

Date: 17 April 2023
Our ref: 427276
Your ref: EN070007



National Infrastructure Planning
Temple Quay House
2 The Square
Bristol
BS1 6PN

Customer Services
Hornbeam House
Crewe Business Park
Electra Way
Crewe
Cheshire
CW1 6GJ

T 0300 060 3900

BY EMAIL ONLY

Dear Sirs

NSIP Reference Name / Code: HyNet Carbon Dioxide Pipeline / EN070007
User Code: HYCO-SP005

Written Representations and response to the Examining Authority's first written questions

Examining authority's submission deadline DL1 with a date of 17 April 2023

Natural England is a non-departmental public body. Our statutory purpose is to ensure that the natural environment is conserved, enhanced, and managed for the benefit of present and future generations, thereby contributing to sustainable development.

For any further advice on this consultation please contact me on the details below and copy to consultations@naturalengland.org.uk.

Yours faithfully

Angela Leigh

Planning & Development Senior Adviser
Cheshire to Lancashire Area Team

██████████@naturalengland.org.uk

WRITTEN REPRESENTATION

PART I: Summary and Conclusions of Natural England's advice.

PART II: Natural England's detailed advice (starting at page 6)

PART III: Natural England's response to the Examining Authority's (ExA's) first written questions (starting on page 25)

Natural England's Written Representations

Part I: Summary and Conclusions of Natural England's advice

Summary of Natural England's Advice

On the basis of information reviewed so far it is Natural England's advice that, in relation to identified nature conservation issues within its remit, there is no fundamental reason of principle why the project should not be permitted.

Since submission of our Relevant Representations there remain a number of issues which are still to be resolved, however we consider these issues can be overcome with the submission of detailed information as set out in our advice given at the Relevant Representations stage.

Natural England continues to engage with the applicant on the outstanding information required.

1.1 Part I of these written representations provides a summary (above) and overall conclusions of Natural England's advice. This advice identifies whether any progress in resolving issues has been made since submission of our relevant representations (RR – 20034012). Our comments are set out against the following sub-headings which represent our key areas of remit as follows:

- International designated sites
- Nationally designated sites
- Protected species
- Biodiversity net gain
- Nationally designated landscapes
- Soils and best and most versatile agricultural land

1.2 Our comments are flagged as red, amber or green:

- Red are those where there are fundamental concerns which it may not be possible to overcome in their current form
- Amber are those where further information is required to determine the effects of the project and allow the Examining Authority to properly undertake its task and or advise that further information is required on mitigation/compensation proposals in order to provide a sufficient degree of confidence as to their efficacy.
- Green are those which have been successfully resolved (subject always to the appropriate requirements being adequately secured)

Internationally designated sites - Amber

1.3 Natural England's position regarding internationally designated sites has not changed since submission of our Relevant Representations (RR – 20034012).

- 1.4 Our position regarding impacts on internationally designated sites is as set out in our Relevant Representation (RR – XX). Remaining issues are detailed within our Written Representation Part II.

Nationally designated sites - Amber

- 1.5 Natural England's position regarding nationally designated sites has not changed since submission of our Relevant Representations (RR – 20034012).
- 1.6 Our position regarding impacts on nationally designated sites is as set out in our Relevant Representation (RR – XX). Our comments regarding Nationally designated sites coincides with that for Internationally designated sites. Remaining issues are detailed within our Written Representation Part II.

Protected species - Amber

- 1.7 Natural England's position regarding European protected species has not changed since submission of our Relevant Representations (RR – 20034012).
- 1.8 Our position regarding impacts on protected species is as set out in our Relevant Representation (RR – XX). Remaining issues are detailed within our Written Representation Part II.
- 1.9 Natural England is still awaiting submission of draft protected species licence applications for review. Without draft protected licence applications we are unable to issue Letters of No Impediment (LoNI).

Biodiversity Net Gain Provision - Green

- 1.10 Natural England's position regarding provision of biodiversity net gain has not changed since submission of our Relevant Representations (RR – 20034012).
- 1.11 Our position regarding biodiversity net gain provision is as set out in our Relevant Representation (RR – 20034012). Further detail on our reasoning to support our relevant representation is set out in our Written Representation Part II.
- 1.12 We welcome the commitment from the developer to achieving biodiversity net gain, and that this commitment comes ahead of a mandatory Biodiversity Net Gain requirement for NSIPs.
- 1.13 The approach taken includes the provision of BNG for priority habitats and a minimum of 1% is outlined within the assessment. We understand that further work continues on the BNG assessment and so strongly encourage the exploration of further biodiversity enhancement opportunities.
- 1.14 The Metric 3.1 has been used within the assessment, which is accepted as this represents the appropriate Metric in use at the time of submission.
- 1.15 It is understood that the preferred option of on-site net gain has been considered by the applicant but has been ruled out on the basis that priority habitats could not be reinstated within the

development area, as the applicant would not be able to commit to the required habitat management and monitoring over at least 30 years in these areas. Therefore, the applicant is pursuing the delivery of local off-site BNG. It is understood that there are ongoing discussions between the applicant and Cheshire West and Chester Council regarding suitable net gain sites.

- 1.16 The applicant should link BNG delivery to relevant local plans or strategies, including:
- Cheshire West Climate Plan [Home | Climate Response \(westcheshireclimateplan.co.uk\)](https://www.westcheshireclimateplan.co.uk)
 - Cheshire West and Chester Council Carbon Management Plan [the-carbon-management-plan \(cheshirewestandchester.gov.uk\)](https://www.cheshirewestandchester.gov.uk/the-carbon-management-plan)
 - Cheshire West and Chester Local Plan (Part 2) – green infrastructure, biodiversity and geodiversity [Cheshire West and Chester Local Plan \(Part Two\) Land Allocations and Detailed Policies - Keystone](#)
 - Cheshire West and Chester Council BNG and Ecological Networks Guidance Note [Biodiversity Net Gain interim guidance note \(June 2022\).pdf](#)
 - [Local Nature Recovery Strategy \(when available\)](#)

Soils and best and most versatile agricultural land - Amber

- 1.15 Natural England's position regarding soils and the best and most versatile agricultural land has not changed since submission of our Relevant Representations (RR – 20034012).
- 1.16 Our position regarding soils and best and most versatile agricultural land is as set out in our Relevant Representation (RR – 20034012). Remaining issues are detailed within Written Representation Part II.

Natural England's overall conclusions

- 1.17 The main issues raised by this application are in relation to International and National designated sites, protected species, and soils and best and most versatile agricultural land.
- 1.18 Although there are a number of matters which have not yet been resolved as part of the pre-examination process, Natural England considers that these outstanding matters are capable of being overcome.
- 1.19 Natural England's advice, based on the information provided, is that in relation to identified nature conservation issues within its remit there is no fundamental reason of principle why the project should not be permitted.
- 1.20 Issues regarding Internationally and Nationally designated sites relate to the potential for noise disturbance during the construction phase.
- 1.21 Additional survey information is required with regards to protected species including bats, great crested newt, otter and water vole.
- 1.22 Updates are required with regards to both the Soil Management Plan (SMP) and Peat Management Plan (PMP).

Natural England's Written Representations

Part II: Natural England's detailed advice

2.0 Part II of these representations expands upon the detail of all the significant issues ('amber' issues) which, in our view remain outstanding and includes our advice on pathways to their resolution where possible. Part II also shows 'green' issues where a resolution has been reached and subject always to the appropriate requirements being adequately secured. Where possible this table provides an update on Part II of the Relevant Representations.

2.1 Natural England will continue engaging with the applicant to seek to resolve these concerns throughout the examination.

