

Date: 13 January 2023
Our ref: 414234
Your ref: EN070007



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Dear Sir/Madam

NSIP Reference Name / Code: HyNet Carbon Dioxide Pipeline EN070007

Natural England's comments in respect of the HyNet Carbon Dioxide Pipeline promoted by Liverpool Bay CCS Limited

Examining authority's submission deadline 13 January 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 the case officer Angela Leigh at [REDACTED] [@naturalengland.org.uk](mailto:[REDACTED]@naturalengland.org.uk) and copy to consultations@naturalengland.org.uk.

Yours faithfully

Angela Leigh
Planning & Development Lead Adviser
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Natural England's Relevant Representations

PART I: Summary and Conclusions of Natural England's advice.
PART II: Natural England's detailed advice (starting on page 6)

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.

However, Natural England considers that the applicant has provided insufficient evidence and is not yet satisfied that the following issues have been addressed:

- **International and national designated sites as further information is required relating to impacts on functionally linked land and noise disturbance.**
- **Protected species as further information is required regarding survey and assessment details.**
- **Soils and best and most versatile agricultural land as further information is required within the Soil Management Plan and Outline Peat Management Plan.**

- 1.1 Natural England's advice in these relevant representations is based on information submitted by **Liverpool Bay CCS Ltd** in support of its application for a Development Consent Order ('DCO') in relation to **HyNet Carbon Dioxide Pipeline** (*the project*).
- 1.2 Part I of these representations summarises what Natural England considers the main issues¹ to be in relation to the DCO application, and indicate the principal submissions that it wishes to make at this point. Natural England will develop these points further as appropriate during the examination process. It may have further or additional points to make, particularly if further information about the project becomes available.
- 1.3 Where there are specific comments to make these are set out against the following sub-headings which represent our key areas of remit:
 - Internationally designated sites
 - Nationally designated sites
 - Protected species
 - Biodiversity net gain

¹ PINS NSIP Advice Note 11 Annex C sets out Natural England's role in infrastructure planning.
https://infrastructure.planninginspectorate.gov.uk/wp-content/uploads/2015/10/PINS-Advice-Note-11_AnnexC_20150928.pdf

- Nationally designated landscapes
- Soils and best and most versatile agricultural land
- Ancient woodland and ancient/veteran trees
- Connecting people with nature (National Trails, open access land and England Coast Path)
- Other valuable and sensitive habitats and species, landscapes, and access routes

1.4 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)

1.5 Natural England has been working closely with Liverpool Bay CCS Ltd and their consultants WSP to provide advice and guidance since 18 November 2020, Natural England has also been working with Natural Resources Wales to provide coordinated advice.

1.6 Natural England has commenced engagement with the applicant's consultants on a statement of common ground (SoCG) and recently begun initial review of a draft SoCG and expects to continue discussions with the applicant in order to resolve any concerns.

1.7 Natural England continues to review the detail within the Draft DCO, Register of Environmental Actions and Commitments (REAC), Outline Construction Environmental Management Plan and documents and expects to provide further comments via discussions with the applicant's consultants.

1.8 Part I of these representations provides an overview of the issues and a summary of Natural England's advice. Section 2 identifies the natural features relevant to this application. Section 3 summarises Natural England's overall view of the application and the main issues which it considers need to be addressed by the Secretary of State.

1.9 Part II of these representations sets out all the significant issues which remain outstanding, and which Natural England advises should be addressed by Liverpool Bay CCS Ltd and the Examining Authority as part of the examination process in order to ensure that the project can properly be consented. These are primarily issues on which further information would be required in order to allow the Examining Authority properly to undertake its task or where further work is required to determine the effects of the project to provide a sufficient degree of confidence as to their efficacy.

1.10 Natural England will continue discussions with Liverpool Bay CCS Ltd to seek to resolve these concerns and agree outstanding matters in a statement of common ground. Failing satisfactory agreement, Natural England advises that the matters set out in section 4 will require consideration by the Examining Authority as part of the examination process.

1.11 The Examining Authority may wish to ensure that the matters set out in these relevant representations are addressed as part of the Examining Authority's first set of questions to ensure the provision of information early in the examination process.

