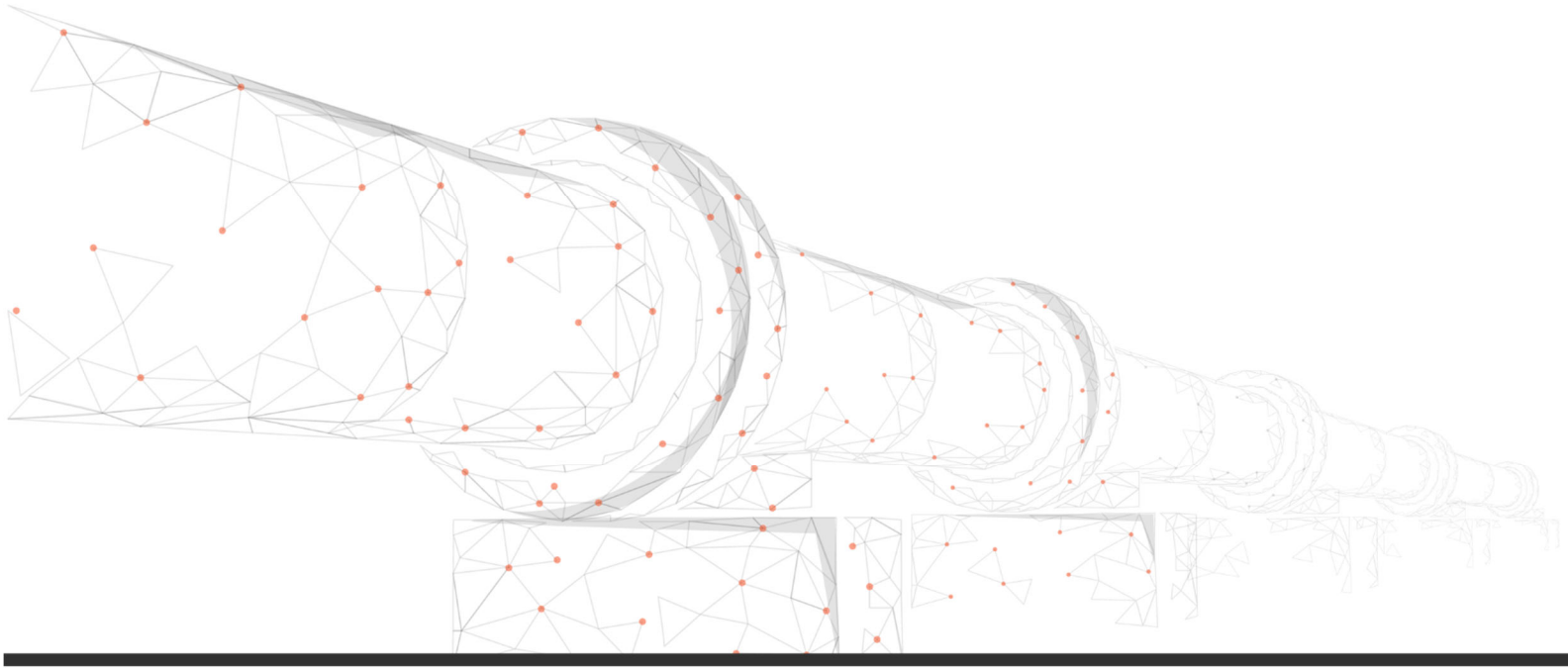
HyNet North West

Annex D

CORRESPONDENCES Rev B



21/02454/AAC Request for a formal opinion on the scope of an Environmental Statement (ES) under Regulation 10 and 11 of the Environmental Impact Assessment Regulations 2017: HyNet North West Carbon Dioxide Pipeline

(Lead Local Flood Authority response – 18th June 2021)

The proposal is to scope in water to consider impacts on the surface water and groundwater receptors to include Main Rivers, Ordinary Watercourses and WFD water bodies. We are in agreement with the proposed assessment requirements, but have the following specific comments:

Above ground installations, block valve stations and compound areas will require a flood risk assessment and drainage strategy in accordance with NPPF. Where development is proposed within Flood Zone 2 and 3 mitigation measures should be provided in accordance with NPPF and Environment Agency standing advice.

Where ordinary watercourses are crossed via trenched crossings, a Land Drainage Consent will be required for both the temporary and permanent works and mitigation measures provided through temporary diversion or pumping along with method statement for undertaking the works.

