



High Speed Rail, West Midlands to Crewe Environmental Statement, CA5 South Cheshire

Response from the Cheshire Wildlife Trust (September 2017)

Overview

The Cheshire Wildlife Trust is the leading conservation charity in Cheshire that focusses on all aspects of wildlife. In our response to the consultation for the High Speed Rail (West Midlands to Crewe) Environmental Statement we seek to represent the views of our 12,000+ local members. There are a number of issues we would like to raise which we have set out in our response below.

We note that the HS2 Environmental policy states HS2 Ltd's commitment to *'developing an exemplar project, and to limiting negative impacts through design, mitigation and by challenging industry standards whilst seeking environmental enhancements'*. The policy also states that *'habitat creation is required to fulfil the objective of no net loss of biodiversity as far as practicable in the local area as well as to ensure that populations of protected and notable species are maintained'*.

Whilst the Cheshire Wildlife Trust supports this position we believe that currently HS2 Ltd. fall far short of achieving their objectives. We are particularly concerned that the short time frame in which the Environmental Statement has been prepared has led to a catalogue of serious mistakes and unjustifiable assumptions based on incorrect, incomplete or missing information.

Our main concerns relate to a) the highly misleading manner in which residual impacts have been inaccurately portrayed or omitted, partly due to a failure to acknowledge incomplete/missing data; b) gross inaccuracies in the calculated areas of impacted habitats; c) a shortfall of approximately 8.3km hedgerows, 28 ponds and 86.9 ha of compensatory habitat in the local area meaning that residual impacts on protected and notable species are not adequately addressed; c) failure to either acknowledge or address the multiple county/regional scale impacts that will result from the loss of a 100 hectare core site of the Meres and Mosses Nature Improvement Area designated in 2012 to *'create joined up and resilient ecological networks at a landscape scale'*.

Our concerns are set in out more detail below:

1. Loss of core site from Meres and Mosses Nature Improvement Area

The scheme will result in the loss of Randilow Farm potential Local Wildlife Site (pLWS) which is an integral part of the nationally designated Meres and Mosses Nature Improvement Area established to *'create joined up and resilient ecological networks at a landscape scale'*¹. Loss of

¹ <https://www.gov.uk/government/publications/nature-improvement-areas-improved-ecological-networks/nature-improvement-areas-about-the-programme>

this core NIA site will increase ecological fragmentation within the NIA. The pLWS supports a farmland breeding bird assemblage of county importance, areas of habitat of county importance, an assemblage of bat species of county importance and at least one 'important' hedgerow. The residual impacts of the loss of this site will be significant at a county/regional scale.

The Randilow Farm site meets the following LWS criteria:

H1 Lowland mixed deciduous woodland

S2 Birds

S3 Mammals

and preliminary survey data suggests it is likely to meet criterion H25 *High value hedges*

The loss of habitat for breeding and overwintering farmland birds at this site is UNMITIGATED. The loss of woodland, hedgerows and other habitat for bats is not adequately mitigated for due to significant shortfalls in the amount of compensatory habitat provided at a local level (table 3 below) according to HS2 Ltd's own methodology²

Farmland birds on the pLWS

The breeding bird survey data for Checkley (000-BB1-240001) indicates that the survey area meets the criterion for selection as a Local Wildlife Site for its breeding bird interest (criterion S2) conferring a county level importance on the site. It also supports an important wintering bird assemblage. The site supports at least 12 BoCC red or amber listed species including breeding yellow wagtail. The presence of red listed breeding yellow wagtail confers a county importance in its own right as this is classed as a scarce breeding bird in Cheshire (i.e. 20-100 breeding birds 2004-2006). Further evidence is available from Natural England who have confirmed the presence of an additional 2 BoCC red listed species (tree sparrow and grey partridge, both species of principal importance). The Cheshire and Wirral Ornithological Society have confirmed additional records of BoCC amber listed meadow pipit and kestrel and BoCC red listed corn bunting and mistle thrush (*per comm.* 2017).

