

Ein cyf/Our ref: 20033913 Eich cyf/Your ref: EN070007

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17/04/2023

Er sylw / For the attention of: Jake Stephens

Annwyl / Dear Jake,

# PIBLINELL CARBON DEUOCSID HYNET ARFAETHEDIG / PROPOSED HYNET CARBON DIOXIDE PIPELINE

CYFEIRNOD YR AROLYGIAETH GYNLLUNIO / PLANNING INSPECTORATE REFERENCE: EN007007

EIN CYFEIRNOD / OUR REFERENCE: 20033913

# PARTHED: CYFLWYNIAD YSGRIFENEDIG CYFOETH NATURIOL CYMRU AR GYFER DYDDIAD CAU 1

# **RE: NATURAL RESOURCES WALES' WRITTEN SUBMISSION FOR DEADLINE 1**

Diolch am eich llythyr Rheol 8, dyddiedig 27 Mawrth 2023, sy'n gofyn am sylwadau gan Gyfoeth Naturiol Cymru ynglŷn â'r uchod.

Mae'r llythyr hwn yn cynnwys y cyflwyniad canlynol gan Gyfoeth Naturiol Cymru:

- Sylwadau Ysgrifenedig gweler <u>Atodiad A</u>.
- Ymateb i Gwestiynau'r Awdurdod Archwilio gweler Atodiad B.

Mae'r sylwadau a ddarperir yn y cyflwyniad hwn, gan gynnwys yr atodiadau, yn cynnwys ymateb Cyfoeth Naturiol Cymru fel parti statudol o dan Ddeddf Cynllunio 2008 a'r Rheoliadau Cynllunio Seilwaith (Partïon a Chanddynt Fuddiant) 2015 ac fel 'parti â buddiant' o dan adran 102(1) o Ddeddf Cynllunio 2008.

Mae ein sylwadau'n cael eu cyflwyno heb ragfarnu unrhyw sylwadau eraill efallai y byddwn yn dymuno eu gwneud mewn perthynas â'r cais a'r archwiliad hwn, boed hynny mewn perthynas â'r Datganiad Amgylcheddol, a'r dogfennau cysylltiedig, darpariaethau'r Gorchymyn Caniatâd Datblygu a'i ofynion, neu dystiolaeth a dogfennau eraill a ddarperir gan Liverpool Bay CCS Ltd. ('yr Ymgeisydd'), y Corff Archwilio neu unrhyw bartïon eraill a chanddynt fuddiant.

Yn Atodiad A rydym yn darparu ein Sylwadau Ysgrifenedig gan gynnwys crynodeb byr. Mae'r Sylwadau Ysgrifenedig wedi'u strwythuro mewn fformat tebyg i'n Sylwadau Perthnasol [RR-066], gyda'n sylwadau ar y agwedd alltraeth o'r datblygiad wedi'i ddilyn gyda'n sylwadau ar y agweddau ar y tir.

Yn Atodiad B, rydym yn darparu atebion i'r rownd gyntaf o gwestiynau o'r Awdurdod Archwilio.

Roedd llythyr Rheol 8 yn gofyn am i Ddatganiadau Tir Cyffredin (DTC) gael eu cyflwyno erbyn Dyddiad Cau 1. Derbyniodd CNC gopi o ddrafft o'r DTC gan yr Ymgeisydd ar 30 Tachwedd 2022 a 1 Chwefror 2023. Rydym yn ymgysylltu'n weithredol ac yn barhaus â'r Ymgeisydd i fwrw ymlaen â'r rhain cyn y terfynau amser nesaf. Rydym wedi cynnal nifer o drafodaethau gyda'r Ymgeisydd yn ystod yr wythnosau diwethaf ac wedi symud ymlaen â nifer o faterion a godwyd yn ein Sylwadau Perthnasol – mae'r cynnydd hwn yn cael ei esbonio, lle bo'n berthnasol, yn ein Sylwadau Ysgrifenedig.

Yn ogystal â bod yn barti a chanddo fuddiant o dan Ddeddf Cynllunio 2008, mae Cyfoeth Naturiol Cymru'n arfer swyddogaethau dan ddeddfwriaeth benodol, gan gynnwys (ond nid yn gyfyngedig i) Rheoliadau Trwyddedu Amgylcheddol (Cymru a Lloegr) 2016 (fel y'u diwygiwyd), a Deddf y Môr a Mynediad i'r Arfordir 2009. Mae Cyfoeth Naturiol Cymru wedi derbyn ceisiadau am Drwydded Forol o dan Ddeddf y Môr a Mynediad i'r Arfordir 2009.

Er mwyn eglurder, fe nodir ble bo'r sylwadau gan Wasanaeth Trwyddedu CNC ac fe'u cynhyrchir ym mharagraffau 12.1 – 12.7 a rhan 12 o Atodiad A; mae pob sylw arall yn ymwneud â rôl gynghori CNC.

Mae croeso i chi gysylltu â Chris Jones @cyfoethnaturiolcymru.gov.uk) os ydych angen rhagor o gyngor neu wybodaeth ynglŷn â'r sylwadau hyn.

Thank you for your Rule 8 letter, dated 27 March 2023, requesting Cyfoeth Naturiol Cymru / Natural Resources Wales' comments regarding the above.

This letter comprises the following submission from NRW:

- a) Written Representations see <u>Annex A</u>.
- b) Response to Examining Authority's Questions see <u>Annex B</u>.

The comments provided in this submission, including the associated Annexes, comprise NRW's response as a Statutory Party under the Planning Act 2008 and Infrastructure Planning (Interested Parties) Regulations 2015 and as an 'interested party' under s102(1) of the Planning Act 2008.

Our comments are made without prejudice to any further comments we may wish to make in relation to this application and examination whether in relation to the Environmental Statement (ES) and associated documents, provisions of the draft Development Consent Order ('DCO') and its Requirements, or other evidence and documents provided by Liverpool Bay CCS Ltd. ('the Applicant'), the Examining Body or other interested parties.

In Annex A we provide our Written Representations including a brief summary. The Written Representations are structured in a similar format to that of our Relevant Representations [RR-066].

In Annex B we provide answers to the first round of questions from the Examining Authority.

The Rule 8 letter requested Initial Statements of Common Ground (SoCG) to be submitted at Deadline 1. NRW received copies of the draft SoCG from the Applicant on 30 November 2022 and 1 February 2023. We are currently in active and on-going engagement with the Applicant to progress this ahead of the next deadlines. We have held a number of discussions with the Applicant in recent weeks and have progressed a number of matters raised in our Relevant Representation – this progress is explained, where relevant, in our Written Representations.

In addition to being an interested party under the Planning Act 2008, NRW exercises functions under legislation including (but not limited to) the Environmental Permitting (England and Wales) Regulations 2016 (as amended), and Marine and Coastal Access Act 2009. NRW has received applications for a Marine Licence application under the Marine and Coastal Access Act 2009.

For the purpose of clarity, comments from NRW Permitting Service are titled as such and are produced in paragraphs 12.1 - 12.7 and section 12 of Annex A; all other comments pertain to NRW's advisory role.

Please do not hesitate to contact Chris Jones @cyfoethnaturiolcymru.gov.uk) should you require further advice or information regarding these representations.

Yn gywir / Yours sincerely,

#### Chris Jones

Uwch Gynghorydd, Cynllunio Datblygu / Senior Advisor, Development Planning Cyfoeth Naturiol Cymru / Natural Resources Wales

#### [CONTINUED]

# <u>ANNEX A</u>

# NATURAL RESOURCES WALES' WRITTEN REPRESENTATIONS

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# 1. Crynodeb / Summary

1.1 NRW's areas of key concern which remain outstanding are as follows.

#### Water Framework Directive (WFD)

Based on the information provided to date by the Applicant, NRW considers that there may be deterioration of the Wepre Brook waterbody, as a result of the proposed open-cut crossing of Alltami Brook. Consequently, a derogation would be required under Article 4 (7) WFD transposed by Regulation 19 of the Water Environment (WFD) (England and Wales) Regulations 2017.

There is a risk that excavating bedrock for the proposed Alltami Brook open-cut crossing could create a pathway for surface water to be lost to the ground/contaminated mine workings; this could cause water courses to dry up downstream.

NRW remains in dialogue with the Applicant regarding suitable solutions to address our concerns.

#### Access to Flood Risk Assets

NRW maintains its concern in relation to the potential for the development to prevent NRW from accessing and undertaking flood defence asset maintenance works and/or flood defence improvement projects in the future. These concerns have previously been raised with the Applicant but are yet to be resolved.

1.2 Following constructive dialogue with the Applicant the following previous areas of concern have been further progressed.

#### Air Quality

NRW advises that the proposed dust deposition management plan to mitigate potential dust impacts on the River Dee and Bala Lake Special Area of Conservation (SAC) appears adequate. Requirement 5(1) of the draft DCO should be amended to require consultation with NRW prior to the LPA's approval of the dust management plan.

#### **Climate Resilience**

NRW has no further comments regarding climate resilience.

#### Biodiversity

NRW considers the survey to be satisfactory in respect of great crested newts (GCNs), bats, otters and water vole and largely agrees with the conclusions of the Environmental Statement (ES).

NRW acknowledges the outline recommendations and proposed principles for mitigation and agrees with this approach. NRW is satisfied that Schedule 2, Requirement 11 of the draft Development Consent Order (dDCO) [APP-024] captures the need for inclusion of long-term management of habitats post-construction. NRW advises that further information be provided in respect of the overall scope of long-term mitigation.

NRW acknowledges that the Applicant will provide prescriptive methods of work and measures for the protection and conservation of GCN and bats as part of the method statement for the EPS license application.

NRW acknowledges that measures have been prescribed to ensure completion of preconstruction barn owl surveys. NRW advises that these surveys should extend to a maximum of 100m from the Newbuild Infrastructure Boundary. NRW advises that alternative barn owl nest locations away from the Zone of Influence (ZoI) should be provided.

NRW advises that Measure D-BD-043 of the REAC [APP-222] should include appropriate consideration of Cetti's warbler (*Cettia cetti*).

NRW acknowledges that the natural gas pipeline to be repurposed for conveying carbon dioxide is already located below the Halkyn Mountain SAC/SSSI and Flint Mountain SSSI. NRW advises that any maintenance of this pipeline that would involve potentially damaging operations within the designated sites would need prior Section 28 approval unless permitted directly through planning condition/DCO requirement.

NRW is satisfied that a Biosecurity Method Statement will be produced, which will address relevant INNS concerns and that sources of water for hydrostatic testing will be defined during detailed design.

#### Land and Soils

NRW advises that pipeline excavation and groundwater dewatering could result in interaction with groundwater contamination from local landfills and petrol stations. NRW advises that additional boreholes should be used to assess groundwater levels and local permeabilities before any excavation and dewatering works.

NRW advises that further consideration of submitted information is needed by the Applicant to understand potential contamination sources along the proposed pipeline route, the degree to which the proposed excavation works could interact with private water supply wells and the degree to which dewatering could interact with sensitive land within close proximity to the pipeline.

NRW acknowledges that a Dewatering Management Plan will be prepared and delivered via the detailed CEMP. NRW advises that an acceptable methodology should be developed to determine the disposal of any pumped groundwater generated from pipeline dewatering activities.

NRW advises that the nature and extent of pipeline excavation dewatering at the Alltami Brook crossing location does not appear to have been defined in detail and that further site investigation at this location is needed to understand the local hydrogeological conditions.

NRW understands that heavy plant will be required to excavate the bedrock within Alltami Brook, which has the potential to further destabilise unstable ground. NRW advises that the potential for made ground materials to enter Alltami Brook, notably during or following wetter periods, should be avoided.

NRW understands that there is a slurry store close to the proposed pipeline alignment in the vicinity of the Alltami Brook crossing point. NRW advises that the potential for inorganic pollutants to discharge into the water course from this source should be assessed.

NRW acknowledges that a validation report stating the final discharge volume, discharge methods and processes required for hydrostatic testing will be produced. NRW therefore has no further comments regarding hydrostatic testing.