Natural England's Written Representations, Part II, Table 1

Table 1: Natural England's detailed advice				
NE key issue ref.	Topic	Issue summary	NE commentary and advice on:	Risk - Amber/Green
1	<p><u>International designated sites:</u></p> <p>Dee Estuary SPA/Ramsar</p> <p>Mersey Estuary SPA/Ramsar</p> <p><u>National designated sites:</u></p> <p>Dee Estuary SSSI</p>	Impacts on functionally linked land - Wintering birds	<p>The following comments relate to details within the Habitats Regulations Assessment – Information to Inform An Appropriate Assessment (Document reference number D.6.5.6).</p> <p>There is reference to the Dee Estuary SAC within the text (4.2.1 and 6.2.7) in relation to birds however as this site is not designated for any bird features, we advise the text is updated accordingly.</p> <p>It is stated that bird surveys were carried out with a minimum of one visit per month throughout October to February and two visits per month during March to September. This is considered limited survey effort with regards to passage and wintering birds.</p> <p>Natural England has previously provided advice on bird survey methodologies to WSP on 11 February 2021, stating that wintering</p>	Amber

	Mersey Estuary SSSI		<p>bird surveys are expected to include two surveys per month during October to March and passage surveys should include weekly visits between September to November (or March to May), surveys are to be undertaken at different tide states. We note that survey effort was increased for Transect 2 in the location of the River Dee crossing to two surveys per month.</p> <p>We advise further information is required within the HRA to explain the reduced survey effort and if sufficient additional data is available to enable a robust assessment of impacts to wintering birds.</p>	
2		Impacts in on functionally linked land - Noise disturbance impacts on wintering birds	<p>We do not agree with the conclusions for the Mersey Estuary SPA/Ramsar and Dee Estuary SPA/Ramsar regarding noise disturbance to wintering birds. Additional detail is required regarding expected noise levels during works in close proximity to SPA birds in order to rule out impacts.</p> <p>We note that a distance of 300m is stated beyond which noise disturbance impacts are not expected to occur, however we advise this will depend on the type of works to be undertaken, and consideration should be given to any high disturbance works including piling and hydraulic breaking that may be required.</p>	Amber
3		In-combination effects	<p>Appendix B of the HRA includes an In-combination Assessment Summary and considers other schemes that form part of the HyNet North West project, although some schemes have limited information available at this stage, we advise that the in-combination assessment continues to be updated as more information becomes available. It is important that other schemes within the HyNet North West project are considered as fully as possible.</p>	Amber
4	Protected Species	Impacts to otter	<p>Natural England continues to review the recently submitted updated Riparian Mammals Survey Report and will provide further advice on this in due course.</p>	Amber
5		Impacts to water vole	<p>Natural England continues to review the recently submitted updated Riparian Mammals Survey Report and will provide further advice on this in due course.</p>	Amber

6		Impacts to bats – Bat Activity Survey	<p>Natural England continues to review the recently submitted updated Bat Activity Survey Report and will provide further advice in due course.</p> <p>Our advice within our relevant representations highlighted areas that would benefit from further clarification to aid in a future EPSL application should one be required, this advice is set out below for completeness.</p> <p><u>Roost Designation</u></p> <p>Within the preliminary bat roost assessment surveys (Paragraph 2.3.1) there are 3 types of roost that the designations were grouped into; Maternity, Summer/Transitional, and Hibernation. It is noted that within the scheme’s definition of a Summer/Transitional roost, satellite roosts are included. Please be aware that, satellite roosts are viewed in the same way as impacting a Maternity roost would (timings of works and compensation provided for loss of roost etc...).</p> <p>It is further noted that this is the only point in the survey report where Hibernation roosts are referred to. Further clarification on the hibernation potential of the features onsite should be provided, and then further clarification on whether Hibernation surveys were carried out, if required per Best Practice Guidelines.</p> <p><u>Survey Methodology and Results</u></p> <p>It is welcomed that the survey methodology used has followed best practice guidelines where possible with regards to the presence/absence surveys.</p> <p>Within Annex E, Table 7 - Confirmed Bat Roosts, it is stated that T325-327 have potential emergences along the tree line. It is recommended that the scheme provide clarity on this as it develops- does this</p>	Amber
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			<p>indicate individuals observing multiple trees within one survey or was this an incidental observation during surveys on individual trees? If the former, please provide clarity as to whether this approach was applied across additional tree surveys, or just this one occasion?</p> <p><u>Further Survey/Information</u> The above comments are on the basis of all of the surveys carried out so far. It is highly recommended that the full survey effort on all potential roosting features be carried out and added to the results. In addition, it would be beneficial to provide figures with the locations of the surveyors present, in addition to providing detailed statistics on the IR Camera's used (Resolution, Frames per Second etc...). Annex F – Table 8 and 9, should also contain timings of the surveys and the time of sunset/sunrise included.</p>	
7		Impacts to bats – Bat and Hedgerow Assessment	<p>Natural England continues to review the recently submitted updated Bats and Hedgerows Assessment and will provide further advice in due course.</p> <p>Our advice within our relevant representation highlighted some areas that required clarification within the earlier assessment and these are set out below for completeness.</p> <p><u>Discount Parameters</u> In section 2.2.11 and Table 3 (including footnote), the scheme states that parameters were developed that discounted hedgerows with a BHSA score of good, excellent, or not assessed yet hedgerows from the survey requirements. Within this, one of the discount parameters is “Over 50% of hedgerow located within 50m of main roads”, where “Main roads” are defined by expert opinion from field ecologists, based on experience of the development, traffic and street lighting. It is recommended that the scheme provide further clarity on the parameters it used to define what a “main road” is, including consideration of expert opinion. This is because many roads are still</p>	Amber