The land on the pLWS is under a HLS/ELS environmental stewardship agreement set to run to 2021 at a total cost of £166,429 (with £95,693 of public money paid to date³) and has options HF4NR, HE11, HF12NR specifically for the bird species of principal importance listed as features. These are present on 5 parcels of land that lie within the pLWS and will be directly impacted by the Phase 2a route.

Lowland mixed deciduous woodland on pLWS (potential ancient woodland)

The parcel of woodland at Randilow Farm supports NVC vegetation communities W10c and W6b (according to the NVC data provided by HS2 Ltd) which means that it meets LWS selection criterion H1 and confers a county level importance for native woodland at this site. It is also a 'potential ancient woodland' as it appears on the 1836 maps. We are waiting for HS2 Ltd. to

² 'No net loss in biodiversity methodology' (HS2 Ltd 2015)

³ Data from MAGIC August 2017

confirm its status. This needs to be established as soon as possible to determine what level of mitigation will be required. Ancient woodland is an irreplaceable habitat which cannot be offset.

Mammals on pLWS

The bat survey data provided by HS2 Ltd indicates that the Randilow Farm pLWS supports 7 species of bat (as recorded by the static bat detector placed on the edge of Randilow wood), scoring a total of 28 points in the Cheshire region LWS criterion S3. This easily exceeds the threshold of 12 points which is necessary for the selection of the site as a LWS and confers a county level importance for bats on the site.

Providing the LWS partnership are in agreement with the above findings the site is likely to be designated as a Local Wildlife Site at the next Cheshire Region LWS Partnership meeting which is likely to be in 2018.

2. No net loss of biodiversity as far as possible in the local area.

HS2 Ltd. have stated the aim of achieving '*no net loss of biodiversity as far as possible in the local area*'. The no net loss calculations do not form part of the ES and will be published at a later date. Despite the assurance that the revised methodology would be published at the same time as the ES, this has not been forthcoming so in the absence of this CWT have used HS2 Ltd's previous methodology (*No net loss in biodiversity methodology* HS2 Ltd. 2015) to undertake these calculations at a local level for notable habitats and habitats of principal importance.

Using this methodology we have demonstrated that there are significant shortfalls in the area of habitat provided to compensate for the loss of notable habitats and habitats of principal importance in the local area. This is particularly concerning as it falls far short of the stated aim of achieving '*no net loss of biodiversity as far as possible in the local area*'. Our calculations have not included the loss of habitats of district/local importance, meaning that the actual 'net loss of biodiversity' is likely to be higher than the figures we have given for the loss of notable habitats and habitats of principal importance alone. We acknowledge that the creation of woodland for landscaping purposes may go some way to address this residual loss; however we emphasise that this type of unmanaged woodland will be of low ecological value and will not always be of greater value than the habitats lost, for example if landscape planting occurs on semi-improved grassland (as is shown in the plans).

Once the methodology has been published we will re-run these calculations, however in the light of initial comments from the consultee (Natural England 2016 Review of the High Speed 2 No Net Loss in Biodiversity Metric) with regards to the methodology it is highly unlikely that the shortfall will be addressed by the revisions.

Failure to provide enough compensatory habitat in the local area means that residual impacts on protected and notable species (bats, amphibians and reptiles) in the local area are not adequately addressed.

Our no net loss calculations are provided in the tables 1 and 2 below and the overall conclusions are presented in table 3.

