HyNet North West

BIODIVERSITY NET GAIN ASSESSMENT (TRACKED)

HyNet Carbon Dioxide Pipeline DCO

Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 – Regulations 5(2)(a)

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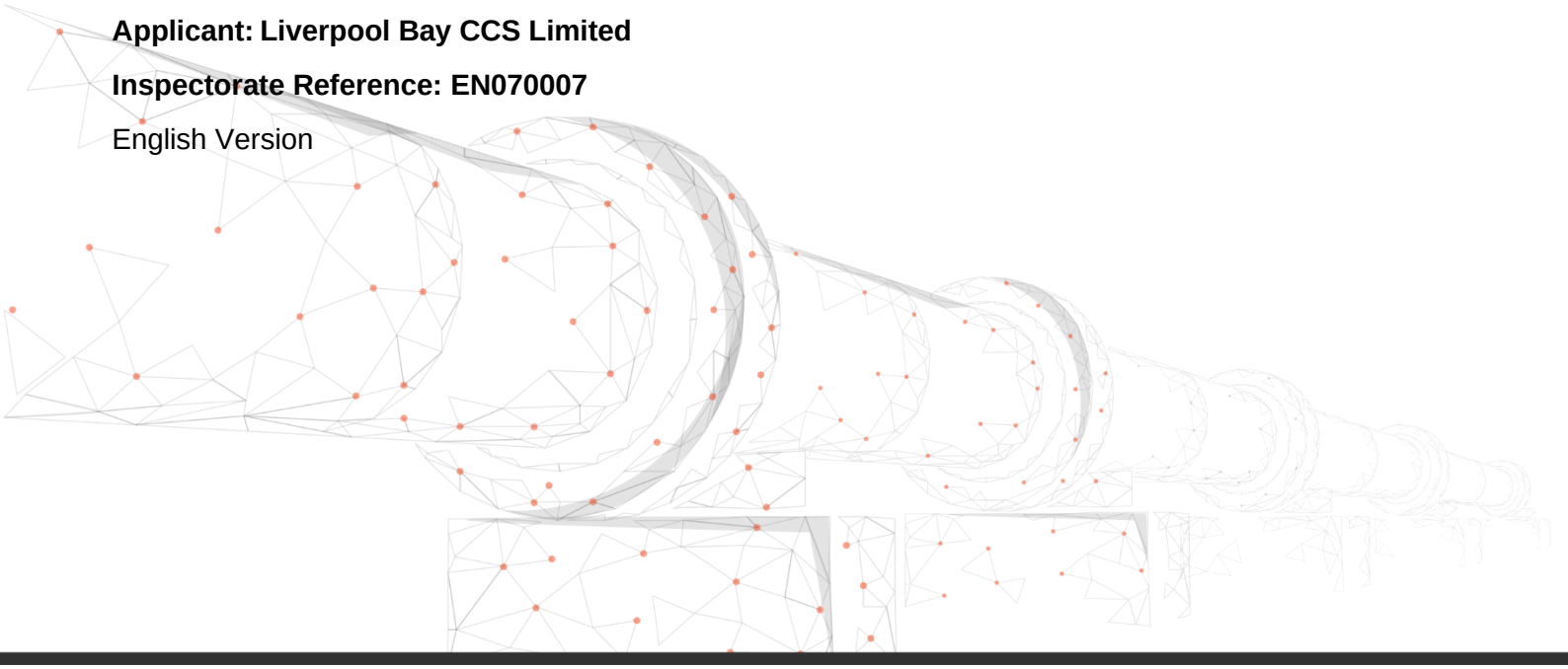

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EXECUTIVE SUMMARY

Biodiversity Net Gain (BNG) is the desired result of a process applied to development so that overall, there is a positive outcome for biodiversity. The process itself follows the mitigation hierarchy, which sets out that everything possible must be done to firstly avoid, secondly minimise and thirdly compensate for unavoidable impacts on or off-site. To demonstrate a positive biodiversity outcome using this process, the project is assessed against the Construction Industry Research and Information Association (CIRIA), the Chartered Institute of Ecology and Environmental Management (CIEEM), and the Institute of Environmental Management and Assessment (IEMA) Biodiversity Net Gain Good Practice Principles (hereafter referred to as 'the BNG Good Practice Principles').

The Applicant intends to build and operate a new underground carbon dioxide (CO_2) pipeline from Cheshire, England to Flintshire, Wales with necessary Above Ground Installations (AGIs) and Block Valve Stations (BVSs). It is classed as a Nationally Significant Infrastructure Project (NSIP) and will require a Development Consent Order (DCO) under the Planning Act 2008 ('PA2008') granted by the Secretary of State ('the SoS') for the Department of Energy Security and Net Zero ('DESNZ').

The aim of this assessment was to ~~seek~~secure a minimum of 1% net gain in Priority Habitats in both England and Wales, following the industry good practice principles for BNG developed by CIEEM, CIRIA and IEMA, as well as the latest (at the time of first assessment) Biodiversity Metric guidance and user guide information. The targeting of Priority Habitats to achieve net gains in biodiversity accords with the Natural Environment and Rural Communities (NERC) Act (2006) Section 41 (Ref. **1**) and Section 7 of the Environment Act Wales (2016) (**Ref. 2**). ~~,~~This assessment therefore was undertaken considering only Priority Habitats present within the Newbuild infrastructure boundary (hereby referred to as the Survey Area). Non-Priority Habitats are not assessed or discussed further within this report.

This report:

1. ~~quantifies~~ Quantifies and compares the baseline biodiversity value of Priority Habitats and the proposed post-development biodiversity value to provide an assessment of quantitative net loss, no net loss or a net gain for Priority Habitats on-site;
2. Incorporates data on both baseline habitats and habitats proposed to be enhanced and created within identified Offset Sites to determine whether these suitably compensate for any residual losses to achieve BNG targets;
3. ~~determines~~ Determines whether the DCO Proposed Development achieves a scheme-wide biodiversity net gain for Priority Habitats by evidencing compliance with the BNG Good Practice Principles; and
4. ~~provides~~ Provides recommendations where necessary that can be implemented to promote a scheme-wide biodiversity net gain.

~~The aim of this assessment was to seek a minimum of 1% net gain in Priority Habitats, in line with the Natural Environment and Rural Communities (NERC) Act (2006) Section 41 (**Ref. 1**) and Section 7 of the Environment Act Wales (2016) (**Ref. 2**). This assessment therefore was undertaken considering only Priority Habitats present within the Newbuild infrastructure~~

~~boundary (hereby referred to as the Survey Area). Non-Priority Habitats are not assessed or discussed further within this report.~~

The Natural England Biodiversity Metric 3.1, hereafter referred to as BM3.1, (Natural England, 2022, **Ref. 3**) has been used to quantify the biodiversity value of existing Priority Habitats present on-site and the proposed on-site retention, loss, and reinstatement, as well as those associated with ~~each~~identified Offset Sites. The BNG assessment was applied to the 'Survey Area' (as referred to in this report) which is defined on **Figure 1**, as well as any identified Offset Sites which are detailed fur~~t~~ther in this report. The BNG assessment was undertaken separately for both the England and Wales sections of the DCO Proposed Development, with ~~.~~ ~~i~~individual BM3.1 metrics completed for each country.~~were completed for each section.~~

~~Without the actions outlined in the BNG Strategy Update **[REP2-042]** and as submitted at Deadline 3, involving discussions on going with a number of key stakeholders~~Considering the agreed Offset Sites, the DCO Proposed Development, as assessed via this BNG assessment, ~~currently achieves a net loss~~ gain in area-based and hedgerow Priority Habitats for both ~~England and Wales.~~ No Priority river habitats have been identified for inclusion within the assessment for either England or Wales. The River Dee, whilst qualifying as a Priority Habitat, has been excluded due to its statutory international and national site designations (the River Dee and Bala Lake/Afon Dyfrydwy a Llyn Tegid Special Area of Conservation (SAC) and River Dee / Afon Dyfrydwy Site of Special Scientific Interest (SSSI)), in line with the BNG Good Practice Principles. Additional dedicated engagement with the BNG Good Practice Principles will work towards an overall positive outcome for biodiversity for the DCO Proposed Development.

Identification of Offset Sites has been undertaken through engagement with landowners and stakeholders as summarised by the BNG Strategy Update [**REP6-033]** and as submitted at Deadline 7. Habitat creation and enhancement within identified Offset Sites has been ~~proposed~~developed in detailed consultation with both CWCC and FCC in England and Wales respectively, as well as Natural England where necessary.

With the agreed Offset Sites, the DCO Proposed Development, as assessed via this BNG assessment, achieves a net gain in area-based and linear hedgerow Priority Habitats for both England and Wales. The Applicant ~~is~~ has ~~committed to~~demonstrated ~~achieving~~ achievement of at least 1% gain in Priority Habitats across the DCO Proposed Development and will secure these Offset Sites, as well as their long-term management, prior to the commencement of development. See **Table 1-1** below for a summary of the BNG result provided by the proposed offsetting.

Table 1-1 - Summary of the Quantitative BNG Assessment Results following off-setting

	Habitat type	On-site baseline value (Area based HU or Linear HeU)	On-site post-development value (Area based HU or Linear HeU)	Off-site baseline value (Area based HU or Linear HeU)	Off-site post-development value (Area based HU or Linear HeU)	Total net unit change	Quantitative outcome

England	Area-based Priority Habitats	132.55	117.95	27.47	43.59	+ 1.52	+ 1.15 %
	Linear hedgerow Priority Habitats	148.19	143.89	0.00	5.87	+ 1.57	+ 1.06 %
Wales	Area-based Priority Habitats	14.13	14.27	0.00	0.34	+ 0.34	+ 2.41 %
	Linear hedgerow Priority Habitats	155.37	150.91	0.00	6.18	+ 1.72	+ 1.11 %

~~The Applicant will seek to deliver this through:~~

- ~~refining and reducing the extent of proposed temporary impacts through detailed design; and~~
- ~~delivering off-site compensation to offset any remaining Biodiversity Unit deficit.~~

~~Off-site compensation scenarios have been produced in order to demonstrate indicative habitat types and areas that would be required to achieve at least 1% gain in Priority Habitats. Further enhancements will be explored that provide a greater net gain in Priority Habitats where practicable and proportionate.~~

BM3.1 toolkits are provided as **Annex C** separate to this report, with two for each of England and Wales. These include ~~hypothetical compensation scenarios~~Offset Sites as outlined within this report.

~~Identification of Ooffset Ssites is being pursuedhas been undertaken through engagement with landowners and stakeholders as summarised by the BNG Strategy Update [**REP2-042]** and as submitted at Deadline 73, using these off-site compensation scenarios based upon this BNG assessment. The Applicant intends this revision of the report as an interim update and intends to publish the final BNG report at Deadline 5. The report will be updated and resubmitted~~This report ~~therefore re~~represents the final BNG assessment report to ~~be submitted to the Planning Inspectorate~~support the DCO Application, following confirmation of ~~the~~ land ~~or~~ and specific strategies to be used ~~to evidence an overall~~to achieve a net gain ~~position~~ in Priority Habitats. This report ~~will detail~~details offset site locations and relevant ecological surveys ~~will have been undertaken~~, where required, to recalculate Biodiversity Units to be delivered. ~~Heads of terms~~ Legal agreements with the ~~relevant landowner(s) or~~ LPAs are under negotiation and will be finalised at this point ~~where applicable~~prior to the commencement of development.

Additional dedicated engagement with the BNG Good Practice Principles, alongside a commitment to deliver~~consider~~ the above proposals, will work towards an overall ~~positive outcome~~net gain of at least 1% for Priority Habitats for biodiversity for the DCO Proposed Development.

1. INTRODUCTION

1.1. BACKGROUND

1.1.1. This Biodiversity Net Gain (BNG) Assessment has been prepared to support a Development Consent Order (DCO) Application for the construction of a new underground CO_2 pipeline (the Newbuild Carbon Dioxide Pipeline) and associated infrastructure~~, broadly from Stanlow, Cheshire area to a location near Flint~~. A~~A~~n a~~d~~ditional Town and Country Planning Act (TCPA) application~~s~~s ~~have has~~have been made for proposed new and modified infrastructure associated with the underground natural gas pipelines and Point of Ayr (PoA) Terminal in Flintshire, Wales. The PoA Terminal will be modified to operate with carbon dioxide (CO_2) as part of the wider CO_2 pipeline transportation network, and the HyNet North West Carbon Capture and Storage (CCS) Infrastructure.

1.1.2. The DCO Proposed Development includes installation of a Newbuild Carbon Dioxide Pipeline, six new block valve stations (BVSs) and four locations for installation of above ground infrastructure (AGIs). The majority of the DCO Proposed Development is in England, with elements also located in Wales.

1.1.3. The 'Survey Area' considered as part of the BNG assessment for the DCO Proposed Development (**Figure 1**) comprises the Newbuild Infrastructure Boundary and includes land required ~~on a temporary~~temporarily ~~basis for construction activities~~to facilitate construction~~,~~ which will be subsequently reinstated following construction;~~,~~ and locations where there will be permanent loss associated with the construction of new ~~or modified~~ infrastructure. Physical access was gained to all locations within the Survey Area for habitat surveys and condition assessment unless there were specific access or health and safety restrictions.

~~1.1.3.~~1.1.4. This report ~~now includes~~ additionally provides information regarding 'Offset Sites' within both England and Wales. ~~which~~ These have been identified through liaison with Cheshire West and Chester Council (CWCC), Flintshire County Council (FCC), and other landowners and interested parties, and assessed as being suitable to support the DCO Proposed Development's requirements in order to meet its net gain targets.

1.2. ECOLOGICAL BACKGROUND

1.2.1. Phase 1 Habitat surveys were undertaken throughout 2020, 2021, and 2022 for the DCO Proposed Development. The habitats predominantly consisted of hedgerows, arable land, modified grassland, woodland, and urban developed land. Areas of scrub, neutral grassland, ponds, and watercourses were also present. A small section of the DCO Proposed Development is located within the River Dee Site of Special Scientific Interest (SSSI) and River Dee and Bala Lake Special Area of Conservation (SAC). The Survey Area also traverses several Local Wildlife Sites (LWS) in both England and Wales, ~~and~~ with the Cheshire West and Chester Ecological Network coverings ~~a significant proportion of the~~ land linking these features in England.

1.2.2. ~~The DCO Proposed Development is located in both England and Wales~~Given the cross-border nature of the DCO Proposed Development, ~~. T~~the BNG assessment was run separately for ~~both~~each of the English and Welsh sections, in order to accurately assess the effects for ~~the two areas~~each country individually.

1.2.3. While the use of a metric is not currently required through existing legislation in Wales, ~~to quantify net gain,~~ there is a ~~necessity~~ need to deliver evidence of providing 'net benefits' for biodiversity (Welsh Government, 2016, **Ref. 2**). Therefore, the BM3.1 was utilised as the best tool for evidencing the baseline biodiversity of the Survey Area~~,~~ and for being able to show what is required to offset impacts in a quantifiable way~~,~~ In this manner, ~~adopting~~ a technical approach consistent with the English sections of the DCO Proposed Development was achieved.

1.3. SCOPE OF REPORT

1.3.1. BNG is the end result of a process applied to development so that overall, there is a positive outcome for biodiversity. The process itself follows the mitigation hierarchy, which sets out that everything possible must be done to firstly avoid, secondly minimise, and thirdly restore / rehabilitate losses of biodiversity on-site. Only as a last resort, residual losses are compensated for. In addition, further enhancements can be provided using Biodiversity offsets, which are distinguished from the forms of on-site mitigation in that they fall outside of the development site. ~~and~~These may consider further enhancement opportunities based on local ~~Biodiversity~~ biodiversity recovery strategies, schemes, and ecosystem service networks. BNG assessment reports are intended to provide a detailed insight into the adherence of a development to the BNG Good Practice Principles.

1.3.2. It is important to recognise that the quantification of Biodiversity Units (BU) is one of a number of factors to be considered when assessing the impact of the DCO Proposed Development on biodiversity. This BNG assessment report is focused on priority habitats. All potential impacts of the DCO Proposed Development on protected species, priority and non-priority habitats, or designated sites, are dealt with within the Biodiversity Chapter of the Environmental Statement (ES) (**Chapter 9 – Biodiversity, Volume II**) following the EIA mitigation hierarchy.

1.3.3. This report ~~represents an~~provides an updated assessment, building on the original assessment submitted with the DCO Application **[APP231 to 240]**. This updated report takes into account the further developments and refinement of the Order Limits developed during the course of the DCO Examination. ~~, whereby further reductions to the extent of habitat loss has been reflected where possible, and any~~This report additionally presents how residual net losses have been compensated for through the identification and use of Offset Sites. These Offset Sites have been identified in consultation with local stakeholders with baseline and 'post intervention' habitat data ~~being~~ gathered and evaluated for inclusion within the assessment. ~~At the detailed design stage, further refinement of construction information will provide an even more accurate result.~~

1.4. DEVELOPMENT OF DCO BNG TARGETS

1.4.1. The BNG targets for the DCO Proposed Development have been developed with consideration of feedback from Statutory Consultees. These have been discussed with the project team and their proportionality reviewed in light of existing policy and legislation for both England and Wales, together with the scale and nature of likely impacts resulting from the DCO Proposed Development. This BNG assessment report considers a target of 1% net gain for Priority Habitats to be applied for the DCO Proposed Development. This approach has been presented to and agreed with statutory consultees.

~~1.4.2. However, the Applicant wishes to explore further enhancement opportunities where practicable and proportionate (as outlined in the BNG Strategy Update **[REP2-042]** and as submitted at Deadline 7~~3, ~~for Priority Habitats or for a selection of Priority Habitats. The opportunities for this will be further discussed through consultation with landowners, during the DCO examination and after its completion, during the detailed design phase.~~

1.5. RELEVANT LEGISLATION, POLICY AND STRATEGY

1.5.1. This BNG assessment has been compiled with reference to the following relevant nature conservation legislation, planning policy and the UK Biodiversity Framework from which the protection of sites, habitats and species is derived in England and Wales.

- UK Government's 25 Year Environmental Plan (DEFRA, 2018) (**Ref. 4**);
- Biodiversity 2020: A Strategy for England's Wildlife and Ecosystem Services (DEFRA, 2011) **(Ref. 5)**;
- The Environment Act (HMSO, 2021) (**Ref. 6**);
- Environment (Wales) Act 2016 (Welsh Government, 2016) (**Ref. 2**);
- Planning Policy Wales: Edition 11 (Welsh Government, 2021[1]) (**Ref. 7**);
- Planning Act 2008: Changes to Development Consent Orders (Department for Communities and Local Government, 2015) (**Ref. 8**)
- National Planning Policy Framework (NPPF) (DCLG, 2021) (**Ref. 9**);
- The Natural Environment and Rural Communities (NERC) Act (HMSO, 2006) (**Ref. 1);**
- Cheshire West and Chester Local Plan Part 1 (2015) (**Ref. 10**), and Part Two (2019) (**Ref. 11**); and
- Flintshire Unitary Development Plan (2011) (**Ref. 12**).
- Flintshire Local Development Plan (2023) (**Ref. 32**)

1.6. OFFSET SITES AND COMPENSATION

1.6.1. ~~1.6.1~~ The assessment presents confirmed compensation 'Offset Sites' designed to achieve a minimum of 1% net gain of Priority Habitats across the DCO Proposed Development.~~xxxxxxxxx~~

1.6.2. ~~1.6.2~~ During the Examination, data from ecological surveys of identified Offset Sites has been collated by the Applicant, to assess baseline data for input into the Biodiversity Metric. This ~~updated~~ report

[1] Including targeted policy changes related to Planning Policy, Wales available at: https://www.gov.wales/sites/default/files/pdf-versions/2023/3/4/1678382406/targeted-policy-changes-planning-policy-wales-net-benefit-biodiversity-and-ecosystems-resilience.pdf

uses this data as well as an evaluation of the proposed habitat interventions (creation and enhancement) to inform a ~~re~~calculation of Biodiversity Units to be delivered.

1.6.3. Habitat creation and enhancement has been proposed in detailed consultation with both CWCC and FCC in England and Wales, respectively as well as Natural England, where necessary. Additional context regarding the extensive discussions with stakeholders and interested parties around securing of Offset Sites and appropriate habitat interventions and creation strategies can be found within the BNG Strategy Update **[REP6-033]** submitted at Deadline 7.

~~Habitat creation and enhancement has been proposed in detailed consultation with both CWCC and FCC in England and Wales respectively as well as Natural England where necessary. Additional context regarding the extensive discussions with stakeholders and interested parties around securing of Offset Sites and appropriate habitat interventions and creation strategies can be found within the BNG Strategy Update [REP6-033] submitted at Deadlin~~

2. METHODOLOGY

2.1. BNG ASSESSMENT

2.1.1. This BNG assessment was undertaken with reference to the following industry recognised best practice methodologies:

- CIEEM, IEMA & CIRIA (2016). Biodiversity Net Gain Good Practice Principles for Development (**Ref. 13**);
- CIEEM, IEMA & CIRIA (2019). Biodiversity Net Gain. Good Practice Principles for Development. A Practical Guide (**Ref. 14**);
- CIEEM (2022). Welsh Government's Approach to Net Benefits for Biodiversity and the DECCA Framework in the Terrestrial Planning System. CIEEM Briefing Paper. (**Ref. 15)**
- Natural England (2022). The Biodiversity Metric 3.1 (JP039) auditing and accounting for biodiversity user guide (**Ref. 16**);
- Natural England (2022). The Biodiversity Metric 3.1 (JP039) Technical Supplement (**Ref. 17**);
- British Standards Institute (BSI) (2021). BS8683: 2021: Process for designing and implementing Biodiversity Net Gain Specification (**Ref. 18**); and
- Natural England (2010). Higher Level Stewardship, Farm Environment Plan (FEP) Manual, 3rd Edition (**Ref. 21**).

2.1.2. This report uses the Principles and BM3.1 to produce an assessment report that:

1. Establishes the total number of baseline Biodiversity Units (BU) for Priority Habitats within the Survey Area for both England and Wales independently~~. The two sections will be evaluated separately~~;
2. Establishes the total number of BU in Priority Habitats which will be lost, retained, reinstated, enhanced, and created under the current plans of the DCO Proposed Development;
3. Determines whether the DCO Proposed Development will result in a quantitative net loss, no net loss, or a net gain for biodiversity in Priority Habitats within the Survey Area;
4. Determines whether the Offset Sites identified adequately compensate for the residual losses associated with the DCO

Proposed Development to ~~reveal~~result in an overall quantitative net gain for biodiversity in Priority Habitats; and

~~4.~~5. Determines whether the DCO Proposed Development achieves a net gain for biodiversity in Priority Habitats within ~~either~~ both the England ~~or~~ and Wales sections of the DCO Proposed Development, by evidencing compliance with the BNG Good Practice Principles.~~; and~~

2.1.3. The quantitative outcomes of the BNG assessment calculations can then be categorised as achieving one of the outcomes listed in **Table 2** below.

Table 2.1 - Quantitative Outcomes of BNG Calculations

Post-development biodiversity value	**Predicted Scheme-wide outcome**
Less than 100% of the baseline value	Net Loss of biodiversity
100% - <101% of baseline value	No Net Loss of biodiversity
101% or more of baseline value	Biodiversity Net Gain

2.1.4. The quantitative outcomes of the calculations are one component of the BNG assessment and associated BNG Good Practice Principles (**Annex A**). A BNG assessment also requires the collation of qualitative evidence on the application of the mitigation hierarchy, stakeholder engagement, and post-development habitat management. Collectively, these quantitative outcomes and qualitative evidence are used to inform the outcomes of the BNG assessment.

~~5. Provides recommendations to help inform the landscape plan for the DCO Proposed Development, or the creation/enhancement of off-site habitats, to work towards achieving net gain.~~

~~2.1.3.~~2.1.5. Strategic significance refers to another attribute within BM3.1 which factors in the spatial context of each habitat and assigns a multiplier based upon whether they are in ecologically connected locations. With respect to strategic significance, the following approach has been taken to identify the relevant category for each individual habitat 'parcel' occurring within the Survey Area:

Table 2-22.1 - Method for assigning strategic significance

Strategic significance	Method
Within an area formally identified in local strategy	Habitats are assigned this category where the following criteria are met: - It is located within an area identified as a statutory designated site[2] or non-statutory designated site[3] or within a relevant local strategy[4] and - Habitats are specified in relation to the identified area *or* - Where specific details on relevant habitats to the identified site are unknown, all habitats which sit within the formally identified area are assigned to this level.
Location ecologically desirable but not in location strategy	Professional judgement ~~will be~~is applied to determine if the location is deemed ecologically desirable for a particular habitat type. This decision will take account of the proximity of formally identified areas and ecological connectivity (i.e., if the habitat forms a strategic corridor) to the Site.
Area not in a local strategy	Any habitats which do not fall into either of the above categories will be assigned this level of strategic significance.