#### **Major Accidents and Disasters**

NRW generally accepts that the risk of a large-scale release of Carbon Dioxide (CO2) can be managed to be As Low As Reasonably Practicable (ALARP). However, NRW advises that the proposed detailed design studies and modelling of CO2 releases should inform the modelling input parameters for establishing the risks.

#### Water Quality

NRW agrees with the conclusions of the ES, WFD compliance assessment and Habitats Regulations Assessment (HRA) in terms of marine water quality based on the provision that the mitigation for pollution and biosecurity listed in the Register of Environmental Actions and Commitments (REAC) [APP-222] can be secured within the detailed CEMP.

NRW would wish to be a named party for being consulted on the detailed CEMPs by the relevant planning authority at the discharge of requirement stage.

1.3 NRW and the Applicant continue to develop their Statement of Common Ground.

### 2. Water Framework Directive

- 2.1 In respect of ES Appendix 18.3: Water Framework Directive Assessment [APP-165], NRW advises that the WFD compliance assessment is not adequate and does not contain sufficient detail. In respect of para 5.5.7, NRW considers that there is insufficient evidence to demonstrate that "potential construction and operation impacts are unlikely to cause a deterioration in the status of quality elements or overall status at the Wepre Brook water body scale with the mitigation within the CEMP, REAC and monitoring measures implemented". Further, in respect of para 5.5.20 there is insufficient evidence to demonstrate that "The DCO Proposed Development therefore would not compromise the ability of the water bodies potentially impacted to achieve Good Ecological Potential/Status." (para. 5.5.20).
- 2.2 On the basis of the information provided by the applicant, NRW considers that there may be deterioration of Wepre Brook water body, as a result of the proposed opencut crossing of Alltami Brook. Consequently, a derogation would be required under Article 4 (7) WFD transposed by Regulation 19 of the Water Environment (WFD) (England and Wales) Regulations 2017. In such circumstances, the applicant would need to demonstrate that the conditions specified under regulation 19 have been met. To date, such information has not been presented and NRW is not in a position to advise further.
- 2.3 Article 4 (1) of the Water Framework Directive (2000/60/EC) sets out environmental objectives and in terms of surface waters, as defined. The Directive requires members to implement the necessary measures to prevent deterioration of the status of all bodies of surface water, subject to other provisions [Art 4(1)(i)]. Whereas the concept of "deterioration of status" of a body of surface water is not defined, the European Court of Justice determined in the case of Weser [Case c-461/13] that it must be interpreted as meaning that there is deterioration even if that fall does not result in a fall in classification of the body of surface water as a whole. Where the quality element is already in the lowest class, any deterioration of that element would constitute deterioration of the status of a body of surface water. The judgment ruled that the Water Framework Directive precludes authorisation of a project where, unless a derogation applies, the project may cause a deterioration of the status of the body of water concerned or where it jeopardises the attainment of good surface water status or of good ecological potential and good surface water chemical status by the date laid down by the directive.
- 2.4 The risk of deterioration in the status of the Wepre Brook waterbody arises as a consequence of the proposed works to be carried out at Alltami Brook. Such proposed works are described by the applicant at Chapter 18 of the ES [APP-070]. The applicant describes the effects on the hydrology and hydromorphological processes of Alltami Brook and the effects of the installation of permanent artificial structures in water courses as anticipated to be "Slight Adverse (not significant)". However, currently the information presented does not provide sufficient assurance to NRW that this would be the case as insufficient geological, hydrogeological, hydrological, geomorphological, and ecological information has been provided to

justify the proposed open-cut crossing option for Alltami Brook. As a result, and on that basis, NRW considers that deterioration may result to the Wepre Brook waterbody.

- 2.5 Specifically, NRW considers that there is a risk that excavating bedrock for the proposed Alltami Brook open-cut crossing could create a pathway for surface water to be lost to the ground/contaminated mine workings via disturbance, cracks, faults and joints between proposed bedrock removal and concrete backfill, even with the grouting of any fissures/fractures found and backfill of existing bed material; this could cause water courses to dry up downstream of the open-cut crossing, including Wepre Brook. This loss of flow may occur in the short- or long-term, for example if the grouting was to deteriorate over many years. Such flow losses, and any resultant contaminated mine water upwelling elsewhere, are difficult to address in the long term and could cause deterioration of hydromorphology, water quality and ecological elements downstream.
- 2.6 The estimated catchment area at the Alltami Brook crossing point (SJ27634 67138) is 6.2km<sup>2</sup> and the estimated mean flow (Qmean) is 0.07m<sup>3</sup>/s. The confluence of Alltami Brook with Wepre Brook is approximately 540m downstream of the crossing point. Just downstream of the confluence at SJ 27750 67500 the total catchment area is 16.1km<sup>2</sup> and the estimated mean flow is 0.19m<sup>3</sup>/s. Therefore, in Wepre Brook just downstream of the confluence, the Alltami Brook is contributing approximately 37% of the flow in the water course (all estimates have been produced using Qube software).
- 2.7 NRW's site visit of the proposed Alltami Brook pipeline crossing corridor with the Applicant on 27 March 2023 showed bedrock to be present in the bed of Alltami Brook. The proposed crossing area is a steep gorge with an elevation drop in the order of 15-25m from the land on either side of the brook to the brook bed. Fissile sandstone, likely weathered within the banks of the brook was observed together with more competent bedrock. There is therefore likely to be differential weathering of the bedrock in this locale given that it is a water environment. It is likely that the waterflows observed within the stretch of the Alltami Brook proposed for the pipeline crossing derive from a combination of upgradient channel flow and some baseflow from the superficial sediments and the made ground that abut the brook at this point. It would be unusual for the bedrock to be supplying high rates of baseflow to the brook.
- 2.8 NRW understands that excavation in the order of 2m below the bedrock surface of the brook would be required to install the 0.9m diameter pipeline. The existing brook flows would need to be temporarily diverted so that the bedrock excavations can take place in as dry a condition as possible. NRW notes that the intention is to grout any discontinuities/fractures that may be encountered during the bedrock excavation works so that when the brook flows are returned, the possibility of fractures facilitating the movement of flowing water downwards, is negated. However, there is currently no information on the nature of the bedrock at or adjacent to the proposed crossing point. This information would typically be derived from strategically located boreholes

and, potentially, trial pits. Such boreholes would enable representative samples of ground materials to be retrieved typically through coring, so that the nature of the bedrock, superficial deposits, and their engineering properties, including groundwater conditions and permeability, can be derived. Whilst the possibility of brook flow loss, after grouting may be low, the grouting would possess a finite design life and the possibility of brook flow loss in the future cannot therefore be ruled out.

- 2.9 The applicant proposes to address these concerns through assessment, monitoring, and adaptive mitigation at the detailed design phase, and argues that the mitigation measures would be technically and financially feasible. However, based on the lack of available site-specific information for Alltami Brook NRW cannot currently advise whether this is correct or not.
- 2.10 NRW therefore advises that the following further information should be submitted by the Applicant to inform a risk assessment of the proposed Alltami Brook crossing open-cut option so that its viability can be assessed, as follows:
  - a) Whether or not the affected reach of the Alltami Brook is 'losing' or 'gaining' water to/from the bedrock. If the stream is losing water, this loss could be enhanced with stream bed disturbance/excavation. During the site meeting on 27/03/23 the Applicant suggested flow monitoring could be undertaken to gauge flows in the Alltami Brook up and downstream of the proposed crossing point, to ascertain whether it is a gaining or losing reach. Further discussion between the Applicant and NRW concluded that this was unlikely to be of benefit due to the uncertainties involved in flow measurement, difficulties in finding two suitable stretches of watercourse and the limited time available. Given the uncertainties involved, unless flow monitoring identified very large differences in flow between the up and downstream sites it would be challenging to reach any meaningful conclusions. NRW advises that ground investigations (boreholes) that provide detailed information of the geology of the bedrock that would be exposed at the proposed Alltami Brook crossing point would be more accurate for drawing conclusions on the risk of impacts to surface water.
  - b) The depth to the local groundwater and the thickness of any vadose zone<sup>1</sup> beneath the streambed if the stream is 'losing' water to bedrock.
  - c) Local stratigraphic control, the permeability of the local bedrock and the thickness of the streambed on that bedrock. Cutting through a streambed for excavation purposes may for example directly facilitate the ingress of stream water into the unsaturated bedrock. If the bedrock is fractured, and because fractures can possess high permeabilities, the streambed water may become lost to the subsurface.
  - d) The degree to which the bedrock can be excavated. This would depend upon the hardness of the bedrock at the crossing point. NRW advises that blasting the bedrock would not be suitable, but the method of bedrock excavation has not been provided to date and should therefore be provided for review.

<sup>&</sup>lt;sup>1</sup> A terrestrial subsurface that extends from the surface to the regional groundwater table.

- e) Whether stream diversion would be required and how this would be achieved from a practical perspective.
- f) The nature of legacy mine workings in the vicinity of the proposed crossing point and the influence that they may have on activities related to the crossing point, both for the excavation, construction, and operational phases.
- g) The potential that streambed excavation works could significantly damage the current stream flows (worst case: all the flow is lost to unsaturated bedrock below) and remove flow that is relied upon downstream. This would lead to deterioration of the hydromorphology element and potentially other WFD elements including water quality and biological.
- 2.11 NRW notes that the proposed crossing option for Alltami Brook has been amended/substantiated by the applicant since the EIA Scoping stage (from a clear-span bridge to open cut). NRW acknowledges that the Applicant will include reference to the email correspondence received on 8 August 2022 from NRW regarding the comparison of crossing methodologies within the Errata document, and that the email correspondence from NRW (August 2022) is also referenced within the SoCG between the Applicant and NRW (document reference D.7.2.4). This email highlighted NRW's concerns associated with the open-cut Alltami Brook crossing proposal now submitted in comparison to the lesser environmental impacts of the other options considered. NRW advises that the Alltami Brook crossing appraisal of alternative options presented in Chapter 4 of the ES [APP-056] is lacking in detail that fully addresses the concerns highlighted above and should therefore be presented to the Examination for NRW to advise further.
- 2.12 During the site meeting on 27 March 2023 the Applicant provided NRW with the design details of a clear-span bridging solution (with the pipeline buried within a concrete U-shaped channel above). Furthermore, during the site visit a narrow section of channel, underlain with bedrock to provide a suitable foundation, was identified as a potential crossing point for this alternative option which was within the design envelope of the proposed open-cut crossing point. In addition to this, NRW's position on culverts was discussed on site – NRW highlighted that it would normally only advise the use of culverts if there were no reasonably practicable alternative, or if they consider the detrimental effects would be so minor that a more costly alternative would not be justified. As such, given the existing impacts on the watercourse from the upstream A55 culvert (namely that the river sediments observed were very loose, unstable, unstructured and poorly sorted - thereby likely providing poor habitat given its high mobility) and the significant presence of exposed bedrock on site, it was discussed that it may be possible to consider a culvert bridging solution (provided that it was founded on bedrock, particularly at the inlet and outfall ends) given the likely minor additional detrimental effects. NRW confirmed that a clear-span or culvert bridging solution would be preferred rather than the present open-cut bedrock proposal. This approach would likely address NRW's concerns associated with burying the pipeline within the bedrock at the Alltami Brook crossing and the lack of supporting evidence to address the risks associated with that option.