Potential for increased groundwater flood risk up gradient of longitudinal below ground structures should be assessed and mitigation measures provided to manage any temporary and permanent groundwater emergence at the surface.

The proposed development is generally within an area at low risk of surface water flooding but there are parts of the development which are at medium to high risk of surface water flooding which need to be considered as part of the layout to ensure any overland flow routes are retained.

Surface water management for the above ground works needs to follow the drainage hierarchy:

- Infiltration into ground
- Connection to the watercourse
- Connection to discharge water sewer and as a last resort;
- Connection to the combined sewer.

SuDS should be designed to control surface water as close to its source as possible. Well-designed sustainable drainage systems also provide opportunities to:

- reduce the causes and impacts of flooding,
- remove pollutants from urban run-off at source,
- combine water management with green space providing benefits for amenity, recreation and wildlife.

The use of SuDS should also help achieve the sustainability objectives of the National Planning Policy Framework (NPPF).

The suitability of sustainable drainage systems should be assessed in accordance with paragraphs 051, 079 and 080 of the revised NPPF Planning Practice Guidance for Flood Risk and Coastal Change (https://www.gov.uk/guidance/flood-risk-and-coastal-change).

Sustainable drainage systems should be designed in line with national Non-Statutory Technical Standards for SuDS (https://www.gov.uk/government/publications/sustainable-drainage-systems-non-statutory-technical-standards) and local policies ENV1, DM40, DM41, DM42 and DM43 of the Core Strategy.

Surface water attenuation requirements should be assessed that offer a reduction in surface water runoff rate in line with the Policy DM 41 (i.e. at least 30% betterment on brownfield flows and greenfield runoff for existing greenfield sites). Please note that all new connections to the watercourses shall comply with reduction of flows to greenfield runoff rates.

Surface water should be managed to ensure there is no increased surface water from the proposed development and runoff from extreme events should be managed such that adjacent third party land is not affected.

Hydraulic calculations and drawings to support the design need to be provided along with an assessment of overland flow routes for extreme events that is diverted away from buildings.

Maintenance of SuDS is essential for its proper operation and a clear management and maintenance plan for the lifetime of the works.

In considering a development that includes a sustainable drainage system, Cheshire West and Chester Council as local planning authority will want to be satisfied that the proposed minimum standards of operation are appropriate and that there are clear arrangements in place for ongoing maintenance. Information sought by Cheshire West and Chester Council would be no more than necessary, having regard to the nature and scale of the development concerned in line with NPPF Paragraph 081.

A management and maintenance plan for the lifetime of the development which shall include the arrangements for adoption by any public body or statutory undertaker, or any other arrangements to secure the operation of the sustainable drainage scheme throughout its lifetime should be provided.

Au, Megan

From: Solis, Gabriel
Sent: 15 June 2022 10:47
To: Au, Megan
Subject: FW: Flood Risk and Drainage Enquiry - Hynet North West CO2 Pipeline (the DCO Proposed Development)

Importance: High

From: Solis, Gabriel
Sent: 02 May 2022 15:56
To: LLFA@cheshirewestandchester.gov.uk; [redacted]
Cc: Quentin Bahlmann [redacted]; Trevor Croft [redacted]; [redacted] Gonzalez Cano, Gala [redacted] Peter, Lara [redacted] Franklin-Losardo, Declan [redacted] Mohun, Vic [redacted] Isnenghi, Enrico [redacted] Marlow, Frances [redacted]
Subject: RE: Flood Risk and Drainage Enquiry - Hynet North West CO2 Pipeline (the DCO Proposed Development)
Importance: High

Hello,

Hope you had a good bank holiday weekend.

I would like to follow up on the request for information initially send on the 01/03/2022.

Please note that this request was made over two months ago and we did not receive any reply yet.

Kind regards,

Gabriel

From: Solis, Gabriel
Sent: 14 April 2022 11:53
To: LLFA@cheshirewestandchester.gov.uk
Cc: Quentin Bahlmann [redacted] Patterson, Daniel [redacted] Trevor Croft [redacted]; [redacted] Gonzalez Cano, Gala [redacted] Peter, Lara [redacted] Franklin-Losardo, Declan [redacted] Mohun, Vic [redacted] Isnenghi, Enrico [redacted] Marlow, Frances [redacted]
Subject: RE: Flood Risk and Drainage Enquiry - Hynet North West CO2 Pipeline (the DCO Proposed Development)
Importance: High

Hello,

I am following up on the emails I sent on the 01/03/2022 and the 14/03/2022.