2.2. SOURCES OF HABITAT DATA

2.2.1. The BNG assessment is informed by:

1. Field surveys ~~were~~ undertaken in 2020, 2021 and ~~continued into~~ 2022, by experienced ecologists, to provide a baseline habitat database, which details habitat types present within the Survey Area, their area (ha) and their geographic distribution (**Figure 1**). Classification of habitats was undertaken using Joint Nature Conservation Committee (JNCC) Phase 1 methodology (**Ref. 19**) following best practice guidance. The JNCC habitat types were later translated into UK Habitat Classification (UKHab) (**Ref. 20)** types, using the 'G-9 Translation Phase 1' tab within the BM3.1, along with the professional judgement ~~from~~ of a suitably experienced ecologist. In BM3.1, 'distinctiveness' (referring to the

[2] To include Special Protection Areas (SPAs), Special Areas of Conservation (SACs), Ramsar, Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNRS)
[3] To include Local Nature Reserves (LNRs) and Local Wildlife Sites (LWS)
[4] To include strategic ecological networks where referenced within Local plans

relative scarcity of a habitat as well as its intrinsic value) is pre-assigned for each habitat based upon the UKHab system. Where gaps were present (~~2.74ha, or~~ 0.1~~6~~% of the Survey Area) within the habitat data, aerial mapping and pre-classified remote sensing data was used (see **Section 2.4**). All Priority Habitats, which are the focus of this assessment, were fully and comprehensively assessed by field survey.~~xxx~~

2. Concurrently with Phase 1 Habitat surveys, the Applicant undertook a Habitat Condition Assessment (HCA) of all habitats within the Survey Area. The HCA followed conditions present in the Natural England (NE) Farm and Environment Plan (FEP) manual (**Ref. 21**), as the surveys were started during 2020 prior to the release of a condition assessment associated with the BM3.1. Where HCA data was not collected in the field at the time of survey, due to access or health and safety reasons, a retrospective HCA was undertaken (see **Section 2.4**).

~~2.2.2. The quantitative outcomes of the BNG assessment calculations can then be categorised as achieving one of the outcomes listed in **Table 2** below.~~

~~**2.2.2**~~

~~**Post-development biodiversity value**~~	~~**Predicted Scheme-wide outcome**~~
~~Less than 100% of the baseline value~~	~~Net Loss of biodiversity~~
~~100% of baseline value~~	~~No Net Loss of biodiversity~~
~~101% or more of baseline value~~	~~Biodiversity Net Gain~~

~~2.2.3. The quantitative outcomes of the calculations are one component of the BNG assessment and associated BNG Good Practice Principles (**Annex A**). A BNG assessment also requires the collation of qualitative evidence on the application of the mitigation hierarchy, stakeholder engagement, and post-development habitat management. Collectively, these quantitative outcomes and qualitative evidence are used to inform the outcomes of the BNG assessment.~~

2.3. IRREPLACEABLE HABITATS AND HABITATS OF PRINCIPAL IMPORTANCE

2.3.1. Following best practice guidance, Baker *et al* 2019 (**Ref. 22**) irreplaceable habitats and statutory designated sites ~~were~~ have been

excluded from the BNG calculations. Net gain or no net loss cannot be achieved for a ~~DCO Proposed D~~development as a whole if there is a negative impact on an irreplaceable habitat (see Principle two of the BNG Good Practice Principles). Where such impacts persist, bespoke mitigation measures must be agreed, but gains can still be sought and assessed for the remaining habitats. Any habitat that cannot be recreated elsewhere, within a reasonable timeframe, is considered to be an irreplaceable habitat.

2.3.2. Publicly available datasets for Habitats of Principal Importance (HPI) (**Ref 33** and **Ref.34**) were overlaid with the Survey Area (see **Section 2.4** for further details). Ancient Woodland Inventory (AWI) and statutory designated sites also were overlaid to determine their presence and need for ~~their~~ exclusion from the BNG assessment.

2.3.3. The Priority Habitat types 'Coastal Floodplain and Grazing Marsh', 'Ponds (Priority Habitat)', 'Lowland mixed deciduous woodland', and 'Hedgerows (Priority Habitat)' were identified from public data sets within the Survey Area; no other Priority Habitats were identified.

2.3.4. No Priority River habitats ~~have~~ were ~~been~~ identified for inclusion within the assessment for either England or Wales. ~~The River Dee had been incorrectly included within the original version of metric, assessment and report **[APP-231]** at DCO submission. This has been addressed appropriately within this version of the report.~~ The River Dee, whilst qualifying as a Priority Habitat, has been excluded from the metric calculations and reporting due to its statutory international and national site designations (the River Dee and Bala Lake/Afon Dyfrydwy a Llyn Tegid SAC and River Dee / Afon Dyfrydwy Site of Special Scientific Interest (SSSI)). This approach is in accordance with the BNG Good Practice Principles for Development (**Ref. 22**) and BNG's non-application to statutory designated sites.

2.4. ASSUMPTIONS AND LIMITATIONS

2.4.1. The following assumptions and limitations have been applied when using the above methodologies.

GENERAL

2.4.2. Only Priority Habitats have been assessed within this assessment, reflecting the goal of achieving a minimum 1% Biodiversity Net Gain in Priority Habitats. This BNG assessment responds proportionately to the existing legislative and policy landscape in England and Wales, whereby BNG is not (or not yet) a mandatory requirement. The targeting of Priority Habitat to achieve net gains in biodiversity accords

with the Natural Environment and Rural Communities ~~(NERC) Act (2006)~~ (NERC Act) Section 41 (**Ref. 1**) and Section 7 of the Environment (Wales) Act ~~Wales (2016)~~ (**Ref. 2**), whilst utilising the Biodiversity Metric provides a robust mechanism to achieve a greater extent of Priority Habitat than that which is lost to the DCO Proposed Development. Further context around how the BNG assessment responds to existing legislation and policy within England and Wales can be found within the ~~BNG Strategy Update re-submitted at Deadline 7 (REF).~~ BNG Strategy Update [**REP6-033**] ~~and~~ as submitted at Deadline 7.

~~2.4.2. The net gain approach is in line with the Natural Environment and Rural Communities (NERC) Act (2006) Section 41 (**Ref. 1**) and Section 7 of the Environment Act Wales (2016) (**Ref. 2**).~~

2.4.3. As per UKHab guidance (**Ref. 20**), all hedgerows consisting *"predominantly of at least one woody UK native species*" within the Survey Area have been considered Priority Habitats.

2.4.4. River habitat data to inform the river condition score ~~have been~~was collected by carrying out River Condition Assessment surveys on all watercourses within the Survey Area (not deemed to be ditches or hedgerow features). As per Gurnell et al., 2020 (**Ref. 23**), baseline data ~~has~~ was~~been~~ collected for at least 20% of the length of each watercourse within the Newbuild Infrastructure Boundary. For ditches, the simple ditch survey form was completed once for each ditch within the Newbuild Infrastructure Boundary. The distinctiveness of each watercourse as a river, ditch or canal was based upon observations from a walkover survey in November 2021. For watercourses which were not accessed in November 2021, the distinctiveness was determined on site during the surveys in March and April 2022 (see paragraph 2.3.3 above). Whilst these assessments were undertaken, ultimately no watercourse was ~~considered~~assessed ~~to be~~as a Priority Habitat and have therefore not considered further within this assessment.

2.4.5. BM3.1 (Natural England, 2021, **Ref. 3**) has been used to quantify the biodiversity value of existing Priority Habitats present on-site and the proposed on-site retention, loss, and reinstatement. The BNG assessment was applied to the 'Survey Area' (as referred to in this report) which is defined on **Figure 1**. The BNG assessment was undertaken separately for both the England and Wales sections of the DCO Proposed Development. Individual BM3.1 metrics were completed for each section.

2.4.6. Small gaps (0.01% of the Survey Area) were present within the baseline habitat dataset in instances where habitats were inaccessible to surveyors. For this BNG assessment, a gap analysis was undertaken, and aerial imagery was used to identify the habitats within these gaps. Due to the small number of habitats assessed via aerial imagery within the Survey Area, this assumption is not considered a significant limitation of the BNG assessment. Habitat condition was assigned retrospectively to habitat parcels assessed via aerial imagery using the method as described below.

2.4.7. HCA was primarily informed by field data where possible, however, where this was not possible, and/or where HCA data was absent, the following rule was applied:

- Low distinctiveness habitats were assigned poor condition; and
- Medium or High distinctiveness habitats were assigned moderate condition.

2.4.8. Due to their statutory designated status, the River Dee and Bala Lake SAC has been excluded from the BNG calculations~~, and~~with bespoke mitigation measures ~~have been~~ proposed, ~~where~~ as required, ~~and~~ and~~will be~~ secured through the DCO Application., as detailed within the ES and Habitat Regulations Assessment (HRA) for the DCO Proposed Development. Connah's Quay Ponds and Woodlands SSSI is~~, in part,~~ located ~~immediately~~ adjacent to Order Limits, beyond the Order Limits boundary, and as such is excluded from the BNG calculations.

2.4.9. ~~The p~~Publicly available ~~Habitats of Principal Importance (~~HPI~~)~~ dataset~~s was~~ were overlaid with the Survey Area. This identified various ~~the~~ HPI habitats including 'Coastal Floodplain and Grazing Marsh' (CFGM) within the Survey Area. Following a review of desk study data and ditch networks across the Order Limits, along with consideration of the prevailing habitat and vegetation structure, CFGM status has been applied where this aligns with the CFGM HPI dataset. Specifically, where this habitat designation was overlaying a habitat parcel within the Survey Area, the following assumptions were applied:

- Where field survey data had identified a habitat as grassland or cropland habitat, ~~it was assumed that~~ this was ~~confirmed~~ assumed to be CFGM.
- Where survey data had identified areas as habitats other than a grassland habitat type (e.g. urban – developed land or woodland),

the field survey data was assumed to be most accurate and up to date and therefore CFGM was not present.

2.4.10. ~~The p~~Publicly available HPI dataset~~s~~ were~~as~~ also used to identify HPI woodland within the Survey Area. The designation of HPI woodland was also sense-checked using field survey data. Any woodland deemed to meet criteria for HPI woodland through this field survey sense check was assigned as lowland mixed deciduous woodland within BM3.1 and therefore assessed as a Priority habitat.

2.4.11. For ponds present within the Survey Area, these were assumed to all be Priority Habitat due to the assumed presence of Great Crested Newt *Triturus cristatus* as a precautionary measure (irrespective of desk and field survey results presented within Chapter 9 Biodiversity and its supporting appendices).

2.4.12. The classification of priority habitat for rivers and streams has been reviewed following consultation with Natural England. Following the guidance in UKBAP Priority Habitat Descriptions for Rivers (**Ref. 31**), the priority habitat is defined by either the presence of one species from criterion level A or C, or six species from criterion level B. It was identified that only the River Dee has six criterion level B species, and no watercourses have criterion level A or C species present. However, as the River Dee is designated as an SAC and SSSI it has been excluded from the metric, in line with the BNG Good Practice Principles.

2.4.13. The strategic significance of all Priority habitats within England were assigned as 'formally identified in local strategy' owing to ~~. This is due to~~ the Ecological Network mapping associated with ~~Cheshire West and Chester Council (~~CWCC~~)~~ policy DM44, which includes all known Priority habitat parcels. It is acknowledged that not all hedgerows fall within the network, however, as the vast majority do, and considering priority habitat is considered a fundamental element of the network, all were assigned strategic significance as a precautionary measure.

POST-DEVELOPMENT BIODIVERSITY

2.4.14. For the post-development recommendations, strategic significance scores were assumed to be the same as the baseline scores, due to the same spatial context.

~~2.4.14.~~2.4.15. Block Valve Stations (BVS) and Above Ground Installations~~Infrastructure~~ (AGI) have been subject to landscape design proposals. These have been incorporated into the BNG

assessment to assess the losses and gains of Priority Habitat associated with any landscaping.

~~2.4.15.~~2.4.16. All habitats outside the permanent loss areas or areas covered by landscape designs, but within the Survey Area, excluding areas where specific commitments for retention have been made, have been classified as 'temporary loss areas', as shown in **Figure 2**. The BM3.1 considers losses to be temporary when the original baseline habitat will be recreated in the same or better condition~~,~~ within two years from the date of the impact occurring (**Ref. 16**).

~~2.4.16.~~2.4.17. Due to the predominantly short-term, temporary, and localised nature of the DCO Proposed Development, all habitats within permanent loss areas were considered to be completely lost and habitats within temporary loss areas assessed using the methodology laid out in **paragraph 2.4.18.**

~~2.4.17.~~2.4.18. The Construction Working Width for the DCO Proposed Development is expected to be a maximum of 32m ~~along the Newbuild Carbon Dioxide Pipeline Route~~, with exceptions made for Above Ground Installations ~~Infrastructure~~ (AGI)~~s, and~~ Block Valve Stations (BVS) and temporary construction compounds~~s~~. ~~The Survey Area for the DCO Proposed Development extends further than this 32m buffer to accommodate possible further refinement of the Newbuild Carbon Dioxide Pipeline Route during Detailed Design~~In the absence of a final design, a larger Survey Area was applied during baseline surveys broadly encompassing a 100m survey corridor, extended in sections to accommodate proposed access routes or compound locations. For this reason, the Survey Area contains more habitat area than that which would be potentially affected ~~from~~ by construction of the DCO Proposed Development. In order to make the assessment more accurate and proportionate, the following calculation method was utilised:

1. The total area was calculated for all temporary loss areas within the Survey Area.
2. The total area was also calculated for a 32m buffer within the temporary loss areas.
3. The total area was then divided by the area covered by the 32m construction buffer.
4. The result of this calculation was a ratio by which all Priority Habitats within the temporary loss areas were divided by.

5. The resulting number was treated as the ‘lost’ area for that habitat. The remaining area was then treated as ‘retained’.

~~6.~~ This was all calculated separately for both the England and Wales sections of the DCO Proposed Development, taking into account the latest order limits ~~taking account of~~ including ~~design c~~Change R~~r~~equests 1, 2 and 3. ~~xxx~~

~~7.~~6. By using this method, the assessment produced a more realistic result proportionate to likely impacts, which takes into account an average 32m corridor being affected by the DCO Proposed Development within the entire Survey Area.

~~2.4.18.~~2.4.19. All habitats considered to be ‘lost’ within the temporary loss areas were ‘reinstated’ where reasonably possible. In some circumstances due to limitations from utilities presence in some locations, it will not be possible to reinstate certain habitats (e.g. woodland); these were therefore treated as lost entirely and replaced by modified grassland. The habitat type ‘Lowland mixed deciduous woodland’ was considered unlikely to be recreated on-site without the confirmation of long-term management commitments and was therefore conservatively treated as lost, even though the area could be replanted with a lower distinctiveness woodland or native scrub species (where utilities do not allow for woodland planting).

~~2.4.19.~~2.4.20. The above assumptions, based on temporary loss areas, are considered to be a proportionate approach due to detailed construction information or a final design not being available at the time of writing.

~~2.4.20.~~2.4.21. For hedgerows, a maximum of 15m of hedgerow length has been assumed to be lost from each hedgerow crossing within the Survey Area, in order to accommodate construction of the DCO Proposed Development, before being replanted after construction. Therefore, during the assessment, 15m of each hedgerow crossed was treated as ‘lost’ and then ‘reinstated’ within the on-site Creation tab. The remaining length of each hedgerow was treated as retained.

~~2.4.21.~~2.4.22. Where it was confirmed through field survey data that a habitat parcel was CFGM, it was treated in the BM3.1 in accordance with the underlying habitat it was surveyed as. Therefore, a low distinctiveness grassland which overlapped with the CFGM HPI layer (and therefore was assigned as CFGM in BM3.1) was treated as retained in the toolkit, as it is assumed to be reinstated within 2 years. Medium distinctiveness grasslands which overlapped with the CFGM HPI layer were treated as lost and reinstated. This rationale reflects the fact that

CFGM designation is based upon the underlying hydrology, topography, and local ditch systems, all of which would not change as a result of the DCO Proposed Development. Therefore, the intrinsic value of the underlying grassland associated with species diversity is the predominant factor which will determine whether or not this habitat type will return to its baseline value within 2 years of impacts occurring.

For the ~~off-site compensation scenarios~~Offset Sites, a baseline habitat type of 'Developed land – sealed surface' was used where the baseline habitat was not Priority Habitat, in order to accurately estimate the habitat area required for Priority Habitats. These habitat types are labelled within the 'assessor comments' box of the BM3.1 where relevant to provide transparency.~~It is assumed that this habitat type will be made up of 'Grassland – Modified grassland' or similar, where new Priority Habitat is proposed to be created~~. ~~Due to this not being~~ Where the baseline habitat was not a Priority Habitat but did generate BU, it was ~~therefore~~ not included within the calculations so as to remain consistent and to display clarity in the Priority Habitat results.

~~2.4.22. The post-development condition of impacted watercourses is determined by running scenarios through Cartographer (**Ref. 30**). Actual River Condition Assessment (RCA) survey results have been estimated to reflect what would likely be recorded in a survey post-development to derive a future condition score.~~

~~To remain transparent, as off-site habitat interventions are explored the baseline habitats for any identified sites will be outlined including UKHab habitat and condition where relevant.~~

3. RESULTS

3.1. OVERVIEW

3.1.1. A summary of the quantitative BNG assessment calculations ~~quantitative outcomes~~ is presented ~~in the results section~~below. Results are presented individually for both England and Wales, as separate BM3.1 toolkits were completed for each ~~area~~ country to allow for an overall BU score to be determined for ~~each~~independently. The separate BM3.1 toolkits are provided ~~as~~ within **Annex C** separate to this report~~, with one for each of England and Wales~~.

3.2. ENGLAND

Baseline Biodiversity

3.2.1. The total footprint of area-based Priority Habitats within the DCO Proposed Development for England covers an area of 12.921~~1~~ha with a value of 132.55 Habitat Units (HU).

3.2.2. The total linear hedgerow Priority Habitats within the DCO Proposed Development for England totalled 18.541km with a value of 148.197~~7.91~~ Hedgerow Units (HeU).

3.2.3. No river Priority Habitats were present within the DCO Proposed Development for England.

Post-Development Biodiversity

3.2.4. Retained, area-based Priority Habitats totalled 11.1134~~34~~ha, with a value of 116.548~~8.20~~HU. Retained linear Priority Habitat hedgerows totalled 15.659~~59~~km, with a value of 1245~~45~~.9137~~37~~HeU.

3.2.5. Reinstated area-based Priority Habitats totalled 0.741~~41~~ha with a value of 1.4135~~35~~HU. Reinstated linear hedgerow Priority Habitats totalled 2.8572~~72~~km, with a value of 165~~65~~.4381~~81~~HeU.

~~3.2.5.~~3.2.6. Newly created linear hedgerow Priority Habitats totalled 0.33km, with a value of 2.54HeU.

Quantitative Assessment

~~3.2.6.~~3.2.7. **Table 3-1** below summarises the current overall change in biodiversity value between the baseline and post-development.

Table 3-13.1- Summary of the Quantitative BNG Assessment Results within the Survey Area

Habitat type	Baseline value	Post-development value	Change in units	Quantitative outcome
Area-based Priority Habitats	132.55	117.959.55	-14.6013.00	**-11.019.81%**
Linear hedgerow Priority Habitats	148.197.91	1431.8918	--4.306.73	**-2.904.55%**
~~Linear river Priority Habitats~~	~~0.00~~	~~0.00~~	~~0.00~~	~~0.00%~~

~~Compensation Scenario~~Offset Site Compensation

- ~~-~~

3.2.8. Offset Sites have been identified through liaison with CWCC and r~~a~~un through BM3.1 to demonstrate achievement of a minimum 1% net gain in Priority Habitats within England. The locations of the sites in relation to the DCO Proposed Development Order Limits can be viewed within **Figure 4**. Further context regarding identification of sites and liaison with offset providers, including locations of the Offset Sites, is detailed within the BNG Strategy Update **[REP6-033]** ~~and~~ as submitted at Deadline 7.~~BNG Strategy Update (Ref XX) submitted at Deadline 7.~~

3.2.9. Further detail regarding these Offset Sites ~~are~~is provided below:

- Land around Wervin, near Ashwood Lane (approximately~~..~~ 0.75 km) Northwest of the Order Limits. The site has a mix of existing broadleaved woodland (0.95ha) as well as recently planted woodland from arable land. An agreement in principle is in place to purchase the units resulting from enhancing the existing woodland as well as creation of new woodland from arable land which surrounds the existing woodland block. At this site, it is also proposed to create a pond, adjacent to the woodland habitat creation.
- Land around the Countess of Chester Country Park, North Chester (Chester Wetlands Project), approximately 0.5km south of the Order Limits. This area contains a mosaic of existing wetland, grassland, scrub, and woodland habitats. Proposals

have, independently of the DCO Proposed Development, already been created in draft form for this site for an existing CWCC project, which involves creation and enhancements to wetland and grassland habitats. This site will be utilised to provide offsetting for ponds and Coastal Floodplain and Grazing Marsh.

- ~~CWCC Hedgerow Strategy - From autumn 2023, CWCC are proposing a Hedgerow Grant Scheme for planting of new hedgerow. The hedgerow initiative will be promoted to landowners, matching up interested landowners with volunteers to help map the health of their hedgerows.~~

3.2.10. ~~Using the BM3.1, a~~The Offset Site compensation ~~broadly follows the compensation scenarios~~ was run to calculate the amount of off-site ~~created habitat that would be necessary to achieve a minimum 1% net gain in Priority Habitats~~set out in previous iterations of this report, but demonstrates tangible identified sites which have been assessed through field survey to establish the baseline units and potential uplift in units which can be achieved through habitat interventions. ~~**This scenario is**~~**Further and the compensation provided at the Offset ~~Sites~~ ~~laid out in Table 4, below.~~ Table 3.2** below summarises the habitat interventions proposed at each of the Offset Sites within England and provides the units gained through these proposals. **Table 3.3** summarises the total areas of each habitat type to be lost and reinstated within the Survey Area as well as created or enhanced within the Offset Sites.~~The locations of the sites in relation to the DCO Proposed Development Order Limits can be viewed at~~within **~~Figure 4~~**. ~~Further context regarding identification of sites and liaison with offset providers, including locations of the Offset Sites, can be seen is detailed within the Update the BNG Strategy (Ref XX) re-submitted at Deadline 7.~~

- ~~—~~

3.2.11. The following assumptions and limitations were applied to the compensation calculations:

- For all Offset Sites, habitats created and enhanced will be secured, managed, and maintained for 30 years.
- ~~This scenario involves gaining units in Priority Habitat via creation of new habitats only. It will be possible to gain required units through a blend of newly created habitats and enhancement of existing Priority Habitat, or through achieving uplifts in distinctiveness of non-priority habitat to meet criteria of Priority~~

~~Habitat. Under any future scenario, a greater total area of each Priority Habitat type will be created than that lost within the Survey Area baseline wherever possible.~~

- The target condition of created or enhanced habitats has been decided through collaboration with CWCC based upon known conditions of the Offset Sites as well as management and maintenance which is achievable.
- Moderate condition Lowland mixed deciduous woodland habitat creation was targeted due to the difficulty in achieving the required criteria for good condition over a period of 30 years~~,~~ (~~notably~~primarily presence of veteran trees and establishment of ~~3~~three age classes). ~~Offset Site~~ For this habitat type,
- ~~For Lowland mixed deciduous woodland creation,~~ 'Habitat created in advance/years' has been set to 2 years within BM3.1[5] due to the trees having already been planted within a previous arable cropland baseline at the Wervin site prior to engagement with CWCC.
- Ponds created within the Wervin site are also set as '2' within the 'Habitat created in advance/years' column of BM3.1 for the same reason.
- Good condition Lowland mixed deciduous woodland has been targeted from Other woodland; broadleaved enhancement, due to many mature trees already being established within the Offset Site baseline.
- For Coastal floodplain grazing marsh, a target condition of moderate has been selected. This is ~~due to the fact that~~considered appropriate in the knowledge that some ditches present within the baseline are unlikely to be enhanced to good through the proposed habitat interventions at the Offset Site, meaning that a criterion essential for good condition will not be passed.
- ~~was assumed to be Good, based on the assumption that appropriate management plans will be in place and secured for a minimum of 30 years.~~
- An off-site baseline habitat type of 'Developed land – sealed surface' was used where the baseline was not a Priority Habitat due to it scoring a baseline value of 0HU. This was in order to accurately estimate the habitat area required for Priority Habitats.

[5] Habitats created in advance/years, for the purposes of this assessment and in line with BM3.1 guidance, have been considered as creation and not enhancement.

~~It is assumed that this habitat type will be made up of 'Grassland – Modified grassland' or similar~~Where this is the case, the actual baseline habitat has been labelled within the appropriate row of the assessor comments box within BM3.1. ~~Due to this not being a Priority Habitat but still impacting results of HU, it was therefore not included within the calculations and instead a~~A habitat was used that does not score biodiversity units so as to remain consistent and provide clarity in the Priority Habitat results.

- Due to an error in the BM3.1, whereby units would not generate due to the 'final time to target multiplier' box remaining blank, it was not possible to estimate the amount of L~~l~~owland mixed deciduous woodland creation required to achieve a 1% net gain through the off-site tab. Therefore, the compensation required for L~~l~~owland mixed deciduous woodland was modelled using the on-site tab. This is not considered to be a limitation as the multipliers applied result in the same result as would be achieved through the off-site tab.
- A portion of the ponds and all hedgerows are to be created through a CWCC 'Pond Creation Strategy' and 'Hedgerow Creation Strategy' respectively, meaning that no land has yet been identified. The details of these strategies have been agreed with CWCC. The hedgerow and pond creation will adhere to the habitat type and target condition as set out in the accompanying BM3.1 and **Table 3.2** below. They will be subject to 30 years management overseen by CWCC and baseline surveys will be completed prior to construction of ponds to ensure no existing priority habitat is impacted. Further details on these strategies are provided within the BNG Strategy Update [**REP6-033**] and as submitted at Deadline 7. ~~BNG Strategy Update (REF).and an outwith available details of these strategieswithin~~
- ~~For Lowland mixed deciduous woodland creation, 'Habitat created in advance/years' has been set to 2 years due to the trees having already been planted within previous arable cropland baseline at the Wervin site prior to engagement with CWCC.~~

Table 3-2~~3.2~~ - Off-site Priority Habitat Compensation Scenarios for England

Habitat Type	Offset Site	Baseline Habitat data source	Baseline Habitat	Baseline Condition	Proposed Habitats	Target Condition and intervention	Created or enhanced ~~A~~area (ha) /length (km)	Units created or enhanced (HU/HeU/RU)	Overall Change in Units per Habitat	Overall Percentage Change
Area-based	Chester Wetlands (land near Countess of Chester country park)	3rd party ecological survey on behalf of CWCC in September 2021 and November 2022	Coastal floodplain and grazing marsh	Poor	Coastal floodplain and grazing marsh	Enhancement to ~~Good~~Moderate	2.776 ha	28.087.57	+1.131.34	+1.150392%
	Wervin	CWCC field survey	Cropland – cereal crops	N/A	Ponds (Priority habitat)	Creation of Good	0.07 ha	0.87	+0.2096	
	To be delivered through Pond Creation Strategy	N/A	N/A	N/A	Ponds (Priority habitat)	Creation of Good	0.123 ha	1.393.03		
	Wervin	CWCC field survey	Other woodland; broadleaved	Moderate	Woodland – Lowland mixed deciduous woodland	Enhancement to Good	0.952.6 ha	4.949.63	+8.550.25	
	Wervin	CWCC field survey	Cropland – cereal crops	N/A	Woodland – Lowland mixed deciduous woodland	Creation of Moderate	2.25 ha	3.61		
Linear – hedgerows	To be delivered through Hedgerow Creation Strategy	N/A		N/A	Native species rich hedgerow ~~with trees~~	Creation of Good	0.751.0 km	8.835.87	+1.572.09	+1.06.42%

Table 3.3 - Total areas of habitats to be reinstated and created or enhanced through the DCO Proposed Development in England.

