construction and potentially also during operation (Para. 3.5.9, Volume 6, *ibid*). Careful siting of the portals (including potential extension of the tunnel) may be able to address these concerns.

The RSPB reserve at Shorne Marshes is part of the Ramsar designation, and is now the most important site for breeding waders on the Hoo peninsula. We are strongly committed to ensuring that the work of the RSPB in restoring grazing marsh habitat on the reserve, with consequent conservation gains, is not undone. We note that the illustration of the tunnel portal to the south of the river (Figure 8.2, Volume 1, *ibid*) appears to show the tunnel emerging at the boundary of the marsh. We are concerned that this may impact on the hydrology of this internationally important site and urge that careful investigation of this is undertaken, particularly to evaluate whether a short extension of the tunnel would enable any hydrological concerns to be addressed. We note that the tunnel portal is considered to be optimised to reduce biodiversity effects (Para. 5.4.12, Volume 6, *ibid*) but consider it essential that this view is evaluated carefully at the next stage.

#### **b. Potential impacts north of the river**

We are concerned about possible direct or indirect impacts on intertidal and terrestrial habitats and their supporting species, which are functionally linked to the network of designated sites within the Thames Estuary. Furthermore, there are a number of Local Wildlife Sites (LWS) designated for their invertebrate and botanical interest and areas of ancient woodland which are directly threatened. The RSPB is aware of a number of Birds of Conservation Concern<sup>1</sup> (breeding nightingales, turtle doves, grasshopper warblers, possibly long-eared owls and wintering corn buntings) that are also present at Goshems Farm and will be affected by direct land-take and construction impacts. The level and nature of these impacts, particularly on terrestrial habitats, differs with the three route options under consideration.

With regard to a bored tunnel at Location C, we are aware that ringed plovers and dunlins (SPA Feature species) roost on land to the west of Goshems Farm. A review of construction impacts on waterbirds<sup>2</sup> (Cutts *et al* 2009) highlights that levels of disturbance response vary according to season, that birds in areas of limited opportunity for roosting are more sensitive to disturbance, and that this impact could be mitigated by creating new areas (page 30).

This literature review also identifies gaps in knowledge with regards to the effects of noise on waterbird populations (page 84). The RSPB would like to see this issue fully addressed given the (as yet unidentified) potential construction impacts of a section of cut-and-cover tunnel for the northern

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<sup>1</sup> Eaton M.A., Aebischer N.J., Brown A.F., Hearn R., Lock L., Musgrove A.J., Noble D.G., Stroud D. and Gregory R.D., 2015. Birds of Conservation Concern 4: the population status of birds in the UK, Channel Islands and Isle of Man. *British Birds* **108**: 708-746

<sup>2</sup> Cutts N., Phelps A. and Burdon D 2009 *Construction and Waterfowl: Defining Sensitivity, Response, Impacts and Guidance* Institute of Estuarine & Coastal Studies. Report ZBB710-F-2009

bored tunnel option (Para. 5.3.53, Volume 3) and “the consideration of piling of flood defences” (Para. 3.5.11, Volume 3).

This is particularly important as data from Wetland Bird Surveys (WeBS)<sup>3</sup> highlight that the mudflats south of Goshems Farm support nationally important numbers of ringed plovers and high numbers of black-tailed godwits. It is highly probable that the black-tailed godwits roost in Holehaven Creek to the east. Roost sites for ringed plovers and dunlins are currently unclear.

Whilst we recognise that the area of permanent land-take has been identified for all the crossing options, the extent of the construction envelope and the potential effects thereof has not. We understand why this information has not been presented to date but seek assurances that it will be in due course.

The RSPB is aware that some jetties in the Thames support important high tide wader roosts and the applicant should identify and consider these in further survey work should there be any ship transportation during construction.

### **Thames Terrace invertebrates**

The wider Thurrock area affected by the route options is important for a large number of nationally rare or scarce invertebrates. These include Priority Species under the Natural Environment and Rural Communities (NERC) Act 2006, such as the shrill carder bee (*Bombus sylvarum*), brown-banded carder bee (*Bombus humilis*), red-shanked carder bee (*Bombus rudarius*), phoenix fly (*Dorycera graminum*), horsehound longhorn moth (*Nemophora fasciella*) and five-banded weevil wasp (*Cerceris quinquefasciata*).