- With regards to cumulative effects in respect of the risk of deterioration, NRW notes 2.13 that the channel and banks of open-cut crossings "will be reinstated to mimic baseline conditions as far as practicable" (Table 5.3, ES Appendix 18.3: Water Framework Directive Assessment, APP-165). However, without further detail to clarify what the reinstatement works would entail NRW does not consider such assurance to be adequate to rule out deterioration. Section 4.7 of NRW's OGN 72: "Complying with the Water Framework Directive Regulations 2017: how to assess and appraise projects and activities" states "It is important to consider the in combination and/or cumulative effects of pressures in a water body and the combined impacts of the proposed activity". Given the expansive extent of the proposals and substantial number of sites requiring reinstatement mitigation (e.g., temporary culverts, open-cut crossings), this could cause a cumulative impact. Although the Applicant has referred to this in Chapter 18 of the ES [APP-070] no reference to cumulative effects has been made in the WFD compliance assessment [APP-165] and NRW advises that this should be done.
- 2.14 NRW agrees with the water bodies screened in to the WFD compliance assessment [APP-165]. It is also agreed that smaller water courses within the wider WFD water bodies are assessed, and tributaries of the Dee Transitional water body are assessed using surface water quality elements.
- 2.15 NRW made the following comments on the WFD Compliance Assessment within its Relevant Representation:
  - Calculations of the works footprint (in km<sup>2</sup> and % of water body area) have not been presented in Annex B, Table B.2. However, NRW agrees with the Applicant that it is not necessary to provide these calculations. Given further consideration, NRW understands that most of these impacts would be to upstream water courses and not directly to the Dee (North Wales) water body. Therefore, given the only crossing of the Dee (North Wales) water body is via a trenchless technique NRW concurs that the area metrics do not need to be calculated.
  - NRW acknowledges that construction impacts have been included in the WFD compliance assessment [APP-165], but the document notes (para. 2.3.5) "that the assessment of potential construction impacts is not required as part of a WFD assessment". However, NRW advises that a WFD compliance assessment should include all stages of project activity (construction, operation, maintenance, and decommissioning), as per NRW's internal guidance (OGN 72: Complying with the Water Framework Directive Regulations 2017: how to assess and appraise projects and activities), previously shared with the Applicant.
  - Section 1.2 Study area: Some waterbodies are transboundary and were formally assigned to either NRW or Environment Agency for reporting purposes. NRW notes that there is a pipeline crossing in Finchett's Gutter water body, reported as being in England, but the crossing is in the Welsh part of the water body. However, NRW acknowledges that the Applicant intends to provide clarity on the England / Wales differentiation of transboundary water bodies within Chapter 18.3 WFD Assessment [APP 165] of the 2022 ES, in particular regarding the Finchett's Gutter crossing, and on that basis is not currently in a position to comment further on this matter until this information is received.

- WFD protected areas. There is no reference to groundwater drinking water protected areas (DWPA) NRW advises that all groundwaters in Wales are DWPAs. The Dee Estuary Ramsar site is also a protected area (NRW has published a Protected Area Register with the River Basin Management Plans). The Dee estuary shellfish water protected area is also not assessed. However, given that it falls within the Dee Estuary SAC and Special Protection Area (SPA), and these are assessed separately, it does not require further consideration. NRW is satisfied that the Applicant will provide further information on Protected Areas in the next iteration of Chapter 18.3 Water Framework Directive Assessment [APP-165] during the Examination Period.
- Para. 5.6.2 Nitrates Directive: in Wales the Nitrate Pollution Prevention (Wales) Regulations (2013) have been revoked and replaced by the Water Resources (Control of Agricultural Pollution) (Wales) Regulations 2021. NRW is satisfied that the Applicant will provide a correction to the wording regarding the Nitrates Directive during the Examination Period.
- Table 5.12 and Table 5.13: NRW noted that different sets of information have been extracted for the Dee compared to North West and Western Wales River Basin Management Plans (RBMPs) but it was unclear why. NRW also noted that different versions of the RBMPs were used – 2015 plan for Western Wales and draft 2021 RBMP for the Dee, even though the Dee and Western Wales RBMPs were always published (drafts for consultation opened Dec 2020 and final plans published July 2022) at the same time. NRW is satisfied that the Applicant will review and provide updated data and information regarding the 2021 River Basin Management Plans (published in July 2022) as appropriate.

#### 3. Access to Flood Risk Assets

- 3.1 The site boundary lies partially within Flood Zones C1 and C2 according to the Development Advice Map (DAM) contained within Technical Advice Note (TAN) 15: Development and Flood Risk.
- 3.2 The Flood Consequences Assessment (FCA, APP-168-170) also refers to the Flood Risk Assessment Wales (FRAW) maps. However, as the FRAW maps have no official status for planning purposes NRW advises that reference to these is removed. The FCA should be updated to refer to the Flood Map for Planning (FMfP) which represents the best and most up-to-date information on areas at flood risk than the DAM. NRW notes that the Applicant considers that the FMfP was unavailable at the time of writing the FCA, but it was publicly available. Notwithstanding this, NRW acknowledges that the Applicant has reviewed the contents of the FCA against the FMfP and has concluded that there are no changes to flood risk as reported in the FCA. NRW advises that this should be documented in the FCA.
- 3.3 NRW's powers under section 165 of the Water Resources Act (1991) include undertaking maintenance and improvement works to flood defences. NRW maintains its concerns regarding the impact of the temporary construction compounds and equipment yards on NRW's access arrangements for undertaking maintenance works to crucial flood assets. These concerns were highlighted in our Section 42

Preliminary Environmental Information Report consultation response (paragraphs 67 to 69, dated 22/03/22, our ref: CAS-181472-B2Q1), and in our Relevant Representations response. The concerns relate to NRW's access to the Hawarden and Northern Embankments, and to several main rivers in Sandycroft and Pentre. Retaining NRW's ongoing access to maintain assets which protect people and properties from flooding is vital. The ES (Chapter 18, APP-070) should therefore be updated to address these concerns and demonstrate that the proposed works will not temporarily adversely affect our access. The Applicant's response to our Relevant Representations on this matter is not considered sufficient.

- 3.4 The ES (Chapter 18, APP-070) refers briefly to the construction compounds, and paragraph 18.8.4 states that "*all centralised compounds are located outside the fluvial and coastal floodplain*". However, NRW considers that this is not correct based on Sheet 14 of Drawing EN070007- D.2.4 WP, as the centralised compounds "30D Wood Farm Compound" and "31A River Dee" are both located within the floodplain of the Tidal River Dee. NRW acknowledges that the Applicant has confirmed that the ES will be updated to provide clarification on these points.
- In relation to paragraph 3.7.7 of the ES (Chapter 3, APP-055), which refers to a 24.4m 3.5 permanent rights corridor which would place restrictions on how NRW could access this land. This could have implications for NRW's access to maintain flood defence assets, particularly where the pipeline runs under/close to flood defence assets, such as the Northern and Hawarden Embankments. NRW advises that further information is submitted to assess how this could affect NRW's ongoing routine flood defence asset maintenance works, which are completed regularly at these locations, and any major civil engineering improvements likely to be required to the defences within the design life of the pipeline (c. 40 years). If pipe locations deviate from agreed locations this could significantly affect NRW's Flood Risk Management activities and hence any change in location during the construction phase will have to be carefully managed. This matter was also raised in NRW's Relevant Representations, and NRW notes that the Applicant has acknowledged this concern and has committed to liaise with us on this issue. However, NRW is yet to receive any further correspondence or information to fully understand the implications of the permanent rights corridor.
- 3.6 The measures proposed for managing flood risk during the construction phase are referred to in the ES (Chapter 18) and the Outline CEMP (APP-225). However, there is no reference to what would happen to any arisings resulting from the installation of the pipeline. NRW also notes that the Outline CEMP (APP-225) refers to the trenchless crossing of the river Dee (Table 6.6 D-BD-019) stating that all entry and exit pits will be 16m away from any tidal watercourses. However, in order to ensure that associated flood defence structures are also considered and safeguarded, NRW advises that this should be updated to specify a distance of 16m away from any tidal water course and any flood defence structures on that water course. NRW acknowledges the Applicant's confirmation that the CEMP will be updated to address these points.

- 3.7 NRW's Relevant Representations advised that location plans for each proposed crossing point should be provided. The Applicant has referred to Figure 18.5.17 which does provide a map of watercourse crossings. However, NRW also advised that the FCA should be updated to advise on the typical design principles that would be followed for the crossings, such as minimum cover requirements below hard / firm bed levels, and how far this level would extend either side of the bank. No further information has been submitted in relation to this, so NRW continues to advise that the FCA is updated to include a section on general design principles for the watercourse crossings.
- 3.8 NRW understands that discussions in relation to the crossing of Alltami Brook are ongoing, and that one of the potential options now being considered is an encased pipe bridge. However, we have not yet been provided with any information or plans detailing the proposed arrangement. NRW advises that the FCA should be updated to demonstrate that the consequences of flooding associated with the crossing can be managed and that there would be no increased flood risk elsewhere as a result of the proposed structure. NRW advises that the structure should be sized to convey the 1% Annual Exceedance Probability (AEP) event with an allowance for climate change, with the soffit level of the bridge being set at least 300 mm above the flood level for the 1% AEP event with an allowance for climate change. The central estimate climate change allowance should be applied (20% for the Dee catchment). The impacts of blockage should also be considered, and the FCA should contain a management and maintenance plan, outlining the measures that will be undertaken to minimise the risk of a blockage occurring. As the crossing is on an ordinary watercourse, NRW advises that the Applicant seeks further advice from the Lead Local Flood Authority (LLFA) in respect to design and consenting requirements.

#### 4. Air Quality

- 4.1 NRW advises that the proposed dust deposition management plan to mitigate potential dust impacts on the River Dee and Bala Lake SAC appears adequate, in particular the creation of a Dust Management Plan to be approved by the Local Planning Authority (REAC, D-AQ-004, APP-222). NRW considers this to be a key aspect of mitigation to address potential dust impacts on the River Dee and Bala Lake SAC. Requirement 5(1) of the draft DCO should therefore be amended to require consultation with NRW prior to the LPA's approval of the dust management plan.
- 4.2 NRW acknowledges and welcomes the Applicant's confirmation (ref. 2.13.32, Applicant's Response to NRW Relevant Representation, draft, undated) that NRW will be consulted when the Dust Management Plan is produced. We note that this document is to be secured by Schedule 2, Requirement 5(2)(c) of the dDCO [APP-024].

#### 5. Climate Resilience

5.1 Chapter 7 of the ES [APP-059] is chiefly focused on national (UK) and English legislation and policy, e.g., there is no reference to the Welsh Climate Change

Adaptation Plan – Climate Conscious Wales, but reference is made to the English National Adaptation Programme. Since the proposals would be located within England and Wales, NRW advised that the relevant Welsh climate change policies should also be acknowledged.

5.2 NRW acknowledges the Applicant's confirmation (ref. 2.13.33, Applicant's Response to NRW Relevant Representation, draft, undated) that the Welsh Climate Change Adaptation Plan – Climate Conscious Wales will be included within the next iteration of Chapter 7 of the ES [APP-059].

#### 6. Biodiversity

#### Great crested newt, bat species, otter, and water vole

- 6.1 NRW considers the submitted surveys to be satisfactory for the purposes of informing the principles of constructing and operating the proposed scheme in respect of great crested newts (GCN), bats, otters, and water vole. NRW agrees with the overall conclusions within the ES.
- 6.2 In terms of survey detail, NRW notes that there are currently outstanding bat foraging and dispersal surveys, and that this information is to be subsequently submitted, which is welcomed. NRW considers that this information is required for the purposes of informing the detail of the proposal (as opposed to the overall principles of the scheme).
- 6.3 In terms of assessment NRW notes no apparent consideration of the current conservation status (CCS) of populations of European Protected Species (EPS) and favourable conservation status (FCS) in accordance with published guidance (see European Commission guidance document C/2021/7301). NRW understands that the Applicant intends to submit draft license application documents as part of the submission. However, absent of further information, NRW is not in a position to advise further in this regard.
- 6.4 No apparent consideration has been given to low rainfall during spring 2022 and how this may have affected the results of GCN surveys. Furthermore, NRW notes that data relating to GCN had been split between England and Wales. However, considering the trans-boundary nature of this application there appears to have been no apparent consideration given to GCN within ponds located in England potentially using land within Wales as a component of a local population's foraging area. NRW therefore advises that the Applicant confirms:
  - a) whether consideration of low rainfall conditions during Spring 2022 have been factored into the GCN assessments, and;

b) whether the terrestrial foraging range for GCN in England extends into Wales. If this information has not been considered within the assessments to date, NRW advises that this is included for the Examination.