Habitat Type	Area/ Length lost (ha/ km)	Area/ Length Reinstated/Created (ha/ km)	Proposed Area/ Length Created / Enhanced off-site (ha/ km)
Lowland mixed deciduous woodland	0.37ha	0.00	2.25ha created 0.95ha enhanced
Ponds (Priority habitat)	0.10ha	0.00	0.19ha created
Hedgerow priority habitats	2.86km	3.18km	0.75km created
Coastal Floodplain and Grazing Marsh (CFGM)	1.34ha	0.74ha	2.77ha enhanced

3.3. WALES

Baseline Biodiversity

~~3.3.1. The River Dee and Connah's Quay Ponds and Woodlands SSSI (SAC and SSSI) were recorded within the DCO Proposed Development for Wales. However, as previously mentioned in **Section 2.5,** the sites were not included within BNG calculations.~~

~~3.3.2.~~3.3.1. The total footprint of area-based Priority Habitats within the DCO Proposed Development for Wales covers an area of 1.~~66ha~~ 67ha with a value of 14.13~~14.12~~HU.

~~3.3.3.~~3.3.2. The total linear hedgerow Priority Habitats within the DCO Proposed Development totalled 24.34~~84~~km with a value of 155.37~~57.07~~HeU.

~~3.3.4. No river Priority Habitats were present within the DCO Proposed Development for Wales.~~

Post-Development Biodiversity

~~3.3.5.~~3.3.3. Retained, area-based Priority Habitats totalled 0.74~~50~~ha, with a value of 7.05~~5.24~~HU. Retained linear Priority Habitat hedgerows totalled 20.45~~91~~km, with a value of 131.24~~2.86~~HeU. ~~Retained linear river Priority Habitats totalled 0.41km, with a value of 4.83RU.~~

~~3.3.6.~~3.3.4. Reinstated linear hedgerow Priority Habitats totalled 3.87~~91~~km, with a value of 18.54~~61~~HeU.

~~3.3.7.~~3.3.5. Newly created linear hedgerow Priority Habitats totalled 0.17km, with a value of 1.14HeU.

Quantitative Assessment

~~3.3.8.~~3.3.6. ~~**Table 3.1**~~**Table 3.4~~3** below summarises the current overall change in biodiversity value between the baseline and post-development.

Table 3~~-3~~3.34 - Summary of the Quantitative BNG Assessment Results within the Survey Area

Habitat type	Baseline value	Post-development value	Change in units	Quantitative outcome
Area-based Priority Habitats	14.13~~14.12~~	~~5.24~~7.05	~~-8.88~~-7.08	**-50.10~~62.85~~%**
Linear hedgerow	15~~57~~.~~07~~37	~~152.61~~150.91	-4.46	**-2.8~~7~~4%**

Habitat type	Baseline value	Post-development value	Change in units	Quantitative outcome
Priority Habitats				
~~Linear river Priority Habitats~~	~~0.00~~	~~0.00~~	~~0.00~~	~~**+0.00%**~~

Offset Site Compensation

3.3.7. Offset Sites have been identified through liaison with FCC and raun through BM3.1 to demonstrate achievement of a minimum 1% net gain in Priority Habitats within Wales. Locations of the Offset Sites are provided at **Figure 4**. Further context regarding identification of sites and liaison with offset providers is detailed within the BNG Strategy Update [**REP6-033**] and as submitted at Deadline 7. ~~BNG Strategy (Ref XX) submitted at Deadline 7.~~

3.3.8. Further detail regarding these Offset Sites are provided below:

- Field off Wepre Lane, near Ashwood Land (approx. 0.7 km) North West of the Order Limits. This area will be utilised for the provision of pond creation.
- Land adjacent to River Dee, Sealand will provide the creation of 7040m of hedgerow creation.
- Ewloe-Northop Hall area, adjacent to the existing Order Limits. This site is currently a species-poor pasture grassland and proposals will involve the creation of Lowland Mixed Deciduous Woodland.

3.3.9. The Offset Site compensation demonstrates tangible identified sites which have been assessed through field survey to establish the baseline units and potential uplift in units which can be achieved through habitat interventions. ~~Further context regarding identification of sites and liaison with offset providers, including locations of the Offset Sites, is detailed within the BNG Strategy (Ref XX) submitted at Deadline 7. Locations of the Offset Sites are provided at **Figure 4.**~~ **Table 3.5** below summarises the habitat interventions proposed at each of the Offset Sites within Wales and provides the units gained through these proposals. **Table 3.6** summarises the total areas of each habitat type to be lost and reinstated within the Survey Area as well as created or enhanced within the Offset Sites.~~The details of these Offset Sites, including baseline habitat data sources, are laid out in **Table 4**, below. Further context including locations of the Offset Sites can be seen within the Update BNG Strategy (Ref XX) re-submitted at Deadline 7.~~

3.3.10. The following assumptions and limitations were applied to the compensation calculations:

- For all Offset Sites, habitats created and enhanced will be secured, managed, and maintained for 30 years.
- The target condition of created or enhanced habitats has been decided through collaboration with FCC and/or the responsible body for on-going management of the habitats based upon known conditions of the Offset Sites as well as management and maintenance which is achievable.
- For hedgerows and ponds, these features will be established and maintained over a ~~30 year~~30-year period by FCC and it is considered reasonable to expect these features to achieve good condition.
- For Lowland mixed deciduous woodland, a target condition of good has been selected based on the fact that this woodland will be established through use of specimen trees of both mixed species and age. Planting of a variety of species and ages will contribute to varied growth rates and therefore allow for multiple age classes to be present at the end of 30 years.
- An off-site baseline habitat type of 'Developed land – sealed surface' was used where the baseline was not a Priority Habitat due to it scoring a baseline value of 0HU. This was in order to accurately estimate the habitat area required for Priority Habitats. Where this is the case, the actual baseline habitat has been labelled within the appropriate row of the assessor comments box within BM3.1. A habitat was used that does not score biodiversity units so as to remain consistent and provide clarity in the Priority Habitat results.
- Due to an error in the BM3.1, whereby units would not generate due to the 'final time to target multiplier' box remaining blank, it was not possible to estimate the amount of Lowland mixed deciduous woodland creation required to achieve a 1% net gain through the off-site tab. Therefore, the compensation required for Lowland mixed deciduous woodland was modelled using the on-site tab. This is not considered to be a limitation as the multipliers applied result in the same result as would be achieved through the off-site tab.

Table 3.~~-43.4~~ 5 - Off-site Priority Habitat Compensation Scenarios for Wales

Habitat Type	Offset Site	Baseline Habitat data source	Baseline Habitat	Baseline Condition	Proposed Habitats	Target Condition	Created or enhanced A~~a~~rea (ha) /length (km)	Units created or enhanced (HU/HeU/RU)	Overall Change in Units per Habitat	Overall Percentage Change
Area-based	Field off Wepre Lane	FCC survey undertaken on 19.05.23	Other neutral grassland	Good	Ponds (Priority habitat)	Good	0.02 ha~~km~~	0.20	+0.20~~25~~	+2.41%
	Land around Ewloe-Northop Hall	WSP surveys in September 2021~~XX~~	Modified Grassland	~~XX~~Moderate	Woodland – Lowland mixed deciduous woodland	Good	3.802~~.6~~ ha	~~4.94~~7.22	+0.14	
Linear – hedgerows	Land adjacent to River Dee, Sealand	N/A but area for hedgerow planting reviewed by FCC rangers team.	N/A	N/A	Native species rich hedgerow with trees	Good	0.7~~1.0~~ km	~~8.83~~6.18	+1.72~~2.09~~	+1.11~~42~~%

Table 3.6 – Total areas of habitats to be lost and created or enhanced through the DCO Proposed Development in Wales

Habitat Type	Area/ Length lost (ha/ km)	Area/ Length Reinstated or Created (ha/ km)	Proposed Area/ Length Created off-site (ha/ km)
Ponds (Priority habitat)	0.00 ha	0.00	0.02 ha
Hedgerow priority habitats	3.89 km	4.04 km	0.7 km
Lowland mixed deciduous woodland	0.93 ha	0.00	3.8 ha

3.4. QUALITATIVE ASSESSMENT

3.4.1. **Table 7** below discusses the adherence of the DCO Proposed Development to each of the BNG Good Practice Principles. Adherence of the DCO Proposed Development to the BNG Good Practice Principles is based on the current stage of the BNG process. The BNG Good Practice Principles have been assessed against the Priority Habitats of the DCO Proposed Development only.

Table 3-33.5 - Summary of the Qualitative BNG Assessment Results

Principle	Description	Evidence	Current Outcome
1. Apply the mitigation hierarchy	Do everything possible to first avoid and then minimise impacts on biodiversity. Only as a last resort, and in agreement with external decision-makers where possible, compensate for losses that cannot be avoided. If compensating for losses within the development footprint is not possible or does not generate the most benefits for nature conservation, then offset biodiversity losses by gains elsewhere.	The design and route of the DCO Proposed Development has been designed to avoid high value habitats wherever possible, for example by avoiding veteran trees and ancient woodland, as well as specific commitments to avoid existing areas of Priority Habitat where possible. However, it has not been possible to avoid all high value habitats within the Survey Area. Where losses have been unavoidable, habitats are proposed to be reinstated like for like within 2 years of their removal. For habitats where this is not possible and for the remaining required compensation, off-site mitigation will be sought to offset the remaining losses, on a like for like basis. Reinstatement of habitats within 2 years will depend on specific actions for each habitat which will be drawn up and adhered to as part of the detailed Landscape and Ecological Management Plan (LEMP). These will include ground preparation, planting methodologies, and initial maintenance. In all cases, the habitat interventions within each Offset Site propose to either enhance existing ~~p~~Priority ~~h~~Habitat, enhance existing non-priority habitat to a priority habitat condition, or create new priority habitat. The interventions result in an uplift in condition and/or distinctiveness~~.~~ and demonstrate significant benefits for biodiversity within both ~~Cheshire West and Chester and Flintshire~~England and Wales respectively.	Achieved
2. Avoid losing biodiversity that cannot be offset by gains elsewhere	Avoid impacts on irreplaceable biodiversity – these impacts cannot be offset to achieve no net loss or net gain.	Any internationally and nationally designated statutory sites, ancient woodland, and veteran trees located within the Survey Area associated with the DCO Proposed Development have been excluded from the BNG calculations. For these, bespoke compensation has been addressed, as required, within the Environmental Impact Assessment and associated Habitat Regulations Assessment concerned with the DCO Proposed Development where impacts cannot be avoided. It has been concluded that there are no likely significant effects resulting from construction and operation of the DCO Proposed Development on any international statutory designated site (document reference **[REP2-023]**. No Ancient Woodland or veteran trees are ~~is~~ proposed to be lost as a result of the DCO Proposed Development. No irreplaceable habitats are to be included within any of the habitat interventions being used within the identified Offset Sites to compensate for the DCO Proposed Development. As any impacts to statutory designated sites are addressed through the HRA **[REP~~24-023~~243]**, submitted at Deadline 7, and it has been concluded that there are no likely significant effects, it is considered that this principle is achieved.	~~Not A~~achieved
3. Be inclusive and equitable	Engage stakeholders early, and involve them in designing, implementing, monitoring and evaluating the approach to net gain. Achieve net gain in partnership with stakeholders where possible and share the benefits fairly among stakeholders.	Engagement with stakeholders has been undertaken including Natural England, Natural Resources Wales, Cheshire West and Chester Council and Flintshire County Council.	Achieved

Principle	Description	Evidence	Current Outcome
		Further engagement ~~is underway with~~has been undertaken with these stakeholders in relation to identifying viable offset site locations, alongside extensive discussions to ensure achievement of desired habitat interventions in order to the 1% gain target and alignment to the Principles. ~~These have now been undertaken and discussed with r~~Relevant stakeholders have been engaged throughout the process of identifying and securing Offset Site locations and habitat interventions with opportunities for feedback provided to ~~to allow them to provide feedback and work collaboratively to~~ ensure the best outcomes for biodiversity.	
4. Address risks	Mitigate difficulty, uncertainty, and other risks to achieving net gain. Apply well-accepted ways to add contingency when calculating biodiversity losses and gains in order to account for any remaining risks, as well as to compensate for the time between the losses occurring and the gains being fully realised.	The BNG assessment has used industry recognised risk multipliers from the BM3.1. Furthermore, the assessment has addressed risks to reinstatement of HPI woodland habitat, associated with uncertainty over the long-term management required to ensure establishment of this habitat type. To this end, within temporary loss areas, even where this woodland is lost and will be reinstated, it has not been entered into the BM3.1. It is assumed this habitat type associated with reinstatement could only constitute medium distinctiveness woodland in the habitat creation tab and therefore should not be included within the assessment which calculates losses and gains of Priority Habitat only. The result of this means that HPI woodland will only be compensated for through off-site habitat interventions where long-term management can be ensured. Within the Offset Sites, target conditions have been set through liaison with the relevant stakeholders to determine balanced aims which are achievable in light of existing baseline conditions as well as future management and maintenance commitments. An example of this is within the Chester Wetland Offset Site, whereby existing poor condition ~~C~~coastal floodplain grazing marsh is only proposed to reach moderate condition due to the risk of failing to improve water quality to the required levels at the site (and therefore failing an essential criterion associated with the condition assessment).	Achieved
5. Make a measurable Net Gain contribution	Achieve a measurable, overall gain for biodiversity and the services ecosystems provide while directly contributing towards nature conservation priorities.	The BNG assessment now ~~does not currently~~ achieves a quantitative net gain in area-based and~~or~~ hedgerow Priority Habitats within England ~~or~~ and Wales~~, as well as river Priority Habitat in Wales. However,~~ **Sections 3.2** and **3.3** lay out ~~potential off-site compensation scenarios which will be investigated further by identifying potential offset sites~~ ~~idenfitied~~identified Offset Sites which have been determined to provide the necessary types and amounts of BU's to adequately compensate for residual losses and achieve a net gain for the DCO Proposed Development. ~~Details of the timelines associated with evidencing this net gain is provided in earlier and subsequent sections of this report, and additionally~~Further context to these Offset Sites and the process of achieving appropriate habitat interventions is captured within the BNG Strategy Update **[~~REP2~~REP6-~~042~~033]**, ~~(as~~ updated at Deadline ~~7~~3~~)~~.	~~To be achieved~~Achieved
6. Achieve the best outcomes for biodiversity	Achieve the best outcomes for biodiversity by using robust, credible evidence and local knowledge to make clearly-justified choices when:	At the time of writing, this BNG assessment has used the most recent data and followed a rigorous method and QA process. For area-based and hedgerow Priority Habitats, ~~net gain has not yet been~~a quantifiable net gain has now been achieved. ~~However, recommendations have~~	A~~To be a~~chieved

Principle	Description	Evidence	Current Outcome
	• Delivering compensation that is ecologically equivalent in type, amount and condition, and that accounts for the location and timing of biodiversity losses; • Compensating for losses of one type of biodiversity by providing a different type that delivers greater benefits for nature conservation; • Achieving net gain locally to the development while also contributing towards nature conservation priorities at local, regional and national levels; • Enhancing existing or creating new habitat; • Enhancing ecological connectivity by creating more, bigger, better and joined areas for biodiversity.	~~been made for~~This report sets out off-site compensation ~~in~~ which compensates for the residual ~~the~~ habitat types lost ~~will be compensated for~~ using the like-for-like or better approach. The Survey Area spans part of the CWCC Ecological Network within England. Whilst no significant impacts are anticipated within these areas, the habitat compensation being identified off-site ~~will, wherever feasible,~~ contribute<u>s</u> to the Ecological Network by providing additional areas of priority habitat within core areas, ecological stepping~~-~~ stones and corridors, or restoration areas. Discussions ~~are on-going with~~<u>have been undertaken with</u> CWCC ~~around how~~<u>to ensure</u> sites ~~can~~ <u>have</u> <u>be</u>en identified which fall within these areas. <u>Within Wales, discussions have taken place regarding creation of a pond which links up to wider biodiversity benefits, which has resulted in proposals to create the required pond in proximity to the Deeside and Buckley Newt Sites SAC which is designated due to its significant Great Crested Newt *Triturus cristatus* population.</u>~~xxx~~	
7. Be additional	Achieve nature conservation outcomes that demonstrably exceed existing obligations (i.e., do not deliver something that would occur anyway).	This BNG assessment ~~does not currently~~ achieve<u>s</u> additionality ~~as it does not achieve a net gain. However, if the compensation scenarios~~<u>as the Offset Sites as</u> laid out in **Sections 3.2** and **Section 3.3** ~~are followed, then additionality can be achieved~~<u>include habitat interventions which will occur directly as a result of funding associated with the DCO Proposed Development</u>. A target of at least 1% net gain in Priority Habitats has been committed to and this report ~~will be~~<u>has been</u> ~~updated with~~ details ~~of~~ offsetting <u>mechanisms</u> ~~during the examination phase of the DCO Application~~<u>which will be implemented to achieve these targets</u>. ~~Further enhancements will be explored during detailed design that provide a greater net gain in Priority Habitats where practicable and proportionate.~~ Off-site net gains will be delivered as a result of the DCO Proposed Development and ~~will~~ <u>have</u> <u>be</u>en designed and implemented transparently and in accordance with the ~~32~~principles of additionality.	<u>A</u>~~To be a~~chieved
8. Create a Net Gain legacy	Ensure net gain generates long-term benefits by: • Engaging stakeholders and jointly agreeing practical solutions that secure net gain in perpetuity; • Planning for adaptive management and securing dedicated funding for long-term management; • Designing net gain for biodiversity to be resilient to external factors, especially climate change; • Mitigating risks from other land uses; • Avoiding displacing harmful activities from one location to another; and • Supporting local-level management of net gain activities.	At this stage of the development, detailed construction plans are not available and therefore no management plans are in place <u>for habitats proposed within the Order Limits</u>. Habitats will be reinstated where they are temporarily lost to facilitate the DCO Proposed Development in the same location that they are removed, wherever possible. Where this is not possible (e.g., due to existing utilities), woodland<u>/trees</u> will be reinstated in other locations within the Newbuild Infrastructure Boundary over existing Low distinctiveness habitat~~, as close as possible to the location where they have been removed~~. ~~Following reasons set out above (see Principle 4), all woodland reinstatement within the Survey Area, regardless of location, will only be treated as medium distinctiveness habitat.~~ An outline LEMP including habitat management has been submitted <u>as part of the DCO Application</u>. A detailed LEMP will be developed ~~and submitted for consultation with the relevant LPAs at the~~<u>through the development of a</u> detailed design ~~stage~~<u>, appropriate to the impacts of any final scheme design</u>.	To be achieved

Principle	Description	Evidence	Current Outcome
		Areas secured off-site as part of the BNG strategy to achieve net gain will be subject to ~~a minimum of~~ 30 years management and will include monitoring over this timeframe. In England, CWCC will be responsible for the establishment and management of habitats over the 30-year period. In Wales, FCC will be responsible for establishment and ongoing management of ponds and hedgerows, whereas a reputable habitat management company, to be appointed by the Applicant, will be responsible for woodland establishment and management. In all cases, a Habitat Management and Monitoring Plan (HMMP) (or suitable equivalent) will be produced outlining more detailed management and monitoring actions prior to works at the Offset Sites commencing.	
9. Optimise sustainability	Prioritise Biodiversity Net Gain and, where possible, optimise the wider environmental benefits for a sustainable society and economy.	This BNG assessment is being used to inform the DCO Proposed Development's design to provide better outcomes for biodiversity. The designs ~~will take~~have taken into account the BNG requirements as well as sustainability requirements and aimed to address the two so that they are delivered together. ~~Any~~ Hhabitat offsetting will also provide opportunities ~~to realise~~for wider environmental benefits within the local area.	~~To be achieved~~Achieved
10. Be transparent	Communicate all net gain activities in a transparent and timely manner, sharing the learning with all stakeholders.	The BNG outcome is being shared with relevant stakeholders at the appropriate time. Results ~~will be~~ have consistently been updated, for example to include Offset Ssite information when available and ~~a revised report submitted at Deadline 5.~~this has been shared with relevant stakeholders. The Applicant has provided additional updates and communication of progress with achieving BNG and identification of Offset Ssites through the production of a BNG Strategy, submitted into the DCO Examination. This has been updated repeatedly and submitted at multiple deadlines through the Examination to evidence and provide information on the advances made in discussions with CWCC and FCC, as well as other parties, in identifying, securing, and agreeing offset sites and appropriate habitat interventions to achieve the required net gains for the DCO Proposed Development.~~,~~	Achieved

4. CONCLUSIONS

4.1.1. The DCO Proposed Development as assessed in England, would result in a net loss in HU of ~~area-based~~area based and HeU Priority Habitats within the Order Limits. However, through the utilisation of identified Offset Sites the DCO Proposed Development ~~but~~ achieves ~~a~~its target of a minimum 1% net gain in Priority Habitats in England.~~when including the identified Offset Sites.~~

4.1.2. The DCO Proposed Development as assessed in Wales would result in a net loss in HU of area~~-~~ based Priority Habitats and HeU within the Order Limits. However, through the utilisation of identified Offset Sites the DCO Proposed Development achieves its target of a minimum 1% net gain in Priority Habitats within Wales.~~but achieves a net gain when including the identified Offset Sites.~~.

4.1.3. ~~At the time of writing, t~~The DCO Proposed Development has therefore ~~taken significant steps in~~ demonstrated a net gain of at least 1% in all Priority Habitats within both England and Wales through securing Priority Habitat offsets.~~-~~ **Table 4-1** below provides a summary of the BNG result ~~provided by~~inclusive of the proposed offsetting.

~~(see Further context for these Offset Sites are provided within the BNG Strategy Update **[REP2-042]** as updated at Deadline 73). However, this does not yet deliver a quantifiable net gain against the target of at least 1% net gain in Priority Habitat. A final BNG assessment and report will be submitted at Deadline 5 capturing further progress in securing offset site locations.~~

Table 4-1 - Summary of the Quantitative BNG Assessment Results following off-setting

	Habitat type	On-site baseline value (Area based HU or Linear HeU)	On-site post-development value (Area based HU or Linear HeU)	Off-site baseline value (Area based HU or Linear HeU)	Off-site post-development value (Area based HU or Linear HeU)	Total net unit change	Quantitative outcome
England	Area-based Priority Habitats	132.55	117.95	27.47	43.59	+ 1.52	+ 1.15 %
	Linear hedgerow Priority Habitats	148.19	143.89	0.00	5.87	+ 1.57	+ 1.06 %
Wales	Area-based	14.13	14.27	0.00	0.34	+ 0.34	+ 2.41 %

	Priority Habitats						
	Linear hedgerow Priority Habitats	155.37	150.91	0.00	6.18	+ 1.72	+ 1.11 %

~~4.1.3.~~4.1.4. The quantitative outcomes of the assessment are a singular element of the BNG assessment and should be considered alongside compliance with the BNG Good Practice Principles (**Annex A**) as presented within **Table 3.5**.

~~4.1.4.~~4.1.5. The DCO Proposed Development has achieved nine~~four~~ out of the ten BNG Good Practice Principles to date; the final Principle (8 – Create a net gain legacy) will be achieved prior to commencement of the DCO Proposed Development through provision of a 30-year management plan for all habitats associated with Offset Sites.

DISCUSSION

~~4.1.5.~~4.1.6. A net gain in biodiversity is quantifiably achievable by implementing the following points within the next stage of development:

- ~~Optimising HU, HeU and RU within the Survey Area through influencing the detailed design and compensating for any residual net loss with off-site compensation. This can be achieved through the proposed compensation scenarios laid out within this report.~~The Offset Sites are to be secured through a suitable agreement prior to commencement of the DCO Proposed Development. ~~Head~~Legal agreements ~~s of Terms~~ are to be agreed between the Applicant and the landowners / LPA ~~where appropriate~~to ~~ensure~~secure the identified Offset Sites and habitat interventions a~~re secured~~ for the project and under discussion at an advanced stage.