			<p>used as flight corridors and linear features by bats, depending on their specific use. This information will thus provide important context as to whether “main roads” are a suitable discount parameter.</p> <p>In addition to this, due to how hedgerows have been defined (continuing past intersections if they continue in the same direction), further clarity on hedgerow range definition would be welcomed. Where sections of a single hedgerow outside of the established 50m range that meet an intersection and continue onwards (and thus still count as the same hedgerow as defined in the report)- have these been discounted, despite potential for bats to access it whilst not coming within the 50m range of the main road?</p> <p><u>Static Detector Survey Methodology</u></p> <p>In paragraph 2.3.5 and 2.3.7, it is noted that the sound analysis carried out on the data collected by the surveys was done using an auto-analysis software and only 10% of data has been manually analysed. This is considered a limitation within the approach, as it renders species identification on a site less reliable, due to inaccuracy of the software (outside of Common and Soprano pipistrelle). That is to say, software identification often misses occurrences that human corroboration does not- such as when multiple species are passing at once, as only the loudest bat with the most calls is identified, or both/all bats are mis-identified entirely.</p> <p>Individual static detectors and grouped static detectors were deployed. It is recommended that the scheme provide the specific parameters that the statics covered, and whether this is extended to multiple hedgerows at once.</p> <p><u>Field Survey Methodology</u></p>	
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			<p>In paragraph 2.4.4 it is stated that further surveys will be carried out if DEFRA thresholds were met. While it is noted that applying DEFRA methods to 60 mins of survey effort instead of 90 was discussed in August 2021, please note that- as discussed in this advice- further information on the justification for this approach would be welcomed alongside any reference to the modifications applied. For example, were these thresholds were proportionately reduced to reflect the reduced survey effort? The scheme also state that survey timings were also subject to change dependent on the presence of Annex 2 species. Further information on the specifics of this change would also be welcomed in this explanation.</p> <p><u>Static Survey Results/Progress</u></p> <p>The early results for the static deployments have highlighted the presence of a potential number of vulnerable, woodland-adapted species, and Annex 2 species present on the site. Any further information on whether this has been used to update and improve the design of the crossing-point surveys proposed (in line with previous feedback of the length of surveys needing to be lengthened should these species be found on the site) would be welcomed.</p> <p>In Annex F, please note that weather data from the deployments should be included in future submissions of the report (e.g., Rain, Wind and Temperature).</p> <p>We welcome that pre-commencement surveys will be carried out to update baseline surveys during the bat survey season (May-August inclusive) and prior to construction commencement. These should follow Best Practice Guidelines where possible.</p> <p>Further to this we also welcome the use of faux hedgerows to maintain linear features and minimise fragmentation and isolation during the</p>	
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			<p>construction phase of the development. It is noted that the faux hedgerows will be maintained until the “excellent” hedgerow replacement planting has been established and planting of “good” hedgerow completed. We note this could imply the risk that for a portion of time, there will be potentially no established hedgerow in place for the “good” hedgerows, which constitute a significant proportion of sites hedgerows. As the scheme develops, we recommend further clarity on whether this is the case, and if so how the loss of the hedgerow during this time will be mitigated for.</p>	
8		<p>Impacts on great crested newt</p>	<p>Our advice within our relevant representation highlighted some areas that required clarification, and these are set out below for completeness.</p> <p>Is it noted that the scheme combines the use of licensing in Wales, District Level Licensing (DLL) in England, and traditional bespoke licensing in the section of the scheme in England where DLL's red zone is in operation. The following comments pertain to those ponds within England's DLL red zone, to be licenced under traditional bespoke licensing, unless otherwise stated.</p> <p>The following comments relate to Appendix 9.2 Great Crested Newt Report Volume III (Document reference number D.6.3.9.2).</p> <p><u>HSI Surveys</u></p> <p>The proposed HSI survey methodology broadly follows best practice guidelines published in The Great crested newt Mitigation Guidelines (GCNMG). Natural England's Wildlife Licensing Service had previously given advice (dated 15th March 2021) that, when applying for a bespoke EPS mitigation licence, HSI survey methodology should always be used in combination with presence/absence surveys and- where likely absence is not established- population size class surveys.</p>	Amber

			<p>The scheme's acknowledgement of this under section 2.7.6 is welcomed.</p> <p><u>Presence/Absence Surveys</u> The proposed presence absence survey methods outlined in section 2.5 align with best practice and are welcomed.</p> <p>However, under notes and limitations in section 2.7.5, the scheme details that some presence/likely absence surveys were undertaken in temperatures below 5°C, which deviates from best practice.</p> <p>The scheme details that, "as alternative methods were used, e.g., torching, netting, refuge search, egg search, the surveys are considered valid". Please note that, as described in our email of 28/03/2022 to the consultants, WSP, Natural England do have concerns about the validity of data collected in temperatures colder than 5°C. In section 5.6.3. of the GCNMG, it is explicitly stated the Torch survey results are highly variable in temperatures lower than 5°C. Further to this, as an ectothermic (cold blooded) species, GCN are less likely to be active during colder temperatures, rendering survey results from methodologies such as netting and refuge search less valid in colder temperatures.</p> <p>Please note that in support of a GCN mitigation licence application, surveys where this was the case should be clearly marked, and the scheme should provide further information as to why these surveys could not be conducted in optimum conditions, and how these constraints will be accounted for in consideration of results and approaches.</p> <p><u>Population Size Class Assessments</u> The proposed population class survey methods outlined follow some best practice, in that a total number of 6 surveys were to be</p>	
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			<p>conducted. However, it should be noted that the best practice guidelines detail that population size class assessment should be undertaken using torch survey and bottle trapping for ponds, so that a count of GCN in ponds may be made. Please ensure that any population size class assessments (to be undertaken following established GCN presence) will be made using these methods.</p> <p>For any population size class assessments which have already been attempted, and cannot be repeated, the scheme may wish to consider utilising the information they have available to come up with a “reasonable maximum scenario” of GCN population size class under licensing policy 4 (further guidance linked here).</p> <p><u>Results</u></p> <p>As noted above, this scheme combines 3 licensing regimes (Licensing in Wales, District Level Licensing [DLL] in England, and Bespoke Mitigation Licensing in England) in this approach. While Table 6 differentiates between waterbody survey results in Wales and waterbody survey results in England, it is recommended that waterbody survey results in England are further sub-divided by those within DLL, and those which fall under bespoke mitigation licensing (red zone). This will allow a thorough assessment to be made of all survey results in Table 6 pertaining to waterbodies within the red zone.</p> <p>In section 2.7.7, the scheme notes that ponds on Chester Zoo make use of data collected by the zoo for monitoring purposes, so as not to over-trap these water bodies. While data sharing to prevent over-trapping is generally welcomed, surveys on ponds 166, 167, 168, 169, 170, 171, and 172 unfortunately do not follow best practice guidelines for the purposes of informing development, given these were typically subject to one, although in some cases two, survey methodologies.</p>	
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			<p>Therefore, although presence has been confirmed at waterbodies 166, 167, 169, and 171 respectively, the survey information currently provided is not enough to confirm likely absence at waterbodies 166, 168, 170, and 172 respectively. Further to this, the survey effort at 166, 167, 169, and 171 is not sufficient to predict population size class in these ponds. The scheme may wish to consider further survey effort in collaboration with Chester Zoo, which adheres to the best practice guidelines for development mitigation, while also preventing double-trapping of newts.</p> <p>In this case, the risk of not having sufficient data to adequately predict the scheme's impacts on GCN is considered higher than the risk of over-trapping.</p> <p>Ponds 42, 47, 48, 49, and 52 were subject to public health and safety/ access constraints to surveying ponds as described in section 2.7.11 and 2.7.12. These constraints are appropriately addressed by combining further information and treating these waterbodies as likely present, described within 2.7.13.</p> <p>Upon review of the information in Table 2, Section 2, and Table 8 (Annex C), the following is noted:</p> <ul style="list-style-type: none">• The surveys conducted on waterbodies 43, 45, 46 are broadly conducted within best practice guidelines and deemed acceptable surveys• Waterbodies 51 and 53 appear to have had some constraints around turbidity, please note that further justification as to the validity of these surveys, and how the results would be interpreted in light of this constraint, would likely be required in support of a bespoke licence application.	
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			<ul style="list-style-type: none"> • Waterbodies 47 and 52 had some surveys undertaken, but following constraints outlined in 2.7.11 and 2.7.12 respectively, have been assessed in combination with other information as likely present in 2.7.13. This is an acceptable approach. • Waterbody 142 appears in Table 8 to have had fewer methods used during its last two surveys than best practice advises, but Table 2 provides some insight into why this might be. In a licence application, it is recommended that a clear line of ecological justification is provided per pond. • Water bodies 54 and 112 dried out in April, before any GCN presence had been recorded. Please note that desk or multiple years' data should be utilised in cases like these in order to justify whether this is a typical or rare occurrence and design an approach accordingly. • For the reasons outlined above, surveys at Chester Zoo waterbodies 166, 167, 169, and 171 are sufficient to confirm GCN presence, but not determined population size class. • Also, for reasons outlined above, surveys at Chester Zoo waterbodies 166, 168, 170, and 172 are not sufficient to confirm GCN absence. <p>It is recommended that any bespoke licence application clearly outlines the approach to that bespoke EPS Mitigation licence, DLL, and the survey buffer/ logic applied to ponds within the red zone.</p> <p>Please note that for ponds within the red zone, survey effort should take into account the metapopulations of any ponds within the red zone and prevent fragmentation of these as far possible. Metapopulations can be anticipated for ponds within 250m-500m of one another provided there are no barriers to dispersal. This</p>	
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			consideration should apply to all ponds within 500m where there are no barriers to dispersal- regardless of whether they are inside or outside the red zone. In this way, there may be ponds within 500m of the scheme's red DLL zone footprint where the scheme's impact on the pond is mitigated for within DLL, but the scheme's impact on metapopulations within a bespoke licence will still need consideration.	
9	Soils and Best and Most Versatile Agricultural Land	Loss of BMV land	<p>Natural England is expecting further updated documentation with regards to the Soil Management Plan and Peat Management Plan, and this has been discussed via the drafting of a SoCG.</p> <p>Our advice within our relevant representation highlighted some areas that required clarification, and these are set out below for completeness.</p> <p>Based on the information provided, it appears that the proposed DCO area comprises 540 ha of agricultural land, including 278 ha classified as 'best and most versatile' (BMV) (Grades 1, 2 and 3a in the Agricultural Land Classification (ALC) system) (this is increased to 339.9 ha when including Predictive (Wales) and Provisional (England) ALC Grades for 81.9 ha of surveyed agricultural land; where Provisional ALC Grade 3 land has been divided evenly between Subgrade 3a and 3b).</p> <p>We understand that, of the 339.9 ha of BMV land which will be affected by the proposals during construction, 19.129 ha of this will be lost for the lifetime of the development.</p> <p>The land take figure provided in Table 11.12 'Construction Stage assessment of significant effects' (1.37 ha BMV) (Chapter 11 – Land and Soils D.6.2.11) does not correspond with Table 11.7 'Hectarage of permanently sealed agricultural land' (19.129 ha), although we acknowledge that the area presented in Table 11.7 would not alter the magnitude of impact and overall significance presented in Chapter 11.</p>	Amber