- 6.5 In respect of GCN, NRW advises that historic records (including those over 10 years old) should also be used to inform the detail of mitigation measures, such as newt barrier fencing. Again, NRW would have no objection to this detail being addressed as part of the license application process.
- 6.6 NRW notes the outline recommendations and proposed principles for mitigation in the ES, OCEMP and the OLEMP. We note that the OLEMP [APP-229] and OCEMP [APP-225] form the basis for a detailed LEMP and CEMP to be produced at detailed design stage, as secured by Schedule 2, Requirements 11 and 5 of the dDCO [APP-024]. NRW agrees with this overall approach. However, NRW advises that the current application should provide assurance of how the provision of long-term compensatory habitat for EPS would be secured through the DCO.
- 6.7 Whilst to be developed at the detailed design stage, NRW notes that Schedule 2, Requirement 11 of the dDCO [APP-024] captures the need for inclusion of long-term management of habitats post-construction. Owing to the requirement for the provision of EPS compensatory habitat, NRW therefore advises that further information should be provided within the detailed LEMP in respect of the overall scope of long-term mitigation including consideration of issues such as future tenure, monitoring and licensing requirements for surveillance and management. NRW notes the Applicant's confirmation that the detailed LEMP to be developed at the detailed design stage will provide relevant details for long-term management and monitoring of restored, reinstated and created habitats and would welcome an updated draft LEMP being presented to the Examination that effectively considers these concerns.
- 6.8 Given the confirmed presence of GCN in ponds within or adjacent to the working DCO corridor, NRW advises that an EPS license will be required to enable the construction of the DCO Proposed Development. NRW notes that Measure D-BD-044 in the REAC [APP-222] which is secured by the CEMP, required by Schedule 2, Requirement 5 of the dDCO [APP-024] specifically cites the requirement for relevant licensing in respect of GCN. NRW also notes that the Applicant intends to apply for an EPS license to facilitate construction at the appropriate time as identified in the Other Consents and Licences document [APP-046]. However, this document only refers to such licenses being obtained from Natural England. NRW advises that this document is updated to include reference to the EPS licenses that would need to be obtained from NRW.
- 6.9 NRW acknowledges that the Applicant will provide prescriptive methods of work and measures for the protection and conservation of GCN and bats as part of the method statement for the EPS license application as prescribed in the Other Consents and Licences document [APP-046] to be submitted to NRW at the detailed design stage. NRW advises that these are set out in the GCN and bat conservation plans and associated Method Statements to be submitted as Annexes to the detailed CEMP. Provision of these plans should consider works during and post-construction including consideration of long-term issues.

# Schedule 1 bird species (Wildlife and Countryside Act 1981, as amended)

- 6.10 NRW acknowledges the Applicant's clarification that surveys for potential barn owl roost/nest features were completed for the entirety of the Order Limits (where access allowed) and that the Order Limits have been revised and reduced during design development.
- 6.11 NRW also acknowledges that Measures D-BD-005 and D-BD-006 in the REAC [APP-222] and secured by the CEMP, which is required by Schedule 2, Requirement 5 of the dDCO [APP-024] have been prescribed to ensure completion of pre-construction barn owl surveys within a relevant Zone of Influence (ZoI) of the detailed designed pipeline route. NRW advises that the relevant ZoI for these barn owl surveys should extend to a maximum of 100m from the Newbuild Infrastructure Boundary.
- 6.12 NRW acknowledges the measures included within the REAC [APP-222] (see D-BD-037, D-BD-038 and D-BD-039) to mitigate potential impacts to barn owl or potential supporting features with requirements for licensing and the erection of alternative nest/roost locations where required. NRW notes that these measures are secured in the CEMP required by Schedule 2, Requirement 5 of the dDCO [APP-024]. NRW also notes that further information regarding the location of alternative nest locations, where required, will be confirmed at the detailed design stage but note that potential Zones of Influence associated with construction will be considered to ensure appropriate and suitable alternative nest box erection.
- 6.13 NRW advises that alternative barn owl nest locations away from the ZoI should be provided, especially where exclusion techniques are concerned. The scheme could also deliver other enhancements for barn owls in the local area (e.g., nest boxes).
- 6.14 NRW advises that Measure D-BD-043 of the REAC [APP-222] should include an appropriate pre-construction survey method for nesting Cetti's warbler (*Cettia cetti*) and clarify how disturbance to this species would be avoided during the breeding season. NRW advises reference to Gilbert *et al.*, 1998 and that a disturbance buffer of greater than 5m may be required for this species.

#### Fish

- 6.15 NRW accepts the use of e-DNA techniques and the Applicant's explanation as to why some sites were ruled out from electrofishing surveys, noting that some locations are deemed too unsafe and difficult for electrofishing. NRW agrees that generally the e-DNA sampling has shown general presence and absence of species within the water courses. NRW accepts that this is a sensitive sampling technique that occasionally will detect anomalous results caused by the various factors that the Applicant has outlined. It is accepted that for the areas that were too difficult to sample with electrofishing, e-DNA was a viable option.
- 6.16 Regarding paragraph 3.4.205 of Appendix 9.9 [APP-113], NRW noted that no data could be produced from the Northop Brook e-DNA survey. NRW advised of the

presence of European eel (*Anguilla anguilla*) and brown/sea trout (*Salmo trutta*) in this brook and note that this is acknowledged in Table 5 of Appendix 9.9 [APP-113]. Table 5 additionally acknowledges the presence of European eel and brown/sea trout within Broughton Brook. NRW is content with the proposed mitigation plans based on the presence of brown/sea trout and European eel in Broughton Brook, which will be important as NRW plan to improve migratory passage through this brook for the aforementioned species.

- 6.17 With regards to the ES, Chapter 9 (Biodiversity): Table 9.6 (APP-061) NRW advises that river and sea lamprey are Annex II qualifying features of the Dee Estuary SAC, and European smelt, river and sea lamprey are features of the Dee Estuary SSSI, but these do not appear to have been referenced. However, NRW appreciates the proposed amendment for qualifying features/species in future ES versions.
- 6.18 NRW accepts the Applicant's confirmation that all culvert design specifications will adhere to Environment Agency fish pass standards and proposed mitigation around their installation and removal. NRW welcomes further discussion and consultation about these on a case-by-case basis where necessary.
- 6.19 NRW accepts the Applicant's research and findings regarding the risk of frac-out during HDD of the tidal Dee. The 4-week time scale of the works also means that peak migratory periods can be avoided with this work despite the Applicants concluding a low risk of any negative impacts on fisheries occurring due to frac-out.

#### **Designated Sites for Nature Conservation**

6.20 NRW notes that the existing natural gas pipeline to be repurposed for conveying carbon dioxide is already located below the Halkyn Mountain SAC/SSSI and Flint Mountain SSSI, and a new pipeline is not proposed at these locations. However, NRW advises that any maintenance of this pipeline that would involve potentially damaging operations within the designated sites would need prior Section 28 approval from NRW unless permitted directly through planning condition/DCO requirement.

#### Invasive Non-Native Species (INNS)

- 6.21 NRW identified the potential for impacts arising from the introduction and spread of INNS, including Chinese mitten crab via water transfer during hydrostatic testing of the completed pipeline. NRW advises that this species is present in the river Dee, and possibly the Mersey, but note that the source of water for this activity is yet to be confirmed.
- 6.22 NRW acknowledges that a Biosecurity Method Statement will be produced as part of the detailed CEMP, secured by Schedule 2, Requirement 5 of the dDCO [APP-024]. We note that the Biosecurity Method Statement will address all relevant INNS concerns that may be encountered during construction of the DCO Proposed Development and that sources of water for use during construction of the DCO

Proposed Development will be defined during the detailed design stage. NRW therefore has no further comments regarding this.

# 7. Land and Soils

- 7.1 NRW advises that pipeline excavation and groundwater dewatering could result in interaction with existing groundwater contamination from local landfills and petrol stations. NRW acknowledges that the Applicant undertook a Ground Investigation Report, presented in Appendix 11.6 [APP-135 to APP-137] of the 2022 ES and that boreholes were located along the pipeline route and where possible located to target identified sources as indicated in Chapter 3 and Section 5.3 of the Ground Investigation report [APP-135 to APP-137]. NRW notes that additional boreholes will be discussed via the SoCG process. Such boreholes should be used to assess groundwater levels and local permeabilities before any excavation and dewatering works, as these would inform the nature and extent of dewatering/permitting that may be required in a particular location.
- 7.2 NRW advises that a review of the Exploratory Hole Location Plan, Appendix 11.6, Ground Investigation Report Part 2, Rev A [APP-136] and Figure 18.3 Radii of Influence, Sheets 1 to 7 [APP-220] and Potential Contaminant Sources, Figure 11.1.3: Sheets 1 to 7 [APP-117] is required to understand the nature and extent of potential contamination sources along the proposed pipeline route, but also to understand:
  - a) the degree to which the proposed pipeline excavation works could interact with the operational performance (flows and water quality) of a number of private water supply wells (at least seven), many of which appear to be related to farms based on information presented in Chapter 18: Water Resources and Flood Risk – Sept 2022, table 18.9 – Licenced groundwater abstraction and known private water abstractions within 1km of the Newbuild Infrastructure Boundary) [APP-070] and that are located within 0.3km of the pipeline excavation, and;
  - b) the degree to which excavation dewatering could interact with several landfill sites, at least one scrapyard and one service station identified to be present in close proximity to the pipeline centreline and hence potentially facilitate the mobilisation of legacy contamination, such as groundwater contamination, that may have arisen from these sources. It is currently unclear based on the information reviewed to date if this potential dewatering/contamination interaction risk has been fully considered given that groundwater levels are known to be close to the ground surface along much of the pipeline route and some of these potential contamination sources are very close to the pipeline excavation alignment.
- 7.3 In addition, NRW advises that the quality of the groundwater in the above locations is important as this will indicate the degree to which local groundwater within a section of pipeline excavation requiring dewatering is polluted and hence requires treatment. NRW advises that an acceptable methodology should be developed to determine the disposal of any pumped groundwater generated from pipeline dewatering activities. NRW acknowledges that the Applicant anticipates that a Dewatering Management Plan, where required, will be prepared and delivered via the detailed CEMP, by the

appointed contractor, in line with REAC Measure D-LS-015 [APP-222] and secured by Schedule 2, Requirement 5 of the dDCO [APP-024], and this will include the testing and disposal requirements for any purge water.

- 7.4 NRW advises that the nature and extent of pipeline excavation dewatering that may be required at the Alltami Brook crossing location does not appear to have been defined in detail. The groundwater conditions in the vicinity of the proposed Alltami Brook crossing point are currently unknown. During NRW's site visit with the Applicant on 27 March 2023 (a climatically dry day) at the proposed pipeline crossing point, the Applicant indicated that the land parcel to the south of the brook was infilled with made ground (old quarry/mine workings) on a significantly larger spatial extent than initially thought. The thickness of the made ground is currently undefined. The hydrogeological relationship between the made ground, the bedrock, and the superficial sediments in the vicinity of the Alltami Brook crossing point are therefore currently undefined and legacy mine workings/structures add another degree of uncertainty to potential behaviours. Understanding the nature of this material, such as its permeability and its relationship to the underlying bedrock together with the local hydrogeological conditions, is relevant to understanding the nature of dewatering works that may be required at this location.
- 7.5 Given the slope failures observed on the southern bank of Alltami Brook, NRW considers it likely that the made ground material is not well-compacted and potentially possesses a higher permeability than the natural in-situ superficial sediments; this would indicate that the local made ground could act as a sink for rainfall and infiltration. During particularly wet weather, groundwater levels within the superficial and made ground materials could be high and this would be of concern if excavation were to take place during such periods. NRW advises that these materials would require due consideration for the pipeline excavation works, notably in relation to made ground permeability, groundwater levels, hydraulic gradients and dewatering controls that may be necessary.
- 7.6 NRW advises that the nature and extent of dewatering during wet weather and the need to support the excavations from failing, along with the associated risks with the surrounding land already observed to be unstable, would be best managed by having site-specific information already available to develop the necessary actions to protect the slopes and prevent the potential for unstable ground entering Alltami Brook.
- 7.7 NRW advises that further site investigation information and data in the vicinity of the proposed Alltami Brook pipeline crossing is required to understand the local hydrogeological conditions, notably the depth to groundwater and the relationships between the made ground, superficial sediments, and the bedrock. A particular unknown is the nature of the bedrock e.g., its fracture and hydrogeological characteristics, as bedrock in the brook bed would need to be excavated under the open-cut option.
- 7.8 NRW advises that the potential for made ground materials to enter Alltami Brook, notably during or following wetter periods and which may be exacerbated by the

pipeline excavation works themselves, should be avoided. NRW understands that heavy plant will be required to excavate the bedrock within the brook and such plant has the potential to further destabilise already unstable ground.