- ~~The~~ Further detail for habitats ~~retained/~~reinstated and created within the Survey Area will be ~~are subject~~ provided to ~~long term management and monitoring~~detail establishment and management methodology as part of the LEMP~~, wherever possible~~. All habitats ~~proposed~~ associated with Offset Sites are to be managed and monitored for 30 years as per the legal agreements securing the Offset Sites. These legal agreements will mandate the production of a Habitat Management and Monitoring Plan (HMMP) (or suitable equivalent) which will provide prescriptions for the management of enhanced or created habitats.
- ~~Unacceptable loss of habitats is adequately mitigated / compensated for outside of the BNG process.~~

4.1.6.4.1.7. The current assessment presents modelled confirmed compensation scenarios Offset Sites required designed to achieve a minimum of 1% net gain of Priority Habitats across the DCO Proposed Development. The location of these Offset Sites alongside the DCO Proposed Development Order Limits can be viewed atwithin **Figure 4**. Where proportionate and practicable, delivery of net gains in excess of 1%, for Priority Habitats, will be explored during the detailed design developmentthe Applicant will seek to achieve additional benefits for biodiversity during the course of the detailed design development and through construction. Identification of suitable offset sites has begun and will continue through further engagement with landowners and stakeholders, as summarised by the BNG Strategy Update [**REP2-042]** as resubmitted at deadline 3. The Applicant intends this revision of the report as an interim update and intends to publish the final BNG report at Deadline 5. Thise report will be updated and resubmittedrepresents the final BNG assessment submitted to the Planning Inspectorate following confirmation of the land or specific strategies to be used to evidence an overall net gain position in Priority Habitats. Additional context regarding the specific Offset Sites used can be found within the BNG Strategy Update **[REP2-042]** also submitted at Deadline 7.

4.1.8. During the examination Examinationphase, data from ecological surveys of identified Ooffset Ssites will have occurredhas been presented to the Applicant, where required, to collate baseline data for input into the Biodiversity Metric. Thise updated report submitted at Deadline 5 will detail offset site locations, relevant surveys undertaken (where required), as well asuses this data as well as an evaluation of the proposed habitat interventions (creation and enhancement) to inform a recalculation of Biodiversity Units to be delivered. Habitat creation and enhancement has been proposed in detailed consultation with both CWCC and FCC in England and Wales respectively as well as Natural England where necessary. Heads of terms with the relevant landowner(s)Legal agreements will be finalised at this point, where applicableprior to the commencement of the DCO Proposed Development. Additional context regarding the extensive discussions with stakeholders and interested parties around securing of Offset Sites and appropriate habitat interventions and creation strategies can be found within the BNG Strategy Update **[REP6-033], updated** submitted at Deadline 7.

4.1.7.

4.1.8. It is acknowledged that the legislative and policy landscape in Wales differs from England. Therefore, whilst the BNG assessment has remained consistent between both countries, the specific means to securing net gains in biodiversity are being discussed having regard to relevant local stakeholder engagement. For England, securing net gains is driven by use

~~of BM3.1. For Wales, the particular forms of gain or benefit to be provided in each case are being developed to seek to deliver the most impactful benefits for biodiversity that the DCO Proposed Development can contribute towards. Where there are demonstrable net benefits to biodiversity, and these support local stakeholders wider strategic ambitions, compensation that is qualitative rather than quantitative may be explored where the net benefits are anticipated to outweigh those through an approach to achieving net gain which is consistent with England.~~

5. REFERENCES

- **Ref.1** HMSO (2006) *The Natural Environment and Rural Communities (NERC) Act*. HMSO, London.
- **Ref. 2** Welsh Government (2016) *Environment (Wales) Act 2016* [Online] Available: https://www.legislation.gov.uk/anaw/2016/3/enacted/data.pdf
- **Ref. 3** Natural England (2022a). *The Biodiversity Metric 3.1 (JP039)* [Online] Available: The Biodiversity Metric 3.1 - JP039 (naturalengland.org.uk)
- **Ref. 4** Department for Environmental, Farming and Rural Affairs (DEFRA) (2018). *A Green Future: Our 25 Year Plan to Improve the Environment.* [Online] Available: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/693158/25-year-environment-plan.pdf
- **Ref. 5** Department for Environmental, Farming and Rural Affairs (DEFRA) (2011). *A Strategy for England's Wildlife and Ecosystem services.*
- **Ref. 6** HMSO (2021) *The Environment Act.* HMSO, London.
- **Ref. 7** Welsh Government (2021) *Planning Policy Wales, Edition 11* [Online] Available: https://gov.wales/sites/default/files/publications/2021-02/planning-policy-wales-edition-11_0.pdf
- **Ref. 8** Department for Communities and Local Government (2015). *Planning Act 2008: Changes to Development Consent Orders*.
- **Ref. 9** Department for Communities and Local Government (2021) *National Planning Policy Framework.*
- **Ref. 10** Cheshire West and Chester *Council (2015) Cheshire West and Cheshire Council Local Plan, Part 1; Strategic Policies*
- **Ref. 11** Cheshire West and Chester *Council (2015) Cheshire West and Cheshire Council Local Plan, Part 2; Land Allocations and Detailed Policies*
- **Ref. 12** Flintshire County Council (2011). Flintshire County Council Unitary Development Plan [Online]. Available: http://www.cartogold.co.uk/flintshire/text/english/08.htm
- **Ref. 13** CIEEM, CIRIA & IEMA (2016). *Biodiversity Net Gain: Good practice principles for development*.) [Online] Available: https://www.iema.net/assets/newbuild/documents/IEMA%20Biodiversity%20Net%20Gain.pdf
- **Ref. 14** CIEEM, CIRIA & IEMA (2019). *Biodiversity Net Gain: Good practice principles for development. A practical guide.* [Online] Available: https://cieem.net/wp-content/uploads/2019/02/C776a-Biodiversity-net-gain.-Good-practice-principles-for-development.-A-practical-guide-web.pdf

- **Ref. 15** CIEEM (2022) *Welsh Government's Approach to Net Benefits for Biodiversity and the DECCA Framework in the Terrestrial Planning System.* CIEEM Briefing Paper.
- **Ref. 16** Natural England (2021) *Biodiversity Metric 3.0 (JP039) Auditing and accounting for biodiversity: User Guide*. [Online] http://publications.naturalengland.org.uk/publication/6049804846366720
- **Ref. 17** Natural England (2021) *Biodiversity Metric 3.0 (JP039) Auditing and accounting for biodiversity: Technical Supplement*. [Online] http://publications.naturalengland.org.uk/publication/6049804846366720
- **Ref. 18** British Standards Institution (2021) *BS 8683: Process for designing and implementing biodiversity net gain.*
- **Ref. 19** JNCC (2010) *Handbook for Phase 1 habitat survey- a technique for environmental audit.* JNCC, Peterborough.
- **Ref. 20** UK Habitat Classification Working Group (UKHab), (2018). *UK Habitat Classification – Habitat Definitions V1.0*. [Online] https://ukhab.org/
- **Ref. 21** Natural England (2010). *Higher Level Stewardship, Farm Environment Plan (FEP) Manual, 3rd Edition.*
- **Ref. 22** Baker, J., Hoskin, R, & Butterworth, T. (2019). *Biodiversity Net Gain: Good Practice Principles for Development, A Practical Guide*. CIRIA, London.
- **Ref. 23** Gurnell, A.M., England, J., Scott, S.J., Shuker, L.J. (2020) *A guide to assessing river conditions: Part of the Rivers and Streams Component of the Biodiversity Net Gain Metric*
- **Ref. 24** Environment Agency. *Environment Agency's Catchment Data Explorer*, available at: https://environment.data.gov.uk/catchment-planning/. Last accessed August 2022
- **Ref. 25** Environment Agency. *Environment Agency's Catchment Based Approach Data Hub, Priority river Habitat – Headwater Areas (England)*, available at: https://data.catchmentbasedapproach.org/datasets/8e3f7118b7484c58a9d3f92700cfa39a_0/explore?location=52.714907%2C-2.258508%2C7.85, last accessed August 2022
- **Ref. 26** Department for Environmental, Farming and Rural Affairs (DEFRA) *Defra's Magic Mapping*, available at: https://magic.defra.gov.uk/magicmap.aspx , Last accessed August 2022
- **Ref. 27** Environment Agency. *Environment Agency's National Fish Population Database*, available at: https://environment.data.gov.uk/ecology/explorer. Last accessed August 2022.
- **Ref. 28** UK Biodiversity Action Plan (UKBAP) (JNCC BRIG, 2008)

- **Ref. 29** JNCC and DEFRA (2012) UK Post 2010 Biodiversity Framework. Available online: http://jncc.defar.gov.uk/page-6189.
- **Ref. 30** Cartographer Studios Ltd. *Cartographer*, available at: https://cartographer.io/. Last accessed August 2022.
- **Ref. 31** UK Biodiversity Action Plan (UKBAP) (JNCC BRIG, 2011) *UK Biodiversity Action Plan Priority Habitat Descriptions – Rivers*. Available online: UK BAP Priority Habitats | JNCC - Adviser to Government on Nature Conservation
- **Ref. 32** Flintshire Local Development Plan (LDP) (FCC, 2023) Available online: Local Development Plan - Flintshire
- **Ref. 33** Natural England (2023) *Priority Habitats Inventory (England).* Available online: Priority Habitats Inventory (England) - data.gov.uk
- **Ref. 34** Welsh Government (2021) *WOM21 Priority Habitat – High Sensitivity*. Available online: WOM21 Priority Habitat - High Sensitivity | DataMapWales (gov.wales)

ANNEX A

GOOD PRACTICE PRINCIPLES

Biodiversity Net Gain

Good practice principles for development

Biodiversity Net Gain is development that leaves biodiversity in a better state than before. It is also an approach where developers work with local governments, wildlife groups, land owners and other stakeholders in order to support their priorities for nature conservation. These ten principles set out good practice for achieving Biodiversity Net Gain and must be applied all together, as one approach.

Principle 1. Apply the Mitigation Hierarchy

Do everything possible to first avoid and then minimise impacts on biodiversity. Only as a last resort, and in agreement with external decision-makers where possible, compensate for losses that cannot be avoided. If compensating for losses within the development footprint is not possible or does not generate the most benefits for nature conservation, then offset biodiversity losses by gains elsewhere.

Principle 2. Avoid losing biodiversity that cannot be offset by gains elsewhere

Avoid impacts on irreplaceable biodiversity - these impacts cannot be offset to achieve No Net Loss or Net Gain.

Principle 3. Be inclusive and equitable

Engage stakeholders early, and involve them in designing, implementing, monitoring and evaluating the approach to Net Gain. Achieve Net Gain in partnership with stakeholders where possible, and share the benefits fairly among stakeholders.

Principle 4. Address risks

Mitigate difficulty, uncertainty and other risks to achieving Net Gain. Apply well-accepted ways to add contingency when calculating biodiversity losses and gains in order to account for any remaining risks, as well as to compensate for the time between the losses occurring and the gains being fully realised.

Principle 5. Make a measurable Net Gain contribution

Achieve a measurable, overall gain[1] for biodiversity and the services ecosystems provide while directly contributing towards nature conservation priorities.

1 Net Gain has been described as a measurable target for development projects where impacts on biodiversity are outweighed by a clear mitigation hierarchy approach to first avoid and then minimise impacts, including through restoration and / or compensation. Adhering to these Net Gain principles (i.e. pursuing all principles together) will help in under-pinning good practice for achieving and sustaining Net Gain.

Principle 6. Achieve the best outcomes for biodiversity

Achieve the best outcomes for biodiversity by using robust, credible evidence and local knowledge to make clearly-justified choices when:

- Delivering compensation that is ecologically equivalent in type, amount and condition, and that accounts for the location and timing of biodiversity losses
- Compensating for losses of one type of biodiversity by providing a different type that delivers greater benefits for nature conservation
- Achieving Net Gain locally to the development while also contributing towards nature conservation priorities at local, regional and national levels
- Enhancing existing or creating new habitat
- Enhancing ecological connectivity by creating more, bigger, better and joined areas for biodiversity

Principle 7. Be additional

Achieve nature conservation outcomes that demonstrably exceed existing obligations (i.e. do not deliver something that would occur anyway).

Principle 8. Create a Net Gain legacy

Ensure Net Gain generates long-term benefits by:

- Engaging stakeholders and jointly agreeing practical solutions that secure Net Gain in perpetuity[2]
- Planning for adaptive management and securing dedicated funding for long-term management
- Designing Net Gain for biodiversity to be resilient to external factors, especially climate change
- Mitigating risks from other land uses
- Avoiding displacing harmful activities from one location to another
- Supporting local-level management of Net Gain activities

Principle 9. Optimise sustainability

Prioritise Biodiversity Net Gain and, where possible, optimise the wider environmental benefits for a sustainable society and economy.

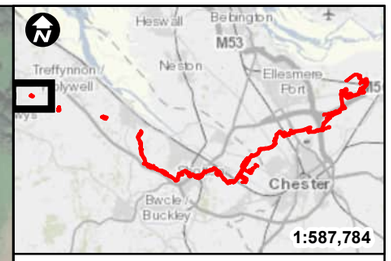
Principle 10. Be transparent

Communicate all Net Gain activities in a transparent and timely manner, sharing the learning with all stakeholders.

2 Biodiversity compensation should be planned for a sustained Net Gain over the longest possible timeframe. For development in the UK, the expectation is that compensation sites will be secured for at least the lifetime of the development (e.g. often 25-30 years) with the objective of Net Gain management continuing in the future.

ANNEX B

FIGURES



Key:

- Newbuild Infrastructure Boundary

UKHab Habitat Types

- Coastal and floodplain grazing marsh
- c1c - cereal crops
- g1c - bracken
- g3c - other neutral grassland
- g4 - modified grassland
- h3h - mixed scrub
- r1 - standing open water and canals
- s - sparsely vegetated land
- u1b - developed land, sealed surface
- u1c - artificial unvegetated unsealed surface
- w1f - lowland mixed deciduous woodland
- w1g - other woodland, broadleaved
- w1h - other woodland, mixed
- w2c - other coniferous woodland
- g3c - other neutral grassland
- w1g6 - line of trees
- h2 - hedgerow
- h2a - hedgerow (priority habitat)
- h2b - other hedgerows
- f2d - aquatic marginal vegetation
- u1e - built linear features
- r1e - canals or ditch

HyNet North West

PROJECT TITLE

HyNet Carbon Dioxide Pipeline DCO

DRAWING TITLE

Biodiversity Net Gain Assessment
Figure 1 - Baseline Habitat Map
Sheet 1 of 13

DRAWING STATUS

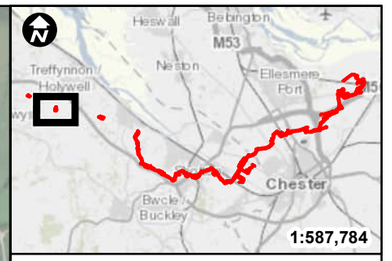
Final for DCO Examination - submitted at Deadline 7

DRAWN	CHECKED	APPROVED	AUTHORISED
ST	JG	JOK	DC

SCALE @ A3 SIZE	DATE	REVISION
1:13,300	01/09/2023	C

DRAWING NUMBER

EN070007-APP-ES-D.6.5.12.1 Sheet 1



Key:

- Newbuild Infrastructure Boundary

UKHab Habitat Types

- Coastal and floodplain grazing marsh
- c1c - cereal crops
- g1c - bracken
- g3c - other neutral grassland
- g4 - modified grassland
- h3h - mixed scrub
- r1 - standing open water and canals
- s - sparsely vegetated land
- u1b - developed land, sealed surface
- u1c - artificial unvegetated unsealed surface
- w1f - lowland mixed deciduous woodland
- w1g - other woodland, broadleaved
- w1h - other woodland, mixed
- w2c - other coniferous woodland
- g3c - other neutral grassland
- w1g6 - line of trees
- h2 - hedgerow
- h2a - hedgerow (priority habitat)
- h2b - other hedgerows
- f2d - aquatic marginal vegetation
- u1e - built linear features
- r1e - canals or ditch

HyNet North West

PROJECT TITLE

HyNet Carbon Dioxide Pipeline DCO

DRAWING TITLE

Biodiversity Net Gain Assessment
Figure 1 - Baseline Habitat Map
Sheet 2 of 13

DRAWING STATUS

Final for DCO Examination - submitted at Deadline 7

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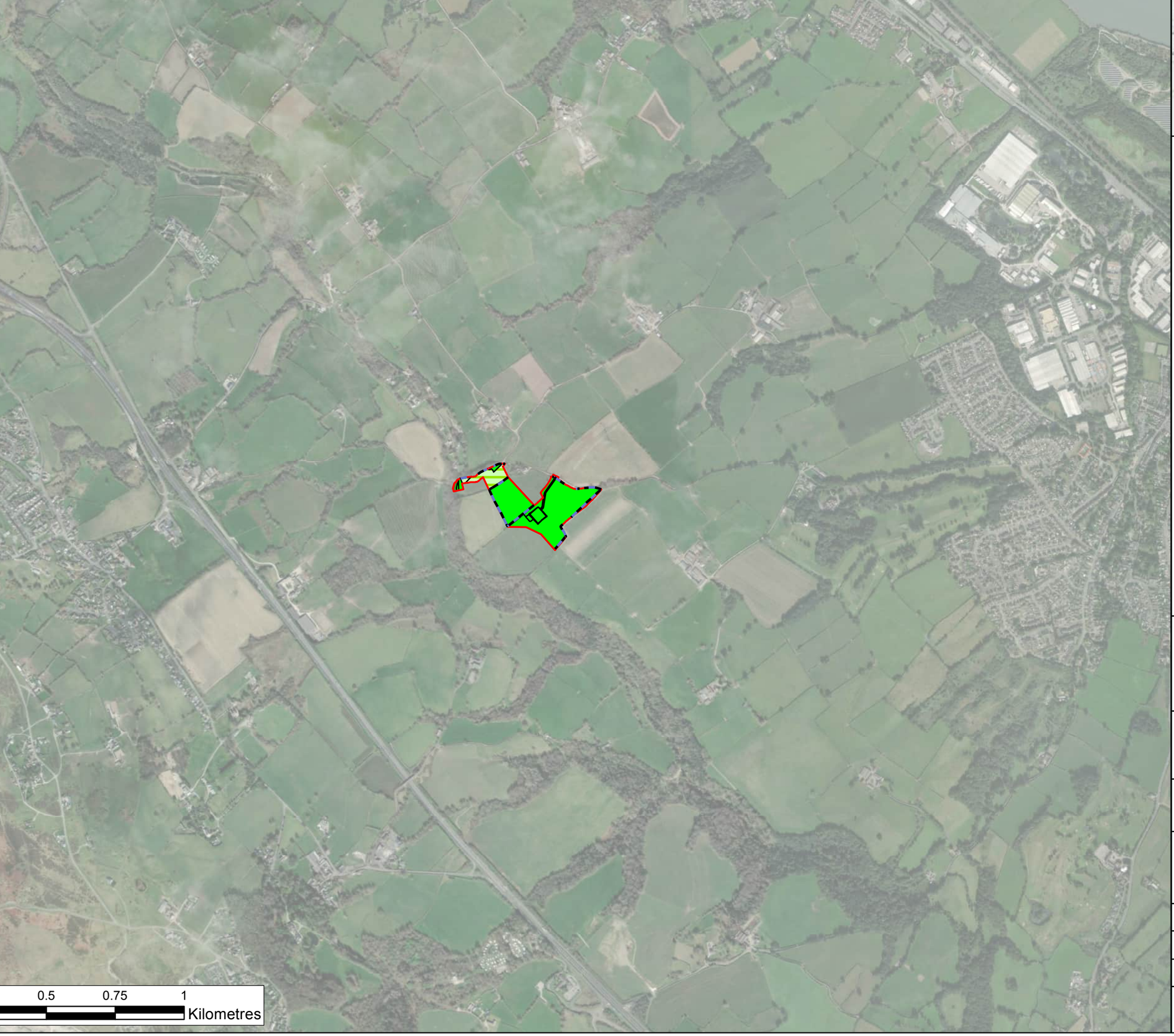
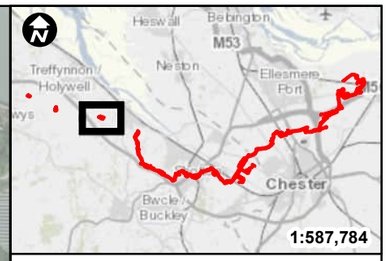
EN070007-APP-ES-D.6.5.12.1 Sheet 2





Key:

- Newbuild Infrastructure Boundary

UKHab Habitat Types

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- r1e - canals or ditch

HyNet North West

PROJECT TITLE

HyNet Carbon Dioxide Pipeline DCO

DRAWING TITLE

Biodiversity Net Gain Assessment
Figure 1 - Baseline Habitat Map
Sheet 3 of 13

DRAWING STATUS

Final for DCO Examination - submitted at Deadline 7

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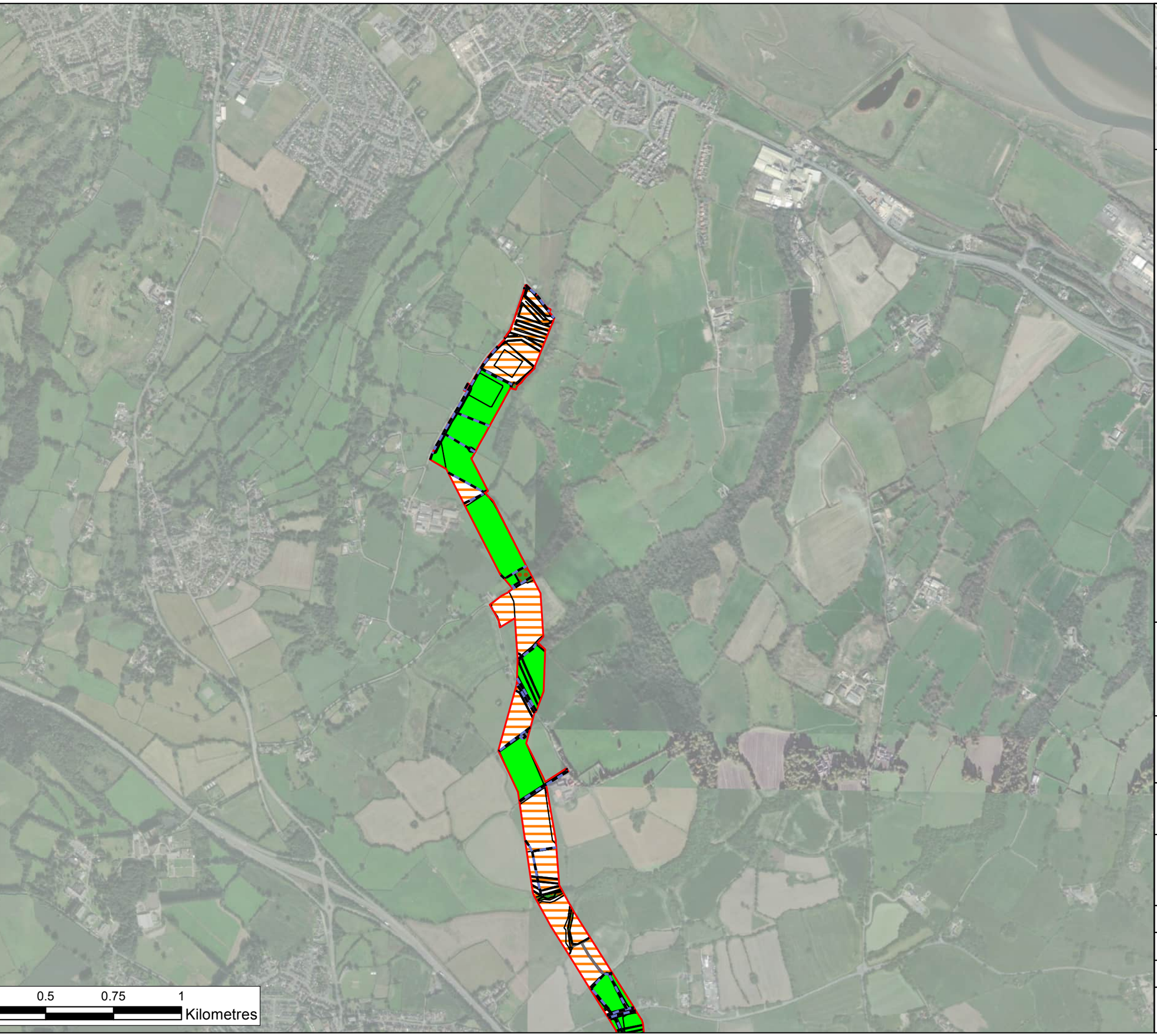
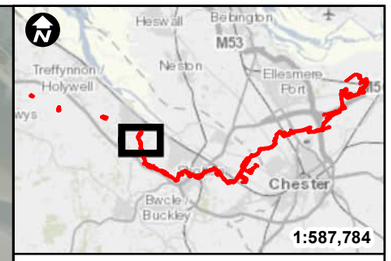
EN070007-APP-ES-D.6.5.12.1 Sheet 3





Key:

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UKHab Habitat Types

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- u1e - built linear features
- r1e - canals or ditch

