AECOM Infrastructure & Environment UK Limited
12 Regan Way
Chetwynd Business Park
Nottingham
NG9 6RZ
UK

T: +44 (115) 907 7000
aecom.com

To:
Thomas Smith

CC:

Project name:

Project ref:

From:

Date:
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Memo

Colne Valley Viaduct South Embankment Wetland Ecological Mitigation Site

Introduction

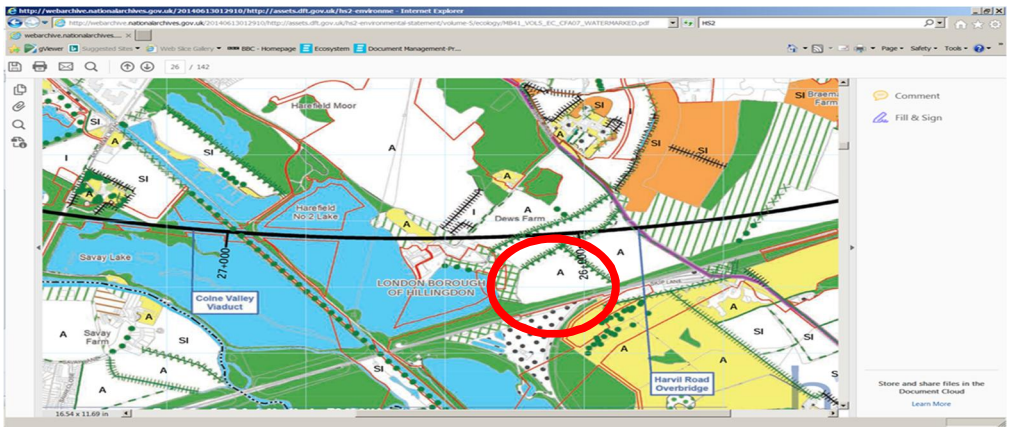
The Colne Valley Viaduct South Embankment Mitigation Site is one of numerous areas selected by HS2 to provide mitigation/ compensation for effects of the scheme on nature conservation. The site is one of several that require early construction and establishment so that receptor areas are available to receive great crested newts and amphibians in particular from the onset of the Main Works.

This memo provides additional background information in relation to the ecological baseline and proposals to address comments on the Schedule 17 application that have been raised by London Borough of Hillingdon.

The Mitigation Site

This Mitigation Site was noted in the Environmental Statement as one of several sites that were to be provided to mitigate for effects on the Mid Colne Valley Site of Metropolitan Importance (SMI). The Mitigation Site at the time of the ES was mapped as being part of an arable field.

Figure 1: Screen shot showing Phase 1 habitat plan included within HS2's 2013 Environmental Statement[1]