We did not receive any response since the first enquiry over a month ago. I cannot emphasise enough how important is this consultation for the project.

Should you need any further information, please do not hesitate to contact me. In the meantime, I look forward to hearing from you.

Kind regards,

Gabriel

From: Solis, Gabriel
Sent: 14 March 2022 15:48
To: LLFA@cheshirewestandchester.gov.uk
Cc: Quentin Bahlmann [redacted] Patterson, Daniel [redacted]; Trevor Croft [redacted] Gonzalez Cano, Gala [redacted]; Peter, Lara [redacted] Franklin-Losardo, Declan [redacted] Mohun, Vic [redacted] Isnenghi, Enrico [redacted] Marlow, Frances [redacted]
Subject: RE: Flood Risk and Drainage Enquiry - Hynet North West CO2 Pipeline (the DCO Proposed Development)

Good afternoon,

I am following up on an email I sent on 01 March (below). Please could you review the email and respond as soon as possible?

If you would like to discuss the email in further detail, please contact me directly.

I look forward to hearing from you.

Kind regards,

Gabriel

From: Solis, Gabriel
Sent: 01 March 2022 18:17
To: LLFA@cheshirewestandchester.gov.uk
Cc: Quentin Bahlmann [redacted] Patterson, Daniel [redacted] Trevor Croft [redacted] Gonzalez Cano, Gala [redacted] Peter, Lara [redacted] Franklin-Losardo, Declan [redacted]; Mohun, Vic [redacted]; Isnenghi, Enrico [redacted] Marlow, Frances [redacted]
Subject: Flood Risk and Drainage Enquiry - Hynet North West CO2 Pipeline (the DCO Proposed Development)

Good afternoon,

WSP are supporting Liverpool Bay CCS Ltd (the Applicant) on the DCO planning application for the Hynet North West CO_2 Pipeline (the DCO Proposed Development) which crosses Cheshire (England) and Flintshire (Wales) (see location map). Overall the DCO Proposed Development involves the installation of a 36 inch and 20 inch pipeline below ground. A more detailed description of the DCO Proposed Development is available in the Preliminary Environmental Information Report (PEIR) which, as part of the ongoing Section 42. statutory consultation, is available at the following link: https://hynethub.co.uk/. Please find attached a plan showing the draft DCO Order Limits, pipeline alignment and Above Ground Installations (AGIs) and Block Valves (BVS) within Cheshire (England) to this email.

The pipeline will be buried at a minimum depth of 1.2m in open-cut sections, however for special crossings such as railway lines, specified roads and main rivers, the depth would be greater to avoid existing services, physical obstructions and to take account of the higher ground loading.

WSP have previously consulted with you on the DCO Proposed Development and more information about this consultation can be found [redacted]. More general information about the wider HyNet project can be found at [redacted]

WSP is currently undertaking a Flood Risk Assessment (FRA) for the DCO Proposed Development to assess the flood risk. We have provided below a list of general enquiries which you may currently hold and which we would like to request in order to inform the preparation of the FRA for the application submission.

Information request to complete the Flood Risk Assessment

Watercourses (within 200m of the current proposed route of the new pipeline, AGIs/BVSs)

- A map and details of any hydraulic structures / pumping stations and associated maintenance regime.
- AIMS records within the study area

Flood Defences / Other Structures (within 200m of the current proposed route of the new pipeline, AGIs/BVSs)

- Details of any flood defences in the area including standard of protection, condition, type and maintenance regime.
- Details of any proposals for any future flood alleviation scheme that could affect the site and if so, provide details and timescales
- Details of any pumping stations / other man-made structures / sources of flood risk that could affect the sites - including discharge rates as well and where they discharge to?

Previous Flooding Records (within 200m of the current proposed route of the new pipeline, AGIs/BVSs)

- Any previous flooding records for the site or the surrounding area including dates, source, depth, extent and any further details

Surface Water

- Information regarding any specific local pressures or objectives that may be of particular relevance to the construction of a below ground pipeline?
- Information regarding licensed surface water abstractions/discharges and private surface water abstractions/discharges within the 200m study area (ones with a current licence)
- Any known issues associated with water quality within the area? (200m)

Other queries

- Does the site lie near or within a Critical Drainage Area?
- Any information on groundwater flooding/emergence issues and depth monitoring information at key locations
- Any local ground infiltration potential/information
- Any information on existing and proposed flood storage areas
- Any information on existing culverts (alignment, depth, sizes, conditions) within the study area
- Any information on proposed culvert diversion schemes
- Any information on proposed river channel or open watercourse diversion schemes
- Any local highway drainage issues or flooding issues