HyNet North West

PROJECT TITLE

HyNet Carbon Dioxide Pipeline DCO

DRAWING TITLE

Biodiversity Net Gain Assessment
Figure 1 - Baseline Habitat Map
Sheet 4 of 13

DRAWING STATUS

Final for DCO Examination - submitted at Deadline 7

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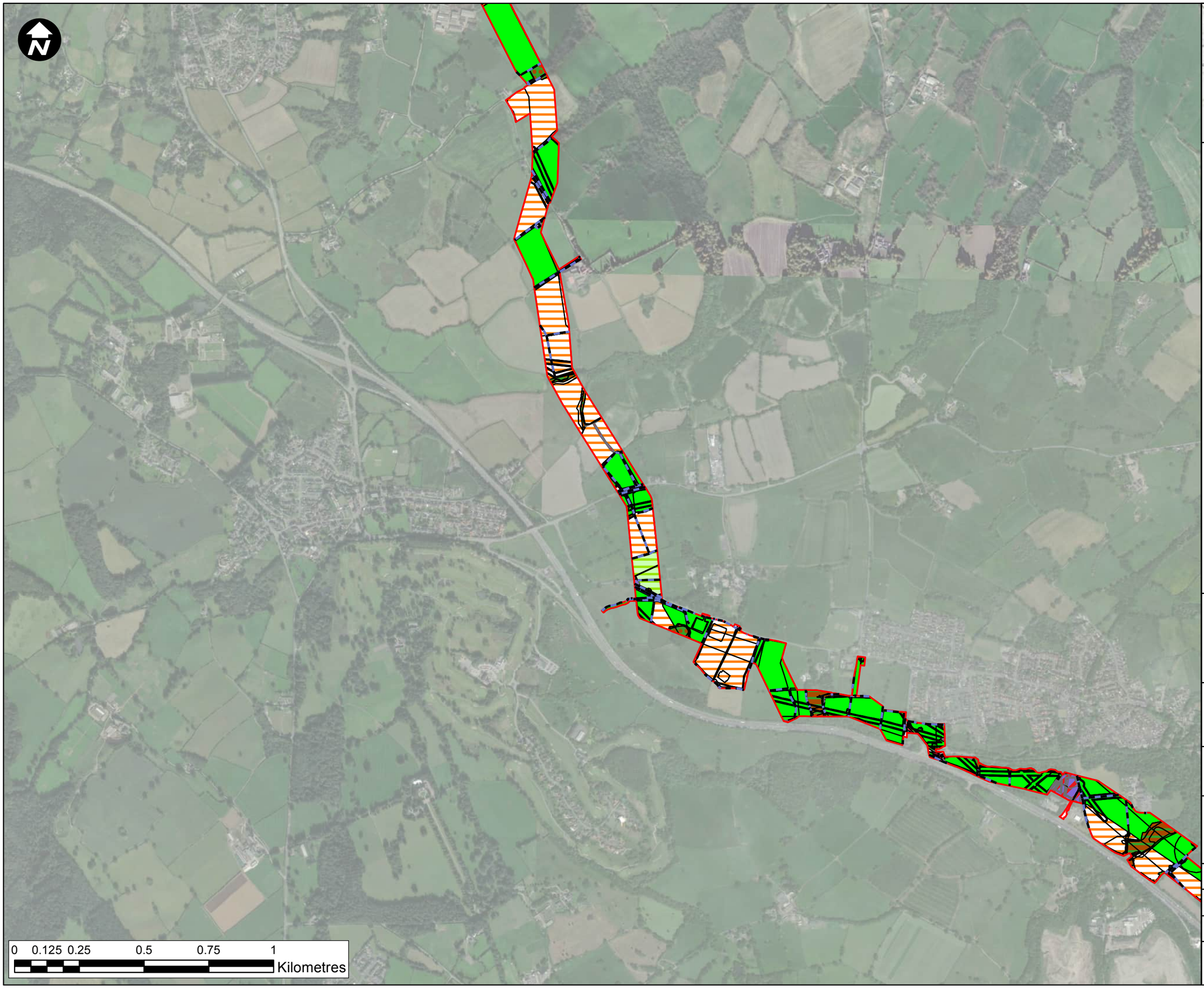
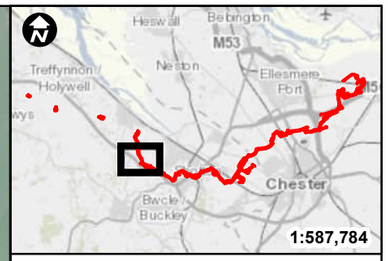
EN070007-APP-ES-D.6.5.12.1 Sheet 4





Key:

- Newbuild Infrastructure Boundary

UKHab Habitat Types

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HyNet North West

PROJECT TITLE

HyNet Carbon Dioxide Pipeline DCO

DRAWING TITLE

Biodiversity Net Gain Assessment
Figure 1 - Baseline Habitat Map
Sheet 5 of 13

DRAWING STATUS

Final for DCO Examination - submitted at Deadline 7

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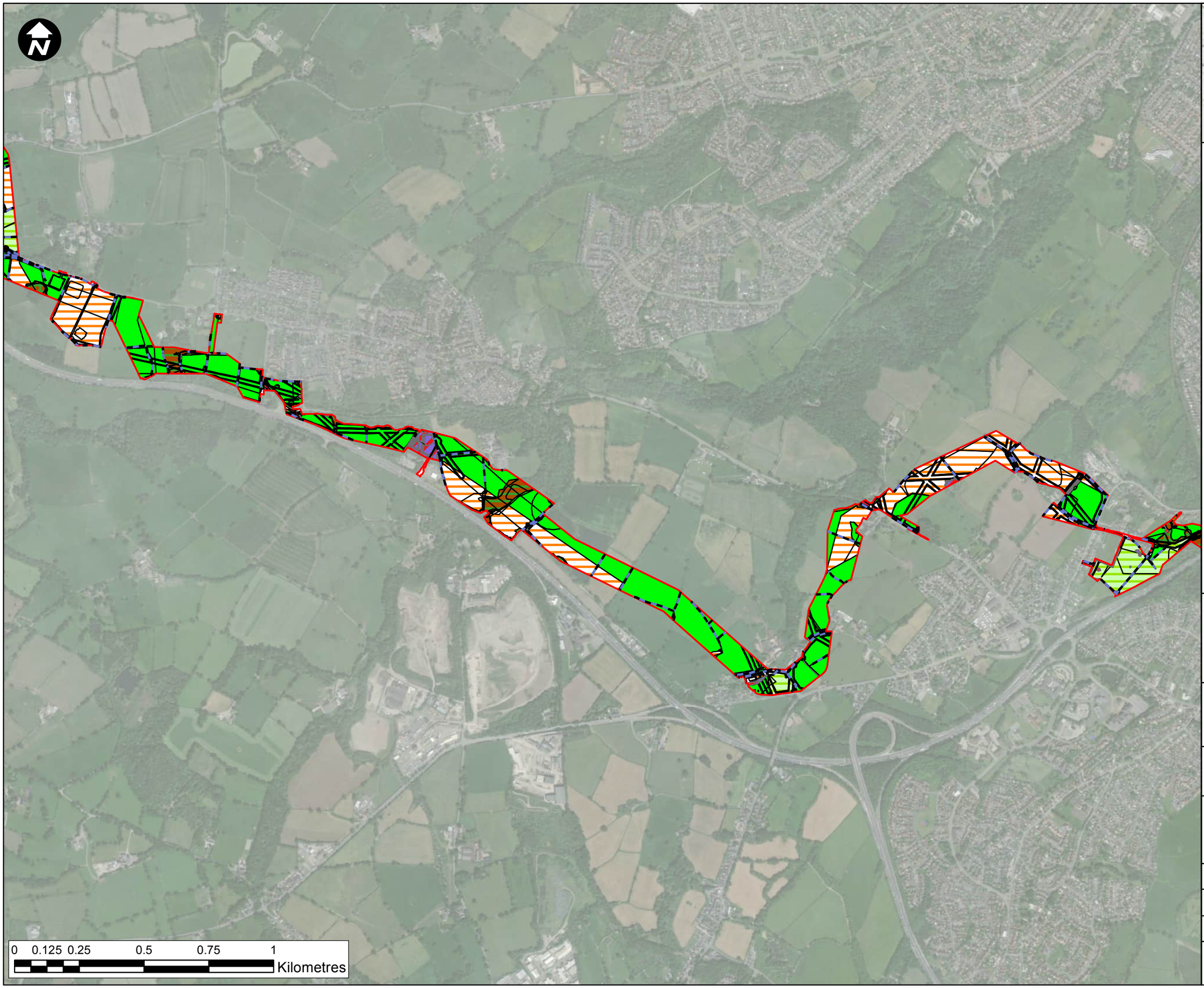
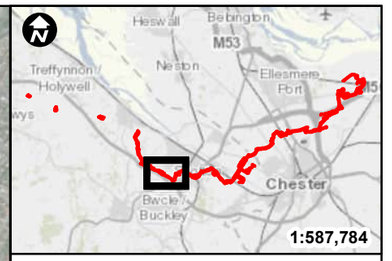
EN070007-APP-ES-D.6.5.12.1 Sheet 5





Key:

- Newbuild Infrastructure Boundary

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HyNet North West

PROJECT TITLE

HyNet Carbon Dioxide Pipeline DCO

DRAWING TITLE

Biodiversity Net Gain Assessment
Figure 1 - Baseline Habitat Map
Sheet 6 of 13

DRAWING STATUS

Final for DCO Examination - submitted at Deadline 7

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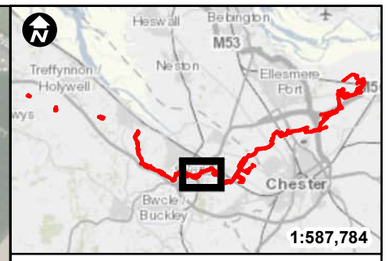
EN070007-APP-ES-D.6.5.12.1 Sheet 6



Key:

- Newbuild Infrastructure Boundary

UKHab Habitat Types

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HyNet North West

PROJECT TITLE

HyNet Carbon Dioxide Pipeline DCO

DRAWING TITLE

Biodiversity Net Gain Assessment
Figure 1 - Baseline Habitat Map
Sheet 7 of 13

DRAWING STATUS

Final for DCO Examination - submitted at Deadline 7

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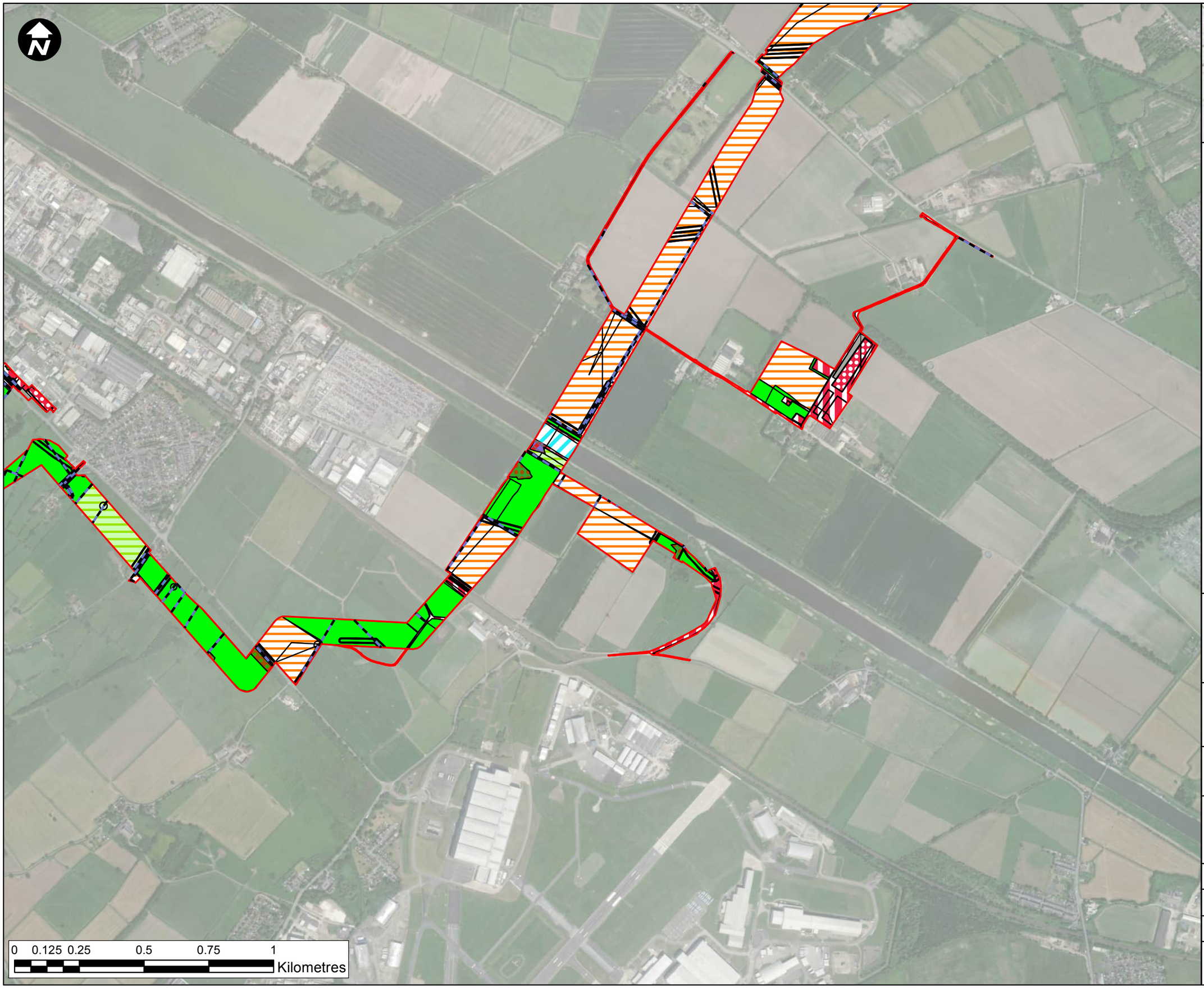
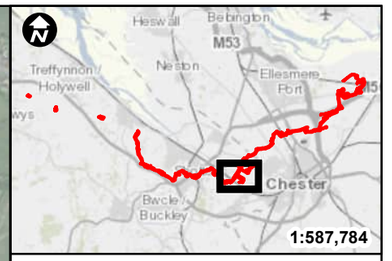
EN070007-APP-ES-D.6.5.12.1 Sheet 7





Key:

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HyNet North West

PROJECT TITLE

HyNet Carbon Dioxide Pipeline DCO

DRAWING TITLE

Biodiversity Net Gain Assessment
Figure 1 - Baseline Habitat Map
Sheet 8 of 13

DRAWING STATUS

Final for DCO Examination - submitted at Deadline 7

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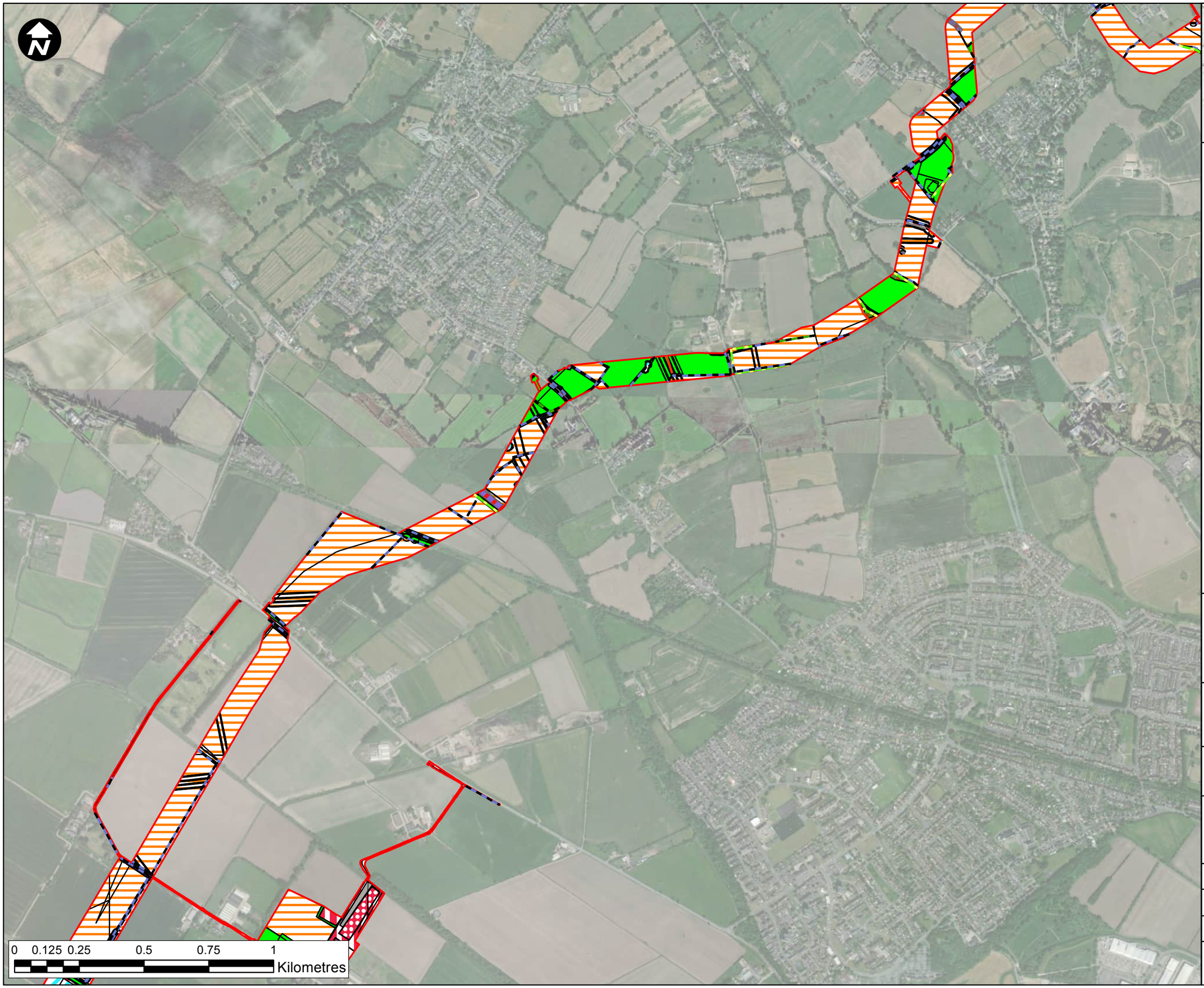
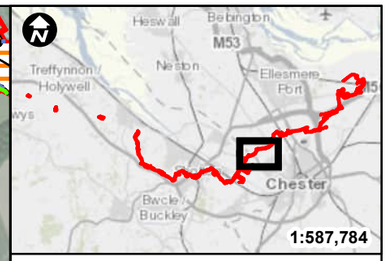
EN070007-APP-ES-D.6.5.12.1 Sheet 8





Key:

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HyNet North West

PROJECT TITLE

HyNet Carbon Dioxide Pipeline DCO

DRAWING TITLE

Biodiversity Net Gain Assessment
Figure 1 - Baseline Habitat Map
Sheet 9 of 13

DRAWING STATUS

Final for DCO Examination - submitted at Deadline 7

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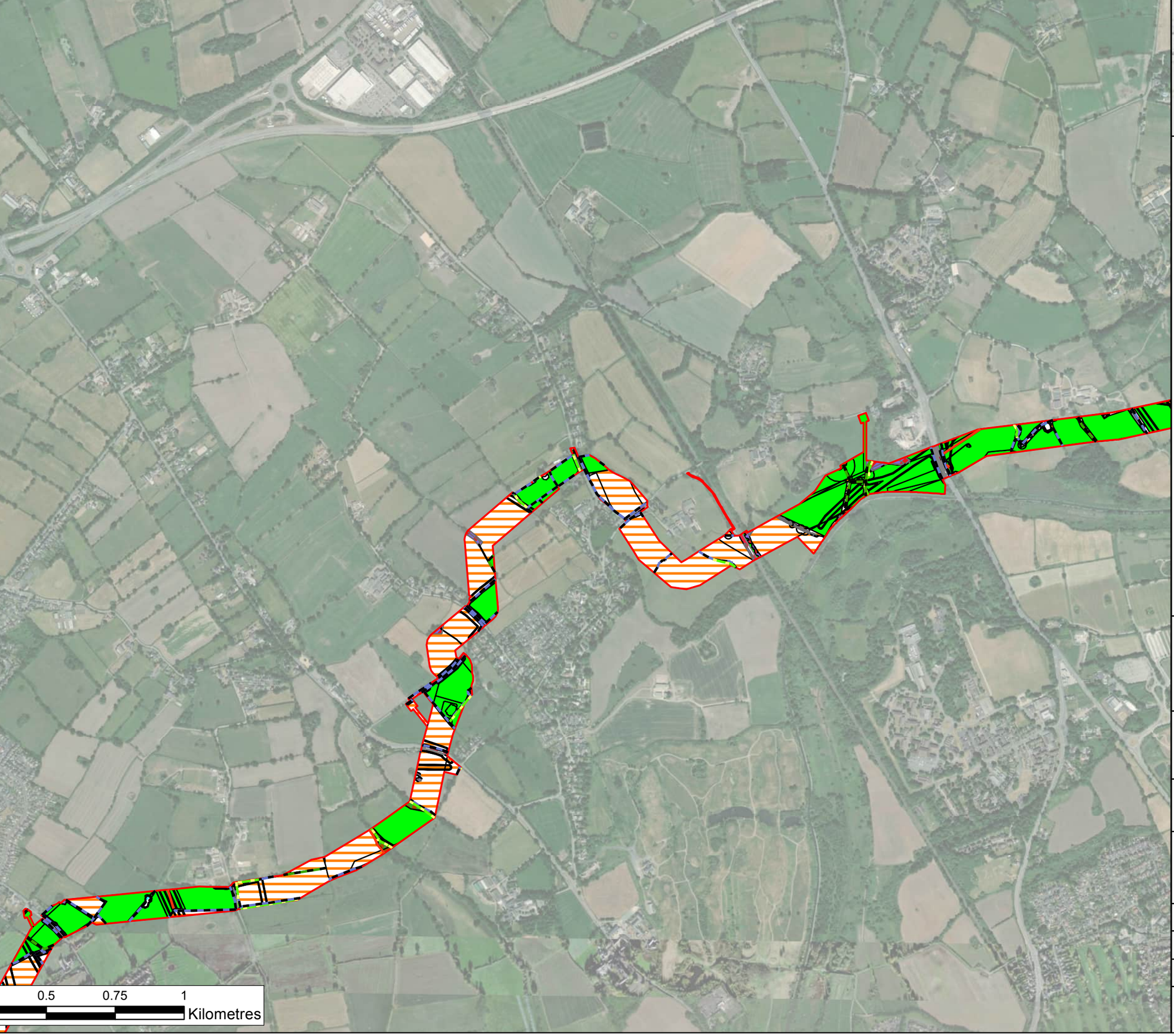
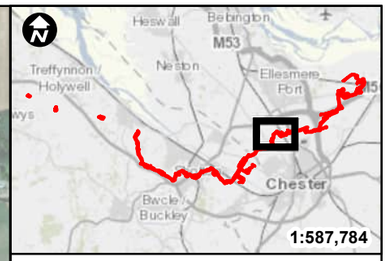
EN070007-APP-ES-D.6.5.12.1 Sheet 9





Key:

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HyNet North West

PROJECT TITLE

HyNet Carbon Dioxide Pipeline DCO

DRAWING TITLE

Biodiversity Net Gain Assessment
Figure 1 - Baseline Habitat Map
Sheet 10 of 13

DRAWING STATUS

Final for DCO Examination - submitted at Deadline 7

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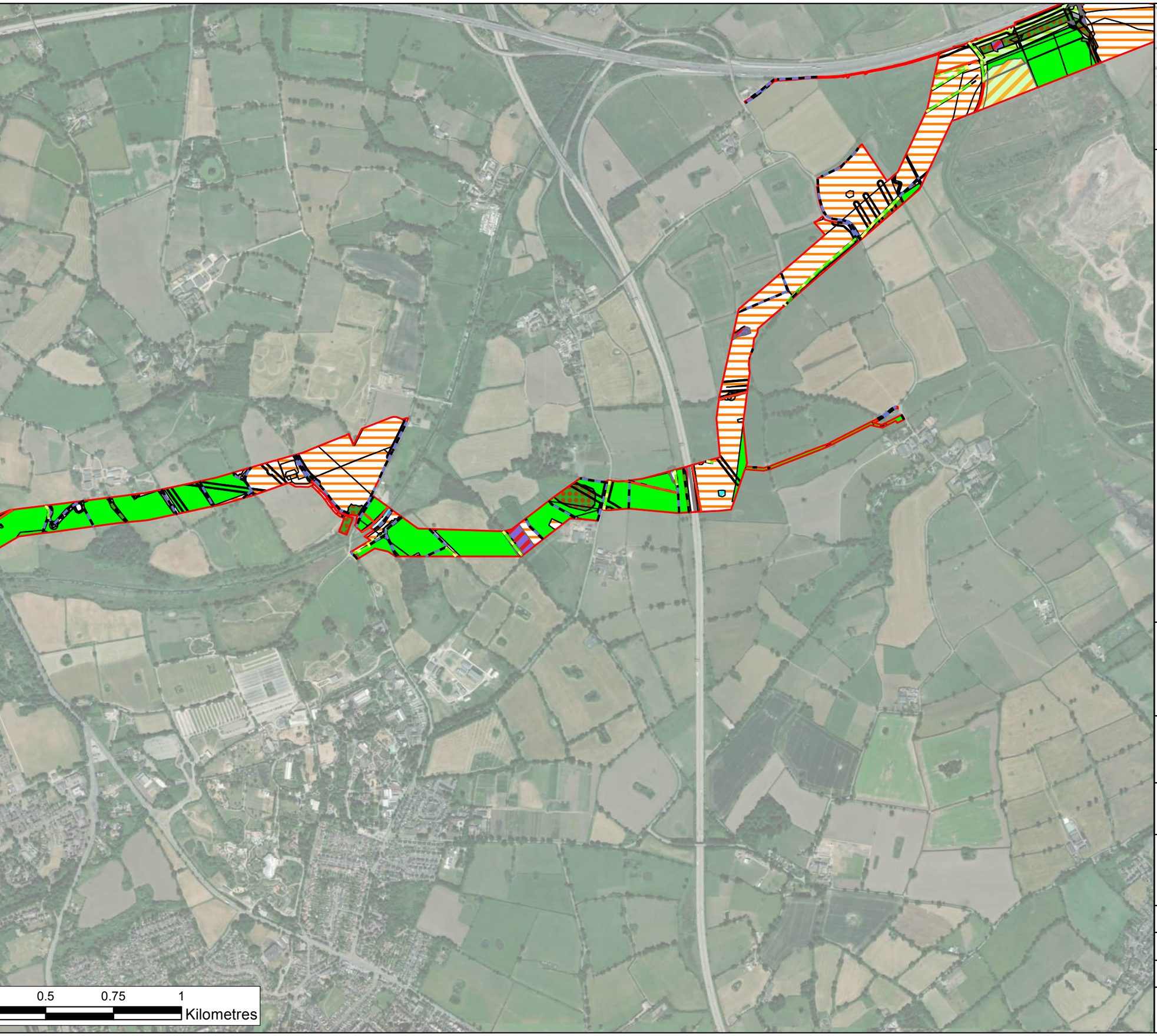
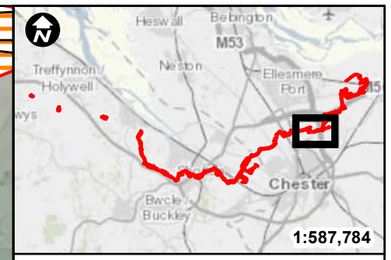
EN070007-APP-ES-D.6.5.12.1 Sheet 10





