

NET BENEFIT FOR BIODIVERSITY AND GREEN INFRASTRUCTURE STATEMENT

Point of Ayr Cable Route Foreshore Works

Town and Country Planning Act 1990

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EXECUTIVE SUMMARY

Liverpool Bay CCS Limited (the 'Applicant'), a member of the Eni SpA group, commissioned WSP UK Ltd (WSP) to provide Ecological Consultancy services in support of the preparation of a Net Benefit for Biodiversity (NBB) and Green Infrastructure (GI) statement to support works proposed to the north-west of the Point of Ayr (PoA) gas terminal in Flintshire.

Planning permission FUL/000246/23 was granted in May 2024, to build new infrastructure and to modify existing facilities at the Point of Ayr Terminal in Flintshire to operate with carbon dioxide (the Consented Development), forming part of the wider HyNet North West Project that will transport carbon dioxide captured from existing industry in North Wales and North West England, as well as from new hydrogen production facilities. The captured carbon dioxide will be stored in depleted offshore gas reservoirs.

A new Town and Country Planning Application is seeking re-authorisation for part of the same works (proposed new cable alignment below Gronant Dunes and Talacre Beach), and same construction methodology already consented under application FUL/000246/23, but on a new alignment that is approximately 250m further eastwards along Talacre Beach (the Proposed Development).

The following Net Benefit for Biodiversity and Green Infrastructure Statement is produced in response to recent policy on the approach to delivering NBB in Wales produced by the Welsh Government (WG). This advises that developments in Wales must demonstrate they have maintained and enhanced biodiversity and created resilient ecological networks, by following a 'Step-wise' approach.

The Biodiversity Net Gain (BNG) assessment submitted for the Consented Development remains relevant to the wider development, along with an updated walkover report and assessments.

This assessment details the stepwise approach taken to deliver NBB. In addition, the Natural Resource Wales (NRW) framework for evaluating ecosystem resilience based on the five attributes referred to as DECCA: Diversity, Extent, Condition, Connectivity and Aspects of ecosystem resilience, were assessed against the Proposed Development. It also outlines the measures by which the Proposed Development will contribute towards NBB.

The Proposed Development reduces the extent of disturbance to habitats by utilising sensitive construction techniques and avoiding sensitive habitats, which also utilise a more direct routing option than that considered previously. The

wider Project also supports the decarbonisation of Wales which will contribute to biodiversity benefits.

Management agreements are in place that the Applicant is committed to, in agreement with NRW. This includes separate management plans for Gronant Dunes and Talacre Warren. These provide a means for the Applicant, in liaison with NRW, to continue their commitment to achieving net benefits for biodiversity within these sites. In addition, with the measures advised in this report including selective scrub management, the enhancement of dune slacks and the removal and control of non native invasive species, this would further enhance the existing dune ecosystem and result in a net benefit for biodiversity to this habitat and species it supports.

Habitat and species conservation and management plans have also been recommended within the ES for the Consented Development and conditioned under Condition 8 for the Consented Development. A strategy for habitat management will be developed and submitted by the Applicant to discharge this condition prior to construction of the Consented Development.

1. INTRODUCTION

1.1. BACKGROUND

- 1.1.1. Liverpool Bay CCS Limited (the Applicant) was granted planning permission (Application Reference: FUL/000246/23), subject to planning conditions, in May 2024, to construct new infrastructure and modify existing facilities at the Point of Ayr (PoA) Terminal in Flintshire to operate with carbon dioxide (Consented Development).
- 1.1.2. The proposed New Douglas offshore platform (OP) in Liverpool Bay, North Wales, as a part of the Project necessitates the establishment of a new power supply from the onshore grid as well as upgraded telecommunications to the OP. This infrastructure is essential for the reception and distribution of CO₂ designated for storage at specified sites as part of the Project. Consequently, the installation of two new power and fibre optic connections between the PoA Terminal and the Offshore Douglas Complex is required. The installation of these electrical and fibre optic cables, spanning from the Mean Low Water Spring (MLWS) line to the Offshore Platform, constitutes the marine component of the Project, for which consent has been sought through a Marine Licence application submitted to Natural Resources Wales' (NRW) Marine Licensing Team.
- 1.1.3. In response to feedback received on the Marine Licence application for the marine component of the Project, the installation of the electrical and fibre optic cables has undergone a realignment to mitigate impacts on vessel traffic navigating in and out of the Port of Mostyn.

1.2. SCOPE OF REPORT

- 1.2.1. This Net Benefit for Biodiversity (NBB) and Green Infrastructure (GI) Statement has been prepared by WSP UK Ltd ('WSP') on behalf of Liverpool Bay CCS Limited (the 'Applicant'), a member of the Eni SpA group.
- 1.2.2. The report will accompany the TCPA application for the installation of an underground section of Horizontal Directional Drilling (HDD) conduit under Gronant Dunes originating from the HDD Entry Pit (consented under FUL/000246/23), to a buried HDD Exit Pit at the Mean High Water Spring (MHWS) line, and burial of a combined

electrical and fibre optic cable across Talacre Beach and Foreshore to the Mean Low Water Spring (MLWS) line, located to the north-west of the Point of Ayr (PoA) gas terminal

1.2.3. In response to recent engagement with Flintshire County Council (FCC) and to meet recent developments in Welsh Policy and Guidance, it was advised that a Green Infrastructure Statement be produced for the Proposed Development, which includes an assessment of NBB.

1.2.4. The Biodiversity Net Gain (BNG) (Ref 1.1) assessment submitted for the Consented Development remains relevant to the wider development, along with an updated walkover report and assessments.

1.3. **APPROACH TO GREEN INFRASTRUCTURE STATEMENT**

1.3.1. The Environment (Wales) Act 2016 (Welsh Government, 2016) (Ref 1.2) provides context for the delivery of multi-functional green infrastructure in fulfilling the Section 6 biodiversity duty. GI can act as a resilient ecological network feature to ensure that network links between habitats and biodiversity hot spots are maintained, to provide maximum NBB and well-being. All planning applications in Wales must include a Green Infrastructure Statement, detailing how green infrastructure is incorporated into the development of the design.

1.3.2. Section 6 of the Planning Policy Wales (PPW) (Welsh Government, 2024) (Ref 1.3) establishes the submission of proportionate Green Infrastructure Statements with planning applications.