Many of these species are dependent on the network of disturbed, sandy sites in Thurrock, including small pockets of old Thames Terrace grassland, but also the more recent consequences of industrial activity creating pits and other brownfield sites. Some of these sites may be directly lost as a result of road building and associated works, while others may have their value diminished by atmospheric pollution and the indirect impacts of the operation of the road. The road may also be a significant barrier to the movement of invertebrates, leading to isolation of populations.

We recommend that specialist advice on these issues is sought from Buglife.

### **Route specific considerations:**

**Route 2:** We note that this route results in the loss of habitat from five Local Wildlife Sites (West Tilbury Church, Broom Hill, Little Thurrock Reedbeds, Terrels Heath and Blackshots Nature Area), one of which contains ancient woodland, and five areas which support UK BAP priority habitats. It

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<sup>3</sup> The Wetland Bird Survey (WeBS) is a joint scheme of the British Trust for Ornithology (BTO), Royal Society for the Protection of Birds (RSPB) and Joint Nature Conservation Committee (JNCC), in association with the Wildfowl & Wetlands Trust (WWT). The principal aims of the scheme are to identify population sizes, determine trends in numbers and distribution and identify important sites for non-breeding waterbirds in the UK

also has the potential to impact on Goshems Farm Local Wildlife site and Chadwell Wood ancient woodland (Para. 4.4.1, Volume 6, Pre-consultation Scheme Assessment Report).

**Route 3:** We note that this route avoids designated sites and ancient woodland. However, it will damage three Local Wildlife Sites (Low Street Pit, Mucking Heath and Blackshots Nature Area) and four areas that support UK BAP priority habitats. Of these Low Street Pit is an important site for rare Thames Terrace invertebrates and may provide important high tide roosting habitat for SPA interests (Para. 4.4.2, Volume 6, *ibid*).

**Route 4:** We note that this does not affect any designated sites, but does result in the loss of habitat from six areas of ancient woodland, some of which occur within Local Wildlife Sites. A total of eight Local Wildlife Sites are threatened (Table 7.2, Volume 6, *ibid*). As with Route 3 this would affect the Low Street Pit site.

Each of these routes presents environmental challenges. On the basis of the data available, Route 3 appears to be the least damaging for the environment.

### **c. Potential impacts south of the river**

The two route options under consideration to link the proposed bored tunnel to the A2 each raise nature conservation issues.

**Western Southern link:** We note that there would be habitat loss from the Shorne and Ashenbank Woods SSSI and the Claylane Wood ancient woodland site (Para. 6.4.1, Volume 6, Pre-consultation Scheme Assessment Report).

**Eastern Southern link:** We note that there would be habitat loss and fragmentation of the woodland within the Great Crabbles Wood SSSI and ancient woodland at Great Crabbles Wood and the Court Wood Local Wildlife Site (Para. 6.4.4, Volume 6, *ibid*).

On the basis of the data available, the Western Southern link appears to be less damaging for the environment.

## **3. Summary and conclusions**

In the event that Location C proves to be the preferred route option, we believe strongly that a bored tunnel is the only alternative that meets the scheme objectives and which is likely to comply with the requirements of the Habitat Regulations. We note that this view is expressed in Para. 7.2.14, Volume 6, of the Pre-consultation Scheme Assessment Report. In this context, therefore, we welcome the fact that the bored tunnel crossing is the promoted option put forward for public consultation.

If this option is progressed to the next stage then the Environmental Impact Assessment (EIA), informing a full Habitat Regulations Assessment, will need to address, *inter alia*:

- a. the potential impacts through disturbance to the notified interests of the SPA/Ramsar site during the construction and operational phases of the project
- b. the potential impacts from land take and/or disturbance at the northern portal of the tunnel.
- c. the potential impacts on the hydrology of the SPA/Ramsar site, particularly but not exclusively at the southern portal, and in particular whether hydrological concerns can be adequately addressed by a short extension to the tunnel at the southern end.

As well as potential impacts on the European and internationally important sites, the EIA will also need to address the issues of avoiding, or if necessary mitigating and offsetting adverse impacts, direct or indirect, on the West Thurrock Lagoons SSSI, the Shorne and Ashenbank Woods SSSI and the Great Crabbles Wood SSSI, along with a number of Local Wildlife Sites and areas of ancient woodland.

We would welcome the opportunity to engage further with Highways England in avoiding damage to protected sites. We encourage the embedding of biodiversity enhancements as part of the design of any project brought forward (which we are able to advise upon), and wish to see a scheme that results in a net gain for nature, as advocated by the National Planning Policy Framework.

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March 2016