Key:

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- r1e - canals or ditch

HyNet North West

PROJECT TITLE

HyNet Carbon Dioxide Pipeline DCO

DRAWING TITLE

Biodiversity Net Gain Assessment
Figure 1 - Baseline Habitat Map
Sheet 11 of 13

DRAWING STATUS

Final for DCO Examination - submitted at Deadline 7

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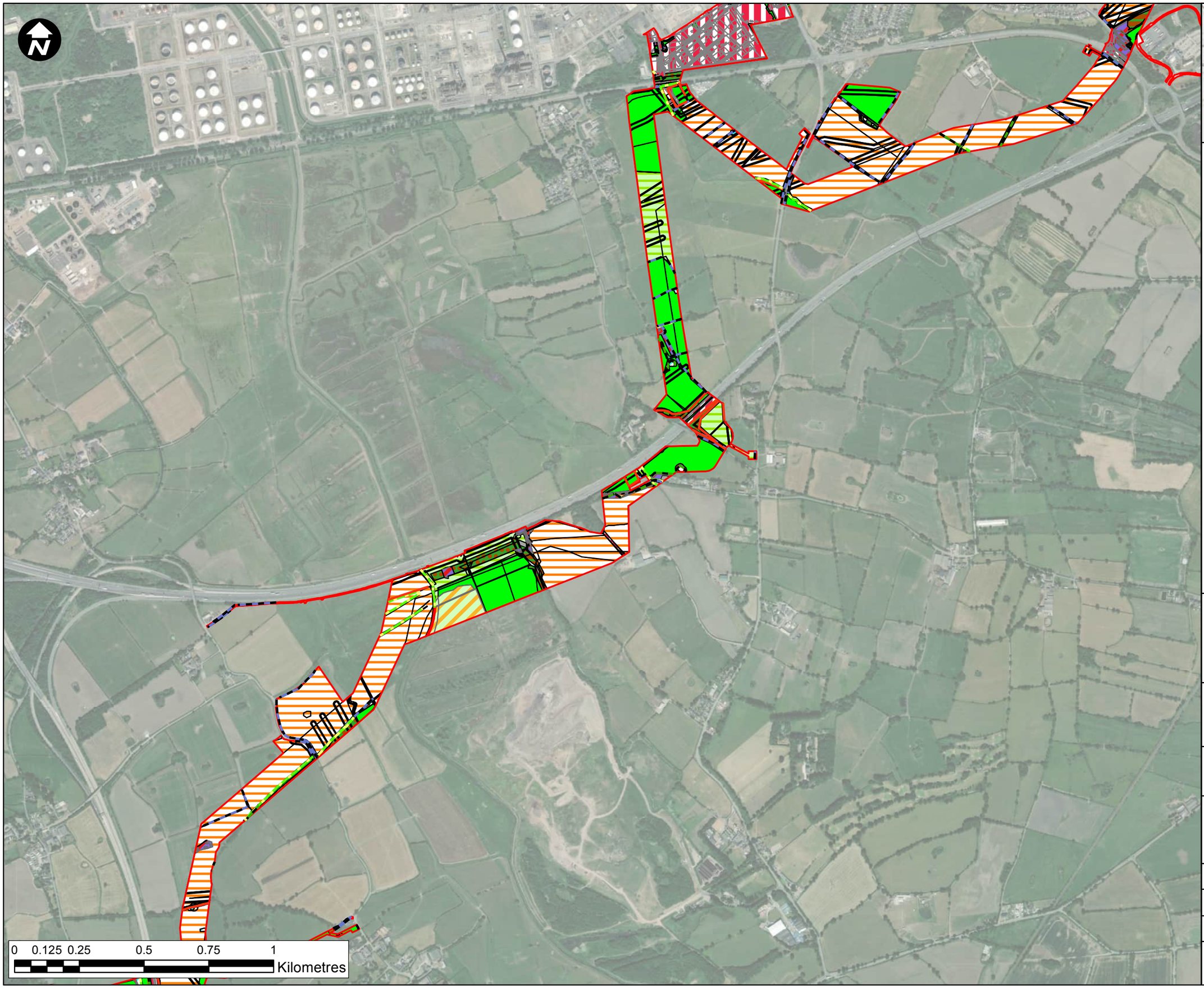
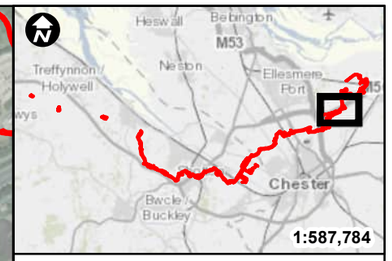
EN070007-APP-ES-D.6.5.12.1 Sheet 11





Key:

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HyNet North West

PROJECT TITLE

HyNet Carbon Dioxide Pipeline DCO

DRAWING TITLE

Biodiversity Net Gain Assessment
Figure 1 - Baseline Habitat Map
Sheet 12 of 13

DRAWING STATUS

Final for DCO Examination - submitted at Deadline 7

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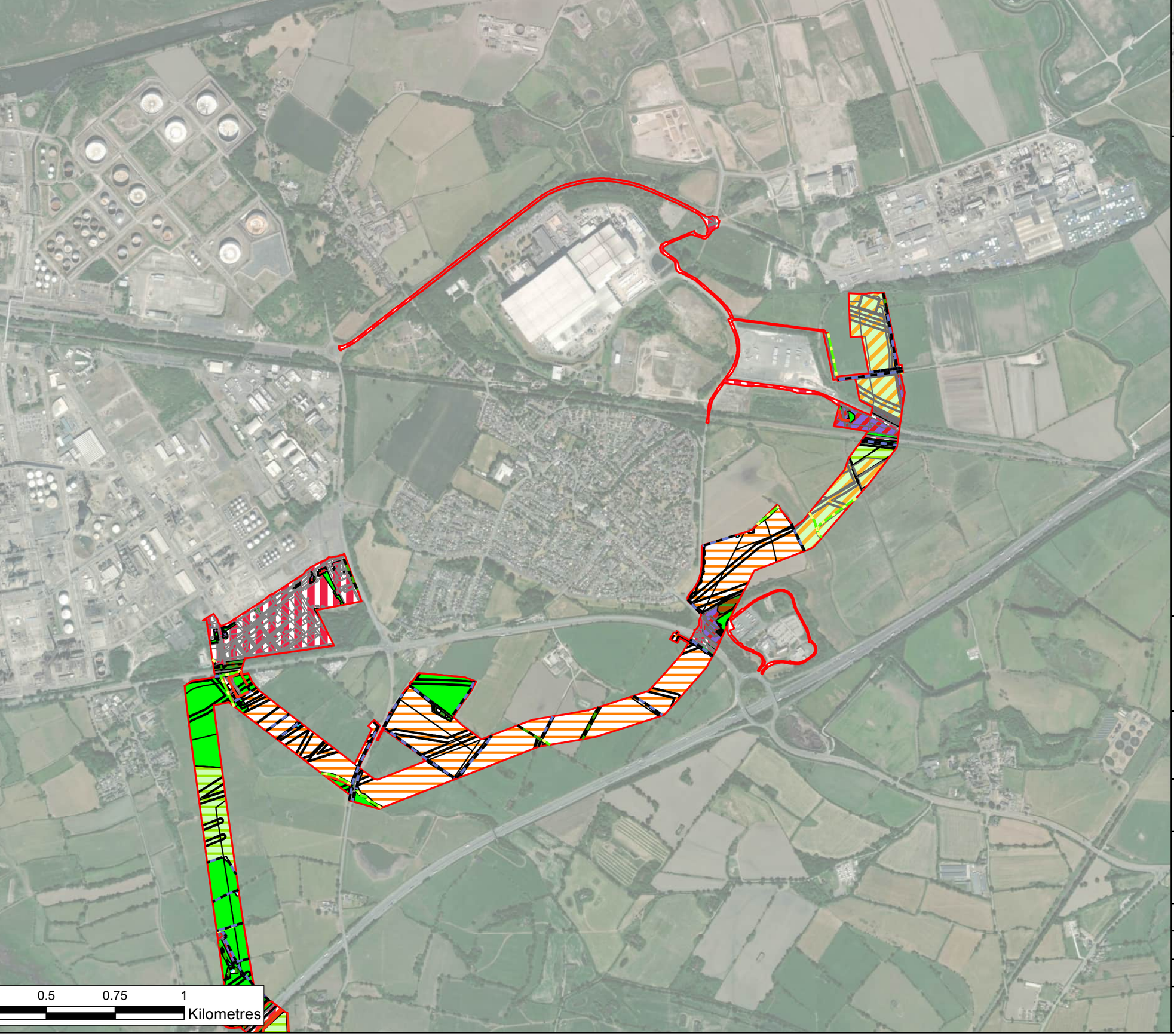
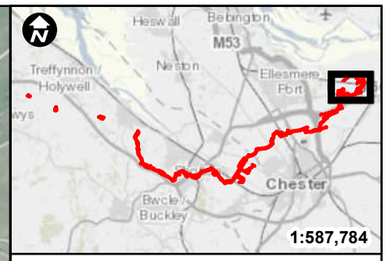
EN070007-APP-ES-D.6.5.12.1 Sheet 12





Key:

- Newbuild Infrastructure Boundary

UKHab Habitat Types

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HyNet North West

PROJECT TITLE

HyNet Carbon Dioxide Pipeline DCO

DRAWING TITLE

Biodiversity Net Gain Assessment
Figure 1 - Baseline Habitat Map
Sheet 13 of 13

DRAWING STATUS

Final for DCO Examination - submitted at Deadline 7

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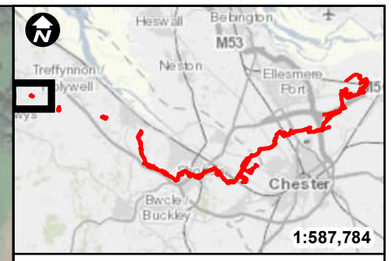
EN070007-APP-ES-D.6.5.12.1 Sheet 13



Key:

- Newbuild Infrastructure Boundary
- Permanent loss
- Scheme boundary that includes area of habitats that will be temporarily lost

HyNet North West

PROJECT TITLE
HyNet Carbon Dioxide Pipeline DCO

DRAWING TITLE
Biodiversity Net Gain Assessment
Figure 2 - Areas of Temporary and Permanent Loss
Sheet 1 of 13

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Final for DCO Examination - submitted at Deadline 7

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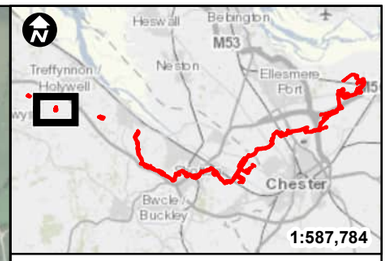
EN070007-APP-ES-D.6.5.12.2 Sheet 1



Key:

- Newbuild Infrastructure Boundary
- Permanent loss
- Scheme boundary that includes area of habitats that will be temporarily lost

HyNet North West

PROJECT TITLE
HyNet Carbon Dioxide Pipeline DCO

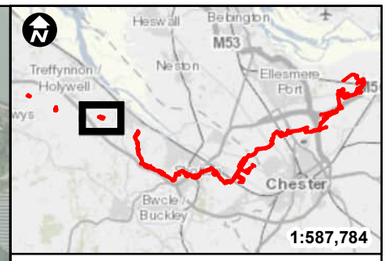
DRAWING TITLE
Biodiversity Net Gain Assessment
Figure 2 - Areas of Temporary and Permanent Loss
Sheet 2 of 13

DRAWING STATUS
Final for DCO Examination - submitted at Deadline 7

DRAWN	CHECKED	APPROVED	AUTHORISED
ST	JG	JOK	DC

SCALE @ A3 SIZE	DATE	REVISION
1:13,300	01/09/2023	C

DRAWING NUMBER
EN070007-APP-ES-D.6.5.12.2 Sheet 2



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HyNet North West

PROJECT TITLE
HyNet Carbon Dioxide Pipeline DCO

DRAWING TITLE
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Figure 2 - Areas of Temporary and Permanent Loss
Sheet 3 of 13

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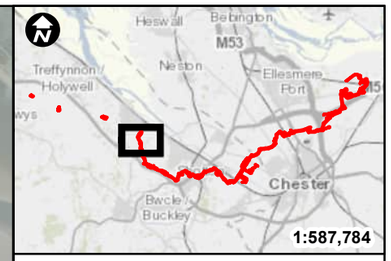

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HyNet North West

PROJECT TITLE
HyNet Carbon Dioxide Pipeline DCO

DRAWING TITLE
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Figure 2 - Areas of Temporary and Permanent Loss
Sheet 4 of 13

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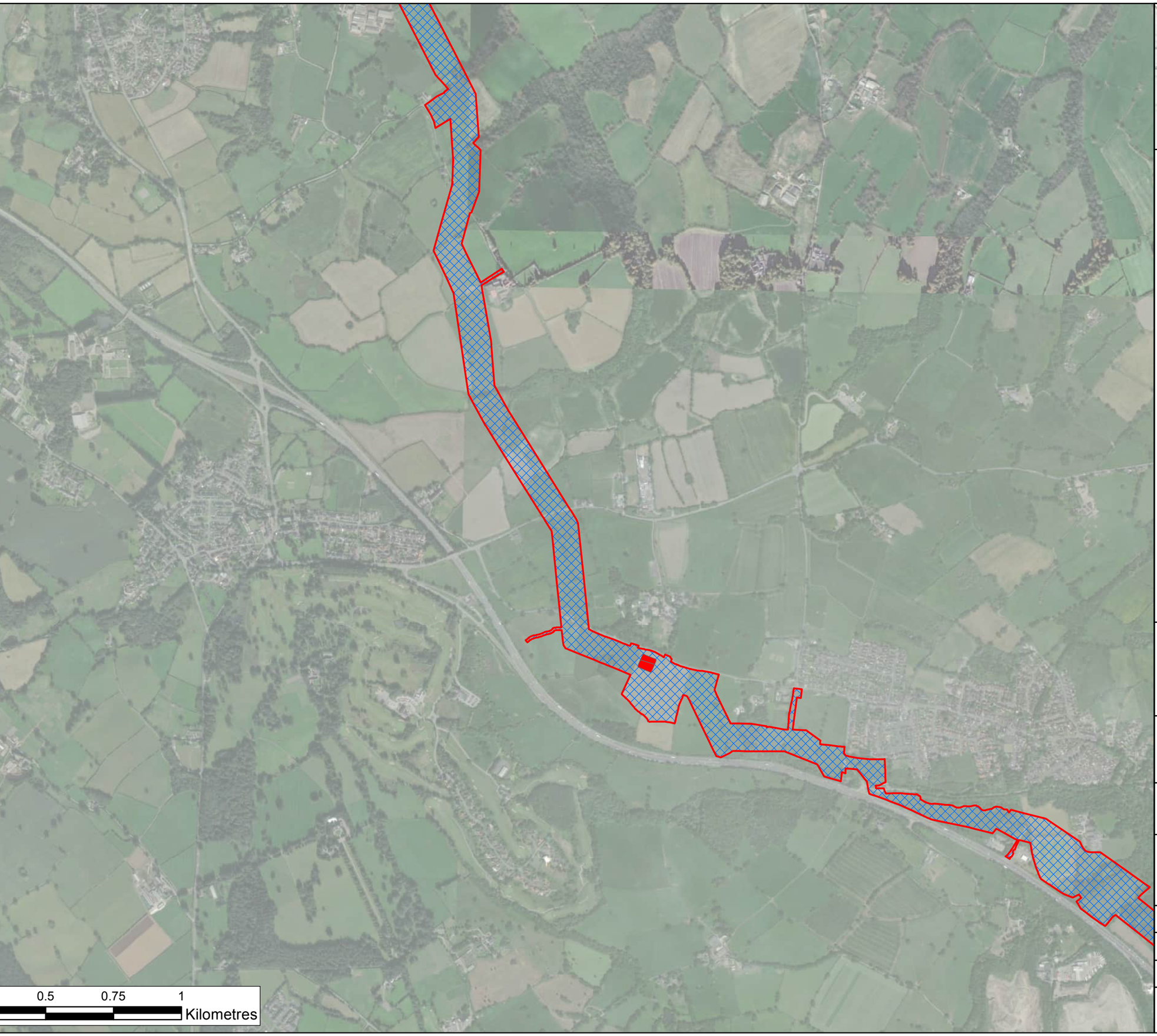

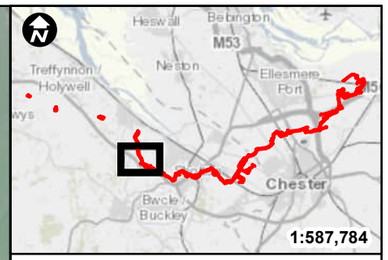

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HyNet North West

PROJECT TITLE
HyNet Carbon Dioxide Pipeline DCO

DRAWING TITLE
Biodiversity Net Gain Assessment
Figure 2 - Areas of Temporary and Permanent Loss
Sheet 5 of 13

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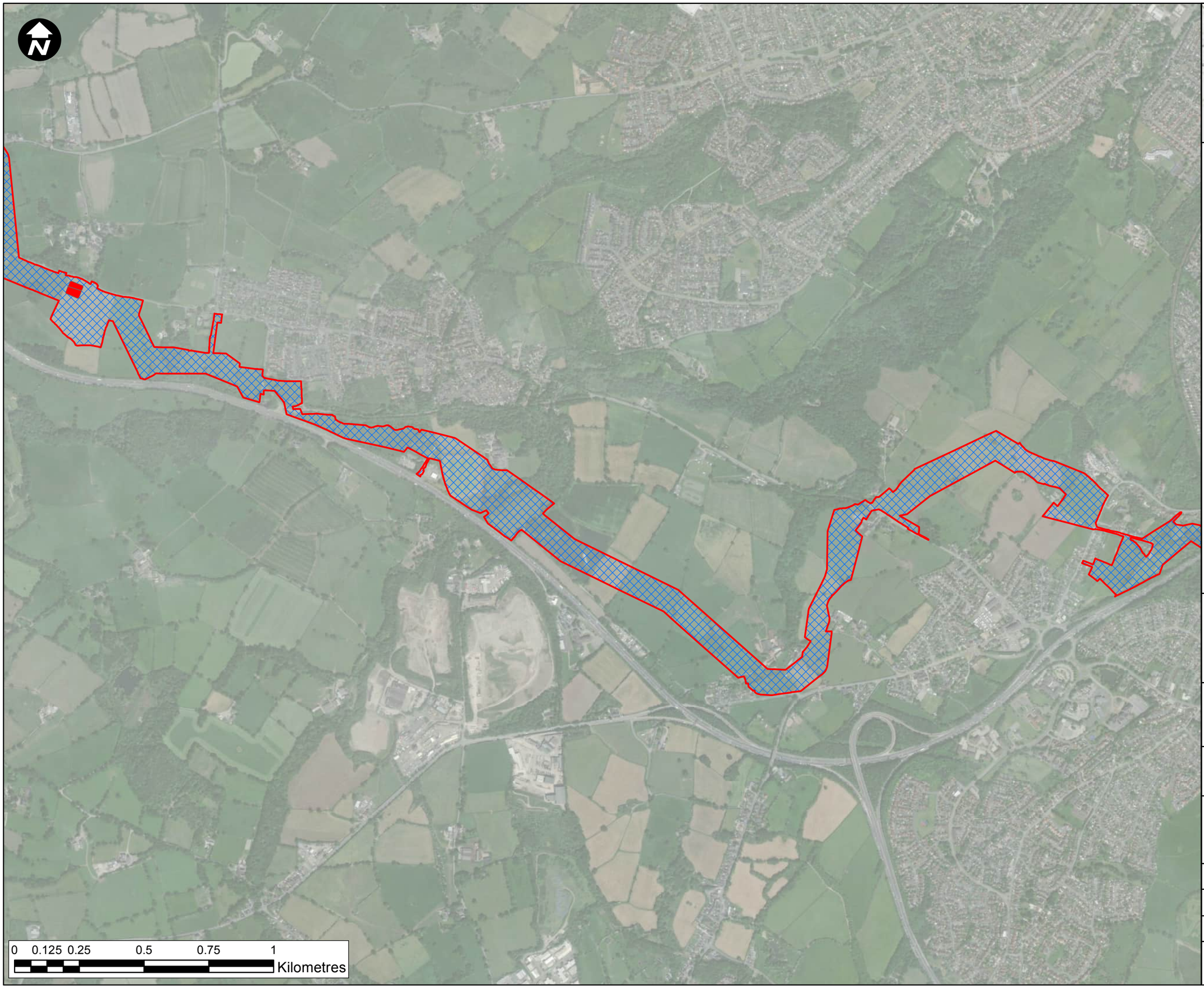
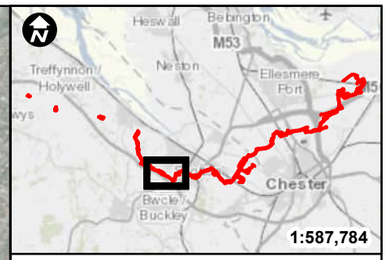
EN070007-APP-ES-D.6.5.12.2 Sheet 5





Key:

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- Permanent loss
- Scheme boundary that includes area of habitats that will be temporarily lost

HyNet North West

PROJECT TITLE

HyNet Carbon Dioxide Pipeline DCO

DRAWING TITLE

Biodiversity Net Gain Assessment
Figure 2 - Areas of Temporary and Permanent Loss
Sheet 6 of 13

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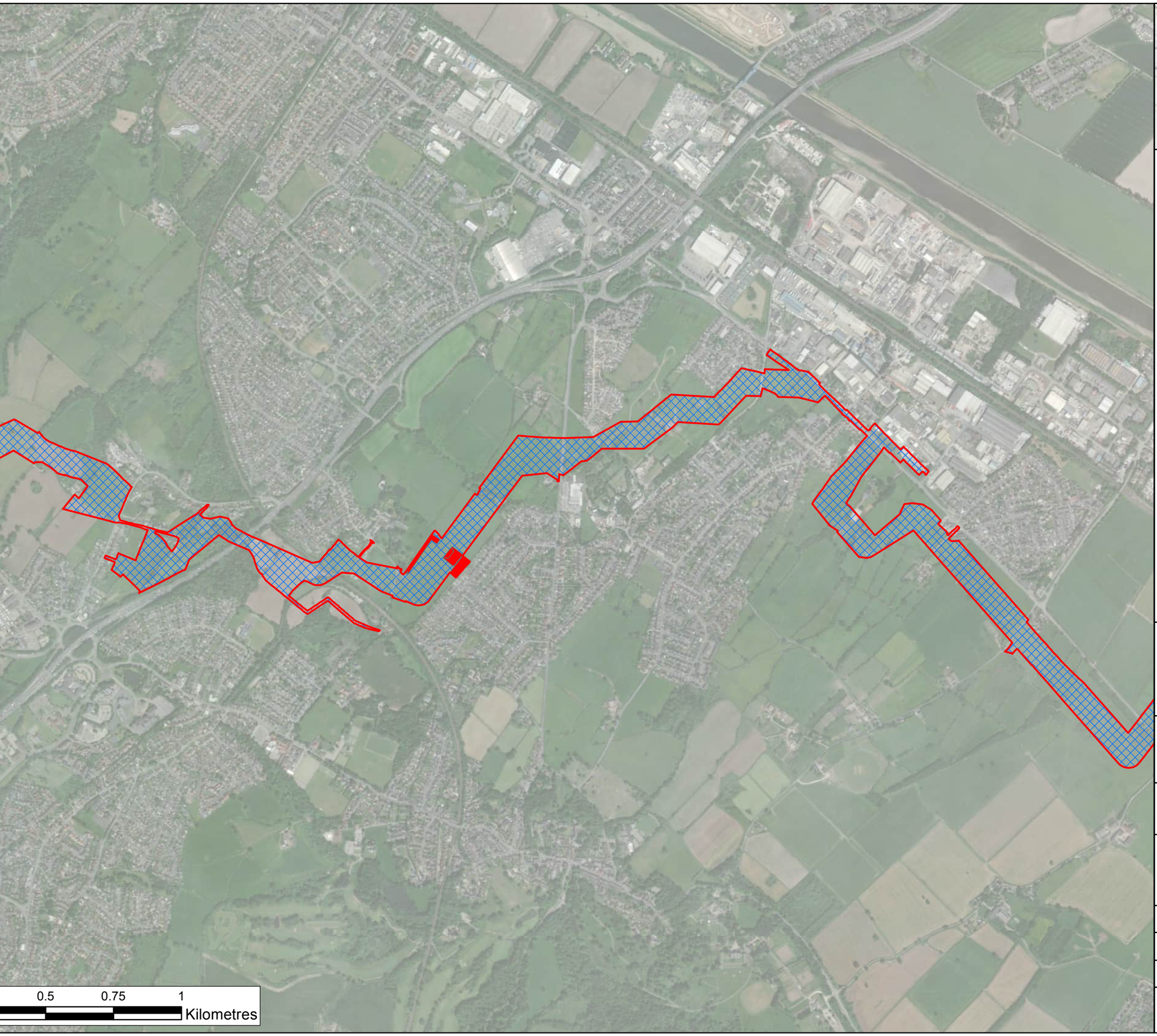
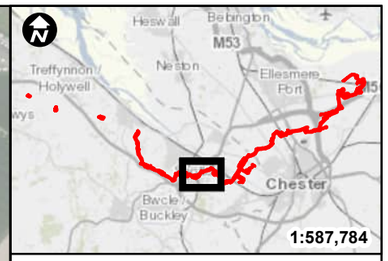
EN070007-APP-ES-D.6.5.12.2 Sheet 6