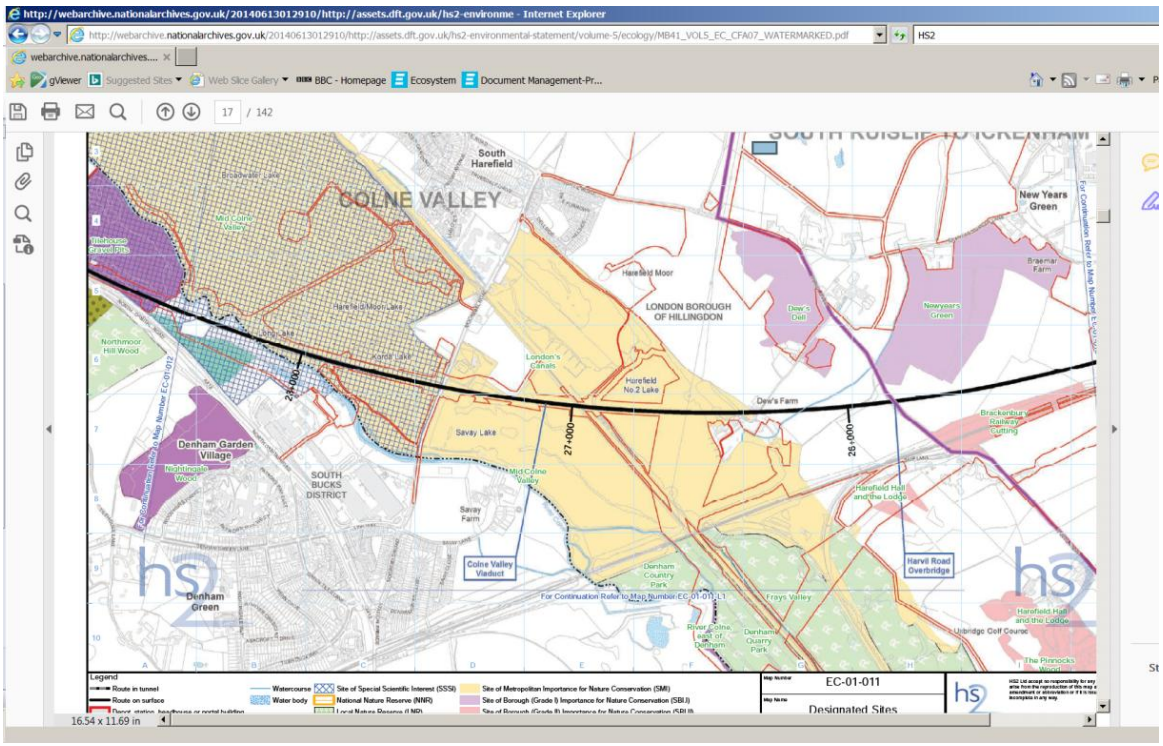


[1] http://webarchive.nationalarchives.gov.uk/20140613012910/http://assets.dft.gov.uk/hs2-environmental-statement/volume-5/ecology/MB41_VOL5_EC_CFA07_WATERMARKED.pdf

Mid Colne Valley SMI

At the time of the 2013 ES, based on information obtain from the local biological records centre the Mitigation Site was identified as being located outside of, but directly adjoining the Mid Colne Valley SMI. The extent of the Mid Colne Valley SMI is shown as the light orange shaded area in Figure 2.

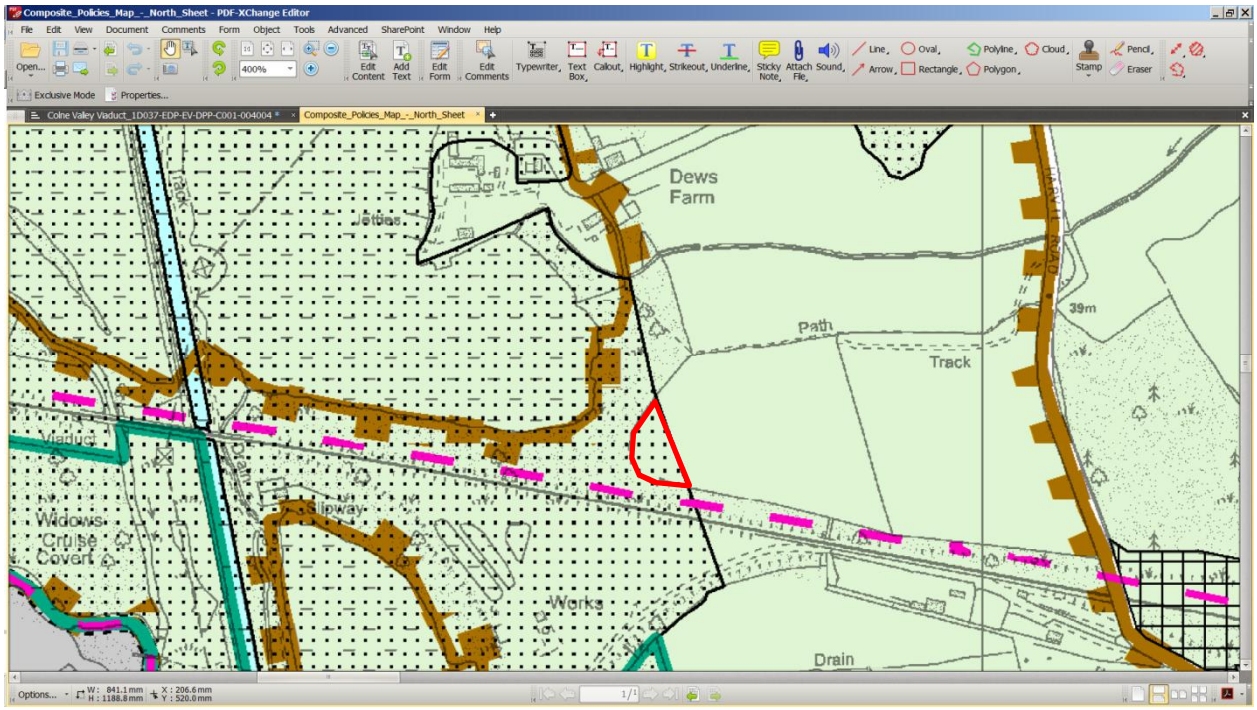
Figure 2: Screen shot showing designated site data used to inform the 2013 ES[2]



