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Registered Charity

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HS2 Phase One environmental statement consultation

Introduction

The Staffordshire Wildlife Trust (SWT) is the leading nature conservation charity in Staffordshire that is concerned with all aspects of nature conservation. Through our planning work we seek to protect and restore important wildlife and habitats, achieve creation of new habitats, encourage public enjoyment of nature and promote sustainable development and land use.

SWT is part of the HS2 Ecology Technical Group, formed in May 2013 to provide the means for engagement, consultation and information sharing to achieve the best possible outcome from HS2 for ecology. The Group is comprised of non-governmental organisations, local authorities and statutory bodies. The Group's full Terms of Reference and members can be found on the National Trust's HS2 web pages.

SWT endorses the response to the Environmental Statement (ES) submitted separately by D Lowe on behalf of the Group. In our own response we add to these comments including specific local issues, concentrating in the main on ecological issues, but also on some other aspects of sustainability.

Staffordshire overview

The proposed route within Staffordshire affects one local authority district (Lichfield District), includes two Community Forum Areas (21 - Drayton Bassett, Hints & Weeford and 22 - Whittington to Handsacre) and one Design Refinement point (Manchester Junction). The route covers approximately 19 km and would affect nearly 600 hectares of land (nearing 2% of Lichfield district) within the construction areas shown.

The route would impact 16 known Local Wildlife Sites (LWSs) and two recently discovered areas which are in the process of notification; 13 are sites of county level importance and 4 are of district level importance. This includes several ancient woodlands, old and diverse hedgerows, heathland, flower-rich grasslands and wetlands.

Question 1 –Non Technical Summary

We found this document to have very minimal information and include only examples rather than a summary of all the impacts and measures to be undertaken. To read only this document does not give comprehensive information on the route or any particular area, so is not useful as anything other than an introduction.

For the two CFAs in Staffordshire only woodland is mentioned in any detail and a couple of habitat creation areas with nothing on species. It would have been more useful to provide a table presenting all important ecological receptors and mitigation proposed, along with figures for areas of habitat to be lost and gained.

It is concerning that the aim of achieving no net loss to biodiversity is considered to be in line with Government policy, when the NPPF clearly promotes 'moving to a net gain' and 'enhancement where possible'. If major projects are not moving towards net gain over their long project timescales then this does not set a very positive example for any other development.

Question 3- Volume 2: Community Forum Area reports **Question 6- Volume 5: Appendices and map books**

We have examined the reports for CFA21 - Drayton Bassett, Hints & Weeford and CFA 22 - Whittington to Handsacre, but also the information in the Ecology appendices and Map Books for these areas, and the Scope and Methodology Report CT-001-000/1 and Addendum CT-001-000/2 and so our comments relate to both questions 3 and 6. Many of the points raised apply to ecology generally within the ES.

- **Use of Existing Ecological Data**

In June 2013 we provided to HS2 ecologists a list of planning applications along the route in Staffordshire (CFAs 21 and 22) which contained habitat and species data that was not yet entered to the records centre, including one large application site of over 280 ha that straddles the route and which was subject to an EIA- Construction of a new community comprising up to 5,000 dwellings (etc.) 08/00324/OUTM (refused). Since then our collation of such applications has totalled 22 sites, covering over 420 hectares, and there are likely to be more. We emphasised the importance of gaining up to date records from Local Records Centres (LRC) who are constantly adding data, but also from these other survey sources, as the time-lag to upload this data to the LRC can be years.

In the Scope and Methodology Report (CT-001-000/1) it states:

'9.2.4 In addition, existing ecological data available from other sources, such as ESs associated with other relevant developments or Nature Reserve monitoring records, will be consulted where available.'

In the CFA16-22 Ladbroke to Handsacre Ecological baseline data reports (EC-001-003, EC-002-003, EC-003-003, EC-004-003), data from other developments is mentioned as a source only for amphibians and bats. For amphibians, desk study information was obtained from other developments in the area, and for each CFA area the results from the desk study and review of developments within 1km of the Proposed Scheme are summarised. In Staffordshire (CFAs 21 and 22) a total of only 14 developments were noted, short of the 22 we have found and missing entirely the huge 08/00324/OUTM application, the ES for which contained a large amount of information including habitats, wintering and breeding bird surveys and many new GCN records. For bats, data from committed developments only is mentioned, and not for every CFA. For all other sites, habitats and species, no data from other developments appears to have been obtained, and desk study results in general are inconsistently reported and discussed. Very few records of notable birds seem to have been returned in Staffordshire, and for otter, no records are even listed or discussed despite the data search described in the methodology.