2. The natural features potentially affected by this application

Internationally designated sites

- 2.1 Our position regarding impacts on internationally designated sites is summarised below. Further detail on our reasoning for this is given against each impact pathway within Part II.
- 2.2 Natural England is not yet satisfied for 'amber' issues identified below that it can be ascertained beyond reasonable scientific doubt that the project would not have an adverse effect on the integrity of the following internationally designated sites.
- Dee Estuary SPA
 - Dee Estuary Ramsar
 - River Mersey SPA
 - River Mersey Ramsar
- 2.3 The main issues raised by this application are that further information is required to assess the impacts of the development on functionally linked land and impacts from noise disturbance during the construction phase. **Amber**
- 2.4 Natural England is satisfied that 'green' issues are unlikely to result in adverse effects on the integrity (AEoI) of internationally designated sites, subject always to the appropriate mitigation/compensation as outlined in the application documents being secured adequately.
- Impacts of lighting during construction phase on the above sites. **Green**

Nationally designated sites

- 2.5 Natural England's position regarding nationally designated sites is summarised below. Further detail on our reasoning for this is given against each impact pathway in Part II.

Our comments above regarding internationally designated sites are applicable to the Mersey Estuary and Dee Estuary SSSIs. **Amber**

Protected species

- 2.6 Natural England's position regarding European protected species is summarised below. Further detail on our reasoning for this is given in part II.
- 2.7 Further information is required to determine that the project will not adversely affect the following protected species (**Amber**):
- Bats
 - Great crested newt
 - Otter
 - Water vole

- 2.8 To note Natural England is 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

- 2.9 Natural England's position regarding provision of biodiversity net gain is summarised below. Further detail on our reasoning for this is given in Part II.
- 2.10 Natural England welcomes the use of the Biodiversity Metric within the Biodiversity Net Gain assessment, including use of Metric 3.0 for habitats and 3.1 for river habitats. **Green**
- 2.11 Natural England welcomes the commitment to achieve a minimum of 1% net gain in Priority Habitats and encourage the applicant to explore further enhancements to achieve a greater net gain in Priority Habitats where practical and proportionate. **Green**

Soils and best and most versatile agricultural land

- 2.12 Natural England's position regarding soils and the best and most versatile agricultural land is summarised below. Further detail on our reasoning for this is given in Part II.
- 2.13 On the basis of the information submitted, Natural England is not yet satisfied with the following soils and best and most versatile agricultural land issues:
- A Soil Management Plan (SMP) (Outline CEMP Appendix 1 Outline SMP) has been prepared and submitted with the application; however, a number of deficiencies have been identified. **Amber**
 - 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. **Amber**

3. Natural England's overall conclusions

- 3.0 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.
- 3.1 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.
- 3.2 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.

Natural England’s Relevant Representations

4. Part II: Natural England’s detailed advice

4.0 Part II of these representations expands upon the detail of all the significant issues (‘red’ and ‘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.

Natural England’s Relevant Representations, Part II, Table 1

Table 1: Natural England’s detailed advice				
NE key issue ref.	Topic	Issue summary	NE commentary and advice on: <ul style="list-style-type: none"> Further details about the project in order to enable assessment Further evidence or assessment work required Inconsistencies or deficiencies within the documentation 	Risk Red/ 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 bird</p>	Amber

	Mersey Estuary SSSI		<p>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>We advise that all suitable otter habitat within 200m of the proposed works should be surveyed.</p> <p>The survey should be undertaken by an experienced otter surveyor, and should include a systematic search for spraints, paw prints, otter paths, slides, food remains, holts and places used for shelter. Guidance: <u><i>NatureScot Protected Species Advice for Developers: Otter</i></u> .</p>	Amber