Within London Borough of Hillingdon's response to the Schedule 17 application it is stated that the Mitigation Site now sits within the boundary of the Mid Colne Valley SMI (rather than adjacent to it). A plan provided by London Borough of Hillingdon (see Figure 3) suggests that the boundary of the SMI has been revised since 2013 to include the area of field that was identified for use as a Mitigation Site.

[2] http://webarchive.nationalarchives.gov.uk/20140613012910/http://assets.dft.gov.uk/hs2-environmental-statement/volume-5/ecology/MB41_VOL5_EC_CFA07_WATERMARKED.pdf

Figure 3: Screen shot showing designated site plan provided by LB of Hillingdon (black dotted area shows current extent of the Mid-Colne Valley SMI, with red line indicating extent of possible boundary change since 2013)



LB Hillingdon have requested that as approximately 0.28ha of the Mitigation Site (total 0.85ha) lies within the SMI and local planning policy is to preserve SMIs that evidence is provided that the construction of the Mitigation Site will not be contrary to policy.

The Mid Colne Valley SMI is identified as being approximately 320ha in the 2013 HS2 ES and designated for the Fray's River with a diverse assemblage of aquatic and wetland plants, species-rich grassland at Fray's Farm Meadows and wet woodland at Denham Lock Wood. It is also designated for wintering waders (birds that are associated with damp grassland), invertebrates including glow worm, Desmoulin's whorl snail, mammals such as water vole and harvest mouse, breeding and wintering waterfowl and passage migrants using the flooded gravel pits.

The part of the Mitigation Site within the SMI approximates to less than 0.1% of the total SMI area. We understand that the Mitigation Site location was until 2016 under regular cultivation, as shown in the images included below as Figures 4 and 5. The south west and southern parts of the field appear to suffer from periodic waterlogging (see Figure 4). However, imagery available via Bing and Google maps website shows that this area has also been subject to ploughing.

Figure 4: 'Birds eye' aerial photograph from Bing Maps (railway corridor at the bottom of the image and main areas of the Mid-Colne Valley SMI to the left of image)

Figure 5: Aerial photograph from Bing maps (railway corridor at the bottom of the image and main areas of the Mid-Colne Valley SMI to the left of image)

We understand that the field in which the Mitigation Site is located was most recently ploughed in 2016 (pers comm landowner). Since ploughing in 2016, the field has been left fallow and has resulted in the development of a tall ruderal flora, which in areas of waterlogging has colonising willows, reeds and reedmace.

A site visit on the 3rd April 2017 was restricted to the public footpath along the north of the site but the site was noted as be becoming dominated by ruderal vegetation with small stands of young willows and reedmace seen towards the south end of the site towards to the railway. Subsequently, the images included below as Figures 6, 7 and 8 were taken at the pre-possession meeting on the 5th May 2017. This visit confirmed the area to support predominately ruderal species typical of abandoned ground dominated by bristly ox-tongue, creeping thistle and teasel, with occasional patches of developing reeds and occasional young willows in wetter areas.