The sourcing, reporting and use of existing ecological data appears to be patchy throughout the ES. Not only are the sources of data very different for each receptor and even species, attempts to gather data from other development applications are restricted to certain species, and even these miss out a lot of known application sites. This is possibly due to ecologists using only the list of committed and proposed developments collated for future baseline study in the ES, rather than all applications, many of which will have been refused or withdrawn, but still contain valuable data. Our conclusion is that the ES has not used all relevant existing data, despite the large amount of it freely available.

- **Lack of cross reference to other ES sections regarding potential indirect and cumulative impacts to ecology**

The need to take into consideration indirect and cumulative impacts such as environmental trends and secondary effects has been missed within the ecology impact assessments.

The Town and Country Planning (Environmental Impact Assessment) Regulations 2011 specifies information for inclusion in an ES:

'4. A description of the likely significant effects of the development on the environment, which should cover the direct effects and any indirect, secondary, cumulative, short, medium and longterm, permanent and temporary, positive and negative effects of the development, resulting from—

(a) the existence of the development;

(b) the use of natural resources;

(c) the emission of pollutants, the creation of nuisances and the elimination of waste, and the description by the applicant or appellant of the forecasting methods used to assess the effects on the environment.'

Case law has also indicated that the cumulative effects of all parts of a project need to be assessed, e.g. secondary improvements to other infrastructure, additional work specified under s106 agreements, dealing with resulting waste such as spreading of materials on fields etc.

No cross reference is made within the ecology impact assessments to impacts in other sections, such as Agriculture, Forestry and Soils, Land Quality, Water Resources or Waste and Material Resources, which might also impact on ecology.

Use of soils, the future of agri-environment schemes, potential changes to land management e.g.

organic schemes and impacts to existing hydrology such as irrigation and abstraction are all relevant in determining additional impacts on ecology, as well as the ability to create compensatory habitat.

The potential need to extract minerals before sterilisation by the scheme is also a major issue. For example in the CFA 21 report, paragraph 8.4.32 states that construction will affect existing mineral resources within a sand and gravel Mineral Safeguarding Area (MSA) and two sand and gravel Mineral Consultation Areas (MCA), and goes on to suggest:

'It is possible that mineral extraction could be undertaken in advance of, or during, construction of the Proposed Scheme through the MSA and MCA.'

In Volume 3: route Wide Effects, paragraph 9.1.4 states:

'Where construction does occur within an MSA, any pre-extraction of surface minerals, at least under landscaping areas adjacent to the route, will assist in minimising the sterilisation of a local mineral supply. The pre-extraction of minerals will need to be discussed with the landowner, the Mineral Planning Authority and other relevant stakeholders to assist in achieving an effective management of minerals.'

The potential secondary impacts to ecology of mineral extraction are not considered at all in the ES.

Socio-economic impacts such as the re-building of demolished properties, farm re-structuring and knock-on development as a result of the scheme going ahead have not been assessed, when some of these would clearly have implications for ecology, and would not occur without the scheme. Worse still, some issues are not even included in the EIA, let alone factored in to cumulative impacts. The Scope and Methodology report (Ct-001-000/1) states under Waste and Material Resources paragraph 16.1.4 that:

'The likely significant environmental impacts and effects from the use of materials (e.g. aggregate, concrete, brick and steel) for the construction of the Proposed Scheme will not be addressed in the EIA.'

This thereby discounts a huge raft of effects that would not occur without the scheme; potentially including increased quarrying, new factories, carbon emissions, and of course secondary effects from these on ecology. However, the wider economic benefits including knock-on effects, such as supply chain and expenditure effects are heralded positively in the Route Wide Effects.

There is no evidence in the Ecology sections of the CFA reports that environmental trends have been considered when predicting the future baseline, or assessing significance of impacts. Not only is climate change a trend, but future changes in agricultural grant schemes, water abstraction licencing, species declines or expansions, planned biodiversity enhancement projects and the designation of new local wildlife sites are all factors that should have been considered when judging the significance of impacts over the life of the scheme.