			<p>Having reviewed the ALC surveys provided within Appendix 11.4 and the residual assessment of effects provided within Chapter 11, we agree with the general conclusions presented.</p> <p>Natural England provided comment on the English Section of the HyNet Pipeline ALC and Soil Resource Report in August 2022, and as such, we have no further comments on Appendix 11.4. The land surveyed in Appendix 11.5 ALC and Soil Resources (Block Valve Stations) Report are all located in Wales, and therefore is not discussed in this response.</p> <p>Paragraph 11.2.10 should include reference to BMV agricultural land. National planning policy relevant to agricultural land and soils is set out in Paragraph 174 of the National Planning Policy Framework which states that: ‘Planning policies and decisions should contribute to and enhance the natural and local environment by: protecting and enhancing [...] soils (in a manner commensurate with their statutory status or identified quality in the development plan); recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland.’</p> <p>Natural England welcome that soils supporting BMV agricultural land will be avoided as far as practicable set out in D-LS-007 of the REAC (Document reference: D.6.5.1). However, it is not clear how the route option or site design has been devised to help minimise this loss of BMV agricultural land nor minimise the disturbance of peat soils.</p>	
10		Material Management Plan	Soil is a finite resource which plays an essential role within sustainable ecosystems, supporting a range of ecosystem services, including storage of carbon, the infiltration and transport of water, nutrient cycling, and provision of food.	Amber

			<p>It is recognised that a large proportion of the agricultural land affected by the development will experience temporary land loss or disturbance and will be restored to the baseline ALC grade (largely as a result of the pipeline trenching). In order to both retain the long term potential of this land and to safeguard all soil resources as part of the overall sustainability of the whole development, it is important that the soil is able to retain as many of its many important functions and services (ecosystem services) as possible. This can be achieved through careful soil management and appropriate, beneficial soil re-use, with consideration of how adverse impacts on soils and their functions can be avoided or minimised.</p> <p>Natural England welcomes the commitment to produce a Materials Management Plan (MMP) which will provide a clear process to enable the reuse of excavated material without it being classified as a waste and outline a cut / fill balance to reduce the amount of material permanently removed during the construction of the Proposed Development. As set out in the Defra Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (publishing.service.gov.uk), a Soil Resource Plan should feed into this MMP to describe how the applicant intends to manage excavated materials.</p>	
11		Soil Management Plan	<p>Natural England welcome the production of an outline Soil Management Plan (SMP) and the commitment to produce an SMP as part of the detailed CEMP. The SMP should consider the soil handling resiliencies of all soils within the alignment of the Newbuild Carbon Dioxide Pipeline not just those supporting BMV agricultural land.</p> <p>Soil handling discussed in the Outline LEMP (Paragraph 3.1.3), should make reference to the Outline SMP and the Defra Construction Code of Practice to ensure consistency across the DCO.</p> <p>A Soil Management Plan (SMP) (Outline CEMP Appendix 1 Outline SMP) has been prepared and submitted; however, a number of deficiencies have been identified as follows:</p>	Amber

			<ul style="list-style-type: none"> • The outline SMP draws on the Defra Construction Code as a source of key guidance. In addition, detailed Soil Resources Plans should be produced by the Contractor for each part of the HyNet CO2 Pipeline project in line with the Defra Code. It is expected that soil data collected as part of the ALC surveys will be re-used to develop the Soil Resources Plans, including providing plans of the soil handling units; soil volumes, location of stockpiles; and restoration criteria. • The loss of BMV land can only be considered temporary if it can be restored back to its original quality. The Outline SMP needs to be clearer that the aim is for BMV agricultural land to be returned to its original quality (Section 5.4. and Section 6). For example, this could be actioned by a target specification for the restored soils according to location and soil types, end use and required ALC grade. • The scope of the Outline SMP should also include the monitoring of all soil handling activities, not just at the stockpiling stage. • Areas of land which have not been surveyed due to access issues which will be subject to disturbance as a result of the proposed development should be surveyed prior to construction, with the soil and ALC information feeding into the detailed SMP (Paragraph 2.2.2.) • The Outline SMP should distinguish between topsoil, subsoil (upper and lower subsoil, where appropriate), and the basal material[1]. These soil resources all need to be handled and stored separately and replaced in sequence. Soil balance calculations should reflect this (Paragraph 2.2.4.). <p>The current excavation volumes estimated includes materials below the topsoil, extending to a depth of up to 6 m to be subsoil, however this material would include both subsoil and basal material. It is important that the excavation of these differing materials is undertaken separately, that they are stockpiled separately, and reinstated in the</p>	
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			<p>same order in which they were excavated to restore the soil profile. This needs to be reflected in Tables 3.2, 3.4 and 3.6.</p> <ul style="list-style-type: none"> • Data on the laboratory assessment of particle size (PSD) is provided in the ALC Report (Reading Agricultural Consultants (2022) HyNet Pipeline ALC and Soil Resources); however, information is also needed about how this limited point information has been used in identifying soil texture for the wider site as presented in Annex B (Paragraph 3.2.1). • The soil resilience has been identified for each soil horizon and at each soil survey location, as presented in Annex B, however this information should be presented as a soil resource plan for the topsoil, upper subsoil and lower subsoil to inform soil handling. • Any surplus material should be beneficially re-used on site where possible. If utilised in re-profiling, the changes to the soil profile (i.e., soil horizon depths, available water capacity etc) and subsequent ALC grade would need to be considered and presented in the detailed SMP to demonstrate that the re-use was indeed a benefit and would not result in a degradation of the soil profile or ALC Grade (Paragraph 3.4.5.) • Detail needs to be provided on how bank or drainage ditch backfilling would be undertaken, to demonstrate this is an appropriate re-use of the soil material (Paragraph 3.4.7.) • Soil stockpiles should be split into different soil types for the topsoil, upper subsoil, lower subsoil and basal material. The proposed location of these stockpiles should be provided in this Outline SMP (Paragraph 4.1.4). Soil stockpiles should be labelled and mapped (including soil type and volume) to facilitate appropriate reinstatement (Paragraph 4.5.2). • The plastic limit should be determined through the use of the Wetness test as presented in Supplementary Note 4 IQ Soil Guidance 	
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			<p>full document including all practitioner advice updated May 2022.pdf (hubspotusercontent-na1.net). BS 1377-2:2022 details the geotechnical laboratory soils test methods and is therefore not appropriate in this context (Paragraph 4.2.3).</p> <ul style="list-style-type: none"> • Inappropriate soil handling can damage the soil structure, not the inherent soil texture. The risk of soil structural damage increases when the soils are handled when wet, this includes an increased risk of compaction (Paragraph 4.4.5. Bullet 5). • Whilst reference has usefully been made to the Defra Construction Code in paragraph 4.4.1, for clarity, the plant type to be used for each element of soil handling should be specified in the subsequent appropriate sections. • Any decompaction or remediation activities should be undertaken when the soils are in a suitably dry condition. 	
12		Peat Management Plan	<p>Natural England welcomes the production of an outline Peat Management Plan (PMP) and the commitment to produce a detailed PMP as part of the detailed CEMP.</p> <p>The consideration of the potential impact of the development on peat soils is important, particularly with regards to their ability to store high quantities of carbon. Considerations regarding peat impacts should include the context of the peat and surrounding areas to ensure hydrological integrity can be maintained.</p> <p>An Outline Peat Management Plan (PMP) (Outline CEMP Appendix 2 Outline PMP) has been prepared and submitted with the application; however, a number of concerns have been identified as follows:</p> <ul style="list-style-type: none"> • The PMP should also utilise the data derived from the ALC and soil resource survey. For example, auger cores 62 – 69 identify clear organic and peaty loam horizons, which can be used to inform stripping depths and volumes. 	Amber