Information request to develop a surface water drainage strategy and future surface water drainage design for AGIs/BVSs

Each of these installations will be constructed at key locations along the pipeline and are essential to their operation. In order to inform the assessment and design of these facilities, please could you provide guidance on the following:

- Surface water drainage detail design criteria including discharge rates, discussion on preferable discharge locations, and the use of SUDs
- Surface water management requirements including any treatment or pre-treatment before discharge to the local receptors
- Pre-app/full app requirements to progress with surface water drainage design for the proposed AGIs/BVS facilities

We would be very grateful if you could review the above information and advise what you be able you would be able to provide. We would also like to request an indication of the associated costs and the timescales for the provision of this information. Given the tight programme for the preparation of the application submission, we would appreciate your response and support as soon as possible.

We would also like to request a teleconference with you to discuss the above matters relating to flood risk and mitigation, surface water drainage design and temporary drainage mitigation measures/management. Please can you respond with your availability on W/C 28/2/22 and 7/3/22.

Kind Regards,

Gabriel N. Solis
Assistant Engineer
MEng GMICE
He/Him

[redacted]

wsp.com

Au, Megan

From: Neil L Parry - Drainage <[redacted]>
Sent: 01 September 2022 12:22
To: Greenan, Niall
Subject: RE: HyNet - Approach to Surface Water Drainage Strategies

Hi Niall

With reference to your e-mail of the 23rd August appended below, please find appended our SAB Consultants response to the queries that you raised :-

1) *Please can the consultant confirm if the SAB process requires attenuation volumes to fully accommodate for gravelled areas over low permeability soils. Additionally, what percentage infiltration should be considered for the gravelled areas?*

This would be subject to permeability of the soils which should be determined by infiltration testing. If permeability is zero, then it would be a sensible approach to accommodate 100% of the gravelled areas within the attenuation system. Where there is an element of permeability, even if rates are slow, effective infiltration can be achieved beneath permeable surfaces due to the large storage and infiltrating surface area available (see G1.15 of the standards). Where infiltration is proposed, the gravel should be laid to a suitable thickness to provide storage for a 1 in 100 year plus climate change event (40%).

Once infiltration testing is complete and infiltration rates calculated, we would recommend investigating the feasibility of infiltration through the gravelled areas using industry recognised drainage design software.

2) *If at detailed design testing is undertaken and favourable results are recorded can the design be rationalised to use soakaways?*

Yes, we would have no issues with this and would encourage the use of soakaways (infiltration) as to comply with the drainage hierarchy.

3) *Pentre-Halkyn and Babell – use of slow infiltration system using a drainage field system spread over a larger area*

It appears that all drainage options have been exhausted and as such we would be happy for an infiltration based system to be used. The use of permeable surfaces is encouraged as to create a large storage and infiltrating surface area.

4) *Point of Ayr – Does the SAB process apply*

As the development proposes new hard-standing in excess of 100m² SAB will apply. We would suggest a SAB pre-app is submitted for this site in isolation with details of the existing drainage system provided. Should existing discharge be made to an estuary or tidal waterbody, as per G2.1 of the standards, the hydraulic control requirements are limited to the drainage service provisions for the site (no flow control / attenuation requirements) and focus of the SAB application would be weighted more towards standards S3 and S6.

Should you have any further queries or should you require any further clarification please do not hesitate to contact me.

Kind regards.

Neil.

From: Greenan, Niall [redacted]
Sent: 23 August 2022 14:28
To: Neil L Parry - Drainage [redacted]
Cc: Tanty Axel [redacted]; James Glass [redacted]; Vipin, Akshat [redacted]; Corless, Natalie [redacted]; Smith, Adam [redacted] u, Megan [redacted]
Subject: HyNet - Approach to Surface Water Drainage Strategies
Importance: High

Hi Neil,

Thank you for joining the call on Wednesday 17th August 2022 at 1:30pm via MS Teams. During the call you mentioned if we had any questions you could pass to an another consultant for approval. I have listed these below and attached presentation for ease of reference.

Gravelled areas

- Each site has a hardstanding area in excess of 100m^2 and a larger gravelled area. Given that the ground conditions consist of mostly low permeability clay, we have conservatively assumed that the attenuation volume must accommodate the full runoff volume from the gravelled area, this is driving significant land take for pond storage. Please can the consultant confirm if the SAB process requires attenuation volumes to fully accommodate for gravelled areas over low permeability soils. Additionally, what percentage infiltration should be considered for the gravelled areas?