- **Potential Local Wildlife Sites**

Details for potential LWS (pLWS) and Ecosites (areas with significant records that could qualify as designated sites subject to assessment) are held by the local records centre in Warwickshire, however such sites are not formally recorded in Staffordshire.

For the route in Staffordshire, a number of pLWS areas were highlighted in our comments on the Draft ES; this has not been mentioned in the ES. The pLWS areas we highlighted have all been mentioned in the Ecological baseline data as being proposed for detailed NVC survey (because they were included within a designated site or potential designated site; may have included a habitat of principal importance; were likely to contain habitats of particular interest or rare plant species; or, supported

extensive wetland areas), however not all were surveyed due to access restrictions. Within CFA16 to CFA22 only 63% of the sites proposed for more detailed NVC survey were surveyed, leaving 37% unsurveyed. The sites selected but not surveyed in Staffordshire (CFAs 21 and 22) amounted to 9 sites, 4 of which have no current designation (Snake's Hill, Fulfen Wood, Little Lyntus and Harvey's Rough- all shown as woodland on the 1884 OS map, therefore potentially ancient or species-rich).

Some wet grassland near Hints (soon to be designated as an SBI) called in the reports 'Hints Meadow West', was the only pLWS to have been surveyed and has been accurately recognised as county/metropolitan value. Of the others, Snake's Hill woodland, also soon to be an SBI, was not surveyed and neither was Little Lyntus, a 1.47 hectare semi-natural woodland near Fradley which is potentially ancient woodland (although not listed on any inventory). SWT has never been able to get access to survey Little Lyntus but it was included in surveys in 2009 for the proposed Curborough new town (08/00324/OUTM), and assessed as being of county value.

Three hedgerows in CFA 21 and 2 in CFA 22 that are not already local wildlife sites were found to be ecologically important under the landscape and wildlife criteria of the Hedgerows Regulations 1997, and were therefore considered to have district importance. However, within the Staffordshire local wildlife site criteria any hedge qualifying as important for ecological reasons under the Hedgerow Regulations qualifies as an SBI, or site of county importance. This is because qualifying hedges are uncommon in the county. Four species rich hedgerows were also found in CFA22, but do not appear to have been assessed against the other criteria for hedgerow wildlife sites.

Species assemblages have been assessed via the EclA spatial hierarchy of importance (i.e. county/district level importance stated where relevant) and some features such as ponds have been assessed using the Staffordshire local wildlife site criteria and potential LWSs highlighted. However this has not been consistently applied

Overall, therefore, the value of many sites has been underestimated due to their current lack of formal designation, patchy use of the Staffordshire Local Wildlife Site criteria or lack of survey information.

- **Habitat loss and gain figures**

Impacts are not set out in the typical tables used in most EIA reports, and the reports do not specify of the impacts the confidence in predictions, their positive or negative nature, their magnitude, extent, duration, reversibility or timing and frequency, or significance of impacts at different spatial levels. It is also very hard to follow the impacts and mitigation for each receptor as these are all described in the text, rather than being laid out in tables showing clearly the impact, significance and residual effects on each receptor.

- **Underestimation of significance of impacts to 'Other Habitats'**

Other habitats such as arable land and non-species-rich grassland and ruderal vegetation and scrub are considered to be up to local/parish value or have negligible value, despite the fact that some areas support a number of notable species particularly birds and mammals. Rough grassland for example is used by birds of prey such as barn owls, even if it is not floristically rich. This is well illustrated by the number of protected and/or notable species/assemblages listed as relevant to the assessment which

have been found on arable fields, all of which are at least local/parish value with some district/ borough and county/ metropolitan value. Further notable species are also present outside of these 'hot spots' at a lower density. The Scope and Methodology Report CT-001-000/1 specifies in the assessment methodology at 9.6.14 that for cumulative impacts, this includes *'The cumulative effects of localised ecological impacts along the length of the railway, for example the potential of cumulative loss of certain habitat types'*. This does not appear to have been applied to lower value habitats. Overall, due to the large areas involved, the extent of the impact is much greater and therefore impacts will be significant at least at a district level, within each CFA. In Staffordshire the land take will be around 600 hectares, which is nearly 2% of Lichfield District, and majority is arable land. On a route-wide scale, the significance would be at least county level, for counties that have a much greater length of track than in Staffordshire.