Existing habitats on site	Total area of habitat lost(ha)	Habitat distinctiveness score for existing habitat	Habitat condition score for existing habitat ⁴	Multiplier for position in ecological network (NIA) ⁵	Biodiversity units to be lost AxBxCxD ⁶
	A	B	C	D	E
Marshy grassland	2	6	2		24
Marshy grassland ⁷	0.72	6	2	x3	25.92
Semi-natural broadleaved woodland	4.16	6	2		49.92
Semi-natural broadleaved woodland (in NIA)	2.24	6	2	x3	80.64
Pond/ditch (assumed to support GCN)	35 (no.)	6	2		n/a (hectareage not known)
Pond/ditch (assumed to support GCN) in NIA	17 ⁸ (no.)	6	2	x3	n/a (hectareage not known)
Pond/ditch (not supporting GCN)	11 (no.)	4	2		n/a (hectareage not known)
Hedgerow good condition	1.8 km				5.4
Hedgerow moderate condition	8.6 km				17.2
Hedgerow poor condition	2.7km				2.7
Semi-improved neutral grassland	18.94 ⁹	4	2		151.52
Semi-improved neutral grassland in NIA ¹⁰	12.06	4	2	x3	289.4

Table 1 – existing biodiversity in area CA5

⁴ All medium distinctiveness habitats not accessed were given a moderate condition score (HS2 No net loss in biodiversity - Methodology 2015). Only 30% of land was accessed so calculations assume moderate condition unless other data available.

⁵ Section 4.4.1 Appendix A HS2 No net loss in biodiversity - Methodology 2015. Multiplier for NIA.

⁶ For hedgerows multipliers of 3, 2 and 1 are used for condition weighting (Section 3.4 Appendix A HS2 No net loss in biodiversity - Methodology 2015)

⁷ Two parcels NE of Randilow Farm on Phase 1 2017

⁸ Includes one ditch SW of Moss House. All were 'scoped in' or supported GCN (Amphibian survey 2017)

⁹ Ecological baseline data – Phase 1 habitat survey July 2017

¹⁰ Land north and north east of Randilow farm

Habitat	Baseline score for habitat scheme	Score achieved by scheme	Net credits per ha(G – F)	Equivalence ratio (BxC)/H ¹¹	Basic offset area (ha) J x A	Time multiplier	Risk multiplier (Difficulty)	Area of habitat required M	Area of compensatory habitat provided in CAS	Shortfall
	F	G	H	J	K	L	M	N	O	P
Marshy grassland	2	12	10	1.2	2.4	3.36 (K x 1.4)	10.08 (L x3)	10.08 ha	3.5ha	6.58 ha
Marshy grassland (NIA)	2	12	10	1.2	0.86	1.2 (K x 1.4)	3.60 (L x3)	3.60 ha	-	3.60 ¹² ha
Semi-improved neutral grassland	2	12	10	0.8	15.15	21.21 (K x 1.4)	31.81 (L x 1.5)	31.81 ha	-	31.81 ha
Semi-improved neutral grassland (NIA)	2	12	10	0.8	9.65	13.51 (K x 1.4)	20.26 (L x 1.5)	20.26 ha	-	20.26 ¹³ ha
Woodland	2	12	10	1.2	4.99	14.97 (K x3)	22.45 (L x 1.5)	22.45 ha	9.9ha	12.55 ha
Woodland (NIA)	2	12	10	1.2	2.69	8.07 (K x 3)	12.10 (L x 1.5)	12.10 ha	-	12.10 ¹⁴
Pond (+GCN)	2	8	6	2	70	84 (K x1.2)	84 (L x 1)	84 (no.)	85 (no)	+1
Pond (+GCN) NIA	2	8	6	2	34	40.8 (K x 1.2)	40.8 (L x1)	40.8 (no.)	19 (no.)	22 ¹⁵
Pond (-GCN)	2	8	6	1.33	14.67	17.6 (Kx1.2)	17.6 (L x 1)	18 (no.)	11 (no)	7
Hedgerow good condition	1.8 km			3	5.4 km			5.4 km	17 km	8.3 km
Hedgerow Moderate condition	8.6 km			2	17.2 km			17.2 km		
Hedgerow poor condition	2.7 km			1	2.7 km			2.7 km		
Total shortfall										86.9 ha habitat, 8.3 km hedges, 28 ponds

Table 2 – Calculations to show difference between area of compensatory habitat provided and the area which is required locally using the HS2 2015 ‘no net loss of biodiversity methodology’