Site with possible infiltration

- There are two sites (Cornist Lane and Northop Hall) where we have assumed zero infiltration for concept design however the ground investigation results suggest that further testing might mean that infiltration is feasible, if at detailed design testing is undertaken and favourable results are recorded can the design be rationalised to use soakaways?

Drainage Field System

- For two sites (Pentre-Halkyn and Babell) we had to take a different approach to surface water drainage.

- In line with the Drainage Hierarchy below:

  Priority Level 1: Surface water runoff is collected for use; **The nature of the development does not warrant the reuse of water. So Level 1 is deemed not appropriate.**
  Priority Level 2: Surface water runoff is infiltrated into the ground; **The ground conditions for the sites are not favourable to high infiltration rates. If all other options are exhausted then a slow infiltration option can be used over a large area.**
  Priority Level 3: Surface water runoff is discharged to a surface water body (watercourse); **No watercourse in close proximity to the site. So Level 3 is deemed not appropriate.**
  Priority Level 4: Surface water runoff is discharged to a surface water sewer, highway drain, or another drainage system; **No surface water sewer, highway drain, or another drainage system in close proximity to the site. So Level 4 is deemed not appropriate.**
  Priority Level 5: Surface water runoff is discharged to a combined sewer. **No combined sewer in close proximity to the site. So Level 5 is deemed not appropriate.**

As all options are exhausted under the Drainage Hierarchy we decided to revisit Priority Level 2 and produce a slow infiltration system using a drainage field system spread over a larger area. Does the consultant agree with this approach?

Point of Ayr

- We are proposing a redevelopment of the Point of Ayr terminal. The terminal has an existing drainage network which was designed to account for future expansion and covers the entire site. Although the redevelopment will add new hard-standing area in excess of 100m^2, this will be on currently gravelled land already served by the existing drainage network. Does the SAB process apply?

Kind regards

Niall

Niall Greenan
Associate Director
Development Infrastructure

[redacted]

Confidential
This message, including any document or file attached, is intended only for the addressee and may contain privileged and/or confidential information. Any other person is strictly prohibited from reading, using, disclosing or copying this message. If you have received this message in error, please notify the sender and delete the message. Thank you. WSP UK Limited, a limited company registered in England & Wales with registered number 01383511. Registered office: WSP House, 70 Chancery Lane, London, WC2A 1AF.

NOTICE: This communication and any attachments ("this message") may contain information which is privileged, confidential, proprietary or otherwise subject to restricted disclosure under applicable law. This message is for the sole use of the intended recipient(s). Any unauthorized use, disclosure, viewing, copying, alteration, dissemination or distribution of, or reliance on, this message is strictly prohibited. If you have received this message in error, or you are not an authorized or intended recipient, please notify the sender immediately by replying to this message, delete this message and all copies from your e-mail system and destroy any printed copies.

-LAEmHhHzdJzBlTWfa4Hgs7pbKl
****

Rydym yn croesawu gohebiaeth yn y Gymraeg a'r Saesneg a byddwn yn ymateb i ohebiaeth yn yr un iaith. Ni fydd y defnydd o'r naill iaith yn arwain at oedi. Mae'r e-bost hwn, gan gynnwys unrhyw atodiadau, yn breifat a chyfrinachol ac ni ddylid ei rannu heb ganiatâd yr anfonwr. Os derbynioch chi'r e-bost hwn ar gam, rhowch wybod i'r anfonwr a dileu'r e-bost. Os cyflwynir unrhyw farn, cyngor, casgliadau ac unrhyw wybodaeth arall yn y neges hon nad oes a wnelo â busnes swyddogol Cyngor Sir y Fflint, deellir nad ydynt wedi'u rhoi na'u cymeradwyo ganddo nac ar ei ran, ac felly ni fydd Cyngor Sir y Fflint yn derbyn unrhyw gyfrifoldeb o gwbl amdanynt.

We welcome correspondence in Welsh and English and you will receive a response in the same language. Use of either language will not lead to a delay. This email, including any attachments, is private and confidential and should not be shared without permission from the sender. If you have received this message in error, please notify the sender and delete it from your account. Opinions, advice, conclusions, and other information in this message that do not relate to the official business of Flintshire County Council shall be understood as neither given nor endorsed by it, or on its behalf, and consequently Flintshire County Council shall bear no responsibility whatsoever in respect thereof.
****