			<ul style="list-style-type: none"> The limitations set out in paragraphs 2.2.2 and 2.2.3 could in part be reduced through the use of the ALC core data. This is briefly referred to in paragraph 3.1.5. Shallow water table identified at 1.15m below ground level (para 3.3.3.) in peat area 2 could be an issue for trenching and pipeline installation. The depth of the open trench is assumed to be 3 m (within a range of 2.5 and 6 m) (Para 3.4.3) Paragraph 3.4.3. Ince AGI (Peat area 1) Is this peat soil a suitable platform for construction? <p>Natural England will continue to review the PMP and expects to provide further comments in addition to those above via our discussions with the applicants and the development of a SoCG.</p>	
13	Biodiversity net gain	Achievement of Biodiversity Net Gain objective	<p>Natural England welcomes the proposed commitment to achieving biodiversity net gain and use of the appropriate Biodiversity Metric.</p> <p>Natural England welcomes that further enhancement opportunities will be explored; these are strongly encouraged where possible.</p> <p>We advise that the identification of suitable local off-set sites is undertaken in liaison with LPAs and Cheshire Wildlife Trust.</p> <p>Natural England welcomes further consultation on the updated Biodiversity Net Gain report that the applicant will submit following confirmation of the land to be used to evidence an overall net gain in Priority Habitats.</p> <p>We note any retained/reinstated and created habitats are subject to long term management and monitoring as part of a LEMP, we encourage consideration that this covers a period of at least 30 years.</p>	Green

			<p>There are minor points that should be addressed within the documentation for clarity, and these include:</p> <ul style="list-style-type: none">• Figures 1 and 2 are referenced throughout the document but not labelled appropriately in the report.• 1.2.1 it is noted that hedgerows were also frequently present.• Table 2.1 Footnote 3 regarding '<i>relevant local strategy</i>' is missing.• Table 2.2 Quantitative Outcomes of BNG calculations – We note that for 100% of baseline value the predicted scheme-wide outcome should state no net loss <i>or net gain</i> of biodiversity.	
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Natural England's Written Representations

PART III: Natural England's response to the Examining Authority's (ExA's) first written questions with a deadline of 17 April 2023

Table 2: Natural England response to Examiner's first written questions ref ExQ1			
ExA question ref	Question addressed to	Question	Answer
Q1.4.1	Surveys IPs, including Relevant Planning Authorities, Natural Resources Wales (NRW), Environment Agency (EA), Natural England (NE)	<p>i) Confirm whether you are satisfied with the range of ecology surveys associated with ES - Chapter 9 - Biodiversity [APP-061];</p> <p>ii) Do you consider the baseline information presented to be a reasonable reflection of the current situation?</p> <p>iii) In respect of i) and ii) if not, why not and what would resolve any residual concerns?</p> <p>The ExA acknowledges that this may be covered by a SoCG. If the answer to these questions is to be covered by a SoCG please indicate that accordingly.</p>	Natural England is currently discussing this matter with the applicant and is therefore to be covered by a SoCG.
Q1.4.2	Monitoring Applicant and IPs, including Relevant Planning Authorities (CWCC and FCC) and NRW, EA and NE.	<p>Confirm whether you are satisfied with the monitoring measures during construction and post construction described within Section 9.13 of ES - Chapter 9 - Biodiversity [APP-061].</p> <p>In particular, your comments are invited on the monitoring requirements anticipated during construction detailed within Table 9.13 and within Appendices 9.1 - 9.10 (Volume III), in relation to protected species licencing and the Outline Landscape Ecology Management Plan [APP-229]. As well as the post-construction monitoring proposed to be undertaken in accordance with a Landscape Ecology Management Plan</p>	Natural England is currently discussing this matter with the applicant and is therefore to be covered by a SoCG.

		<p>(LEMP) [APP-230] developed at Detailed Design. The LEMP is proposed to be included within the Operations and Maintenance Environment Management Plan (OMEMP), provided post-construction.</p> <p>The ExA acknowledges that this may be covered by a SoCG. If the answer to these questions are being covered by a SoCG please indicate that accordingly.</p>	
Q1.4.3	BNG/ Biodiversity Enhancement Applicant and IPs, including FCC, CWCC, NRW and NE	<p>Paragraph's 9.2.33-36 of ES Chapter 9 states that Biodiversity Net Gain (BNG) will be a statutory requirement for most planning applications, as per the new Environment Act (previously Environment Bill), which achieved Royal Assent through Parliament on 9 November 2021. Whilst there is currently a transition period before mandatory requirements come into force (expected to be winter 2023), it will require development to deliver a 10% net gain in biodiversity units (area habitat, hedge and river units where applicable), as determined through the use of a biodiversity metric. Moreover, it is anticipated by the Applicant that the BNG requirement will apply across all terrestrial infrastructure projects, or terrestrial components of projects, accepted for examination by the Planning Inspectorate through the NSIP regime by November 2025 (subject to the provisions of the applicable National Policy Statements or Biodiversity Gain Statement). Projects accepted for examination before the specified commencement date would not be required to deliver mandatory BNG under the terms of the Environment Act.</p> <p>v) Submit your views on seeking biodiversity enhancement/ facilitating BNG, inclusive of any future proofing.</p>	<p>Natural England would expect BNG to be quantified through the use of the biodiversity metric calculation tool in conjunction with ecological advice, with details provided in the Biodiversity Gain Plan of how the required habitat creation/enhancement measures will be achieved, and where, taking into account the mitigation hierarchy.</p> <p>Off-site gain will need to be secured through legal agreements, either Section 106 Agreements or Conservation Covenants, to ensure that habitats will be managed and monitored for a minimum of 30 years.</p> <p>Habitat management and monitoring should be set out in a Habitat Management and Monitoring Plan to cover at least 30 years.</p> <p>Other biodiversity enhancements, such as the provision of bird nest boxes and bat and insect boxes, can be included in the Biodiversity Gain Plan. Incorporating the reporting of these features into biodiversity gain plans will allow the features to be secured through appropriate planning conditions.</p>
Q1.4.4	BNG/ Biodiversity	<ul style="list-style-type: none"> The ExA notes the submission of BNG Assessment – Part's 1-6 [APP-231] to [APP-236], consecutively. 	<p>Natural England considers this a question for the applicant and so makes no further comment at this time.</p>