¹¹ For hedgerows multipliers of 3, 2 and 1 are used for condition weighting (Section 3.4 Appendix A HS2 No net loss in biodiversity - Methodology 2015)

¹² This figure is for marshy grassland creation within NIA. If outside the NIA this figure is 10.80 ha (habitat created within NIA has a weighting of x3)

¹³ This figure is for SI grassland creation within NIA. If outside the NIA this figure is 60.78 ha (habitat created within NIA has a weighting of x3)

¹⁴ This figure is for woodland creation within NIA. If outside the NIA this figure is 36.3 ha (habitat created within NIA has a weighting of x3)

¹⁵ This figure is for pond creation within NIA. If outside the NIA this figure is 66 (habitat created within NIA has a weighting of x3)

Resource/Feature	Reference (Effects arising during construction or technical appendices)	Issue	Comment on residual impacts	Significance of any residual impacts
Construction Phase				
Designated Sites	8.4.12	Impact on NIA	Ecological connectivity is likely to be impacted due to loss of NIA core site.	County/Regional level
Designated Sites	8.4.13	Impact on Basford Brook LWS	Impacts likely to be small	Local level
Designated Sites	8.4.13	Impact on Mere Gutter/Basford Brook LWS	Any pollution event could cause the loss of this site designated for globally endangered White clawed crayfish	County level
Designated Sites (pLWS)		Impact on Randilow Farm pLWS (breeding birds, bats, hedgerows and woodland below)	Core site in NIA to be lost to scheme	County level
Designated Sites (pLWS)		Impact on Wychwood Park pLWS SJ724510 (reptiles below)	Loss of part of this site to scheme	County level
Designated Sites (pLWS)		Impact on Heath Farm pLWS SJ722509 (marshy grassland below)	Loss of this site to scheme	County level
Designated Sites (pLWS)		Impact on Harehill Rough woodland pLWS SJ734484 (woodland below)	Loss and/or indirect impacts	County level
Hedgerows	8.4.17 8.4.56	Shortfall of 8.3 km	Net loss	Up to county
Marshy grassland	8.4.16 8.4.42	Shortfall 10.18 ha	Net loss	County
Watercourses	8.4.18 8.4.44	No figures provided	No figures provided but net loss anticipated.	Up to county
Semi-improved neutral grassland	Table 1 Vol 5 Technical appendices EC-016-005	Shortfall 52.07 ha	Net loss	Up to county
Semi-natural native woodland	8.4.14 8.4.15 8.4.33 8.4.34	Shortfall of 24.65 ha	Net loss (includes possible ancient woodland which is irreplaceable)	County

Resource/Feature	Reference (Effects arising during construction or technical appendices)	Issue	Comment on residual impacts	Significance of any residual impacts
Water bodies (no GCN)	8.4.45 Table 1 Vol 5 Technical appendices EC-016-005	Shortfall of 28 ponds	Net loss	Up to county
Ancient and Veteran Trees	8.4.20 8.4.46	3 Ancient or veteran trees lost	Irreplaceable	County level
Bats	8.4.21 8.4.47 8.4.48 8.4.49	Shortfall in area of grassland, waterbodies, woodland and hedgerows to be provided	Impacts on bat foraging not fully compensated for	County level
Amphibians	8.4.26 8.4.50	Shortfall in area of ponds, species rich neutral grassland, woodland to be provided	Impacts on amphibian breeding and foraging not fully compensated for	County level
Reptiles	8.4.30 8.4.51	Shortfall in area of ponds and grassland to be provided	Impacts on reptile breeding, foraging and places of shelter not fully compensated for	County level
Birds (Farmland)	No reference	<u>No mitigation for impacted species provided.</u> Data missing from an additional 2 areas where requirement for survey was identified.	Known impacts on breeding birds not compensated for. Precautionary principle not applied on additional 2 sites.	County level
Birds (Schedule 1)	No reference	Data missing from area where requirement for survey was identified	Precautionary principle not applied	Up to county level
Aquatic invertebrates	No reference	Survey data missing. Shortfall in areas of suitable compensatory habitat provided	Precautionary principle not applied	Up to county level
Water vole	Table 1 Vol 5 Technical appendices EC-016-005	<u>No mitigation for impacted habitat provided.</u> Survey data missing for several additional watercourses in 'Local Key Area' for water voles (National Water Vole Steering group 2013)	Known impacts on water vole habitat at Swill Brook not compensated for. Precautionary principle not applied for other watercourses.	Up to county level
Habitat of local importance	Table 1 Vol 5 Technical	No mitigation for impacted habitat	'No net loss of biodiversity' at a	Local/District level