The dismissal of large areas of lower-value habitats in the impact assessment while concentrating on higher value receptors means that overall, levels of mitigation and compensation will fall far short of achieving no net loss. No compensatory measures for arable land, such as enhancing areas nearby with positive features such as those used in arable stewardship options, have been proposed.

- **Local Green infrastructure and Biodiversity strategies**

We can find no evidence that local strategies within Staffordshire have been consulted or have informed the design of mitigation and compensation. This means that opportunities to achieve multiple and best value benefits will be missed.

- **Lack of restoration, management and advanced work in compensation proposals**

The preoccupation with new habitat creation as the main method of compensation for most habitats means that temporal effects while new habitats establish, some lasting decades, are not mitigated in the most effective way. It also risks the remaining pieces of important habitat suffering from neglect and losing value while efforts are focussed on new planting. Many of the woodland sites including ancient woodland impacted by the scheme require restoration and suitable management such as rhododendron removal. Many ponds in the area could be improved alongside creation of new features.

It is estimated that temporary adverse effects whilst the new hedges become established and mature would last for approximately 15 years, however no measures to reduce this effect are proposed. Only higher value hedgerows affected are proposed to be translocated, when in fact translocation of any mature hedgerow shrubs, with appropriate management, would produce a faster establishing new hedge. Other methods such as using brush, logs and root plates from removed hedges to form dead hedges alongside new plantings would help to reduce establishment times for usable linear features, and bird boxes would increase nesting resources until these mature naturally. Restoration and management of nearby poorer hedges that are not affected by the scheme would also serve to more quickly compensate for impacts.

Restoration is likely to give faster and more reliable results than creation for many habitats, as well as being able to be carried out in advance, whereas most new planting is proposed within the working corridor after works are complete. In practice a mixture of restoration and creation is the ideal, but

where there is a choice, including a difference in cost, restoration should be given sufficient weighting against other alternatives.

Advanced habitat and species work is not mentioned, when this could serve to reduce establishment times, make important habitats more resilient to planned impacts, set up new corridors and allow species to move or change foraging routes before construction. Seeding of new woodland could be considered if carried out in advance, as this would reach a similar age/ size as specimens planted later, may need less maintenance and could allow larger areas to be created more quickly with less labour. Advanced planting and restoration should be carried out wherever opportunities allow as part of an effective mitigation/ compensation strategy.

- **Farmland birds**

Certain areas with significant numbers of notable birds are highlighted as relevant to the assessment, yet bird populations as a whole across each CFA or the route are not quantified. This means that only certain areas will have targeted mitigation, leaving other areas and temporary impacts unmitigated. The numbers of breeding and wintering birds to be affected should be estimated, temporary habitat provided during the construction phase and adequate compensatory habitat provided post-construction.

- **Mammals - Only legally protected species considered**

The Scope and Methodology Report CT-001-000/1 states in paragraph 9.2.2 that data to be collated will include records of protected, priority or otherwise notable species within 5km of the route. Paragraph 9.6.2 includes within the list of legislation of relevance to consideration of the ecological resources the Natural Environment and Rural Communities Act 2006, which lists Species of Principle Importance for Conservation in England (SPI).

It also states:

'9.5.5 The assessment will consider all ecological receptors with the potential to be directly or indirectly affected by the Proposed Scheme, including sites designated for their nature conservation value, legally protected or otherwise notable species, and habitats. It will include all species and habitats of nature conservation value, not only those listed in Section 9.2 (Establishment of baseline and definition of survey) as requiring targeted survey; thus, for example, brown hare, deer, veteran trees and wood pasture/parkland habitat will all be included in the assessment.'

Despite the statements regarding SPI and specific mention of brown hare and deer, only legally protected mammals have been surveyed for and assessed in Staffordshire, with the exception of Pine Marten, which has been recorded in the county and should also have been included. No mammalian SPI, that are not otherwise protected, have been mentioned at all – these include Brown Hare, Polecat, Harvest mouse and Hedgehog. In contrast many SPI bird species and notable invertebrates have been highlighted. Deer, although not protected or notable, could present a serious threat to rail traffic in terms of collisions. Red deer and other smaller deer species are present in the area, but no assessment of populations or possible crossing routes has been made.