	<p>Enhancement/ Habitats Applicant and IPs, including FCC, CWCC, NRW and NE</p>	<p>i) The level of BNG overall enhancement outlined as being able to be secured is very low. Can the Applicant further justify the rationale for an overall 1% BNG increase aims rather than seeking the higher thresholds of 5% or 10% (stated in the application submissions) in the first instance which are deemed possible?</p> <p>ii) Paragraph 1.4.2 of [APP-231] highlights that BNG up to 10% across area and river habitats is a feasible opportunity. Outline the progress made with landowners in securing such river habitat or other aquatic habitat improvements, as well as the next steps to be taken along with a likely timeframe to inform the Examination.</p> <p>iii) The ExA acknowledges that the BNG Assessment undertaken is focused on priority habitats. This is believed to be based on the spatial dataset in the Priority Habitats Inventory (England) compiled by NE last updated 13 December 2022 which does not cover Wales. Is that the case? Confirm the data sets which have been utilised for both England and Wales and their age.</p> <p>iv) Further to the above question there is the national list of priority habitats and species in England ('Section 41 habitats and species') for public bodies, landowners and funders to use for biodiversity conservation. The UK BAP priority species and habitats were created between 1995 and 1999, and were subsequently updated in 2007, following a 2-year review of UK BAP processes and priorities, which included a review of the UK priority species and habitats lists. The 'UK Post-2010 Biodiversity Framework', published in July 2012, succeeded the UK BAP. Albeit the UK BAP remains a useful reference point for both 'species' and 'habitats'. For the avoidance of any</p>	
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		<p>doubt can you confirm the priority habitat list the Applicant is referring to in its assessment for habitat protections and for BNG/ biodiversity interest purposes?</p> <p>v) Explain what scope remains for the scheme to further complement existing ecological and biodiversity initiatives within the local areas the scheme passes through. If relevant local/ regional or national initiatives have not been fully considered to date, provide an update on how potential integration could be achieved.</p> <p>vi) The EA [RR-024] comment that a waterbody ‘near Stanlow Refinery’ will be permanently lost. Can the Applicant confirm to the Examination the details of adequate compensatory habitat as a result of this loss?</p> <p>The EA [RR-024] also note that in addition to the creation of wood habitat piles and the installation of bat and bird boxes, the completion of nearby Water Framework Directive (WFD) mitigation measures, which enhance riverine habitats for biodiversity, must also be included. This would contribute to BNG and the legal objective of ‘good ecological potential’ for these waterbodies. Does the Applicant acknowledge these responses? If so, explain/ signpost what provision is to be made.</p>	
Q1.4.7	<p>Habitats/ Biodiversity enhancement Applicant and IPs, including FCC, CWCC, NRW and NE</p>	<p>Signpost the particular local nature strategies (including those entailing nature recovery or related ecologically based methods for carbon sequestration) covered in the geographical area subject to the DCO, or those nearby, that could be used for the delivery of additional ecological enhancement.</p> <p>Suggest the strategies which could be used to secure enhancement and the precise mechanisms to implement the desired improvement.</p>	<p>Natural England is aware of the following strategies within Cheshire West which could be used to secure enhancement:</p> <ul style="list-style-type: none"> • Cheshire West Climate Plan Home Climate Response (westcheshireclimateplan.co.uk) • Cheshire West and Chester Council Carbon Management Plan the-carbon-management-plan (cheshirewestandchester.gov.uk)

			<ul style="list-style-type: none"> • Cheshire West and Chester Local Plan (Part 2) – green infrastructure, biodiversity and geodiversity Cheshire West and Chester Local Plan (Part Two) Land Allocations and Detailed Policies - Keystone • Cheshire West and Chester Council BNG and Ecological Networks Guidance Note Biodiversity Net Gain interim guidance note (June 2022).pdf • Local Nature Recovery Strategy (when available) <p>For example, the Cheshire West Climate Plan includes the following points under the section on Land Use, Adaptation and Climate Repair, Local Action, that could be used to secure enhancement:</p> <ol style="list-style-type: none"> ‘1. Support, on average over the five-year (2020-2025) programme, an aspiration for 150 hectares of new planting a year across the borough, a total of 750ha over the lifetime of the programme. 2. Bid for EU Horizon 2020 funding to deploy exemplar nature-based solutions to Climate Change to provide models for wider deployment and incorporation into borough wide plans and strategies. 3. Implement new policies on wildflower verges, enhancing local biodiversity and reducing our cost for green space management. 4. Review the Council’s land holdings, including its farm estate, to explore the case for this land to contribute to the Council’s goal of becoming carbon neutral by 2030. This may include reviewing opportunities to support low-carbon agricultural practices which reduce emissions and increase
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			<p>carbon sequestration, alongside promoting solutions such as tree planting, wetland management and creation.</p> <p>5. We will work with the Planning Service to introduce the requirement for 'net gain' in biodiversity in new development.</p> <p>6. We will identify where natural flood management approaches can be used to increase carbon sequestration and deliver improved catchment management. This will be initiated by an opportunity mapping exercise.</p> <p>7. We will work publish a Biodiversity strategy which sets out how we will promote biodiversity and carbon sequestration through new approaches to Streetscene management and wider work across the borough.</p> <p>8. Explore opportunities to deliver income generation through Woodland management.</p> <p>9. We will develop a detailed Action Plan that will support delivery of Local Action'.</p> <p>Mechanisms to implement the desired improvement could include the applicant purchasing the off-site biodiversity units that are required to achieve the net gain target, from local landowners, and securing the improvements and appropriate management over at least 30 years via Section 106 Agreements or Conservation Covenants.</p> <p>Also, the wider environmental benefits should also be explored, for example by using the following tool:</p> <p>The Environmental Benefits from Nature Tool - Beta Test Version - JP038 (naturalengland.org.uk)</p>
Q1.4.15	Birds	Displacement effects on Mersey Estuary birds excluded for assessment on basis of bird presence/ numbers.	Natural England is satisfied that the proposed mitigation with regards to lighting disturbance is adequate, however it