1.4. **APPROACH TO NET BENEFIT FOR BIODIVERSITY ASSESSMENT**

1.4.1. The NBB approach which is adopted in Wales has the intention to deliver an overall improvement in biodiversity by putting an emphasis on proactive consideration of biodiversity and wider ecosystem benefits within a placemaking context to be considered early in the design process (Welsh Government (2024) PPW, Edition 12).

1.4.2. NRW have developed a framework for evaluating ecosystem resilience based on five attributes and properties specified in the Environment (Wales) Act 2016 and PPW. This is referred to as

DECCA: Diversity, Extent, Condition, Connectivity and Aspects of ecosystem resilience (Ref 1.4).

- 1.4.3. The framework acknowledges that assessing resilience is difficult because ecosystems are complex and dynamic. This is inherently the case with intertidal habitats, which the Proposed Development will temporarily disturb. The dune ecosystem would be left intact with the use of HDD.
- 1.4.4. The NBB approach intends to deliver an overall improvement in biodiversity. It does not utilise a metric. It instead assesses this improvement in biodiversity qualitatively, putting the emphasis on proactive consideration of biodiversity and wider ecosystem benefits.
- 1.4.5. The NBB Assessment sets out how the Proposed Development considers the 'stepwise approach' and how the cable installation aligns with the DECCA framework.

2. TCPA PROPOSED DEVELOPMENT

2.1. PROPOSED DEVELOPMENT DESCRIPTION

- 2.1.1. The 'Proposed Development' is located to the north-west of the Point of Ayr (PoA) gas terminal in Flintshire. The Proposed Development comprises the installation of an underground section of Horizontal Directional Drilling (HDD) conduit under Gronant Dunes originating from the HDD Entry Pit (consented under FUL/000246/23 and not part of the Proposed Development), to a buried HDD Exit Pit at the Mean High Water Spring (MHWS) line, and burial of a combined electrical and fibre optic cable across Talacre Beach and foreshore to the Mean Low Water Spring (MLWS) line.

2.2. PREVIOUS PLANNING CONSENT

- 2.2.1. Planning permission FUL/000246/23 was granted in May 2024, to build new infrastructure and to modify existing facilities at the PoA Terminal in Flintshire to operate with carbon dioxide (the 'Consented Development'). The Consented Development and Proposed Development will form part of the wider HyNet Carbon Dioxide Pipeline ('the Project') that will transport carbon dioxide captured from existing industry in North Wales and Northwest England, as well as from new hydrogen production facilities that are proposed as part of the Project. The captured carbon dioxide will be stored in depleted offshore gas reservoirs.
- 2.2.2. Construction of the Consented Development is scheduled to commence during Q3 2025.

2.3. REQUIREMENT FOR NEW PLANNING APPLICATION

- 2.3.1. The marine elements of the Project includes installation of electrical and fibre optic cables from the MLWS to the OP, for which consent was sought under a marine licence application submitted to Natural Resources Wales' Marine Licensing Team. Following feedback received on the original marine licence application for the marine element of the Project, the electrical and fibre optic cables installation has necessitated a realignment to avoid impacts on vessel movements in and out of the Port of Mostyn. Natural Resources Wales has granted a marine licence reference: CML2365,

which includes the Proposed Development on the revised alignment.

2.3.2. The changes to the offshore works will require the realignment of the cables within the foreshore area from the HDD entry pit (already consented) to the MHWS, outside of the planning application area approved under planning permission FUL/000246/23. Therefore, consent for the new cable alignment is being sought from Flintshire County Council (FCC) through the submission of a new Town and Country Planning Application (TCPA).

2.3.3. The new alignment is approximately 250m further east along Talacre beach. In addition to reducing impact on vessel movements, the new cable alignment will have several benefits compared with the previous alignment including:

- A slightly smaller footprint, due to a more direct route;
- Realigned cable laying, construction plant, and repositioning of the HDD Exit Pit will be:
 - An additional 250m (2,300m in total) away from the Little Tern colony at Gronant Dunes;
 - Carried out away from the main areas of little tern foraging habitat. More efficient, direct crossing of Talacre Beach, and Welsh Channel;
 - Reduced disturbance to the Port of Mostyn;
 - Faster lay operation across channel avoiding complicated, time consuming, sinuous manoeuvre of the Cable Laying Vessel on anchors within the Welsh Channel; and
 - Decreased impact on channel traffic as fewer support vessel movements will be required due to the reduced complexity of anchor movements; and
 - Reduced vessel time in channel due to shorter pull operation.

3. CONSTRUCTION INFORMATION

3.1. METHODOLOGY

- 3.1.1. The new underground foreshore cables will be installed broadly in a north-northwest direction from the HDD Entry Pit to the MLWS. The foreshore cables will be directly buried from the HDD Entry Pit to the MLWS at the Foreshore (and on to the Offshore New Douglas OP).
- 3.1.2. The works from PoA Terminal to and including the HDD Entry Pit are consented under FUL/000246/23 and do not form part of the new TCPA application.
- 3.1.3. The installation of the cables under the Gronant Dunes will utilise HDD equipment. This technique will be used to avoid causing disturbance to the ground surface, and disturbance to the ecologically sensitive dune system. The HDD process involves drilling a tunnel from an entry pit behind the dunes to an exit pit located just below the MHWS line.
- 3.1.4. The exit pit for the Gronant dune system HDD, on the intertidal side, will be placed between 2-3 m below ground level into the sand with temporary pumps and storage tanks sited close to the pit to contain any drilling fluid.
- 3.1.5. Access to the beach will be from the Talacre beach car park. Temporary matting will be placed to facilitate vehicle access within the Foreshore Area over the soft sand as necessary. The method for the installation of the cables across the intertidal area, given the known geological conditions, is to use either a plough or cable trench to simultaneously lay and bury the cable as it moves along the cable route. This is achieved by the cable laying vessel beaching on the intertidal area at the MLWS line. The cables will then be pulled by excavators, and guided on rollers pre-installed on the beach, pegged at approximately 3 m intervals. The cable will then be attached to the HDD pulling equipment, located on the shoreward side of the dunes, and pulled to the HDD Exit Pit, and drawn through the HDD conduit, under Gronant dunes, to the HDD Entry Pit (consented under FUL/000246/23).
- 3.1.6. Once the pull is complete, the cable laying vessel will use either the plough or cable trencher to simultaneous lay and bury the cable across the intertidal area. This is instead of the previously proposed

method that would have required to first lay the cables to the landfall, and then two vessel passages to bury the cables. This reduces potential disturbance from the cable laying vessel activities. As agreed with NRW and the Port of Mostyn during determination of the Marine Licence for these activities, this new alignment will avoid bird foraging areas and disruption to the operation of Port of Mostyn.