- 7.9 NRW understands that there is a slurry store in close proximity to the proposed pipeline alignment in the vicinity of the Alltami Brook crossing point. The nature of this store is unknown, but NRW advises that there is potential for inorganic pollutants such as phosphates and nitrates to migrate along the pipeline towards the brook crossing point and discharge into the water. NRW advises that the potential for this should be assessed in future iterations of Chapter 18 of the 2022 ES [APP-070].
- 7.10 Regarding hydrostatic testing, NRW acknowledges that a validation report stating the final discharge volume, discharge methods and processes required will be produced by the contractor. This will be undertaken in line with REAC Measure D-LS-015 [APP-222], which is secured by Schedule 2, Requirement 5 of the dDCO [APP-024]. NRW therefore has no further comments regarding hydrostatic testing.

# 8. Major Accidents and Disasters

8.1 NRW generally accepts that the "Large scale release of CO2" major disaster scenarios (risk record entry no's. 6 and 18, Table 13.4, APP-065) can be managed by ensuring isolation of sections of pipeline following leak detection to be As Low As Reasonably Practicable (ALARP). However, on the understanding that modelling of CO2 releases is based on the length/pressure between Block Valve Stations (BVS) as a source term linked to the design, NRW advises that the proposed HAZID studies during detailed design and modelling of CO2 releases should inform the modelling input parameters for establishing the risks, *e.g.*, whether the hazard is acceptable or, if anything changes (*i.e.*, pressure/length between Block Valve Stations (pipe isolation)/size of pipe) this would be re-assessed.

# 9. Water Quality

- 9.1 NRW agrees with the conclusions of the ES, WFD compliance assessment and HRA in terms of marine water quality based on the provision that the mitigation for pollution and biosecurity listed in the Register of Environmental Actions and Commitments (REAC, APP-222) can be secured within the CEMP.
- 9.2 NRW has the following advice regarding water pollution and the Outline CEMP [APP-225]:
  - Paragraph 4.2.2 and Table 6.1 (D-GN-003): Any pollution incident in Wales should be self-reported to NRW, without delay.
  - Paragraph 5.2.2: NRW notes that the detailed CEMP will include a Biosecurity Management Plan. Site monitoring should include identifying the presence of INNS to minimise their spread.
  - Table 6.1 (D-BD-054) should also include ordinary watercourses as it refers to a water discharge activity, not a Flood Risk Activity. Reference should also be made to NRW as it currently only refers to the EA.

- Table 6.15 Water resources and flood risk: It is important that all identified measures are transferred and elaborated on in the detailed CEMP and surface water management and monitoring plan, particularly regarding soil management and prevention of silt pollution.
- Table 6.15 (D-WR-025): If sewage from welfare facilities is to be disposed via a septic tank to ground in Wales, this discharge activity will require either a registration of an exemption with NRW or a discharge permit, depending on location and flows.
- Table 6.15 (D-WR-035): Dewatering activities in Wales may require a water resources permit from NRW. Reference should therefore be made to NRW as this currently only refers to the EA. Given the size and length of time to complete this project
- NRW advises that the appointed construction contractor(s) and/or appointed environment manager make proactive contact with the local NRW environment team at the start of the construction phase.
- 9.3 NRW notes that Requirement 5 of the dDCO states that: "(1) No stage of the authorised development can commence until a CEMP which includes that stage and approved by the relevant planning authority following consultation with [TBC]". NRW would wish to be a named party for being consulted on the detailed CEMPs by the relevant planning authority at the discharge of requirement stage.

# **10.** Dee Conservancy Trust

- 10.1 NRW's comments with regards to the Dee Conservancy Trust estate centre around the need for a lease agreement to be in place, which covers the installation and operation of the HyNet infrastructure beneath NRW's estate. NRW's ability to undertake its statutory duties as Harbour Authority and Local Lighthouse Authority for the River Dee must not be impeded as a result of the proposal. The wording of any agreement must allow NRW, as the statutory harbour authority, to carry out navigation works within the lease area with notification to the Applicant, rather than with their permission.
- 10.2 NRW would also advise that an annual payment is attached to the lease and that this is discussed further with the Dee Conservancy Trust.

#### 11. Approach to Environmental Impact Assessment

- 11.1 Noting the Examining Authority's specific question (Q1.1.6) to the Applicant regarding the definition of "the project" for the purposes of the DCO in the context of the wider project and in consideration of NRW's comments made during the EIA Scoping consultation phase, NRW would advise as follows.
- 11.2 There should be careful consideration of what comprises the 'project' for the purposes of the EIA to ensure compliance with the EIA Regulations. The development in the proposed DCO application is dependent, and to an extent predicated on, further infrastructure which will not be covered by the DCO and subject to a separate future

application. Further, the applicant has indicated that the project entails a wider set of related works for which additional future consents will be required. NRW advises that the applicant's general approach of assessing the 'proposed development' for which the DCO is being sought as a distinct project could be acceptable in principle if the applicant can demonstrate that the proposed development can be justified on its own merits and is not dependent on the other parts of the project. Whether this approach is correct is a judgment for the Examining Authority/Secretary of State.

# 12. NRW Regulation and Permitting Services

- Marine Licensing: Regulatory Response

- 12.1 NRW has received minimal engagement from the Applicant regarding the Marine License associated with the DCO submission. On the 21 January 2023, NRW's Marine Licensing Team issued a letter to the Applicant and the Planning Inspectorate confirming its intent to defer any EIA consent decisions under the Marine Works (EIA) Regulations 2017 in accordance with Regulation 10(1)(b) to the Secretary of State. This was followed by an email on 22 January 2023 to the Applicant and its agent explaining the marine licence application process and the documents that will be required for the processing of a marine licence.
- 12.2 A marine licence application has not yet been submitted in relation to the DCO Proposed Development.

#### - Flood Risk Activity Permit

- 12.3 For open cut crossings located on main rivers, a bespoke Flood Risk Activity Permit (FRAP) would be required under the Environmental Permitting (England and Wales) Regulations (EPR) 2016, for both the permanent and temporary works.
- 12.4 The permanent works application would need to include details such as depth of cover beneath the bed of the main river and level of pipe/cable within an 8m/16m distance from the banks of the main river/toe of any associated flood defence structures, and the final route alignment.
- 12.5 A temporary works application would need to be supported by a detailed method statement, including the cable's installation method and how flood risk would be managed during installation. NRW would need to consider impacts on access for inspection, maintenance and incident response, and impacts on the structural integrity of any flood risk assets in the vicinity. Service crossings below the bed of a main river using trenchless techniques (such as Horizontal Directional Drilling) can be registered as an exempt flood risk activity under the EPR 2016, subject to certain key conditions being met as per part 4 of Schedule 3 of the EPR 2016.
- 12.6 NRW advises that these points are addressed in the ES (Chapter 18, APP-070). We note that some of the proposed crossings affect watercourses in Sandycroft. There is a complex network of multiple infrastructure in this urban area i.e., many mixed age

culverts very close to residential property, within roads, with multiple utility pipes present. The crossings at these locations will require careful consideration, with input from NRW. A FRAP may also be required for any works in, over, under or within 8m of a fluvial main river (including any defences on that main river), or 16m of a tidal main river (including any defences on that main river), or within a flood plain. Please see our website for further information. NRW notes that the Applicant has acknowledged the need for a FRAP and that this detail will follow in due course.

- European Protected Species Licensing

12.7 Given the confirmed presence of GCN in ponds within or adjacent to the working DCO corridor, NRW advises that an EPS license will be required to enable the construction of the DCO Proposed Development.

# 13. NRW's General Purpose

13.1 NRW is satisfied that this advice is consistent with its general purpose of pursuing the sustainable management of natural resources in relation to Wales and applying the principles of sustainable management of natural resources. In particular, NRW acknowledges that the principles of sustainable management include taking account of all relevant evidence and gathering evidence in respect of uncertainties, and taking account of the short-, medium- and long-term consequences of actions. NRW further acknowledges that it is an objective of sustainable management to maintain and enhance the resilience of ecosystems and the benefits they provide and, in so doing meet the needs of present generations of people without compromising the ability of future generations to meet their needs and contribute to the achievement of the well-being goals in section 4 of the Well-being of Future Generations (Wales) Act 2015.

#### 14. References

Gilbert, G., Gibbons, D.W., & Evans, J. (1998) *Bird Monitoring Methods: A Manual of Techniques for UK Key Species*. The Royal Society for the protection of Birds, Sandy, Bedfordshire, England.

Natural Resources Wales (2021) Operational Guidance Note 72: Complying with the Water Framework Directive Regulations 2017: how to assess and appraise projects and activities.

Welsh Government (2019). Prosperity for All: A Climate Conscious Wales.



# ANNEX B - RESPONSES TO EXAMINING AUTHORITY'S QUESTIONS

Please find below NRW's responses (right hand column) to the Examining Authority's questions:

Reference	Respondent:	Question:	NRW Response:		
1. General a	1. General and Cross Topic Questions				
Q1.1.3	All Relevant Planning Authorities, including FCC and CWCC and Interested Parties	Update As additional context to inform the Examination the following information is requested: i) Advise if there is a Community Infrastructure Levy Charging Schedule (CILCS) in place for the administrative area the Development Consent Order (DCO) scheme falls within, or within any neighbouring administrative boundaries. ii) Confirm if there any planned improvements to the local area which are separate to the scheme under consideration but potentially complimentary to it, directly arising from the CILCS?	NRW has no further comments to make.		

		<ul> <li>iii) Notwithstanding any CILCS mechanism in place, advise if there are any other planned or known separate publicly led local capital investments, projects, or other planned initiatives in the vicinity of the area proposed for improvement or nearby which could potentially compliment the scheme. For the avoidance of any doubt the planned improvements queried/ referred to may cover any aspect of the local environment and could be wide ranging in their purpose.</li> <li>iv) Explain how any existing separate local capital investments, projects or other initiatives would complement the scheme, if there are any being advanced.</li> </ul>	
Q1.1.8	Applicant and IPs, including CWCC and FCC	ES Cumulative Effects The ExA notes the content of ES Chapter 19 Combined and Cumulative Effects [APP-071] as well as Chapter 19.1 – Inter-Project Effects Assessment Rev A [APP-172] and Chapter 19.2 – Intra-Project Effects Assessment Rev A [APP-173]. Are there any projects identified as under construction, which are expected to be completed before construction of the DCO Proposed Development, which have been	NRW is not aware of any additional projects to be included within the cumulative effects assessment. NRW defers to FCC as the local planning authority to comment on the status of proposed developments within the DCO Proposed Development's Zone of Influence.

		excluded from the Applicant's assessment at Stage 2 (see Table 2 in Appendix 19.1 - Inter-Project Effects Assessment, Volume III [APP- 172]). Do the Relevant Planning Authorities/ IPs agree with the scope and content of the list applicable for Stage 2?	
Q1.1.9	Applicant and IPs, including CWCC and FCC	<b>ES Cumulative Effects</b> Do IPs including Relevant Planning Authorities agree that the likely significant impacts of the DCO Proposed Development have been adequately assessed by the ES? If not, please state why not.	NRW considers the assessment of significant effects within the ES to be appropriate with the exception of the potential effects on Alltami Brook associated with the proposed crossing method. Our comments in response to question 1.10.10 and Section 2 of our Written Representation refer.
Q1.1.14	FCC and IPs	<b>Planning applications and appeals</b> Mr James Doran [RR-054] has referred to a planning application being relevant determined by FCC (planning reference 061368) and is also mentioned as subject to an appeal alongside references to members of the traveller community. Please make whatever comments you deem necessary if you have not already done so.	NRW has no comments to make.
2. Assessm	2. Assessment of Alternatives		
Q1.2.2	IPs, including CWCC and FCC	<b>General</b> Having regard to the submitted ES - Chapter 4.1 - Guiding Principles Factors and Criteria for Options Rev A [APP-079]. Do IPs agree with, or	NRW has no further comments to make.