	Applicant and NE	<p>Has the presence of persons linked to construction activity appearing on top of banks been factored?</p> <p>Lighting, noise and timing of disturbance to avoid times when birds are present are further aspects for consideration in the examination. Is the mitigation proposed adequate?</p>	<p>remains unclear on the mitigation for noise disturbance at this stage. Please see our comments in Part II, Table 1.</p> <p>We advise further consideration is given to the timing of works in close proximity to significant numbers of SPA birds, and confirmation of the timing of works in close proximity to the River Dee is required.</p> <p>We note the measures within the OCEMP to limit movement of personnel around the working areas and so to avoid disturbance effects to birds. We are satisfied with this measure.</p>
Q1.4.16	Aquatic Ecology IPs, including Relevant Planning Authorities, NRW, EA and NE	<p>The ExA acknowledges the content of Appendix 9.9 Aquatic Ecology (Watercourses) Survey Report and Appendix 9.10 Aquatic Ecology (Ponds) Survey Report [APP-113] [APP-114].</p> <p>Are IPs/ Statutory Consultees satisfied with the scope and content of the aquatic surveys provided? If not state why not.</p>	<p>Natural England is satisfied with the scope and content of the aquatic surveys.</p>
Q1.4.18	Wildlife Corridors Applicant and IPs, including CWCC, FCC, NRW and NE	<p>Applicant</p> <ul style="list-style-type: none"> • At the ExA's Unaccompanied Site Inspections [EV-003] and [EV-004] the probable existence of 'informal' wildlife corridors within nearby surrounding areas was observed which could be potentially used by a wide variety of species. <p>i) Clarify how the effect of the proposed development on potential informal wildlife corridors has been considered.</p> <p>ii) Explain the extent of integration of any ecological enhancements/ mitigation with existing informal wildlife corridors and how those elements are to be secured through the DCO.</p> <p>iii) Explain what scope is available within the overall engineering and new landscaping works proposed by the DCO to enable ecological corridors the earliest</p>	<p>We advise the applicant utilises any ecological mapping work completed by the local authorities to inform consideration of informal wildlife corridors and make links to local nature sites.</p>

		<p>chance of re establishment prior to completion of all works. Also explain how such potential provision could be secured formally. Have novel and innovative nature based approaches been sufficiently explored?</p> <p>iv) What mitigation is proposed to ensure protected species and other species are protected from noise and vibration?</p> <p>IPs</p> <p>v) Are there any comments/ concerns you wish to raise with respect to the above matters?</p>	
Q1.5.3	<p>Mitigation Applicant and IPs, including CWCC, FCC, NRW and NE</p>	<p>Having regard to ES Chapter 7 – Climate Resilience [APP-059] the ExA notes the content of Table 7.13 titled Embedded mitigation in the DCO Proposed Development’s Preliminary Design dealing with climate risk during any future operation.</p> <p>What further embedded design mitigation is available to ensure ecological and landscape provision linked to the scheme remains sufficiently resilient to deal with the climatic changes anticipated in future years?</p> <p>Further explain/ substantiate how embedded design mitigation or other additional mitigation/ enhancement possible to achieve would be successful against the climate risks evidenced. For example, any new wetland creation possible may result in several cross-cutting benefits such as those associated to additional ecologically based carbon storage, ecological enhancement and dealing with local flood risk. Similarly, support for offsite seagrass meadow planting, kelp growth initiatives or saltmarsh restoration could have wider cross cutting beneficial impacts.</p> <p>IPs are invited to make whatever comments they deem to be appropriate. In particular comments are sought by the ExA on whether a range of nature based</p>	<p>Natural England advises the following resources regarding climate change may be helpful to the applicants:</p> <ul style="list-style-type: none"> • The Climate Change Adaptation Manual provides extensive information on climate change adaptation for the natural environment. It considers the potential impacts of climate change on individual priority habitats and outlines possible adaptation responses. • The National Biodiversity Climate Change Vulnerability Model is a mapping tool that helps identify areas likely to be more vulnerable to the impacts of climate change. • Carbon Storage and Sequestration by Habitat 2021 (NERR094) – a recently updated report that reviews and summarises the carbon storage and sequestration rates of different semi-natural habitats that can inform the design of nature-based solutions to achieve climate mitigation and adaptation.

		mitigation/enhancements available and achievable has been properly considered?	<ul style="list-style-type: none"> • The Environmental Benefits from Nature Tool - Beta Test Version - JP038 (naturalengland.org.uk) can be used on a site to calculate Carbon storage based on habitats present.
Q1.5.6	Mitigation Applicant and IPs, including CWCC, FCC and NE	<p>In terms of peatland disturbance and the Outline Construction Environmental Management Plan - Appendix 2 -Outline Peat Management Plan [APP-228]. Other than minimisation techniques to reduce peat excavation Paragraph 5.1.4 of the document states “...in the event that there is an excess of excavated material, application of additional options at the Detailed Design and Construction Stages would be required. If no site use is available, off-site re-use options should be explored, with appropriate disposal as waste considered only as the final option, in line with the management hierarchy set out by SEPA.”</p> <p>Can any peatland excavation be undertaken in a way that prevents carbon release?</p> <p>For excavated peat unable to be put back on site, is it possible for its transferred to another nearby peatland in a manner without it drying out and emitting CO₂? If so, how can that mitigation be secured in the DCO?</p> <p>Have novel or innovative approaches been considered/ ruled out for example such as basalt dusting to capture any CO₂ loss during trenching and replenishing soil fertility further afield beyond peatland areas?</p>	<p>Peat was identified within the HyNet site during the detailed soil and Agricultural Land Classification survey (Paragraphs 3.20 – 3.23 ENVIRONMENTAL STATEMENT – (VOLUME III) (planninginspectorate.gov.uk)). The peat soils identified were observed in the subsoil, and had been overlain by organic rich silty clay. The peat soils south of Hapsford Lane were assumed to be near-permanently wet (Wetness Class V), whilst the other peat subsoils were located in areas of high groundwater (WC V or VI). Laboratory determination of the organic matter content produced measurements of 16.4% in a topsoil sample and 31.5% in a subsoil sample (para 3.23). Therefore, these near-permanently wet peat soils will experience slow rates of decomposition due to the low oxygen conditions.</p> <p><i>Can any peatland excavation be undertaken in a way that prevents carbon release?</i></p> <p>Any peat which is excavated will experience carbon losses, via Carbon Dioxide (CO₂) due to the exposure to aerobic conditions¹, these losses cannot be prevented. To minimise these CO₂ losses, the exposure of the peat to the air should be minimised and the moisture conditions maintained to keep carbon losses to a minimum, i.e. avoid or minimise disturbance.</p>

¹ [wst-g-052-developments-on-peat-and-off-site-uses-of-waste-peat.pdf \(sepa.org.uk\)](https://sepa.org.uk)

			<p>There has been research undertaken to investigate the potential of utilising basaltic quarry fines to capture atmospheric CO₂ in predominantly urban and manufactured soils ^{2,3}, through a process called enhanced rock weathering (ERW) (Crushed materials added to soil slowly dissolve and react with CO₂ dissolved in soil pore water to form carbonates.)</p> <p>The ability to 'replenish the soil fertility' will depend on the phosphorus content of the applied crushed rock. There is also the risk that the quarry fines may contain potentially toxic elements (PTEs).</p> <p>The soil properties of the receiving land alongside to the proposed quarry fines, would need to be investigated in full prior to a determination as to whether this may be an appropriate activity or not.</p>
Q1.9.2	Applicant and NE	<p>NE [RR-065] have commented that the Applicant has provided insufficient evidence concerning the following issues:</p> <ul style="list-style-type: none"> i) International and national designated sites as further information is required relating to impacts on functionally linked land and noise disturbance. ii) Protected species as further information is required regarding survey and assessment details. 	<p>Natural England is currently discussing these comments with the applicant and these issues are to be covered by the SoCG.</p>

² Beerling, D. J.; Kantzas, E. P.; Lomas, M. R.; Wade, P.; Eufrazio, R. M.; Renforth, P.; Sarkar, B.; Andrews, M. G.; James, R. H.; Pearce, C. R.; Mercure, J. F.; Pollitt, H.; Holden, P. B.; Edwards, N. R.; Khanna, M.; Koh, L.; Quegan, S.; Pidgeon, N.; Janssens, I. A.; Hansen, J.; Banwart, S. A. Potential for large-scale CO₂ removal via enhanced rock weathering with croplands. *Nature* 2020, 583 (7815), 242–248. [Potential for large-scale CO₂ removal via enhanced rock weathering with croplands — Heriot-Watt Research Portal \(hw.ac.uk\)](https://www.heriowatt.ac.uk/research-portal/potential-for-large-scale-co2-removal-via-enhanced-rock-weathering-with-croplands)

³ [Outputs; SUCCESS project; Newcastle University \(ncl.ac.uk\)](https://www.ncl.ac.uk/research/success) and references therein.