			<p>Construction is likely to create temporary and short-term disturbance (through noise, vibration, and light) and displacement of animals through loss of suitable sheltering, foraging or commuting habitat during construction activities along and adjacent to watercourses.</p> <p>Natural England notes that there is likely to be direct loss of otter resting places as a result of permanent or temporary land take to facilitate construction, but no otter holts are currently identified within the Newbuild Infrastructure Boundary, however evidence of otter has been found within the Newbuild Infrastructure Boundary on three watercourses (Wepre Brook, Alltami Brook and the River Gowy).</p> <p>We have reviewed the sites within England, currently Groups 1-12 and are satisfied with the classification given at each site.</p> <p>Natural England notes that further surveys are to be completed for otter, we are unable to comment fully as final survey results have not yet been presented.</p>	
5		Impacts to water vole	<p>Water vole burrows are currently present within West Central Drain A, West Central Drain B, Hapsford Brook, Thornton Ditches, Thornton Main Drain and the River Gowy.</p> <p>Natural England notes that further surveys are to be completed for water vole.</p> <p>It is vital surveys are as accurate and as comprehensive as possible to gauge the size of the population of water voles likely to be affected. This population estimate is essential in order to ascertain</p>	Amber

			<p>how much compensation habitat will be required to adequately accommodate the water voles at receptor sites.</p> <p>We welcome the proposal for pre-commencement surveys in search of evidence/activity of riparian mammals (namely otter and water vole) in watercourses crossed by the proposed development, and those within an appropriate buffer of proposed works.</p> <p>Surveys should include all sections of watercourses within the Working Width, extending to 200m either side of the Working Width, as a minimum. Guidance Reference : <i>The Water Vole Mitigation Handbook</i> to confirm baseline conditions and mitigation proposals remain accurate or else inform requirements for new mitigation and/or licencing.</p> <p>At watercourses with confirmed water vole presence, a licence will be required to cover vegetation clearance as part of displacement method mitigation techniques, as per best practice guidance.</p> <p>Vegetation clearance can be completed between 15 February and 30 April inclusive or 15 September and 31 October under supervision of a licensed ecologist</p> <p>We welcome the proposal that where culverts are to be installed, provision of mammal ledges to facilitate passage of mammals will be included, where practicable to provide safe passage for mammals.</p> <p>A further note on consistency within documentation – ensure that the Key within figure F9.6.1 is consistent with the Field Signs Table</p>	
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			5, we note for example EM1.1 which is noted as Water Vole burrow however on the map it is shown as 'other'.	
6		Impacts to bats – Bat Activity Survey	<p>We welcome that bat surveys have been carried out during the 2021 and 2022 survey period, that more are planned, and that they broadly follow best practice guidelines. However, there are some areas that would benefit from further clarification to aid in a future EPSL application should one be required.</p> <p><u>Roost Designation</u> 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> It is welcomed that the survey methodology used has followed best practice guidelines where possible with regards to the presence/absence surveys.</p>	Amber

			<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 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>We welcome that assessment surveys have been carried out and understand the limitations that have been caused due to land access restrictions, reducing the ability to carry out crossing point and static detector surveys.</p> <p>However, there are some areas that require clarification within the assessment.</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</p>	Amber

			<p>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 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</p>	
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			<p>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> <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</p>	
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			<p>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 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		Impacts on great crested newt	<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</p>	Amber

			<p>ponds within England's DLL red zone, to be licenced under traditional bespoke licensing, unless otherwise stated.</p> <p>The following comments related 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. The scheme's acknowledgement of this under section 2.7.6 is welcomed.</p> <p><u>Presence/Absence Surveys</u></p> <p>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</p>	
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			<p>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></p> <p>The proposed population class survey methods outlined follow some best practice, in that a total number of 6 surveys were to be 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>	
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			<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> <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>	
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		<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. • 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. 	
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		<p>In a licence application, it is recommended that a clear line of ecological justification is provided per pond.</p> <ul style="list-style-type: none"> • 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 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.</p>	
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9	Soils and Best and Most Versatile Agricultural Land	Loss of BMV land	<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> <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</p>	Amber
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			<p>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	<p>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.</p> <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</p>	Amber

			<p>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> <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 	Amber

			<p>re-used to develop the Soil Resources Plans, including providing plans of the soil handling units; soil volumes, location of stockpiles; and restoration criteria.</p> <ul style="list-style-type: none"> • 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 same order in which they were</p>	
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			<p>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). 	
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			<ul style="list-style-type: none"> • The plastic limit should be determined through the use of the Wetness test as presented in Supplementary Note 4 IQ Soil Guidance 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). • 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>	Amber

			<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. 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</p>	Green

			<p>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> <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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