		have any further comments on, the guiding principles stated as a starting point for the development of the scheme details?	
3. Air Qualit	ty and Emissions		
Q1.3.1	Applicant and IPs, including FCC and CWCC	Mitigation The largest odour zone of 100m to 160m is located at Ince AGI. There are no sensitive receptors within any odour zone except a residential caravan park located 130m south of the Stanlow AGI. These receptors may be impacted immediately after the gas is released during manifold venting, which is planned to occur once every five years. Do IPs have any comments on the receptors identified where odour could result in amenity issues? The assessment also highlights that the risk of odours is removed with a stack height of at least 6m. Do IPs have any comment on the mitigation envisaged or its likely effectiveness?	NRW defers to FCC as the local planning authority to comment on potential amenity odour issues within the DCO Proposed Development's Zone of Influence within Wales.
Q1.3.2	IPs, including FCC and CWCC	Mitigation / Consultation Are IPs satisfied with the monitoring/ mitigation measures proposed by the DCO that deal with air pollution/ emissions and potential odour issues? Is any further consultation provision considered to be necessary and secured within the DCO?	NRW is satisfied with the monitoring / mitigation measures proposed by the DCO that deal with air pollution / emissions regarding internationally and nationally designated nature conservation sites in Wales. NRW defers to FCC as the local planning authority to comment on potential odour issues within the DCO Proposed Development's Zone of Influence within Wales.

4. Biodivers	Biodiversity, Ecology and Natural Environment		
Q1.4.1	IPs, including Relevant Planning Authorities, Natural Resources Wales (NRW), Environment Agency (EA), Natural England (NE)	Surveys i) Confirm whether you are satisfied with the range of ecology surveys associated with ES - Chapter 9 - Biodiversity [APP-061]; ii) Do you consider the baseline information presented to be a reasonable reflection of the current situation? iii) In respect of i) and ii) if not, why not and what would resolve any residual concerns? The ExA acknowledges that this may be covered by a SoCG. If the answer to these questions is be covered by a SoCG please indicate that accordingly.	<ul> <li>(i) Overall, NRW considers that the submitted ecological surveys are proportionate for the purposes of assessing whether the scheme, during its construction and operation phases, is likely to be detrimental to the maintenance of the favourable conservation status of European protected species. This also applies to water vole.</li> <li>ii) The results are entirely consistent with what NRW expected at this location. This includes: <ul> <li>(a) A number of ponds supporting GCN;</li> <li>(b) Bat foraging and dispersal activity includes lesser horseshoe bats.</li> </ul> </li> <li>In relation to the assessments, NRW notes that component information required to inform impact assessment includes consideration of conservation status. This, as informed by Section 3 of <i>Commission notice Guidance document on the strict protection of animal species of Community interest under the Habitats Directive C/2021/7301 final (dated 12/10/21), requires component consideration of current conservation status (CCS) and favourable conservation status (FCS). NRW understands that the Applicant intends to submit draft license application documents as part of the submission. However, absent of further information, NRW is not in a position to advise further in this regard.</i></li> </ul> No apparent consideration has been given to low rainfall during spring 2022 and how this may have affected the results of GCN surveys. Furthermore, NRW notes that data relating to GCN had been split between England and Wales. However, considering the transboundary nature of this application there appears to have been no

			<ul> <li>apparent consideration given to GCN within ponds located in England potentially using land within Wales as a component of a local population's foraging area.</li> <li>NRW therefore advises that the Applicant confirms: <ul> <li>a) whether consideration of low rainfall conditions during Spring</li> <li>2022 have been factored into the GCN assessments, and;</li> <li>b) whether the terrestrial foraging range for GCN in England extends into Wales.</li> </ul> </li> <li>If this information has not been considered within the assessments to date, NRW advises that this is included for the Examination.</li> </ul>
Q1.4.2	Applicant and IPs, including Relevant Planning Authorities, (CWCC and FCC) and NRW, EA and NE.	Monitoring 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]. 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 (LEMP) [APP-230] developed at Detailed Design. The LEMP is proposed to be included within the	<ul> <li>Construction Phase</li> <li>NRW considers that the following monitoring is required during the construction phase of the project and should be secured as part of a DCO requirement, if granted: <ul> <li>(a) Ecological Compliance Auditing to assess the delivery of mitigation measures submitted as part of the application and within the provisions of subsequently required protected species licenses;</li> <li>(b) Ecological monitoring to assess the current conservation status of identified species prior to and during the construction phase; and,</li> <li>(c) Monitoring any incidental capture, injury or killing [as informed by Article 15 of the Habitats Directive and Regulations 52 and 53 of the Conservation of Habitats and Species Regulations 2017 (as amended)].</li> </ul> </li> <li>Mitigation Measure D-BD-003 states that the Applicant will appoint an external third-party to conduct Environmental Compliance Audits during construction of the DCO Proposed Development. The 'Auditing ECoW' will undertake checks of the Construction</li> </ul>

	Operations and Maintenance Environment Management Plan (OMEMP), provided post- construction. 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.	Contractor and their ECoW(s) reporting on compliance of construction works, mitigation and activities on site against the ES and detailed CEMPs, as well as any obtained licenses, permits or assents. The Auditing ECoW will produce monthly reports (or otherwise agreed reporting deadlines in response to on-site activities) and provide written and verbal feedback to the Construction Contractor and ECoW on performance and adherence. NRW agrees with this approach. However, to date we have not seen ecological compliance audit key performance indicators. NRW would advise that these should be included within the scope and provisions of any protected species license applications. In respect of Table 9.13 NRW would advise the following in terms of monitoring requirements: <u>Great crested newt:</u> Annual monitoring of ponds within 250m of the application site during the construction and restoration phase. 2-3 counts per annum with results uploaded into the Wales GCN Monitoring Scheme. <u>Bats:</u> <u>Roosts:</u> Annual assessment throughout construction / restoration phase. Emergence/visual inspections confirming continued functionality together with static detectors. Confirmation of no issues regarding obstruction of access including impacts caused by external lighting.
		lighting. Foraging/dispersal corridors: Annual assessment. Placement of static detectors confirming no loss or changes to habitat functionality
		Confirmation of no issues regarding obstruction of access including impacts caused by external lighting.
		<u>Kipanan mammais:</u>

	Annual monitoring of ponds within 250m of the application site during the construction and restoration phase.
	Post-Construction
	Paragraph 4.4.6 of the Outline Landscape and Ecological Management Plan states: "monitoring and maintenance of habitats and/or features associated with protected species, including great crested newt, bats, badger, otter and water vole will be carried out in accordance with measures prescribed within any granted mitigation licence received from relevant statutory bodies".
	NRW understands that in accordance with paragraph 6.4.23 of Planning Policy Wales (Edition 11) the application has to demonstrate " <i>no detriment to the maintenance of the favourable</i> <i>conservation status</i> " of each local population of EPS (see Regulation 9 and 55(9) (b) of the Conservation of Habitats and Species Regulations 2017 (as amended); and Article 16 of the Habitats Directive (92/43/EEC)).
	In NRW's view the long term is a material attribute to conservation status and consequently we consider that consideration of the long term is material to this planning decision-making process.
	Section 4.5.3 of the OLEMP states "maintenance and monitoring associated with protected species licencing, as required by the relevant statutory body is currently unknown and will be detailed within the associated protected species licensing documents and agreed with the relevant statutory body, along with details including locations, length and frequency and maintenance and monitoring requirements".
	For background and context purposes, the definition of the long-term attribute of conservation status in Appendix 1 of the Habitats

			Directive requires consideration of multiple generations (see Appendix II of Defra Research Project WC1108). Consequently, and without prejudice to our comments on any subsequent protected species license applications, NRW would advise surveillance to be carried out for at least 25 years where the features of an identified ecology area include European protected species such as GCN. NRW therefore advises detailed monitoring prescriptions to be submitted as part of the detailed LEMP should be a requirement of any DCO granted.
Q1.4.3	Applicant and IPs, including Relevant Planning Authorities, (CWCC and	<b>BNG/ Biodiversity Enhancement</b> v) Submit your views on seeking biodiversity enhancement/ facilitating BNG, inclusive of any future proofing.	Regarding biodiversity net benefit in Wales, NRW advises that the Examining Authority (ExA) refers to the Welsh Minister for Climate Change's letter to the Chief Planning Officer on this subject dated 20 December 2022, and the supporting information referred to therein <i>e.g.</i> , the CIEEM briefing, as this is the most current guidance in Wales.
	EA and NE.		Please note that the Welsh Minister's letter explains that a net benefit for biodiversity, whilst similar in concept to net gain, includes a distinct reference to ecosystem resilience and how the site relates to surrounding ecosystems and biodiversity. For further policy guidance regarding this subject, NRW advises that the ExA contacts the Welsh Government's Planning Directorate.
			NRW's biodiversity strategic steer "Vital Nature" encourages a stepwise approach to mitigation and compensation. This reflects the approach set out in Planning Policy Wales 11 (para. 6.4.21). The step-wise approach is to maintain and enhance biodiversity and build resilient ecological networks by ensuring that any adverse environmental effects are firstly avoided, then minimised, mitigated, and as a last resort compensated for. Para. 6.4.21 states that compensation should only be considered as a last resort.

			NRW defers to FCC as the local planning authority to comment on potential local biodiversity enhancements within the DCO Proposed Development's Zone of Influence.
Q1.4.4	Applicant and IPs, including FCC, CWCC, NRW and NE	BNG/ Biodiversity Enhancement/ Habitats The ExA notes the submission of BNG Assessment – Part's 1-6 [APP- 231] to [APP-236], consecutively. 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. 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.	NRW can confirm that the Priority Habitats Inventory (England) does not apply to Wales. Please refer to our response to Q1.4.3 regarding the difference in policy to Biodiversity Net Benefit in Wales compared to Biodiversity Net Gain in England, which has also been shared with the Applicant during previous pre-application engagement.