Resource/Feature	Reference (Effects arising during construction or technical appendices)	Issue	Comment on residual impacts	Significance of any residual impacts
	appendices EC-016-005	provided	local level will be unachievable unless this is addressed.	
Ecological connectivity	No reference	Ecological connectivity analysis using LIDAR and aerial data not provided	Passages should be provided at 'conflict points'. This is especially important within the NIA which is designated for its ecological connectivity. EU and UK best practice	County+ level

Table 3 – Overview of residual ecological impacts (calculated using HS2 'No net loss of biodiversity' methodology 2015)

3. Potential impacts on globally endangered white-clawed crayfish

CWT is concerned that the permanent changes to two unnamed tributaries which flow directly into Mere Gutter could potentially affect the population of globally endangered white-clawed crayfish at this site. Any impact would be significant on a regional scale as Basford brook/Mere Gutter LWS was designated for the purpose of conserving white-clawed crayfish in the North West of England. We are particularly concerned that these tributaries were not surveyed so it is not known if the white-clawed crayfish or water vole (both protected under the WCA 1981) are present. In the absence of survey and given their confirmed presence in the locality, we advise that on the basis of the precautionary principle both species are assumed to be present and mitigation for loss of habitat and indirect impacts is incorporated into the scheme.

We are also concerned that runoff from the new balancing pond (by the re-aligned Newcastle road) will run directly into Basford brook, upstream from a confirmed white-clawed crayfish population. We advise that a white-clawed crayfish licence may be required to discharge into the brook. A single pollution event at this site could potentially result in the loss of this vulnerable species from the North West of England.

4. Significant county level impacts on farmland birds and water voles are missing from ES summary (section 8.4 CA 5 South Cheshire)

The Environmental Statement fails to offer mitigation for either farmland birds or water voles where significant county scale impacts have been established. The unmitigated loss of a) confirmed water vole habitat on Swill Brook, b) parcels of land of county importance for farmland birds is a serious oversight and must be addressed. If this cannot be addressed the ES **MUST** acknowledge the remaining residual impacts so that the scheme can be evaluated fairly. Survey data for these species was incomplete or missing despite an identified requirement for survey, therefore the precautionary principle must be applied correctly.

5. Errors and inconsistencies in habitat area values

There are major inconsistencies with the baseline habitat area values and the overview provided in the Community Area Report CA5: South Cheshire; this needs to be reviewed urgently. For the purpose of our response to this consultation we have used the figures provided in the overview Community Area Report CA5, however this may require amending once the actual figures are provided. CWT have raised this issue with HS2 and we are waiting for clarification. The inconsistencies are set out in the table 4.

Existing habitats	Total area of habitat within scheme (ha) according to ES Vol 2 Community Area Report CA5 South Cheshire July 2017/ Ecology register of local effects (EC-016-005)	Total area of habitat within scheme (ha) according to Ecological baseline data – Phase 1 habitat survey report July 2017
Marshy grassland (SE Heath Farm)	2 ha	1.3 ha (not mapped on P1)
Semi-natural broadleaved woodland	13.2 ha (8.3.11) Or 6.4 ha (8.4.14) Harehill Rough not listed SJ734484	9.5 ha
Pond/ditch	63	55
Hedgerow	13.1km	21.9 km
Semi-improved neutral grassland (good)	No reference to this.	31 ha
Poor semi-improved grassland	6.5 ha	25 ha
Acid grassland	No reference to this	0.1 ha (P1 map shows approx. 8 ha within scheme SJ723505)
Watercourse	Linear distance not provided	Linear distance not provided
Marginal vegetation	CWT visited Swill Brook Water vole site SJ727492. This is a peat body adjacent to ditch/brook with marginal vegetation and marshy grassland which has not been mapped/measured	