3.2. **CONSTRUCTION TIMETABLE**

- 3.2.1. The intertidal works are envisaged to take up to 8 weeks. This is expected to be separated into two different periods: one for the Gronant dunes HDD works (estimated at around 4 weeks), and another for the cable pulls (estimated at around 4 weeks), during which certain locations will be closed off entirely to the public. Temporary diversions will be arranged across the dunes during this period for pedestrian use.
- 3.2.2. Subject to planning permission, it is anticipated that HDD conduit construction, and cable installation, will commence in February to April 2026. The timing of the HDD Exit Pit works has been scheduled for February 2026, which is outside of the Little Tern breeding season. The cable shore pull, and simultaneous lay and burial by the cable laying vessel, are scheduled for July 2026 at the end of the Little Tern breeding season, close to their migratory departure. LBCCS will continue to work with its cable installation contractor to, as far as is reasonably practicable, sequence these works to occur either later in, or after, the breeding season.
- 3.2.3. When it reaches the end of its useful life (after 25 years) or is no longer required, the foreshore cables will be left in situ in the ground.

4. RELEVANT LEGISLATION, POLICY AND GUIDANCE

4.1. ENVIRONMENT (WALES) ACT 2016

- 4.1.1. The main guiding legislation for biodiversity in Wales is the Environment (Wales Act) 2016 Act. This piece of legislation confirms Wales's legal commitment to biodiversity conservation. Section 6 of the Environment (Wales) Act 2016 introduced an "enhanced biodiversity and resilience of ecosystems duty (the S6 duty)" for public authorities, which requires that they "seek to maintain and enhance biodiversity so far as consistent with the proper exercise of their functions and in so doing promote the resilience of ecosystems".

4.2. PLANNING POLICY WALES 12

- 4.2.1. Planning Policy Wales (PPW) 12 Section 6.4.3 sets out the responsibilities of the Local Planning Authority when assessing development proposals and their impacts on biodiversity. This document states:
- 'The planning system has a key role to play in helping to reverse the decline in biodiversity and increasing the resilience of ecosystems, at various scales, by ensuring appropriate mechanisms are in place to both protect against loss and to secure enhancement.'*
- 4.2.2. It sets out the requirement for planning authorities to demonstrate that they have sought to fulfil the duties and requirements of Section 6 of the Environment Act 2016 by taking all reasonable steps to maintain and enhance biodiversity in the exercise of their functions.
- 4.2.3. Policies relevant to nature conservation included into Planning Policy Wales can be summarised as follows:
- **Green Infrastructure:** to include the submission of proportionate green infrastructure statements with planning applications and signposting Building with Nature standards.
 - **Net Benefit for Biodiversity** and the Step-wise Approach: The step-wise approach is the means of demonstrating the steps which have been taken towards securing a net benefit for biodiversity. In doing so, planning authorities must also take

account of and promote the resilience of ecosystems, in particular the following attributes, known as the DECCA Framework (as summarised in Table 4.1)

- Protection for Sites of Special Scientific Interest (SSSI's): strengthened approach to the protection of SSSIs.
- **Trees and Woodlands:** closer alignment with the stepwise approach, along with promoting new planting as part of development based on securing the right tree in the right place. Planning authorities must protect trees, hedgerows, groups of trees and areas of woodland where they have ecological value, contribute to the character or amenity of a particular locality, or perform a beneficial green infrastructure function.

Table 4.1 – Implementing the Section 6 Duty: The DECCA Framework

Attribute	Description
Diversity	More diverse ecosystems are more resilient to external influences (this includes biological, geological and physical diversity on a site). This means strategic planning and individual development proposals should avoid negative impacts on biodiversity by considering how biodiversity assets can be maintained and enhanced.
Extent	The size of an ecosystem will affect its capacity to adapt, recover or resist disturbance. Strategic planning and individual development proposals must avoid loss in the extent of biodiversity and incorporate measures to appropriately maintain and enlarge existing habitats, especially where extent is small or declining, through habitat restoration and creation with adjoining and nearby areas, green infrastructure features and networks.
Condition	Ecosystems and biodiversity assets need to be in a healthy condition to function effectively, to deliver a range of important ecosystem services and be more resilient to external influences. Good condition requires sufficient scale and functioning natural processes or appropriate management to provide structural complexity and sustain diverse mosaics of habitats. Strategic planning and individual

Attribute	Description
	development proposals must not compromise the condition of ecosystems.
Connectivity	Connectivity refers to the links between and within habitats, which may take the form of corridors, stepping stones or patches of the same or related vegetation types. Environmental factors such as geology, soil type or hydrological links affect sea / landscape connectivity. For any given species, connectivity is related to the relative distance that species can move to feed, breed and complete lifecycles that may need different environments. Individual development proposals should identify and incorporate measures which enable appropriate links to be made between the site and its surroundings so as to improve connectivity.
Adaptability to Change	Resistance and recovery from pressures arise when the attributes of ecosystem resilience – diversity, extent, condition and connectivity of ecosystems are in good condition. Habitats and species are not static: planning for nature recovery should aim to sustain habitats and associated species as the geography and land use changes around them, harnessing natural processes and opportunities for nature-based solutions. This means that strategic planning and individual development proposals should identify impacts to the ecosystem resilience attributes of biodiversity, using the pressures identified in SoNaRR.

(adapted from PPW 12)

4.3.

STATE OF NATURAL RESOURCES REPORT (SONARR) FOR WALES 2020

4.3.1.

SoNaRR (Ref 5.1) assesses Wales's sustainable management of natural resources and sets out a range of opportunities for action. SoNaRR assesses sustainable management of natural resources (SMNR) against the four long-term aims of SMNR. These are: safeguarded and enhanced natural resources, resilient ecosystems, healthy places for people, and a regenerative economy. Aim 2 assesses ecosystem resilience, including assessments by broad ecosystem including coastal margins (Ref 5.2) and marine habitats (Ref 5.3).