This is a very obvious and unexplained shortfall in carrying out the EIA in compliance with the scope and methodology set out, and means that impacts to several key mammal species have not been assessed at all and there is no mitigation or compensation proposed for them.

- **Barn owl mitigation**

The ES predicts an adverse effect on the conservation status of barn owls due to loss of territories and risk of collision to barn owls within 1.5km of the route. It is proposed that:

'To offset the likely loss of barn owls from the vicinity of the Proposed Scheme, opportunities to provide barn owl nesting boxes in areas greater than 1.5km from the route will be explored with local landowners. As the availability of nesting sites is a limiting factor for this species, the implementation of these measures would be likely to increase numbers of barn owls within the wider landscape and thus offset the adverse effect.'

Potential synergistic impacts such as the creation of new grassland areas near the line for habitat compensation could attract more barn owls, which would then be at risk of being killed. This effect has not been incorporated in the operational baseline or the impact assessment,

There is no evidence provided to support the assertion that availability of nest sites is a limiting factor in Staffordshire, or in the areas around the proposed route, as opposed to hunting habitat. If territories are displaced then it is both habitat and nesting/ roosting sites that are needed, depending on the resources being lost and the suitability of areas outside of the 1.5km radius. The Staffordshire Barn Owl Action Group (BOAG) has been working to help conserve the barn owl population in Staffordshire through a programme of barn owl nest box installation and since 2001 over 380 nest boxes have been installed in the county. Within the 1.5 km boundary of the route there are at present 5 BOAG nest boxes, which have provided 2 breeding sites with 3 barn owl chicks and 1 roost site between 2005 and 2013. Within Lichfield district there are around 25 boxes, although very few in the southern half of the area. Boxes however are generally focussed in a targeted way, where there are known barn owl populations, adequate habitat and locations at least 1km from major roads and rail lines. Therefore absence of boxes in one area may well mean that efforts are better focussed elsewhere. The proposed 'exploration' of opportunities with landowners is very vague, there no way to guarantee uptake and no details of how maintenance or monitoring of this measure will be undertaken.

Provision of hunting habitat would be more appropriate in some areas, and this is likely to be harder to achieve given the land take. Mortality of barn owls via other means such as road collisions also have an effect on the population, in fact this is the main (or at least, the most detected) cause of death of barn owls reported to the Barn Owl Group, with 32 killed on roads and two hit by trains in the last seven years. Providing measures to preventing this in known hot-spots could be another method to offset impacts.

Without proper information on the current populations in the area and actual limiting factors, the simplistic proposal put forward by the ES is not a robust solution for compensation. A better option would be to work with barn owl and other bird groups along the route to formulate area-specific compensation measures and monitoring to give the best gain to the overall population.

This example could well apply to all other species and species groups in terms of the way mitigation and compensation is planned- actions near to the route will not necessarily provide the best or most

effective compensation and a broader approach should be taken to boost affected populations in the most sustainable way.

- **Maintenance, Monitoring, Reporting and Responding**

A simple search for the word 'monitoring' in the two Staffordshire CFRA reports revealed that while issues such as ground water, flood risk, noise levels and contamination are all proposed to be monitored, no information whatsoever on monitoring ecological impacts and mitigation / compensation measures, reporting on these or responding to shortfalls is included. While some basic information is contained in the Scope and methodology report addendum (CT-001-000/2), it does not give a great deal of confidence that measures will be effective and sustainable long-term.

Question 5- Volume 4: Off-route effects

3.6 Stafford Station

No ecology impacts are predicted.

5. Modifications to the WCML between Lichfield and Colwich

The realignment of track is a maximum of 2m and all within existing railway land; loss of habitats includes hedgerows, mature and semi-mature trees, poor semi-improved grassland, scrub, and tall ruderal vegetation. Any hedgerows, scrub and trees removed will be replaced and protection measures for potential species present will be put in place. While it would be useful to have had figures for the area of habitat affected, we have no major concerns regarding this work, other than the need to take opportunities for enhancement particularly where links can be made with nearby local wildlife sites or other habitats. Re-seeding and planting with species-rich mixes appropriate to the area are requested.