Table 4 – Differences in areas of habitat provided in the baseline data and the Community Area CA5 summary report

6. Precautionary Principle should be applied correctly

According to the ES Volume 1 Introduction and Methodology (9.1.9) *‘Precautionary mitigation has been identified as part of the assessment where: there was insufficient information to confirm the baseline conditions; it was considered that there was a reasonable likelihood of an impact/effect occurring that would require mitigation’.*

We do not believe that the ‘Precautionary Principle’ has been followed for resources/features where requirements for survey were identified but time constraints or owner permission was not given. The following should be attributed ‘up to county’ importance in summary table 18 section 8.3.22 (CA 5 South Cheshire) and mitigation should be incorporated into the design:

- a) 7 watercourses where survey requirement was identified (Ecological Baseline data BID-EC-006-000),
- b) Schedule 1 listed hobby and barn owl (records East of Hough),
- c) Breeding birds at Chorlton Heath and land south of Randilow Farm where survey requirement was identified,
- d) All ponds/ditches which were not surveyed for mud snail (*Lymnaea glabra*) or lesser silver diving beetle (*Hydrochara caraboides*) (protected by the WCA 1981)

7. Loss of potential Local Wildlife Sites

The scheme will result in the loss of several potential Local Wildlife Sites (pLWS) in addition to that at Randilow Farm (referred to above) supporting habitats or species of county importance, including potential ancient woodland at Harehill Rough SJ734484, Marshy grassland SE of Heath Farm SJ722509, Acid grassland north of Dairy farm SJ723505 (tbc) and part of a site supporting reptiles at Wychwood Park SJ724510. There are significant errors in the mapping of three of these sites which means that their importance has not been fully recognised. This is a serious oversight which must be addressed.

8. Barn owl foraging habitat

Loss of barn owl foraging habitat is not compensated for in the current scheme. Advice should be sought to determine the size of habitat required to compensate for the losses, this should be at least equivalent to the area lost. An appropriate area of new barn owl foraging habitat should be created and managed long term at least 3km distant from the track to reduce the chance of train strikes (BTO Research report 692).

9. Additional mitigation/compensation

It is clear from the above calculations that there is a significant shortfall in the area of compensatory habitat and therefore there are residual impacts on protected species including bats, amphibians and reptiles as well as other groups of species. CWT would like HS2 Ltd. to help address this by undertaking one or more of the following:

- Ensuring that the Checkley Lane borrow pit is restored to an ecological mitigation site for farmland birds and wet grassland (preferred option)
- Creating wet grassland habitat adjacent to Blakenhall Moss to be managed for nature conservation purposes.
- Restoration of Chapel Mere SSSI
- Restoration of Norbury Meres SSSI

All four of these lie within the Nature Improvement Area and therefore would help to address issues of reduced ecological connectivity associated with the construction and operation of HS2 as it passes through the NIA. Furthermore all habitat creation within the NIA would be of greater value (in terms of biodiversity units) than that created outside the NIA helping to address 'no net loss' issues. Details of all four schemes have previously been discussed with HS2 Ltd.

We believe by dealing with the issues set out in our response and committing to at least one of the above projects HS2 Ltd. will be able to justifiably claim that in the Cheshire region *'measures will be used to limit the effect of loss and/or fragmentation of habitat to a level where the loss will not result in a significant adverse effect'*, as set out in the High Speed Rail West Midlands to Crewe Environmental Statement Non-technical summary 2017.

RG 28/09/17