4.4. **LOCAL POLICY ON NET BENEFIT FOR BIODIVERSITY**

- 4.4.1. FCC is required by law to seek an NBB in its functions. The councils 'Supporting Nature in Flintshire' Biodiversity Duty Delivery Plan (2020-2023) (Ref 5.4) sets out how it aims to maintain and enhance biodiversity. While Flintshire does not use a fixed metric, it follows a stepwise approach with an emphasis on achieving lasting benefits for local ecosystems.

5. METHODOLOGY

5.1. ASSESSMENT

- 5.1.1. This assessment details the stepwise approach taken to deliver NBB. The stepwise approach (also known as the mitigation hierarchy) is a structured process used to ensure that developments deliver an NBB. The key steps in the assessment methodology are:
- The identification of existing habitats and species, habitat connectivity and nature conservation interest which form the baseline conditions;
 - Avoidance: Designing or adapting development to avoid adverse impacts to biodiversity, for example by route realignment or considering alternative site layouts;
 - Minimise: Where impacts cannot be entirely avoided, modify project design to minimise negative effects on habitats, species and ecosystem resilience;
 - Mitigate: Implement on site measures to restore or offset any unavoidable impacts, aiming to maintain ecological functions and build resilience
 - Compensate: As a last resort, provide compensation for residual impacts that cannot be mitigated on site; and
 - Enhance; Seek opportunities to enhance biodiversity and ecosystem resilience beyond the baseline.
- 5.1.2. In addition, the NRW framework for evaluating ecosystem resilience based on the five attributes referred to as DECCA: Diversity, Extent, Condition, Connectivity and Aspects of ecosystem resilience as detailed in Table 8.1 were assessed and aligned to the Proposed Development.
- 5.1.3. The baseline conditions for the assessment are informed by:
- Updated Phase 1 Habitat surveys in 2025 within the RLB for the Proposed Development.
 - Updated intertidal walkover survey which were conducted on the seaward side of the MHWS line to validate the results of surveys conducted in 2022 and to map additional areas within the RLB of the Proposed Development.

5.2. **ASSUMPTIONS AND LIMITATIONS**

- 5.2.1. The assessment includes the area within the revised red line boundary and construction information as described in Section 3. No limitations to the assessment were encountered.

6. BASELINE SURVEYS

6.1. PREVIOUS SURVEYS

- 6.1.1. Phase 1 Habitat surveys were undertaken in 2021 and 2022 for the Consented Development.
- 6.1.2. Habitats within the foreshore included intertidal mud, saltmarsh, and dune habitats, with the foreshore cable route passing into the littoral zone. The foreshore cable route is located within the Dee Estuary Special Protection Area (SPA), Special Area of Conservation (SAC) and Ramsar site and Gronant Dunes and Talacre Warren Site of Special Scientific Interest (SSSI).
- 6.1.3. Intertidal walkover surveys were additionally conducted in 2022 to inform the Water Framework Directive (WFD) Assessment.
- 6.1.4. To inform the previous submission, the Defra Metric BM3.0 was utilised, as the best tool at that time for evidencing the baseline biodiversity of the Consented Development and for being able to evidence the requirements to offset residual impacts in a quantifiable way.
- 6.1.5. The results of the BNG assessment (**Ref 6.1**) illustrated that, for the wider development area a quantifiable Net Gain had been achieved for non-irreplaceable, area-based, linear hedgerow, and linear river habitats, demonstrating net benefits for biodiversity.

6.2. UPDATED SURVEYS

- 6.2.1. An updated walkover survey and desk-study was undertaken in April 2025 for the Proposed Development. This included the terrestrial ecology survey area and aquatic and intertidal ecology survey area subject to surveys conducted in 2021 and 2022 and the additional areas within the RLB of the Proposed Development. **Figure A.1, Annex A**, illustrates the location of the Terrestrial and Aquatic & Intertidal Ecology survey areas. The results of these surveys are reported separately within the Environmental Studies Report (**Ref 1.1**).
- 6.2.2. The terrestrial walkover surveys were undertaken by experienced WSP ecologists, to provide a baseline habitat database, which detailed habitat types present within the Proposed Development survey area, their area (ha), and their geographic distribution (Refer to **Figure A.2 – UKHab Map of Survey Area, Annex A**).

- 6.2.3. Concurrently with Phase 1 Habitat surveys, WSP ecologists undertook a Habitat Condition Assessment (HCA) of all terrestrial habitats within the Proposed Development survey area.
- 6.2.4. The intertidal walkover survey which was conducted on the seaward side of the MHWS line was updated in 2025 in order to validate the results of surveys conducted in 2022 and to map additional areas within the RLB of the Proposed Development.
- 6.2.5. The updated walkover survey was undertaken following methods described in the JNCC Marine Monitoring Handbook for in-situ biotope recording. The survey was undertaken during a 0.9m spring tide and involved the compilation of target notes and georeferenced photographs of ecological features and habitat types. A further onsite investigation of infauna was also undertaken by digging and sieving substrate at representative locations within the Proposed Development boundary, and recording species observed. The results of the survey undertaken on the 2 April 2025, were compared to the results of the intertidal phase 1 habitat survey conducted on the 2 and 3 April 2022 and are reported in the Water Framework Assessment Report (May 2025) (**Ref 6.2**), Document Reference number: **PF.3.4** submitted along with the planning application.
- 6.2.6. The updated terrestrial ecology walkover report states that overall, the habitats recorded within the Survey Area in 2025 closely match the habitat types and extents recorded during the 2021/2022 Phase 1, National Vegetation Classification (NVC), and intertidal phase 1 habitat survey. The Proposed Development survey area covered similar areas to the 2021/2022 NVC survey. For survey details, including mapping, please refer to the reports submitted within the Environmental Studies Report **Ref 1.1**.
- 6.2.7. The updated Intertidal walkover survey conducted in April 2025 did not observe any significant change to the structure of the intertidal zone from surveys conducted in 2022. However, owing to the dynamic nature of coastal and intertidal systems, during the 2025 survey, the berm and backshore present at the base of the dunes was replaced by a steep backshore and band of cobbles and pebbles which varied in width from 5-10m.
- 6.2.8. These reports, as well as other updated documents will be submitted with the new TCPA application and should be read in conjunction with this assessment.