Q1.4.5	Applicant and IPs, including FCC, CWCC and NRW	<b>BNG/ Biodiversity Enhancement</b> viii) Any comments, responding to questions i) to vii) above are welcome.	NRW advises that responsibility for any proposed ecological compensation areas should be retained and appropriately managed by the Applicant until entirely transferred to a suitable third party ownership/control. NRW advises that the selection of a suitable recipient body is informed by the definition of responsible body under Part 7 of the Environment Act 2021.
Q1.4.7	Applicant and IPs, including FCC, CWCC, NRW and NE	Habitats/ Biodiversity enhancement 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. Suggest the strategies which could be used to secure enhancement and the precise mechanisms to implement the desired improvement.	NRW refers to the Spatial Action Plan for Great Crested Newts in Flintshire (NRW Report No 78) in response. NRW defers to FCC as the local planning authority to further comment on potential local nature strategies within the DCO Proposed Development's Zone of Influence that could be used for the delivery of additional ecological enhancement.
Q1.4.8	Applicant and IPs, including CWCC and FCC	Great Crested Newts Are there any comments/ concerns you wish to raise with respect to the above matters?	<ul> <li>In NRW's view the surveys have been undertaken in accordance with published guidance. From a Wales perspective, the surveys are proportionate and therefore satisfactory given the predominantly temporary impacts on the species.</li> <li>It is noted that inadequate consideration has been given to: <ul> <li>a) The unusually dry and cold conditions during April 2022. It is considered that elsewhere in Wales dry conditions during the spring affected breeding.</li> </ul> </li> </ul>

<ul> <li>b) Use of extant survey information (including records over 10 years old).</li> </ul>
<ul> <li>NRW requires the submission of a more detailed specific conservation plan as part of the detailed CEMP that includes: <ul> <li>(a) Specification of newt barrier fencing;</li> <li>(b) Plans illustrating locations of barrier fencing, checking and maintenance proposals, consideration of access across fence lines including public rights of way;</li> <li>(c) Receptor sites for any amphibians caught;</li> <li>(d) Prior commencement surveys with survey area informed by both 2021/22 survey data and all historic data;</li> <li>(e) Amphibian specific conservation measures including but not limited to on-site and off-site conservation proposals;</li> <li>(f) GCN Mitigation: Submission of further details and associated plans concerning GCN avoidance and mitigation measures including, but not limited to: fence design, specifications, and locations; considerations of access issues (including PROW if applicable); monitoring and maintenance requirements; and supervised removal. Submission to include proposed timescales and reporting requirements;</li> <li>(g) Amphibian Conservation Proposals. Submission of further details concerning on-site compensatory proposals including plans, extent, access, current and proposed tenure. Details shall identify areas of terrestrial and aquatic habitat to be retained, enhanced, and created. Submission to include timescales and reporting requirements;</li> <li>(h) Submission of off-site mitigation proposals to mitigate for the temporary loss of terrestrial habitat loss and severance. It is surmised that this is most likely to be addressed by the provision of a commuted sum to specifically target GCN conservation action within 5km of the boundary of the application eiter.</li> </ul> </li> </ul>

<ul> <li>(i) It is advised that at least one of the areas to be acquired for compensation is specifically managed for GCN. A long-term management plan for this area will be required. It is advised that component provisions of the management plan include <ul> <li>defined aims and objectives (including targets that can be used as key performance indicators for monitoring purposes);</li> <li>habitat management prescriptions for aquatic and terrestrial habitats;</li> <li>contingency prescriptions if fish and/or invasive nonnative species (INNS) are detected;</li> <li>site liaison, wardening, incident reporting and response arrangements;</li> <li>detail of the skills and competencies required by those undertaking the works or activities including whether they require European Protected Species licenses for the activities proposed;</li> <li>provision for periodic review mechanism for the Environmental Management Plan;</li> <li>contingency measures that are capable of being implemented in the event of failure to undertake or appropriately implement / correct management or surveillance prescriptions including any required actions arising from unforeseen situations;</li> <li>current and proposed changes to tenure of the ecology area (as informed by the definition of responsible body under Part 7 of the Environment Act 2021, freehold tenure of the ecology area to be approved by the logic activity in consultation with Natural Resources Wales to ensure appropriate parts and propriate activity and the net blief of and the offective activity and the part is activity in consultation with Natural Resources wales to ensure appropriate</li> </ul> </li> </ul>
targeted delivery of long-term actions:

			<ul> <li>details of persons or bodies responsible for undertaking management and surveillance together with required skills and competencies; and</li> <li>reporting requirements associated with species surveillance and habitat management.</li> </ul>
Q1.4.10	Applicant and IPs, including CWCC and FCC	Bats Comments relevant to the survey work or others deemed necessary are invited.	NRW understands that bat surveys undertaken to date concern potential roosts and foraging and dispersal surveys. Based on results to date, NRW is of the opinion that sufficient survey effort has been undertaken to inform potential bat licensing requirements. Outstanding surveillance relates to bat foraging and dispersal. This information is required for the purposes of informing non-licensed mitigation associated with maintaining bat foraging and dispersal through the construction phase of the proposals. In NRW's view the survey effort is satisfactory for the purposes of license regimes associated with identified roosts. NRW understands that further survey in respect of bats is ongoing. This outstanding survey is, in NRW's view, required for the purposes of informing the detail as opposed to the principle of the proposed development. Outstanding detail will inform requirements associated with bat foraging and dispersal during and post-construction of the project. Of note is lesser horseshoe bat activity, particularly hedgerows 419, 1004, 420, 199, 429. 434 and 246. NRW advises that, on completion of outstanding surveys, supplementary conservation plans are completed for each species of bat and submitted as part of the detailed CEMP. Provisions of the plans should include but are not necessarily limited to: (a) Species; (b) Current conservation status at county and local spatial scales

			<ul> <li>(c) Roosts likely to be impacted together with functionality (wherever known);</li> <li>(d) Foraging/dispersal routes likely to be impacted;</li> <li>(e) Compensatory roost provision;</li> <li>(f) Mitigation including plans to ensure maintenance of features required by bats for foraging/dispersal during and post construction. Details to include dark route plans;</li> <li>(g) Monitoring methodologies during and post construction;</li> <li>(h) External lighting/internal light spillage and proposal to maintain dark corridors (including plans);</li> <li>(i) Mitigation/compensation actions to be carried out in land purchase areas; and,</li> <li>(j) Ecological compliance audit (ECA) Key Performance indicators (KPI's).</li> </ul>
Q1.4.14	IPs, including CWCC and FCC	<b>Birds</b> Section 4.10 of the Applicant's Appendix 9.8 Bird Survey Report [APP-112] notes that large numbers of Redshank (are recorded in Transect 2) using the banks of the River Dee, near Sealand, through the winter months. The other seven transects, including Transect 5 and Transect 7 which are near the River Mersey and Transect 1, near the River Dee did not regularly record Special Protection Area (SPA) qualifying species. Although the River Dee at the crossing point is not within the Dee Estuary SPA, it is directly linked to the SPA further north-west. The population of Redshank using the land along Transect 2 will be part of	NRW has reviewed the 5-year mean peak of Redshank recorded in the Dee Estuary SPA both at site designation and from the most recent data, to inform a condition assessment of the Redshank passage and overwintering features, concluding that the feature was in favourable condition. Based on this assessment and the nature of the disturbance described by the Applicant NRW has concluded that the project is unlikely to have a significant effect on the Dee Estuary SPA.

		the population that occurs within the SPA and should be considered as being functionally linked. Do IPs have any further comments to make on the survey findings or functionally linked land matters?	
Q1.4.16	IPs, including Relevant Planning Authorities, NRW, EA and NE	Aquatic Ecology Are IPs/ Statutory Consultees satisfied with the scope and content of the aquatic surveys provided? If not state why not.	In terms of fish and fisheries, NRW is satisfied with the scope and content of the aquatic surveys provided. NRW has no further comments regarding this matter.
Q1.4.17	Applicant and IPs, including CWCC, FCC, NRW and NE	Wildlife Corridors 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. v) Are there any comments/ concerns you wish to raise with respect to the above matters?	<ul> <li>v) NRW would welcome the provision of further information being provided to: <ul> <li>(a) Demonstrate that protected species would not be impacted by noise/vibrations;</li> <li>(b) The proposed ecological compliance audit includes key performance indicators associated with the assessment of noise/vibration impacts on protected species; and</li> <li>(c) Contingency prescriptions that will be enacted in the event of noise/vibration impacts being identified.</li> </ul></li></ul>
Q1.4.19	Applicant and IPs, including CWCC and FCC	<b>Trees</b> v) Relevant Planning Authorities/ IPs: Do you have any further comments on tree planting or landscaping provision?	NRW has no specific comments in relation to tree planting or landscaping provision. However, in respect of areas to be acquired for tree planting (land purchase) by the Applicant, NRW advises the long-term tenure is a critical consideration to ensure the implementation and maintenance of these measures is secure. Any land that needs to be secured for long-term habitat mitigation/restoration/enhancement should on completion of the

			project be in the long-term legal interest (ownership) of a body that accords with the definition of "responsible" in part 7 of the Environment Act 2021.
5. Climate 0	Change		
Q1.5.2	Applicant and IPs, including CWCC and FCC	Methodology IPs are invited to make whatever comments they deem to be appropriate.	NRW agrees with the summary text presented by the Examining Authority for Q1.5.2. NRW agrees that overall, the development combined with the other elements of the HyNet project would lead to a cumulative beneficial Greenhouse Gas (GHG) effect through the storage of CO2. In addition, in relation to the pipeline and infrastructure, there is limited potential to reduce the scale of embedded emissions through alternative approaches, so consideration of GHG as scoped out is a reasonable position.
Q1.5.3	Applicant and IPs, including CWCC, FCC, NRW and NE	Mitigation 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 mitigation/enhancements available and achievable has been properly considered?	While as referenced above the overall project would result in a cumulative beneficial GHG effect, there would appear to be no reason why the project could not seek to maximise this benefit and minimise the net carbon footprint of the proposed infrastructure through additional nature-based solutions in or around the footprint of the development, including as is suggested particularly woodland creation and saltmarsh restoration that would provide a combination of benefits in terms of carbon, biodiversity and landscape. For example, woodland planted around installations could provide specific landscape benefits in screening the development.
6. Compuls	ory Acquisition, T	emporary Possession and Other Lan	d or Rights Considerations
Q1.6.3	Affected Persons/ IPs	Are any Affected Persons or IPs aware of any inaccuracies in the BoR [APP-030], Statement of Reasons [APP-027] or Land Plans [APP-008]?	No comment
Q1.6.8	Affected Persons and IPs	Are any 'Affected Persons' and/ or 'IPs' aware of:	No comment

			<ul> <li>i) any reasonable alternatives to any CA or Temporary Possession (TP) sought by the Applicant; or</li> <li>ii) any areas of land or rights that the Applicant is seeking the powers to acquire that they consider are not needed?</li> </ul>	
C	Q1.6.12	Statutory Undertakers	Many Statutory Undertakers in their RRs have indicated that their primary concerns are to meet their statutory obligations and ensure that any development does not impact in any adverse way upon these statutory obligations. The ExA would ask whether: i) they have undertaken any assessment of the Proposed Development's impact on their statutory obligation(s) or are currently doing such an assessment(s); and ii) they have identified any such concerns and, if so, what those concerns are	NRW has raised concerns in our Written Representations regarding the potential implications of the 24.4m permanent rights corridor and how this could affect our powers in terms of undertaking maintenance works or flood defence improvements works on assets within the corridor. NRW has previously asked the applicant to provide some further information on this so that we can understand the potential implications but have yet to receive this. We are therefore unable to advise on the impact the permanent rights corridor could have on our ability to undertake such works. We are in the process of seeking legal advice on this point, but these discussions are ongoing. Until we have received further information from the Applicant and have received legal advice it is difficult to provide a definitive answer to these questions.
C	Q1.6.13	Applicant/ Statutory Undertakers	Pursuant to the above question (Q1.6.12), the ExA would ask the Applicant and Statutory Undertakers whether any discussions about the Statutory Undertakers concerns, especially those related to them being able to meet their statutory obligations have occurred and, if so, what progress has been made by	NRW has raised concerns in our Written Representations regarding the potential implications of the 24.4m permanent rights corridor and how this could affect our powers in terms of undertaking maintenance works or flood defence improvements works on assets within the corridor. NRW has previously asked the Applicant to provide some further information on this so that we can understand the potential implications but have yet to receive this. We are therefore unable to advise on the impact the permanent rights corridor could have on our ability to undertake such works. We are in the process of seeking legal advice on this point, but these

		these parties with regard to addressing those concerns.	discussions are ongoing. Until we have received further information from the Applicant and have received legal advice it is difficult to provide a definitive answer to these questions.
Q1.6.23	Applicant, Affected Persons and IPs	Do you consider all potential impediments to the development have been properly identified and addressed? Additionally, are there concerns that any matters, either within or outside the scope of the draft DCO, that would prevent the development becoming operational may not be satisfactorily resolved? This includes matters related to acquisitions, consents, resources or other agreements?	NRW has raised concerns in our Written Representations regarding the potential implications of the 24.4m permanent rights corridor and how this could affect our powers in terms of undertaking maintenance works or flood defence improvements works on assets within the corridor. NRW has previously asked the Applicant to provide some further information on this so that we can understand the potential implications but have yet to receive this. We are therefore unable to advise on the impact the permanent rights corridor could have on our ability to undertake such works. We are in the process of seeking legal advice on this point, but these discussions are ongoing. Until we have received further information from the Applicant and have received legal advice it is difficult to provide a definitive answer to these questions. NRW advises that land required for long-term ecological compensation must be secure. Please note that consideration and evidencing of no satisfactory alternatives is material to European protected species derogation whenever applicable under planning and species licensing regulation regimes (see Article 16 of the Habitats Directive and Reg 55 (9) (a) of the Conservation of Habitats and Species Regulation 2017 (as amended).
7. Environn	nental Impact Ass	essment/ Environmental Statement	
Q1.9.1	Applicant and IPs, including CWCC and FCC	Are you satisfied with the baseline surveys which inform cumulative impact in the ES? If not say why not.	Broadly, NRW considers the baseline surveys which inform cumulative impact in the ES to be comprehensive. Please note our comments in response to question 1.10.10 and Section 2 of our Written Representation with respect to the potential effects on Alltami Brook associated with the proposed crossing method.