Figure 6: Mitigation site vegetation May 2017 (1)

Figure 7: Mitigation site vegetation May 2017 (2)

Figure 8: Mitigation site vegetation May 2017 (3)

Proposals

The proposal for the part of the Mitigation Site that we now understand to fall within the SMI is to encourage the development of a wet grassland sward. Details accord with all the relevant HS2 standards and specifications and here it is envisaged that the standing vegetation be cut to around 50mm, the arising removed and then the area oversown with an appropriate commercial wet grassland seed mix. London Borough of Hillingdon have been separately consulted on the wet grassland seed mix to be utilised as part of the bringing into use consultation.

Whilst the proposed works would result in the loss of the existing developing ruderal vegetation, this will be replaced with a more species diverse wet grassland community that will be subject to ongoing management and monitoring by HS2 or its appointed agents.

The proposals also include the construction of two hibernacula suitable for great crested newts and reptiles within the area that falls within the SMI. The construction of these hibernacula will result in *de minimis* loss of habitat and provide enhanced habitat for amphibians and great crested newts in particular, which may in due course be translocated into the Mitigation Site from ponds lost to HS2.

The pond and reptile basking bank are to be constructed in the part of the Mitigation Site outside of the SMI and the topsoil from construction of the pond used to construct the basking bank and hibernacula. The subsoils will be spread

thinly over the area of the Mitigation Site outside of the SMI. Spreading of the subsoil over the area within the Mitigation Site (but outside of the SMI) is intended to reduce the current nutrient levels in the topsoil to aid establishment of the wet grassland sward.

Assessment and Conclusion

Since the 2013 ES there has been either a revision or clarification of the boundary of the Mid Colne Valley SMI. A small area of the Colne Valley Viaduct South Embankment Ecological Mitigation Site is now located within the boundary of the SMI. This area represents less than 0.01% of the wider areas of the SMI.

The part of the Mitigation Site falling within the SMI was formerly subject to cultivation but in recent years has been left fallow and now supports a community dominated by ruderal species, with occasional wetter patches supporting reeds and young willows. These communities are transient and considered to be of limited ecological value.

The 2013 ES identified that approximately 25ha of terrestrial habitat within the wider SMI would be lost due to HS2 resulting in a permanent adverse effect on the integrity of the SMI prior to mitigation. The hybrid bill included a range of habitat creation measures within the surrounding area to compensate for these impacts.

The creation of the Colne Valley Viaduct South Embankment Ecological Mitigation Site will result in the loss of an area of approximately 0.3ha of ruderal vegetation that has developed since 2016. This loss was not considered within the 2013 Environmental Statement (or subsequent additional provisions Environmental Statements) as at that time this area was identified as being situated outside of the SMI. The new area of vegetation is not critical to maintaining the integrity of the SMI or the species and communities for which it is designated. Based on the scale of the change in impact (0.3ha ruderal vegetation equating to 0.1% of the total SMI) this is not considered to represent a new or different significant effect to that previously reported in the Environmental Statement.

The pond, hibernacula, reptile basking bank and the oversowing of the rest of the Mitigation Site with a wet grassland seed mix will lead to an overall increase in conservation value of the area affected, and enable the value of this habitat to be maintained in the long term. In addition it will provide further habitat of similar value adjacent to but outside of the current SMI boundary.

The habitats proposed are therefore considered complimentary to those present within the wider SMI, and subject to the implementation of the HS2 Code of Construction Practice not anticipated to result in additional impacts on the adjacent retained areas of the Mid Colne Valley SMI.

P R Benyon

P. R. B.

Associate Ecologist BSc (Hons) MPhil MCIEEM

AECOM Infrastructure & Environment UK Limited
12 Regan Way
Chetwynd Business Park
Nottingham
NG9 6RZ

J Simmons

John Simmons

Associate Ecologist

John Simmons, CEcol CEnv MCIEEM
Associate (Ecology),
AECOM
Midpoint
Alencon Link
Basingstoke, Hampshire, RG21 7PP, UK