7. BASELINE BIODIVERSITY

7.1. DESIGNATED SITES

- 7.1.1. The Proposed Development is located within the Dee Estuary SPA, SAC and Ramsar site, and directly adjacent to Liverpool Bay SPA. It is also located within the Gronant Dunes and Talacre Warren SSSI and directly adjacent to the Dee Estuary SSSI. Due to its statutory designations, the Proposed Development has been subject to a Habitat Regulations Assessment (HRA), which is reported separately. (Ref 7.1).

7.2. EXISTING HABITATS

- 7.2.1. Full details of the habitats within the survey area are provided within the Environmental Studies Report (Ref 1.1). A summary is provided below.
- 7.2.2. Embryonic shifting dunes were recorded along the seaward edge of the dunes in 2021/22 (with small amounts of the NVC SD4 *Elymus farctus* ssp. *boreali-atlanticus* foredune community being present) but were absent in 2025, during the walkover. Kim Norman of ENI informed the surveyors that large sections of foredunes had collapsed during storms over the winter of 2024/25, which accounted for the absence of embryonic shifting dunes owing to natural external influences.
- 7.2.3. The majority of habitat within the survey area was classified as s3a6 shifting dunes with marram (UKHab). This equates to H6.8 open dune in Phase 1 and constitutes the Annex I habitat; shifting dunes with marram (H2120). The shifting dunes with marram habitat (including NVC communities SD6 and SD7) extended from the front of the dunes, south to the tarmac access track which runs parallel with the sand dunes. Within the shifting dunes with marram/open dunes there were three well-defined dune slacks in the eastern half of the survey area.
- 7.2.4. Immediately to the north of the open dune/shifting dunes with marram, the survey area encompassed a strip of beach. This strip would be classified as t2d5 intertidal mudflats and sandflats in UKHab and as H1.1 intertidal mud/sand in Phase 1. This habitat constitutes Annex I intertidal mudflats and sandflats (H1140).
- 7.2.5. A long, narrow strip of short grassland, which ran east to west across the middle of the shifting dunes with marram/open dunes and between two of the dune slacks was recorded during the walkover.

This shorter grassland was dominated by red fescue *Festuca rubra* and was classified as s3a7 dune grassland in UKHab, which equates to H6.5 dune grassland in Phase 1 and comprises the Annex I habitat, dune grassland (H2130). Another strip of short dune grassland was recorded directly to the north of the tarmac access track, which was fenced for most of its length, due to it containing ten ponds which are managed for natterjack toads *Epidalea calamita*.

7.2.6. To the south of the access track, the habitat consisted predominantly of dense scrub classified as h3h mixed scrub in UKHab and A2.1 dense/continuous scrub in Phase 1. There were also some more open patches, dominated by false oat-grass *Arrhenatherum elatius* between less dense scrub patches and towards the north-east of the mapped dense scrub area. The scrub consisted mostly of bramble *Rubus fruticosus agg.*, with frequent sycamore *Acer pseudoplatanus*, hawthorn *Crataegus monogyna* and grey willow *Salix cinerea*. Some individual larger trees or small tree groups were also present.

7.2.7. To the south of the dense scrub, there was a large pasture field at Warren Farm, classified as g4 modified grassland in UKHab and B4 improved grassland in Phase 1. It is not within the Proposed Development RLB but is within the Survey Area.

7.3. **INVASIVE NON-NATIVE SPECIES**

7.3.1. INNS were also recorded within the survey area. The only Wildlife and Countryside Act 1981 (as amended) Schedule 9 species recorded within the Proposed Development was montbretia *Crocsmia x crocosmiiflora*, which was present on the open dune/shifting dunes with marram. Japanese rose *Rosa rugosa* was widespread along dunes and grassland to the east of the Proposed Development boundary but was not present within the boundary.

7.3.2. Another nine non-native neophyte species which do not appear on Schedule 9 were recorded on the open dune/shifting dunes with marram and dune grassland.

8. ASSESSMENT

8.1. STEPWISE APPROACH

- 8.1.1. This section outlines the 'stepwise approach' that has been followed to avoid, minimise, mitigate and compensate impacts resulting from the Proposed Development. The step-wise approach will help guide decision makers in securing a net benefit for biodiversity and the onus is on developers to bring forward proposals in a way which will achieve a net benefit for biodiversity demonstrating how they have used the step wise approach.
- 8.1.2. The installation of the HDD Exit Pit on Talacre Beach is currently programmed to avoid most of the little tern breeding season by carrying out the HDD Conduit and Exit Pit works during February and March 2026. Little terns typically arrive at breeding colonies at the end of April into May, with eggs generally laid in late May / early June with many young fledged by mid – late July.
- 8.1.3. The activities for the installation of the electrical cable on Talacre Beach will be conducted towards the end of the little tern breeding season from early July 2026. The installation works will also be carried out away from the main Little Tern foraging and breeding areas.
- 8.1.4. The installation of the cables under the Gronant Dunes will utilise HDD equipment. This technique will be used to avoid causing disturbance to the ground surface and disturbance to the ecologically sensitive dune system. The HDD process involves drilling a tunnel from an entry pit behind the dunes to an exit pit located just below the MHWS line.
- 8.1.5. A Construction Environmental Management Plan (CEMP) will be submitted as part of the TCPA application and will be implemented during the construction phase of the Proposed Development. The CEMP will include best practice construction management measures and project specific mitigation measures.
- 8.1.6. In relation to accidental pollution events resulting from spills, pollution prevention measures will be provided in the CEMP and will be implemented by the Construction Contractor during the works to ensure that pollution events do not occur and are avoided. Further pollution prevention measures are referred to within the CEMP.

- 8.1.7. Prior to construction, a suitably qualified and experienced Ecological Clerk of Works (ECoW), will be appointed to support, oversee and monitor the Construction Contractor with the implementation of measures defined within the CEMP.
- 8.1.8. The stepwise approach applied to assess the effects upon the ecological baseline through the development of proposals is summarised in Table 8.1.
- 8.1.9. Engagement with stakeholders has been undertaken including Natural Resources Wales (NRW) NRW and Flintshire County Council (FCC). This included workshops / presentations to discuss the proposed approach to evidencing net benefits for biodiversity in line with existing policy.