Q1.9.3	Applicant, IPs, including FCC and NRW	Provide any comments you wish to make on the implications of The Well- Being of Future Generations (Wales) Act 2015 if you have not already done so.	The Well-being of Future Generations Act requires public bodies in Wales to consider the long-term impact of their decisions, including permitting, licensing or consenting works that potentially pose long-term impacts to the environment that future generations may be encumbered with restoring. To that end, any modification to bedrock required within the open cut Alltami Brook crossing would need to clearly demonstrate how the design would remain watertight for the lifetime of the works. Considering that the Applicant has no current decommissioning plan for the works this evidence would need to show how the interfaces between the concrete and bedrock would remain watertight in perpetuity. NRW's concern is that concrete routinely cracks, particularly at the interface between materials. A loss of water to ground could lead not only to a loss of water to the river habitats downstream, but also cause pollution to other environments within the area as the lost water lost travels through the underlying coal mines before resurfacing in a complex and diffuse manner across a large area. Wales already encounters such issues with Welsh Government funding NRW to remediate old mines. The Well-being of Future Generations Act obliges all public bodies to make decisions that ensures such issues do not reoccur.
8. Flood Ris	sk, Hydrology, Wa	ter Resources and Contamination	
Q1.10.2	Applicant and IPs, including NRW; FCC as Lead Local Flood Authority (LLFA) and Sustainable Drainage Systems Approval Body (SDSAB); Welsh Water (WW);	Flood Risk Are indicative local watercourse flow rates available before and after development? Would options to slow local surface water flow/ formation rates in the DCO area, or nearby, with the formation of new ponds/ wetland advantageous to wider sustainability goals be feasible/ possible? If so, could that provision be accommodated?	NRW does not operate any flow gauging stations in the DCO area and therefore has no further comment on local water course flow rates. As this question relates to surface water flood risk and an ordinary watercourse, NRW advises that the Lead Local Flood Authority is best placed to answer.

	United Utilities; and CWCC		
Q1.10.3	Applicant and IPs, including NRW; FCC as LLFA and SDSAB; WW; United Utilities; and CWCC	Flood Risk NRW are evidenced to hold one record of a past flood event along the Newbuild CO2 Pipeline (Pipe Reach 4b). The incident occurred along the B5129 Chester Road which is located adjacent to Broughton Brook. FCC's Strategic Flood Consequence Assessment (2018) also indicates that the B5129 Chester Road has had an incidence of historic fluvial flooding although the full details are not known. i) Have any local views come forward/ available giving more details as to the cause or date of this historic flooding event? Is this in the area of Chester Road Brook? ii) The "DG5" flooding register is also referred to in Paragraph 3.3.4 of [APP-168]. Explain the origin, nature and status that register holds for the administrative area. iii) Please make whatever comments you deem applicable on assessing flood risk or any associated survey, mitigation or avoidance matter triggered. Including measures linked to achieving future climate change resilience through potential	NRW's recorded flood extent map layer shows one recorded historical flooding incident along this section of the B5129, which occurred in 1976. The origin of flooding was from the Queensferry Drain system. NRW would not advise any further assessment of flood risk or mitigation measures to be implemented, given that the permanent works at this location (the pipeline) would be below ground.

		wetland creation.	
Q1.10.4	The Applicant and IPs, including: NRW; FCC as LLFA and SDSAB; WW; CWCC; and United Utilities.	Flood Risk iv) 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. Do IPs have any comments to make on that aspect or any other aspect of the proposal? Can any related ecological benefits be secured in tandem with dealing with flood risk management issues arising?	NRW notes that both rivers mentioned in this question are wholly within England. NRW therefore defers to EA for comment.
Q1.10.7	Applicant and IPs, including NRW, NE and EA	Water Environment v) Vegetation clearance is expected to occur within the Mersey, Ince Marshes, Gowy, Stanney Mill Brook, Finchett's 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.	Vegetation clearance works on the banks of or within the vicinity of a main river which include the cutting of vegetation only, do not require a Flood Risk Activity Permit (FRAP) as this work would not be a defined 'activity' under the Environmental Permitting Regulations 2016. However, work to remove root systems (which could destabilise the banks) or which involves the removal of bed material may be subject to a FRAP.

Q1.10.8	Applicant and IPS, including NRW and NE	Water environment Please could: ii) the Applicant and IPs advise whether they consider there to be adequate background information available to gauge subsequent effects to water quality. 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?	NRW notes that Measure D-GN-002 of the REAC [APP-222] states that "The Construction Contractor(s) will prepare and implement appropriate measures to control the risk of pollution due to construction activities, materials and extreme weather events" and D-WR-018 states that "Measures implemented to control spillage or pollution risks for site runoff or works within watercourses will be regularly inspected to ensure they are working effectively". Section 4.2 of the Outline CEMP [APP-225] provides further details. Provided that these measures are secured via the detailed CEMP, which is to be approved by the LPA in consultation with NRW prior to works commencing, NRW would be satisfied that adverse effects on the SACs can be avoided.
Q1.10.9	Applicant and IPs, including WW, United Utilities and EA	Water environment Applicant: With respect to groundwater resources and quality explain what mechanisms are/ would be in place to ensure that no private water supply can be derogated because of the	Please refer to NRW's Written Representation (para. 7.2) for our detailed comments regarding this matter.

		works or operation of the scheme, even temporarily, without the prior written consent of the owner and the provision of mitigation measures? Regarding potential impacts during construction and any proposed HDD activity. Clarify what investigations, assessments, mechanisms, and consultation requirements are to be secured to ensure HDD works will not pose a risk to groundwater resources. IPs: Your comments in regard to the above are invited.	
Q1.10.10	IPs, including NRW, WW, United Utilities, CWCC and FCC Applicant	Water environment Accounting for any locally known watercourses, outfalls, or hydrogeological anomalies which may be apparent; do IPs agree the Applicant's approach detailed in [APP-165] and [APP-225] would be possible? Paragraph 7.1.7 of the WFD Assessment [APP-165] states that the DCO Proposed Development has been assessed and concluded to have no impact on the Wirral and West Cheshire Permo-Triassic Sandstone Aquifers, the Dee Permo- Triassic Sandstone, the Dee Carboniferous Coal Measures and the Clwyd Carboniferous Limestone Groundwater WFD water bodies. Do	Please refer to NRW's Written Representation (Section 2) and SoCG with the Applicant for our detailed comments on this matter, specifically regarding the proposed open-cut crossing of Alltami Brook.

		IPs agree with that conclusion? If not, please state your reasons. Riparian enhancements are proposed at: East Central Drain; Finchetts Gutter Tributary; Backford Brook; Friars Park Ditch; and Alltami Brook. Should any further areas be considered? if so, state why.	
Q1.10.11	Applicant, NRW and EA	Water Environment It is noted that Section 6 of the Newbuild Infrastructure Boundary proposed by the DCO is not within a groundwater protection zone. Please confirm which sections of the pipeline would be located within ground water protection zones.	NRW understands that this question relates to Groundwater Source Protection Zones. According to NRW's records, none of the pipeline sections within Wales would be located within a Groundwater SPZ. NRW also advises that all groundwater bodies in Wales are designated as Drinking Water Protected Areas.
Q1.10.12	Applicant and IPs, including NRW, EA, CWCC and FCC	Licenses The ExA notes that: - A transfer licence or impoundment licence may be necessary if a temporary or permanent structure is required that restricts the flow of a waterway/ watercourse. - An Environmental Permit may be required for the importation and treatment of waste material falling outside the scope or limits detailed in the ES. - With respect to any 'Waste Materials' generated, the consenting authority for certain mobile plant permits (such as concrete crushers) is the relevant local authority, and	Impoundment licences: NRW advises that impoundment licences are required to construct, alter, repair, or remove an impoundment structure. Impoundments can include temporary diversions during construction work. Impoundment licences are site-specific so each impoundment would need to be applied for separately. An impoundment licence is not normally needed for low-risk activities where there is little or no impact on flow or levels of water. There is a check list available on the NRW website for customers to assess if this applies to their proposed impoundment. Abstraction licenses: NRW advises that abstraction licenses are required if water is taken from an inland water or groundwater. There are three types of abstraction license: a full abstraction license, a transfer license, and a temporary abstraction license. There are some exemptions from licensing including if the abstraction is less than 20m <sup>3</sup> /day.

Q1.10.14	IPs, including CWCC, FCC, NRW, EA, WW, and United Utilities	therefore they should be listed along with the relevant national public body within the draft DCO if such provision is anticipated. Comments in regard to the above are invited. <b>Outstanding matters</b> Provide your comments on any outstanding land contamination or pollution control matters arising if you have not already done so.	NRW offers a pre-application advice service to advise whether an abstraction or impoundment licence is needed and/or what type of licence. NRW has no further comments in relation to Environmental Permits and waste materials at this stage. Please refer to NRW's Written Representation (Section 7: Land and Soils) for our detailed comments regarding this matter.	
9. Habitat R	9. Habitat Regulations Assessment			
Q1.11.1	NE and NRW	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?	NRW broadly agrees with the conclusions provided in respect of the features of these SACs. The Applicant has also assessed the Dee estuary SAC, SPA and Ramsar sites/features; NRW also agrees with the conclusions for those sites.	
Q1.11.2	NE and NRW	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?	NRW confirms that the Applicant appears to have used the correct conservation objectives.	

		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 on European sites.	
Q1.11.4	Applicant and IPs, including: CWCC; FCC; NE and NRW	Methodology HRA – Information to inform an appropriate assessment [APP-226] indicates that there are 9 European sites within 10km of the DCO proposed development area. Do IPs concur with the list and agree that there are no omissions for the purposes of formal assessment? Have the defining features of all European sites been properly addressed by the Applicant?	NRW concurs with the list and agrees that there are no omissions for the purposes of formal assessment.
Q1.11.8	Applicant and IPs, including CWCC and FCC, NRW and NE	Mitigation/ Enhancement 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.	NRW advises reference to the Spatial Action Plan for Great Crested Newts in Flintshire (NRW Report No 78) in relation to this question. NRW defers to FCC as the local planning authority to comment on potential 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.
10. Draft De	evelopment Conse	ent Order	
Q1.19.20	Relevant Statutory Undertakers	<b>DCO Articles</b> The ExA would ask relevant Statutory Undertakers for their comments in regard to the disapplication of the	NRW is seeking legal advice on this question, specifically in relation to the disapplication of provision 8(c), and will be in a position to respond once legal advice has been received.

		provisions set out in Article 8(1) of the draft DCO, which related to the powers to make bylaws under the Water Resources Act 1991 and the powers to make bylaws, the prohibition of obstructions, etc. in	
		watercourses and authorisation of drainage works in connection with a ditch under the Land Drainage Act 1991.	
11. Other			
Q1.20.1	IPs	Lighting Do any IPs have any concerns regarding lighting during proposed construction phases, or arising from any other element of the scheme?	<ul> <li>NRW advises that external lighting/internal light spillage plans are prepared and submitted as part of the detailed CEMP and for these to include:</li> <li>In respect of construction, detail of the siting and type of external lighting to be used and consideration of internal light spillage;</li> <li>Drawings setting out light spillage (internal and external) in key sensitive areas including bat corridors;</li> <li>An Environmental Lighting Impact Assessment against conservation requirements for protected species;</li> <li>Measures to monitor light spillage during development, and,</li> <li>Assessments as part of ecological compliance auditing and inclusion of specific key performance indicator(s).</li> </ul>

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