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HyNet North West

PROJECT TITLE
HyNet Carbon Dioxide Pipeline DCO

DRAWING TITLE
Biodiversity Net Gain Assessment
Figure 2 - Areas of Temporary and Permanent Loss
Sheet 7 of 13

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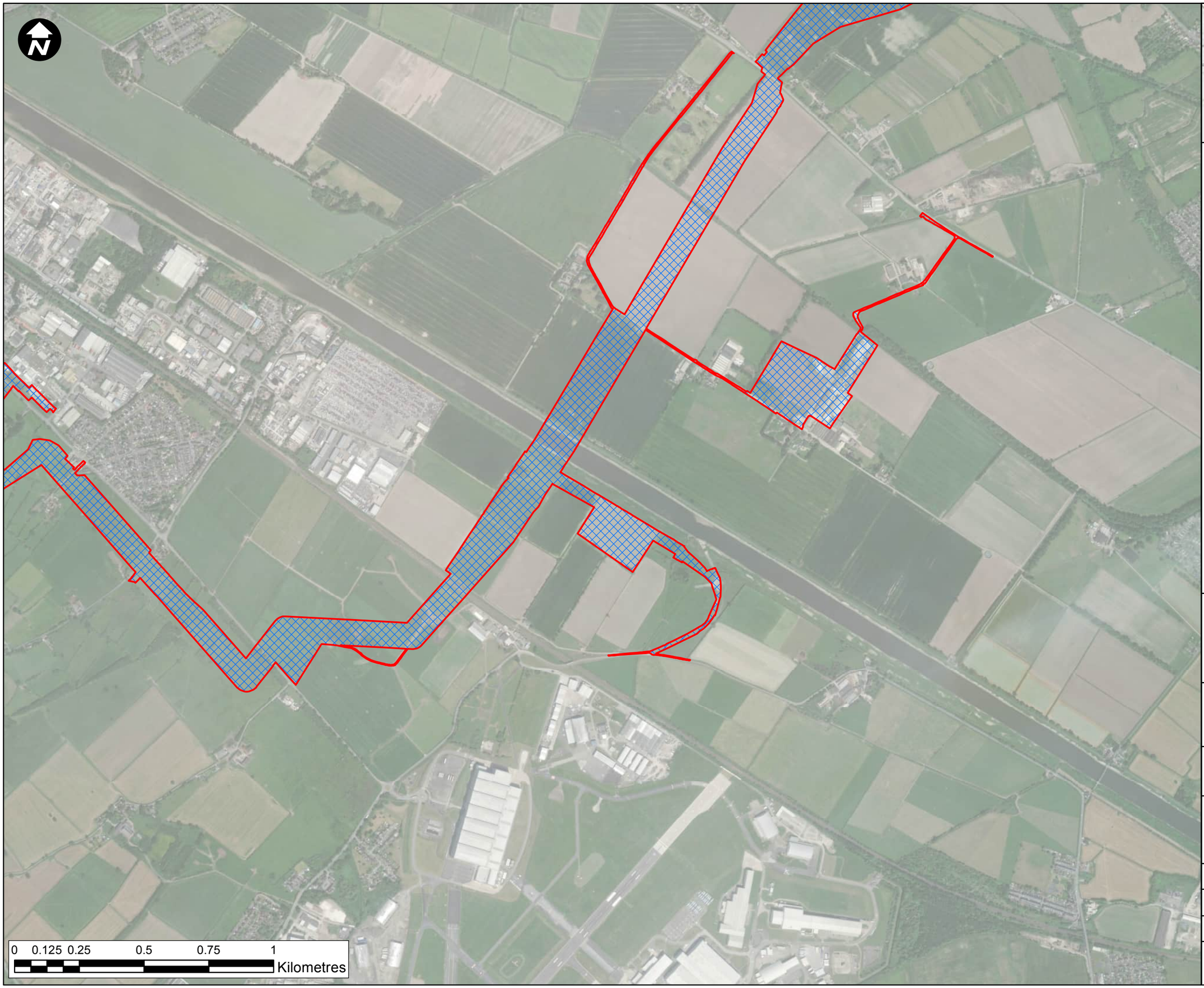
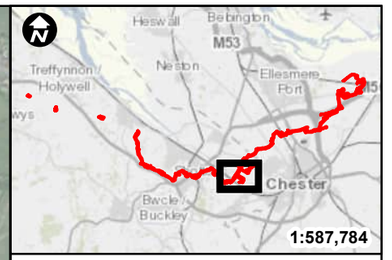
EN070007-APP-ES-D.6.5.12.2 Sheet 7





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HyNet North West

PROJECT TITLE
HyNet Carbon Dioxide Pipeline DCO

DRAWING TITLE
Biodiversity Net Gain Assessment
Figure 2 - Areas of Temporary and Permanent Loss
Sheet 8 of 13

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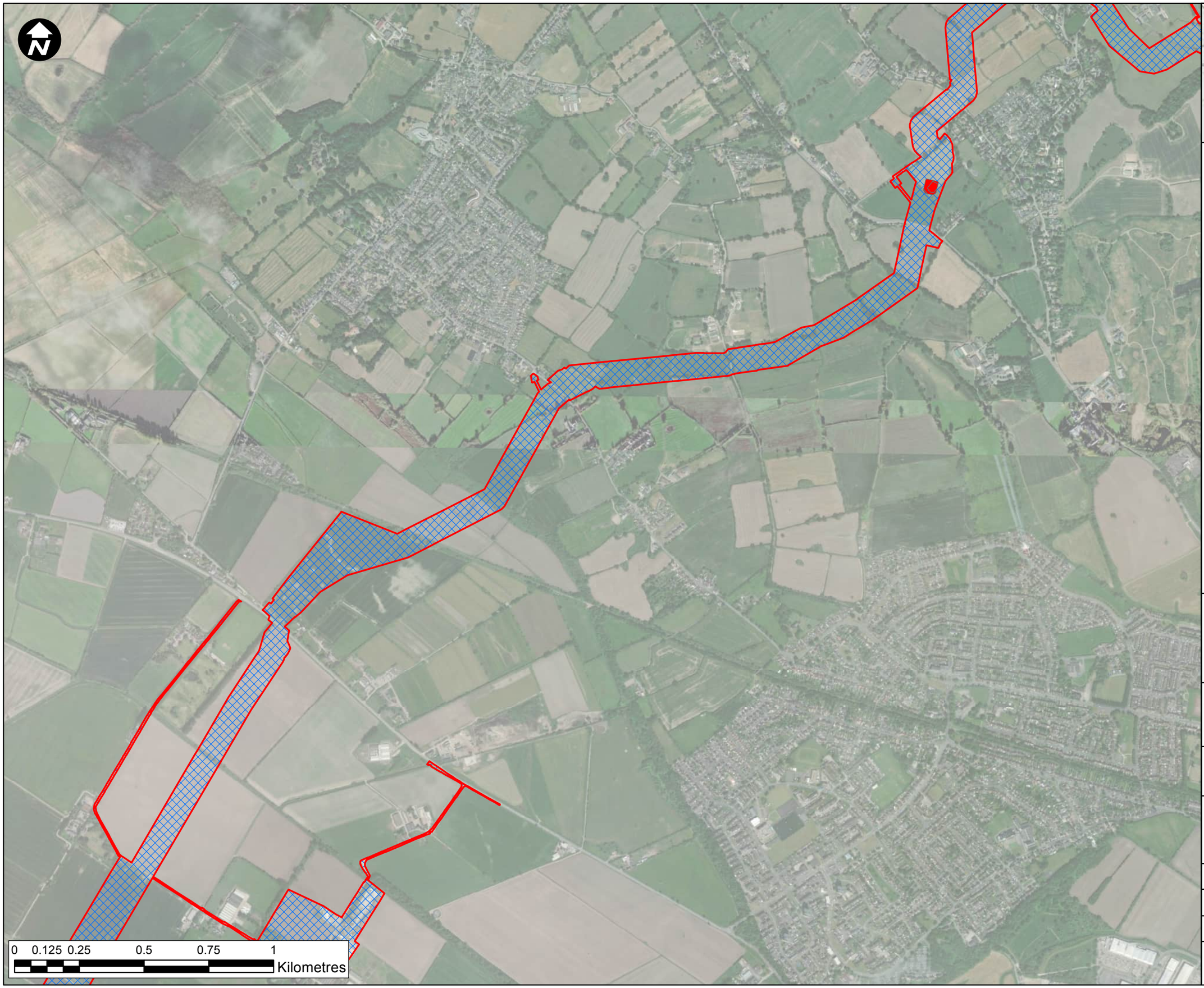
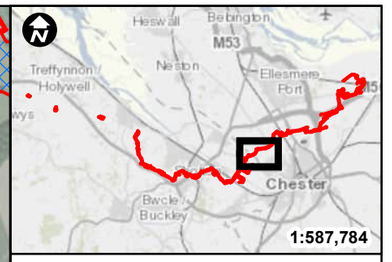
EN070007-APP-ES-D.6.5.12.2 Sheet 8





Key:

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HyNet North West

PROJECT TITLE

HyNet Carbon Dioxide Pipeline DCO

DRAWING TITLE

Biodiversity Net Gain Assessment
Figure 2 - Areas of Temporary and Permanent Loss
Sheet 9 of 13

DRAWING STATUS

Final for DCO Examination - submitted at Deadline 7

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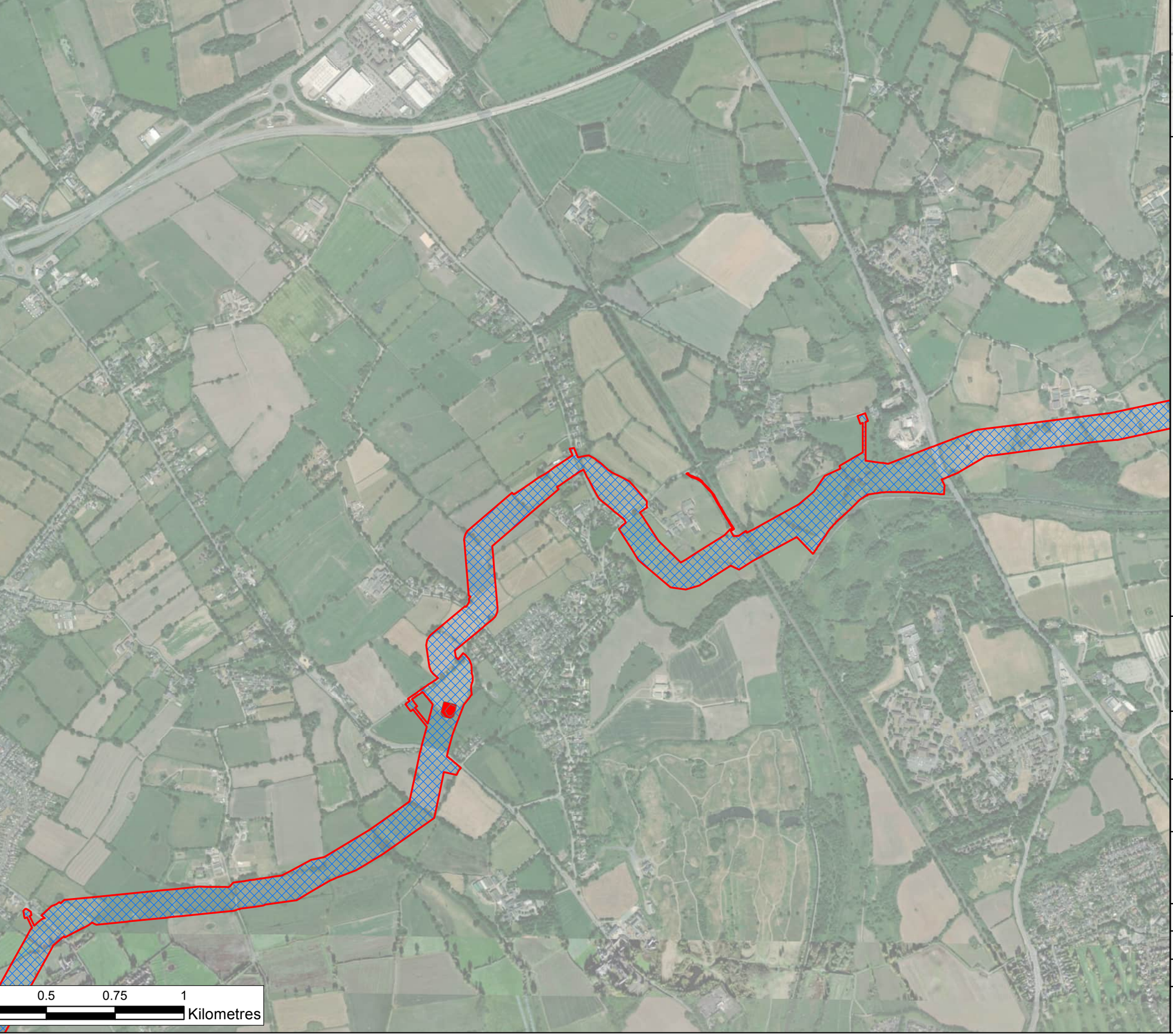
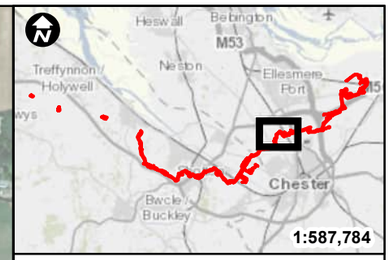
DRAWING NUMBER

EN070007-APP-ES-D.6.5.12.2 Sheet 9





Key:

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HyNet North West

PROJECT TITLE
HyNet Carbon Dioxide Pipeline DCO

DRAWING TITLE
Biodiversity Net Gain Assessment
Figure 2 - Areas of Temporary and Permanent Loss
Sheet 10 of 13

DRAWING STATUS
Final for DCO Examination - submitted at Deadline 7

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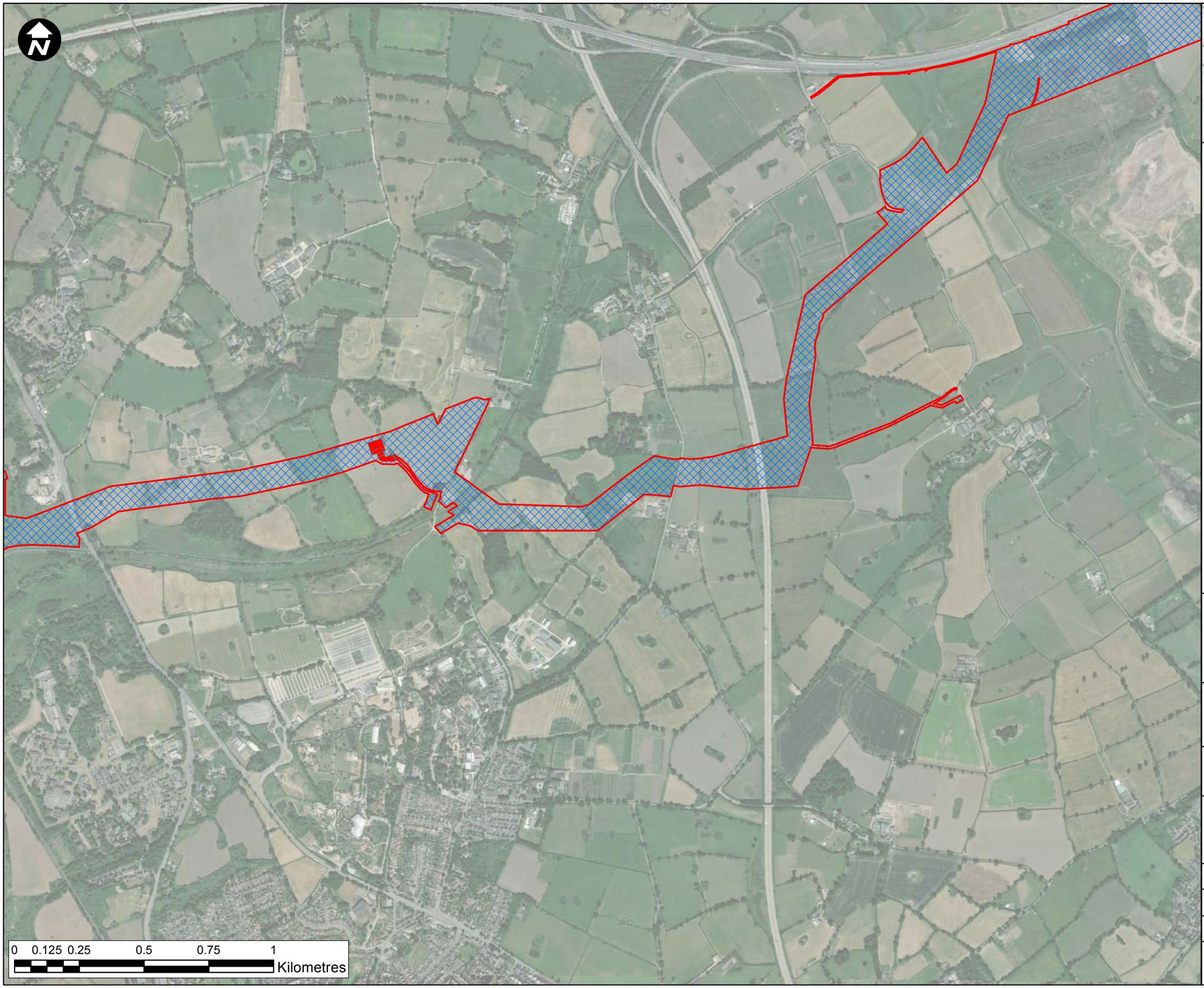
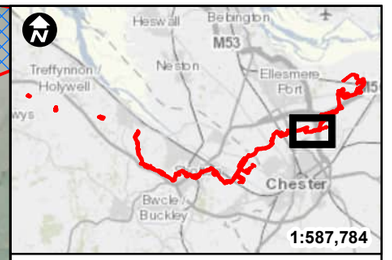
DRAWING NUMBER
EN070007-APP-ES-D.6.5.12.2 Sheet 10





Key:

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HyNet North West

PROJECT TITLE
HyNet Carbon Dioxide Pipeline DCO

DRAWING TITLE
Biodiversity Net Gain Assessment
Figure 2 - Areas of Temporary and Permanent Loss
Sheet 11 of 13

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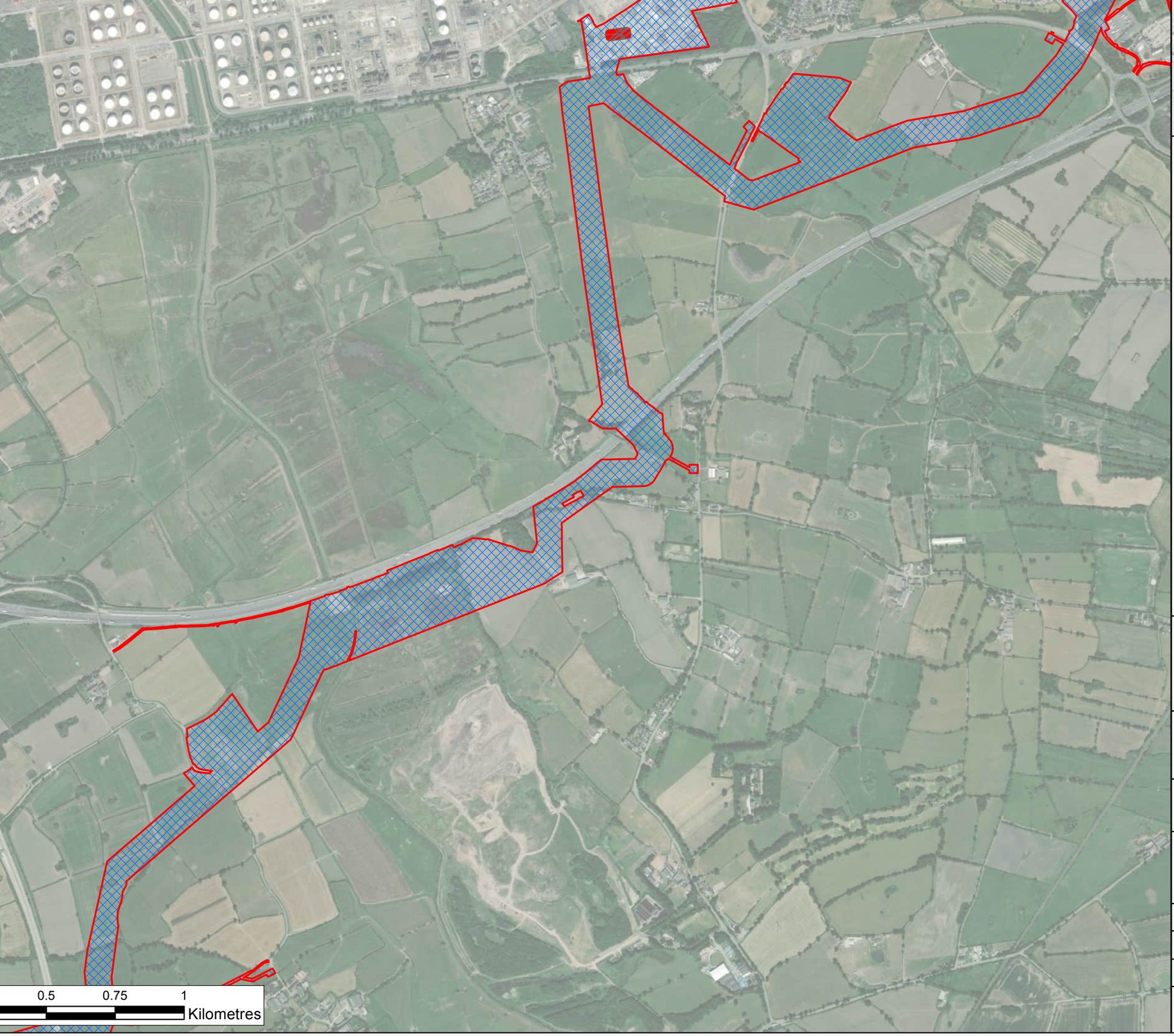
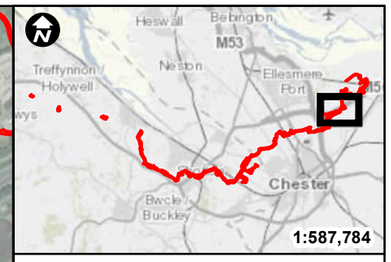
DRAWING NUMBER
EN070007-APP-ES-D.6.5.12.2 Sheet 11





Key:

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HyNet North West

PROJECT TITLE
HyNet Carbon Dioxide Pipeline DCO

DRAWING TITLE
Biodiversity Net Gain Assessment
Figure 2 - Areas of Temporary and Permanent Loss
Sheet 12 of 13

DRAWING STATUS
Final for DCO Examination - submitted at Deadline 7

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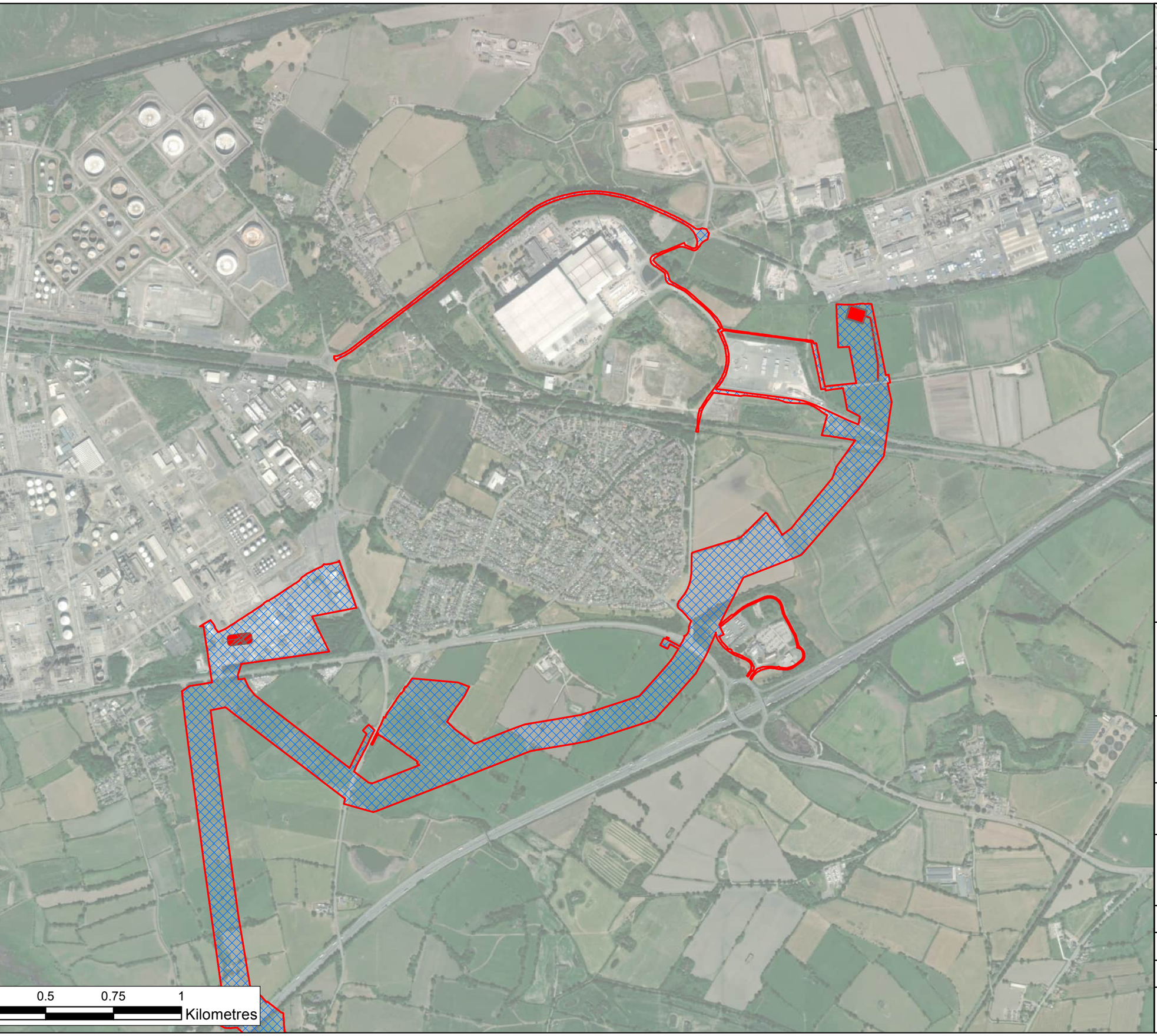
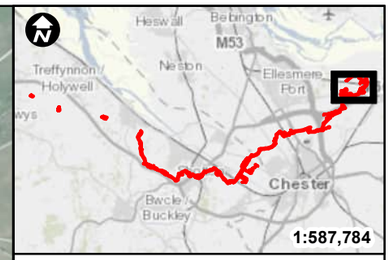
DRAWING NUMBER
EN070007-APP-ES-D.6.5.12.2 Sheet 12