Table 8.1 – Stepwise approach taken to deliver NBB for the Proposed Development

Receptor	Avoid	Minimise	Mitigate	Compensate
Designated sites Dee Estuary/Aber Dyfrdwy SAC, SPA and Ramsar	<p>The development is located within and adjacent to designated sites. This cannot be avoided.</p> <p>A Habitats Regulations Assessment has been undertaken to determine whether the development has the potential to result in likely significant effects upon designated sites and features of interest. It has been concluded that there will be no adverse effects on site integrity on the provision that appropriate mitigation measures are secured and fully implemented during construction.</p>	<p>The design for the cable installation avoids impact on the surface of the dune habitat by utilising 'Horizontal Directional Drilling' (HDD) under the dunes.</p> <p>Effects would be minimised by adopting sensitive construction methods.</p> <p>Measures which will be adopted to minimise and mitigate likely significant effects to designated sites and their features of interest are provided in the HRA. The simultaneous laying and burial of the cable within the intertidal zone will minimise as far as practicable the suspension of sediment or release of any sediment bound contaminants within the water column.</p> <p>The HDD exit pit will be backfilled as soon as practicable upon laying of the cable to minimise damage and disturbance to the habitat.</p>		No habitat would be lost.
INNS	The development will avoid the spread of INNS by adopting measures as set out within a Biosecurity	A Biosecurity Risk Assessment (BRA) and INNS Management Plan will be submitted for agreement with	As part of the aftercare and management of the site, measures will be taken to remove/mange/control INNS, in particular the identified	. N/A

Receptor	Avoid	Minimise	Mitigate	Compensate
	Risk Assessment, this includes the consideration of Marine Invasive species.	FCC in relation to all marine operation activities associated with the TCPA Proposed Development	Cotoneaster with the red line boundary.	
Intertidal Mudflats and sandflats	This habitat cannot be avoided.	Effects would be minimised and mitigated for by adopting sensitive construction methods and following pollution prevention guidance. The HDD exit pit will be backfilled as soon as practicable upon laying of the cable to minimise damage and disturbance to the habitat.		No compensation required. Habitats present within the intertidal area are all commonly occurring habitats around the UK with rapid recovery rates following physical disturbance and a 'High' resilience following disturbance.
Dune habitat	The design for the cable installation avoids impact on the surface of the dune habitat by utilising 'Horizontal Directional Drilling' (HDD) under the dunes. This will avoid and minimise disturbance to this sensitive habitat. Works adjacent to the dune habitat will be limited to vehicle movements from/to the works area. Mats will be used to define the access route to facilitate works and minimise disturbance and impacts to habitats.		Works construction methods and protocols within the sensitive habitat will be set out within a CEMP. Pollution prevention guidance will be followed as set out within a CEMP.	Ongoing sensitive management and enhancement of the dune habitat would be carried out to include sensitive scrub management and control of INNS.

Receptor	Avoid	Minimise	Mitigate	Compensate
Other habitats		To minimise unnecessary habitat loss as a result of the Proposed development, working widths will be kept the minimum necessary to undertake the works.	Habitats that will not be permanently lost during construction are to be reinstated upon completion of the works.	Scrub management within dune ecosystems.
Ponds and associated species including natterjack toads	No ponds will be directly impacted. The design for the cable installation avoids impact on the surface of the dune habitat by utilising 'Horizontal Directional Drilling' (HDD) under the dunes. This will avoid and minimise disturbance to this sensitive habitat and species it supports.		Pollution prevention guidance will be followed, as set out within a CEMP.	Ongoing sensitive management and enhancement of the ponds and associated dune habitat as set out within a Species Conservation Plan.
Nesting bird – general.	<p>Disturbance to nesting birds would be avoided by HDD methods within the dune scrub.</p> <p>Any required site clearance works will ideally be undertaken outside of the nesting bird period (March – August, inclusive)</p>	Nesting bird checks as required if within any clearance works within March – August.	Buffer zones erected around any nests discovered, appropriate to the species recorded.	The sensitive management of scrub would remove available habitat for nesting birds, though benefit the Dune ecosystem.

Receptor	Avoid	Minimise	Mitigate	Compensate
Little Tern	<p>No direct effects. The nearest Little Tern breeding colony to the Proposed Development is at Gronant Beach, which lies approximately 2km west of the Proposed Development</p> <p>The timing of the works has been scheduled outside of the Little Tern breeding season.</p>	Construction works will utilise low noise generating plant and equipment and will adopt methods which minimise noise and vibration, wherever practicable.	<p>A Noise and Vibration Management Plan will detail the noise mitigation measures included in the Detailed Design.</p> <p>Noise level monitoring.</p>	None identified
Over-wintering birds	Avoid works within the over-wintering period.	Where it is not possible to avoid the over-wintering period, the main construction works would be timed to minimise risk and avoid construction works for a three-hour period either side of high tide and during periods of significant numbers or levels of SPA/Ramsar qualifying bird species as identified by an ornithologist.		None identified
Nocturnal mammals		The duration of HDD conduit installation will require continual 24 hour working (consented under FUL/000246/23) to allow the work to be completed as safely and quickly as possible. The estimated overall duration of the trenchless works at the dunes is 2 weeks and will also require a maximum of two consecutive nights (48-hour period).		None identified

8.2. **DECCA FRAMEWORK AND ALIGNMENT TO THE DEVELOPMENT**

- 8.2.1. NBB does not utilise a metric; demonstrating an overall net benefit is not quantifiable. The Welsh approach aims to demonstrate an increase in ecosystem resilience which is difficult to quantify, as ecosystems are complex and dynamic. The Welsh Government and NRW have developed the DECCA framework (see Table 4.1) to provide a better understanding of aspects of ecosystem resilience. It should be noted that the development of the assessment of NBB is still in the process of being discussed between stakeholders to ensure it achieves its intended outcomes.
- 8.2.2. The five attributes referred to as DECCA (Diversity, Extent, Condition, Connectivity and Aspects of ecosystem resilience) were assessed and aligned to the development, as provided in Table 8.2.