		<p>iii) Soils and best and most versatile agricultural land as further information is required within the Soil Management Plan and Outline Peat Management Plan.</p> <p>Is further information forthcoming on these areas of the ES? How does the Applicant intend to resolve these deficiencies?</p>	
Q1.10.7	Water Environment Applicant and IPs, including NRW, NE and EA	<p>Applicant and Ips</p> <p>v) Vegetation clearance is expected to occur within the Mersey, Ince Marshes, Gowy, Stanney Mill Brook, Finchetts Gutter, Garden City Drain, Sandycroft Drain, Wepre Brook, Dee (North Wales), and North Wales WFD surface water bodies. In addition, significant dewatering is expected adjacent to the River Gowy and the West Central Drain. These are in the Gowy and Ince Marshes WFD surface water bodies. Please confirm the licensing provision required for the particular works listed above.</p>	Vegetation clearance at water courses with confirmed water vole presence will require a licence from NE.
Q1.10.8	Water environment Applicant and IPS, including NRW and NE	<p>As context to the Examination The Water Resources (Control of Agricultural Pollution)(Wales) Regulations 2021 replaced the Nitrate Vulnerable Zone requirements. The regulations indicate that a new or substantially changed store must:</p> <ul style="list-style-type: none"> - follow the specific rules for the type of substance stored. - have an expected lifespan of at least 20 years with maintenance (any part of a silage effluent system that is underground must be designed and constructed to last at least 20 years without maintenance). - not be within 10 metres of any inland and coastal waters e.g., streams, ditches, ponds or any pipes or culverts. 	Natural England is satisfied with the information provided with regards to water quality and has no concerns related to our updated advice in relation to nutrient level pollution, although we note that NRW has its own advice in this regard.

		<ul style="list-style-type: none">- not be within 50 metres of any borehole, well or spring.- not be within a groundwater source protection zone 1 unless site-specific mitigation measures that minimise the risk to drinking water supplies have been agreed in writing with NRW. <p>The ExA also notes that NE has recently updated its advice (16 March 2022) in relation to nutrient level pollution in a number of existing and new river basin catchments. The advice finds that an increasing number of waterbodies, in or linked with European Sites, are now deemed to be in ‘unfavourable’ conservation status for the purposes of the Habitats Regulations. This is likely to result in even more plans and projects, in relevant river basin catchment areas and proximate to a European site, needing to be screened in accordance with the Habitats Regulations. The likely result will be a need for more Appropriate Assessments and consideration of relevant information. The advice from NE also confirms that the tools available to inform the assessment of effects have been updated. The advice is also relevant to NRW (for cross border sites).</p> <p>The ExA further notes that competent authorities will need to carefully justify how further inputs from new plans or projects, either alone or in combination, will not adversely affect the integrity of the site in view of the conservation objectives.</p> <ul style="list-style-type: none">• Applicant and IPs Please could:<ul style="list-style-type: none">i) the Applicant confirm it acknowledges the updated advice of NRW/ NE;ii) the Applicant and IPs advise whether they consider there to be adequate background	
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		<p>information available to gauge subsequent effects to water quality.</p> <p>In addition to the above, the ExA notes sensitive land uses are identified within, or within 250m, of Sections 4, 5 and 6 include a SSSI, and a SAC and designated ancient woodland. Moreover, the local water environment is interconnected. Effects to both surface and groundwater during construction is presently not mitigated as the Applicant indicates that additional targeted site investigation and remediation strategy for point sources would be undertaken if necessary. The ExA asks the Applicant and IPs how that approach ensures the effects and safeguards to European sites are able to meet HRA requirements?</p>	
Q1.11.1	NE and NRW	<p>NE has not made any comments on the Applicant's assessment of effects on the River Dee and Bala Lake/ Afon Dyfrdwy a Llyn Tegid SAC or Deeside and Buckley Newt Sites SAC. Can NE confirm whether it agrees with the Applicant's conclusions presented in [APP-226] in respect of these sites?</p> <p>NRW has not highlighted any concerns in respect of the Applicant's assessment of effects on the River Dee and Bala Lake/ Afon Dyfrdwy a Llyn Tegid SAC, Halkyn Mountain/ Mynydd Helygain SAC and Alyn Valley Woods/ Coedwigoedd Dyffryn Alun SAC. Can NRW confirm whether it agrees with the Applicant's conclusions in respect of these sites?</p>	We are satisfied with the conclusions for the River Dee and Bala Lake/ Afon Dyfrdwy a Llyn Tegid SAC, however, defer to the advice of NRW with regards to the Deeside and Buckley Newt Sites SAC.
Q1.11.2	NE and NRW	<p>Does the Applicant's assessment of effects on European sites identify all the relevant sites and qualifying features which could be affected by the Proposed Development?</p> <p>Please confirm if the conservation objectives presented in Appendix A of [APP-226] are the correct ones for the sites covered in the Applicant's assessment of effects</p>	We are satisfied that the Conservation Objectives presented within Appendix A of [APP-226] are correct for all NE sites.

		on European sites.	
Q1.11.4	Methodology Applicant and IPs, including: CWCC; FCC; NE and NRW	<p>HRA – Information to inform an appropriate assessment [APP-226] indicates that there are 9 European sites within 10km of the DCO proposed development area:</p> <ul style="list-style-type: none"> i) River Dee and Bala Lake/ Afon Dyfrdwy a Llyn Tegid SAC. ii) Deeside and Buckley Newt Sites SAC (immediately adjacent to the DCO proposed development area). iii) Halkyn Mountain/ Mynydd Helygain SAC (400m north at its closest point). iv) Mersey Estuary SPA (approx. 1.05km to the north). v) Mersey Estuary Ramsar (approx. 1.05km to the north). vi) Dee Estuary/ Aber Dyfrdwy SAC (approx. 1.2km to the north). vii) The Dee Estuary SPA (approximately 1.2km to the north). viii) The Dee Estuary Ramsar (approximately 1.2km to the north). ix) Alyn Valley Woods/ Coedwigoedd Dyffryn Alun SAC (approximately 6km to the southwest). <ul style="list-style-type: none"> • IPs <p>Do IPs concur with the list and agree that there are no omissions for the purposes of formal assessment?</p> <p>Have the defining features of all European sites been properly addressed by the Applicant?</p>	<p>Further sites sit just within 10km of the proposed DCO development area, including Midlands Meres and Mosses Phase 1 and Phase 2 Ramsar sites, however we are satisfied with the sites and features included in the assessment and advise clarity could be added to the text within the HRA regarding the above sites.</p>
Q1.11.8	Mitigation/ Enhancement Applicant and IPs, including CWCC and FCC, NRW and NE	<p>Point out within the ES documentation (or elsewhere) where there are local strategic nature improvement or recovery strategies in the geographical area subject to the DCO that could potentially be used for the delivery of further ecological enhancement.</p>	<p>Please see answer above for Q1.4.7.</p>

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