Table 8.2 – The DECCA Framework (adapted from PPW 12) and alignment to the Proposed Development

DECCA Framework Attribute	Justification
<p>Diversity: at a biological level, including at the genetic, species, habitat, ecosystems or sea/landscape scale, as well as at the geological and physical level underpins biodiversity, resilient ecosystems, their functioning and the delivery of important ecosystem services. More diverse ecosystems are more resilient to external influences (this includes biological, geological and physical diversity on a site). This means strategic planning and individual development proposals should avoid negative impacts on biodiversity, by considering how biodiversity assets, can be maintained and enhanced.</p>	<p>The Proposed Development is located within diverse ecosystems.</p> <p>The majority of the ploughing and laying of the cable and HDD exit pit is located within a dynamic coastal and intertidal habitat which is resilient to disturbance and recovers quickly.</p> <p>The dune ecosystem would be protected and retained by adopting HDD techniques.</p> <p>The works are temporary in nature and measures would be in place to ensure the continued functionality of the ecosystem and services it supports, not only in terms of nature conservation but also regulatory services and cultural services.</p> <p>The Proposed Development supports a technology designed to reduce carbon dioxide emissions from industry. The changing climate is having physical, ecological, social and economic impacts on UK coasts and seas. With the adoption of carbon capture technologies, this may, in the long-term, safeguard ecosystems and the species they support.</p>

DECCA Framework Attribute	Justification
<p>Extent: to ensure mechanisms allow for the identification of potential habitat, the maintenance of existing biodiversity assets and networks and promote the restoration of damaged, modified or potential habitat and the creation of new habitat. This means that planning decisions should incorporate measures which seek the creation, restoration and appropriate management of green networks and linkages between habitats and maintaining and enhancing other green infrastructure features and networks.</p>	<p>Several ecological surveys and assessments have been conducted in support of the Consented Development and updated to inform the Proposed Development. The surveys identified important ecological receptors, and the accompanying submitted reports identified and recommended measures to protect these by adopting the 'step-wise' approach.</p> <p>The Proposed Development reduces the extent of disturbance to habitats by utilising sensitive construction techniques and avoiding sensitive habitats, which also utilise a more direct routing option that was considered in previously.</p>
<p>Condition: Ecosystems and biodiversity assets need to be in a healthy condition to function effectively, to deliver a range of important ecosystem services. Planning decisions should not compromise the condition of ecosystems. By taking an integrated approach to development, for example, which considers both direct and wider impacts and benefits it should be possible to make a positive contribution. Planning for the long-term management of retained habitats is key to maintaining condition through for example, the use of planning obligations.</p>	<p>Coastal and marine ecosystems are under pressure from a range of influences including climate change, recreation and INNS.</p> <p>The Proposed Development supports a technology designed to reduce carbon dioxide emissions from industry and commitments to climate resilience which in the long-term benefits ecosystems.</p> <p>The Proposed Development retains important habitats by adopting sensitive construction practices and timing of works.</p>
<p>Connectivity: to take opportunities to develop functional habitat and ecological networks within and between ecosystems and across landscapes, building on existing connectivity and quality and encouraging habitat creation, restoration and appropriate management. The opportunities could</p>	<p>The Proposed Development would not fragment the landscape in the long term. The installation of the cables within the intertidal habitats are temporary and habitat would quickly recover. The installation of the cables</p>

DECCA Framework Attribute	Justification
include enlarging habitat areas, developing buffers around designated sites or other biodiversity assets or corridors, including transport and river corridors, and the creation of 'stepping stones' which will strengthen the ability of habitats and ecological networks to adapt to change, including climate change. Individual development proposals should identify and incorporate measures which enable appropriate links to be made between the site and its surroundings so as to improve connectivity.	under the dune ecosystems would be by HDD installation thereby retaining connectivity and not affecting surface habitats (save for facilitating temporary works access).
Adaptation: resistance and recovery from pressures arise when the attributes of ecosystem resilience – diversity, extent, condition and connectivity of ecosystems are in good condition. Habitats and species are not static: planning for nature recovery should aim to sustain habitats and associated species as the geography and land use changes around them, harnessing natural processes and opportunities for nature-based solutions. This means that strategic planning and individual development proposals should identify impacts to the ecosystem resilience attributes of biodiversity, using the pressures identified in SoNaRR They should incorporate measures to ensure that biodiversity's ability to adapt to, resist and recover from pressures is enhanced.	<p>The Proposed Development has identified the impacts on the habitats within the RLB by conducting a suite of surveys and assessments. Reports submitted as part of the Consented Development and for the Proposed Development set out measures to protect and restore habitats and the species they support.</p> <p>The global energy system is one of the main drivers of the climate emergency. Wales's current energy production and consumption creates many pressures for ecosystems and public.</p> <p>Key pressures identified in SoNaRR include climate change, hydrological change, pollution and INNS. The Proposed Development will include measures to manage, control and remove INNS and will adopt pollution control measures. Carbon capture from industry can help reduce greenhouse gas emissions, which helps to address climate change, one of the key pressures identified.</p>

9. RECOMMENDED NBB ENHANCEMENT MEASURES

- 9.1.1. The biodiversity enhancement measures proposed are considered to be proportionate to the scale and nature of the development proposed as part of this application.
- 9.1.2. To meet objectives and provide a NBB, the following measures are recommended and should be included within any future habitat management plans:
- Selective scrub management within the dune ecosystem;
 - Removal of the invasive species *Cotoneaster integrifolius*, as far as practicable;
 - Creation and/or restoration and management of dune slacks to support natterjack toads; and
 - Creation of areas which may be colonised by petalwort. Habitat management to include rejuvenation of dune slacks through the removal of vegetation and by scraping the ground around the edges of slacks, creating potential areas to be colonised. Management work could involve clearing scrub and creating small scrapes around/near known populations.
- 9.1.3. The wider project seeks to alleviate the reliance on fossil fuels by harnessing carbon capture. In the long term, this would aim to meet targets and objectives set by the WG and FCC in tackling climate change.

10. FUTURE MANAGEMENT AND MONITORING

- 10.1.1. A CEMP will be submitted as part of the new application and will be implemented during the construction phase of the Proposed Development. The CEMP will include best practice construction management measures and project specific mitigation measures. These measures would be monitored by an Ecological Clerk of Works.
- 10.1.2. Management agreements are in place which the Applicant are committed to, having been agreed with NRW, to ensure favourable management of the designated sites in perpetuity. This includes separate management plans for Gronant Dunes and Talacre Warren. These provide a means for the Applicant, in liaison with NRW, to continue their commitment to achieving net benefits for biodiversity within these sites.
- 10.1.3. Habitat and species conservation and management plans have been recommended within the ES for the Consented Development (see Chapter 9 – Biodiversity (Volume II) Document Reference: T.4.2.9) and HRA for the Consented Development (Document Reference T.5.4). These documents will detail the necessary mitigation and compensation measures to ensure policy and legislative compliance with respect to these habitats. These have been conditioned under Condition 8 for the Consented Development and a strategy for habitat management will be developed and submitted by the Applicant to discharge this condition prior to construction of the Consented Development.
- 10.1.4. In addition, with the recommendations set out within Section 9, these would contribute to an NBB for the Proposed Development.
- 10.1.5. The BNG outcome is being shared with relevant stakeholders through delivery of the Consented Development. Any recommended NBB for this development will likewise be shared. Annual reports would be submitted by the Applicant as part of their obligations to biodiversity.

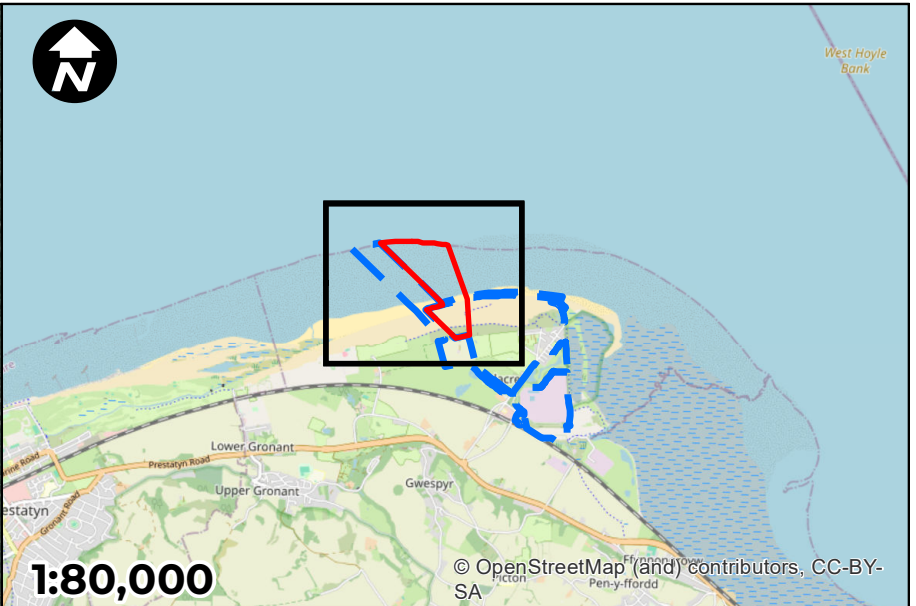
11. REFERENCES

- **Ref 1.1** WSP UK Limited (May 2025) Environmental Studies Report Point of Ayr Cable Route Foreshore Works for Liverpool Bay CCS Limited
- **Ref 1.2** Welsh Government. (2016). Environment Act (Wales) 2016. Retrieved from Legislation.gov.uk: <https://www.legislation.gov.uk/anaw/2016/3>
- **Ref 1.3** Welsh Government (February 2024) Planning Policy Wales Edition 12.
- **Ref 1.4** Natural resources Wales (2020) Ecosystem Resilience in a Nutshell 1: what is ecosystem resilience?
- **Ref 5.1** Natural Resources Wales (2020) State of Natural Resources Report (SoNaRR) Assessment of the sustainable management of natural resources.
- **Ref 5.2** Natural Resources Wales (2020) State of Natural Resources Report (SoNaRR) Assessment of the achievement of sustainable management of natural resources: Coastal Margins
- **Ref 5.3** Natural Resources Wales (2020) State of Natural Resources Report (SoNaRR) Assessment of the achievement of sustainable management of natural resources: Marine
- **Ref 5.4** Flintshire County Council Supporting Nature in Flintshire January 2020-2023
- **Ref 6.1** WSP UK Limited (March 2023) Biodiversity Net Gain Point of Ayr Cable Route Foreshore Works for Liverpool Bay CCS Limited
- **Ref 6.2** WSP UK Limited (May 2025) Water Framework Directive Assessment: Point of Ayr Cable Route Foreshore Works for Liverpool Bay CCS Limited
- **Ref 7.1** WSP UK Limited (May 2025) Habitat Regulations assessment Stage 1 & 2: Point of Ayr Cable Route Foreshore Works for Liverpool Bay CCS Limited

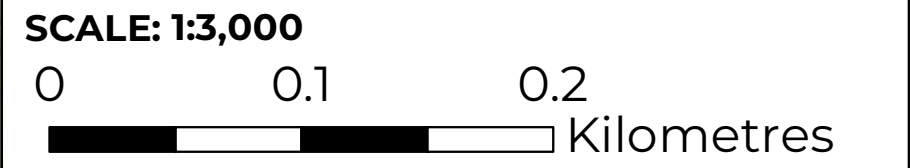
Annexes

Annex A

FIGURES



- Key:**
- Proposed Development Boundary
 - Consented Development Boundary
 - Aquatic and Intertidal Ecology Survey Area
 - Terrestrial Ecology Survey Area



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PROJECT TITLE



**Point of Ayr Cable
Route Foreshore Works**

DRAWING TITLE

Figure A.1: Development Boundaries
and Survey Areas




DRAWING STATUS			
FOR ISSUE			
DRAWN	CHECKED	APPROVED	AUTHORISED
KS	SS	TB	TB
SCALE @ A1 SIZE		DATE	REVISION
1:3,000		02/06/2025	A
DRAWING NUMBER			
UK0029984.4176- PF.3.5.1-ES- Sheet1			

















1:50,000

Key:

-  Proposed Development Boundary
-  Aquatic and Intertidal Ecology Survey Area
-  Terrestrial Ecology Survey Area

UKHab Habitat Classification


-  g4 - modified grassland
-  h3 - dense scrub
-  r1 - standing open water and canals
-  s3a3 - humid dune slacks
-  s3a6 - shifting dunes with marram
-  s3a7 - dune grassland
-  t2d5 - intertidal mudflats and sandflats
-  u1 - built-up areas and gardens
-  u1b - developed land, sealed surface
-  u1e - built linear features
-  Individual trees
-  Scattered scrub (10)

SCALE: 1:2,500

0 0.075 0.15 Kilometres

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liverpool bay ccs

PROJECT TITLE

**Point of Ayr Cable
Route Foreshore Works**

DRAWING TITLE

Figure A.2: UKHab Map of Survey Area

DRAWING STATUS

FOR ISSUE

DRAWN	CHECKED	APPROVED	AUTHORISED
KS	SS	TB	TB

SCALE @ A1 SIZE	DATE	REVISION
1:2,500	02/06/2025	C

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