Key:

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HyNet North West

PROJECT TITLE
HyNet Carbon Dioxide Pipeline DCO

DRAWING TITLE
Biodiversity Net Gain Assessment
Figure 2 - Areas of Temporary and Permanent Loss
Sheet 13 of 13

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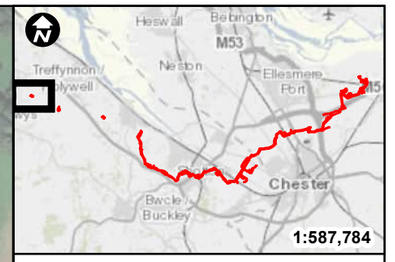
EN070007-APP-ES-D.6.5.12.2 Sheet 13



Key:

- Newbuild Infrastructure Boundary
- Special Area of Conservation (SAC)
- Site of Special Scientifc Interest (SSSI)

HyNet North West

PROJECT TITLE

HyNet Carbon Dioxide Pipeline DCO

DRAWING TITLE

Biodiversity Net Gain Assessment
Figure 3 - Designated Site Map
Sheet 1 of 13

DRAWING STATUS

Final for DCO Examination - submitted at Deadline 7

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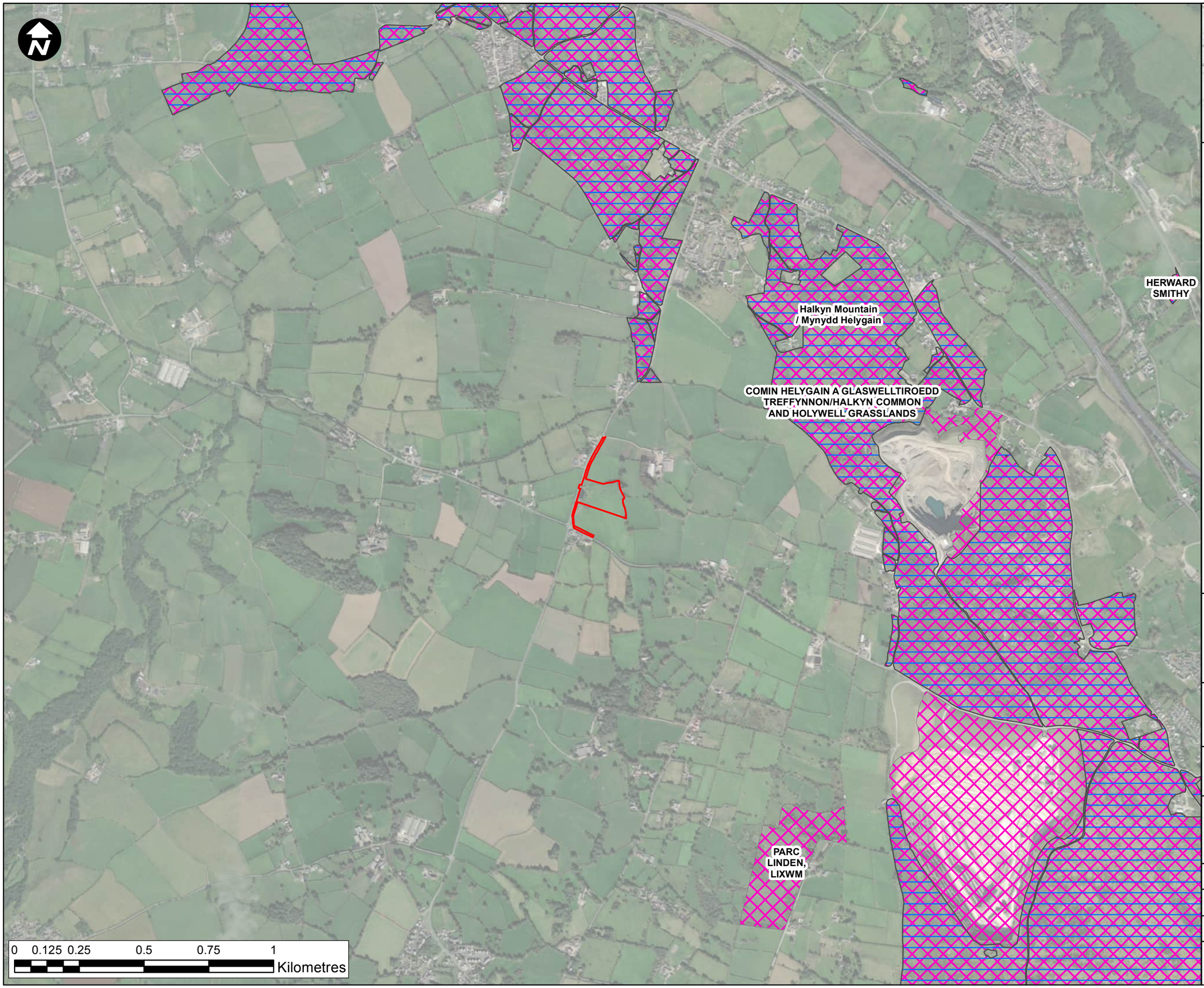
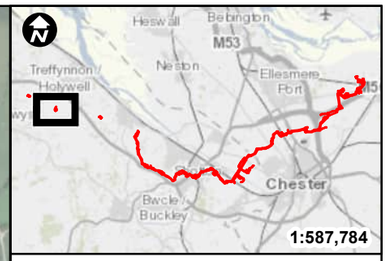
DRAWING NUMBER

EN070007-APP-ES-D.6.5.12.3 Sheet 1





Key:

- Newbuild Infrastructure Boundary
- Special Area of Conservation (SAC)
- Site of Special Scientifc Interest (SSSI)

HyNet North West

PROJECT TITLE
HyNet Carbon Dioxide Pipeline DCO

DRAWING TITLE
Biodiversity Net Gain Assessment
Figure 3 - Designated Site Map
Sheet 2 of 13

DRAWING STATUS
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DRAWING NUMBER
EN070007-APP-ES-D.6.5.12.3 Sheet 2

HERWARD SMITHY

DEE ESTUARY / ABER AFON DYFRDWY

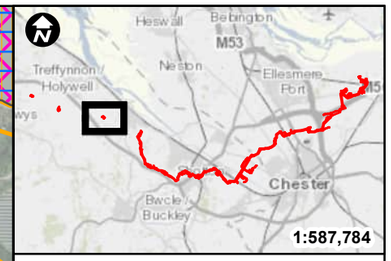
Dee Estuary / Aber Dyfrdwy (Wales)

Halkyn Mountain / Mynydd Helygain

COMIN HELYGAIN A GLASWELLTIROEDD TREFFYNNON/HALKYN COMMON AND HOLYWELL GRASSLANDS

MYNYDD Y FFLINT / FLINT MOUNTAIN

0 0.125 0.25 0.5 0.75 1 Kilometres



Key:

- Newbuild Infrastructure Boundary
- Special Area of Conservation (SAC)
- Special Protection Area (SPA)
- Site of Special Scientifc Interest (SSSI)
- Local Wildlife Site (LWS)
- Ancient Woodland

HyNet North West

PROJECT TITLE

HyNet Carbon Dioxide Pipeline DCO

DRAWING TITLE

Biodiversity Net Gain Assessment
Figure 3 - Designated Site Map
Sheet 3 of 13

DRAWING STATUS

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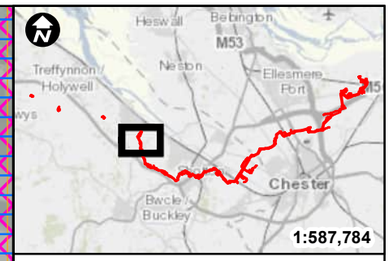
DRAWING NUMBER

EN070007-APP-ES-D.6.5.12.3 Sheet 3

DEE ESTUARY / ABER AFON DYFRDWY

Dee Estuary / Aber Dyfrdwy (Wales)

MYNYDD Y FFLINT / FLINT MOUNTAIN



Key:

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- Special Area of Conservation (SAC)
- Special Protection Area (SPA)
- Site of Special Scientifc Interest (SSSI)
- Local Wildlife Site (LWS)
- Ancient Woodland

0 0.125 0.25 0.5 0.75 1 Kilometres

HyNet North West

PROJECT TITLE

HyNet Carbon Dioxide Pipeline DCO

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Figure 3 - Designated Site Map
Sheet 4 of 13

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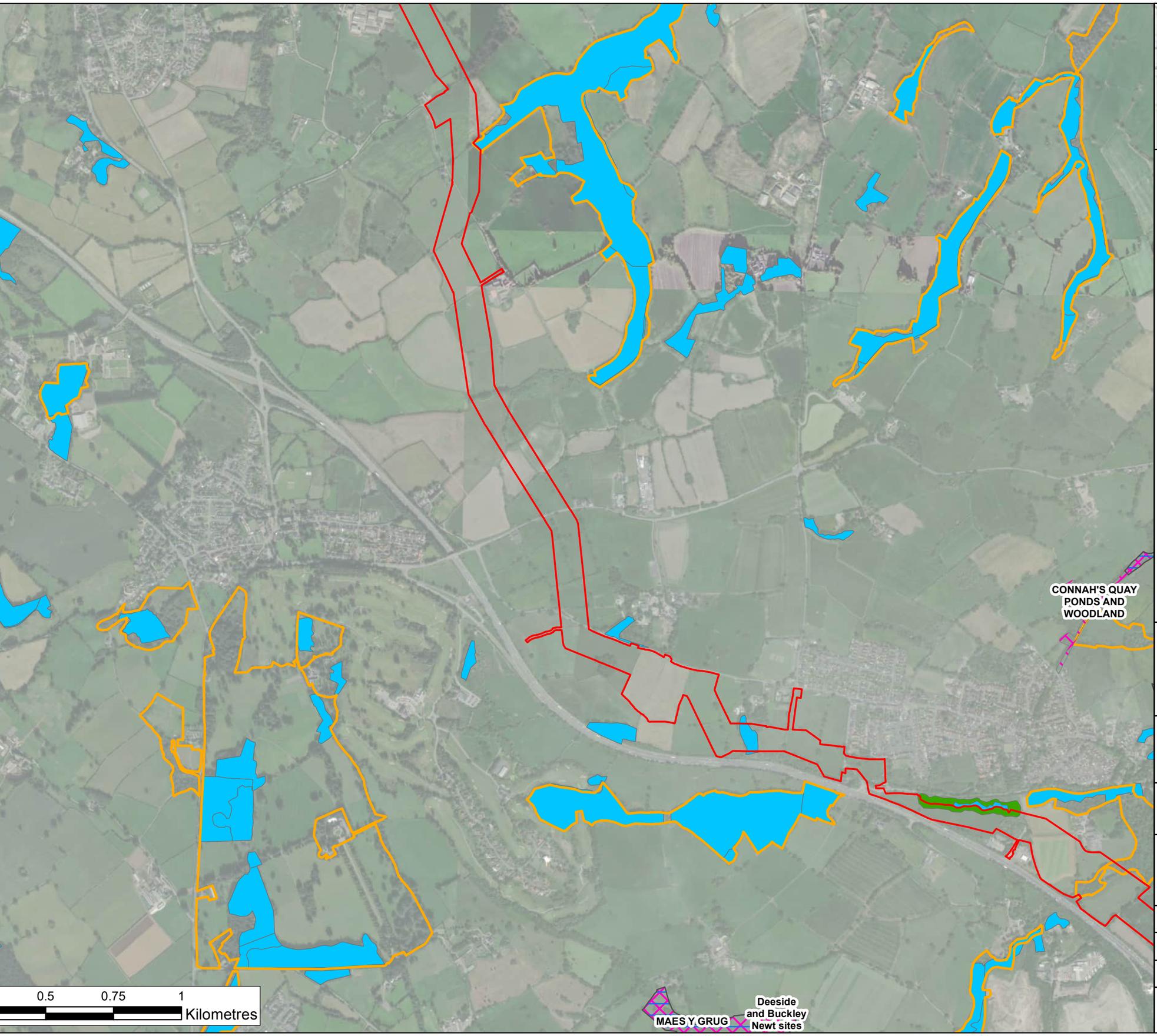
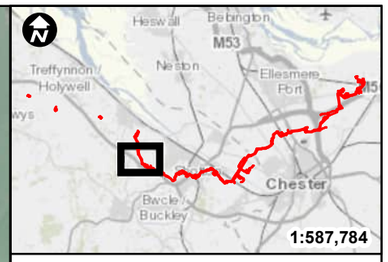
EN070007-APP-ES-D.6.5.12.3 Sheet 4





Key:

- Newbuild Infrastructure Boundary
- Special Area of Conservation (SAC)
- Site of Special Scientifc Interest (SSSI)
- Local Wildlife Site (LWS)
- Ancient Woodland
- Veteran tree groups

HyNet North West

PROJECT TITLE
HyNet Carbon Dioxide Pipeline DCO

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Biodiversity Net Gain Assessment
Figure 3 - Designated Site Map
Sheet 5 of 13

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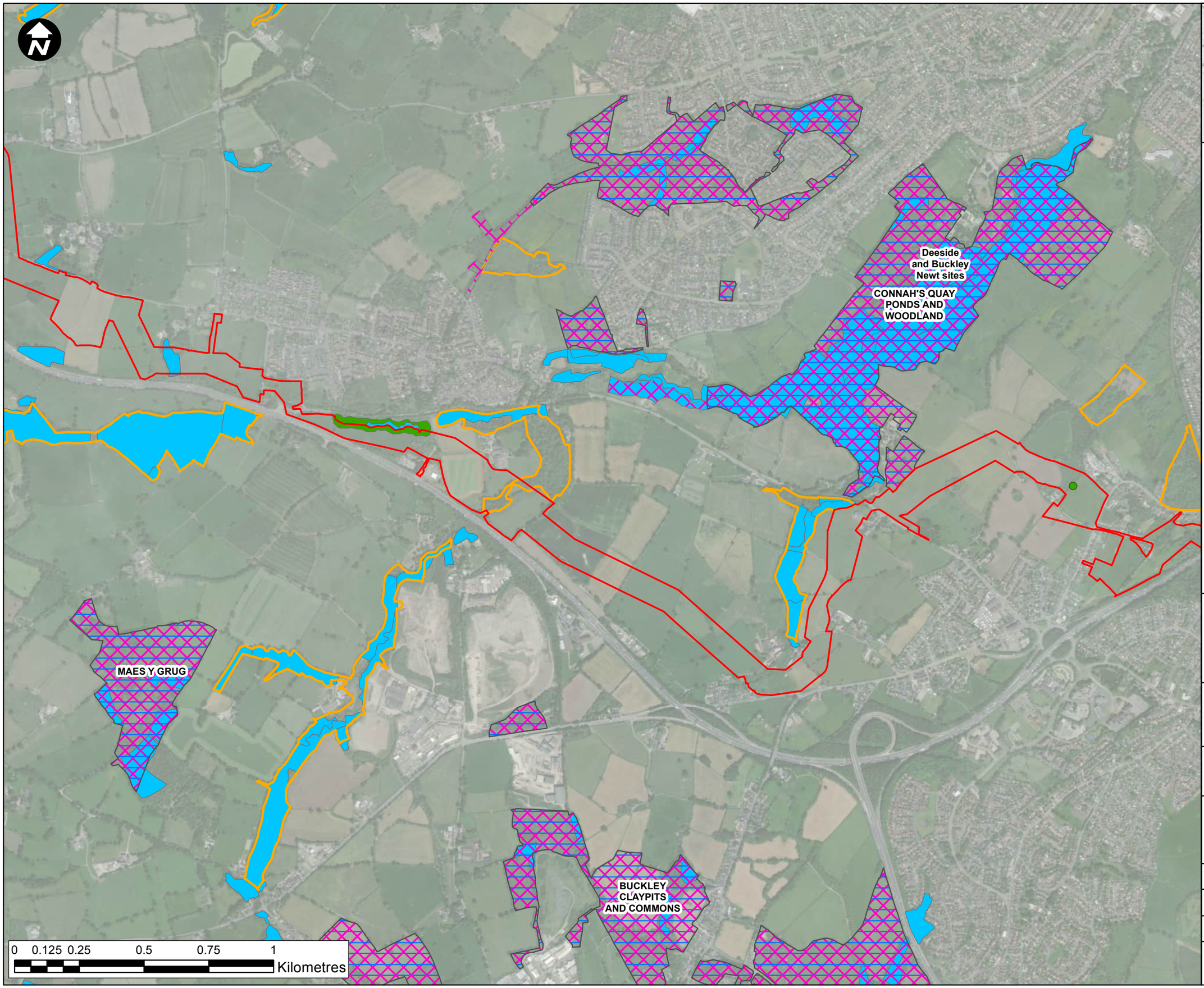
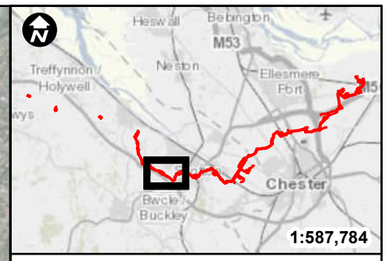
EN070007-APP-ES-D.6.5.12.3 Sheet 5





Key:

- Newbuild Infrastructure Boundary
- Special Area of Conservation (SAC)
- Site of Special Scientifc Interest (SSSI)
- Local Wildlife Site (LWS)
- Ancient Woodland
- Veteran tree groups
- Veteran tree points

HyNet North West

PROJECT TITLE
HyNet Carbon Dioxide Pipeline DCO

DRAWING TITLE
Biodiversity Net Gain Assessment
Figure 3 - Designated Site Map
Sheet 6 of 13

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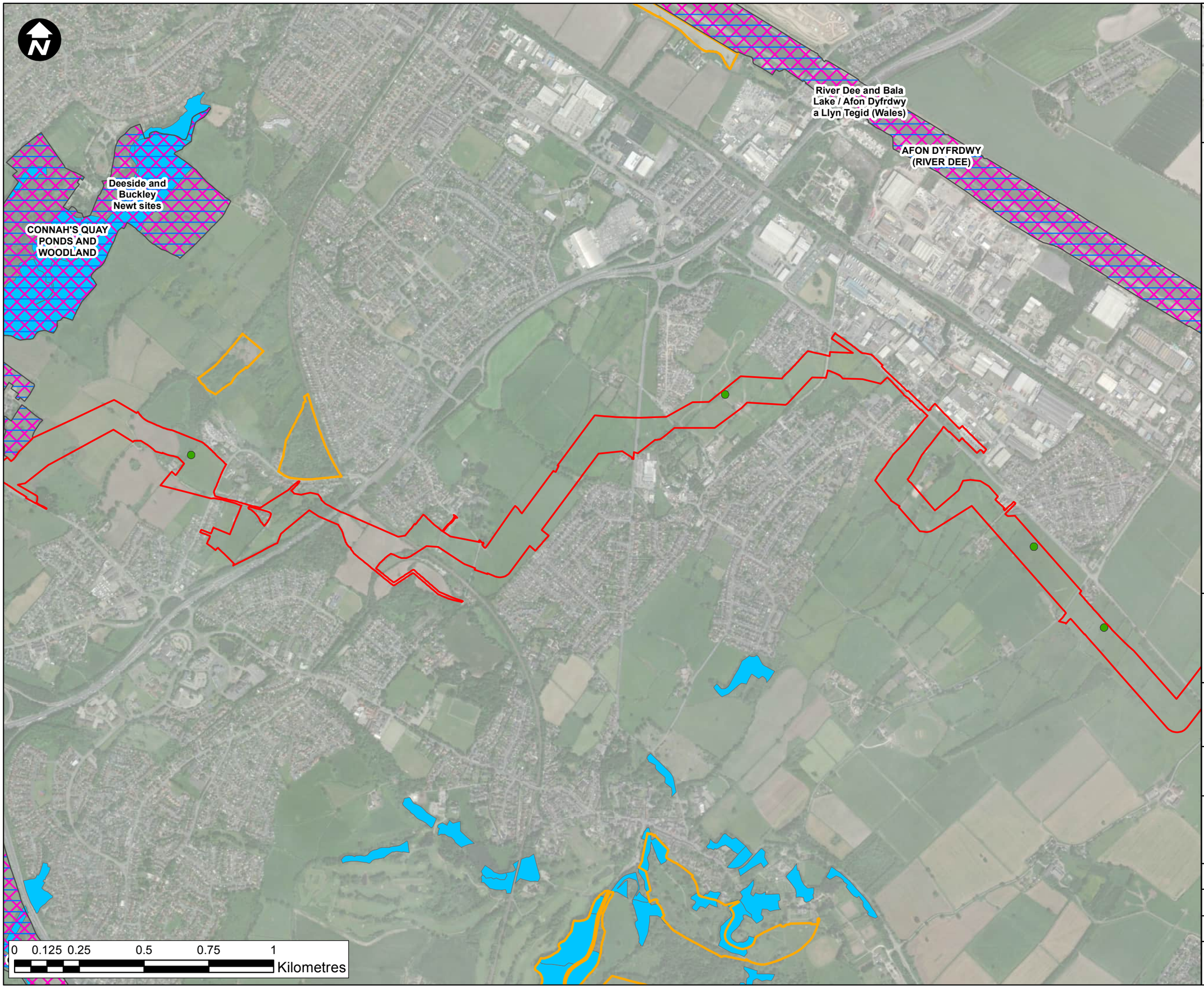
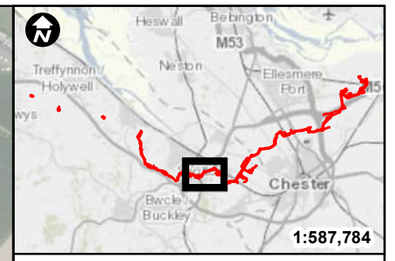
EN070007-APP-ES-D.6.5.12.3 Sheet 6





Key:

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- Local Wildlife Site (LWS)
- Ancient Woodland
- Veteran tree points

HyNet North West

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DRAWING TITLE
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Figure 3 - Designated Site Map
Sheet 7 of 13

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DRAWN	CHECKED	APPROVED	AUTHORISED
ST	JG	JOK	DC

SCALE @ A3 SIZE	DATE	REVISION
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EN070007-APP-ES-D.6.5.12.3 Sheet 7

Saughall Bank

The Greenway (Millennium Cycle Route 5 Blacon to Newton - Former Railway Line)

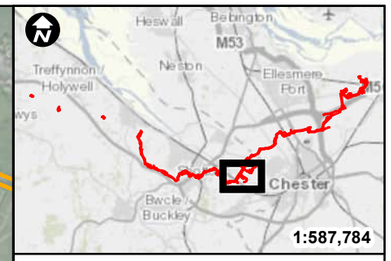
Blacon Wood Escarpment

Blacon Wood Escarpment

AFON DYFRDWY (RIVER DEE)

River Dee and Bala Lake / Afon Dyfrdwy a Llyn Tegid (Wales)

0 0.125 0.25 0.5 0.75 1 Kilometres



Key:

- Newbuild Infrastructure Boundary
- Special Area of Conservation (SAC)
- Site of Special Scientifc Interest (SSSI)
- Local Wildlife Site (LWS)
- Ancient Woodland
- Veteran tree groups
- Veteran tree points

HyNet North West

PROJECT TITLE

HyNet Carbon Dioxide Pipeline DCO

DRAWING TITLE

Biodiversity Net Gain Assessment
Figure 3 - Designated Site Map
Sheet 8 of 13

DRAWING STATUS

Final for DCO Examination - submitted at Deadline 7

DRAWN	CHECKED	APPROVED	AUTHORISED
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SCALE @ A3 SIZE	DATE	REVISION
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EN070007-APP-ES-D.6.5.12.3 Sheet 8

Old River Dee Escarpment

Saughall Bank

Wood West of Crabwell Manor

Viaduct Wood

Field North of Hadrian Drive

Blacon Wood Escarpment

Blacon Wood Escarpment

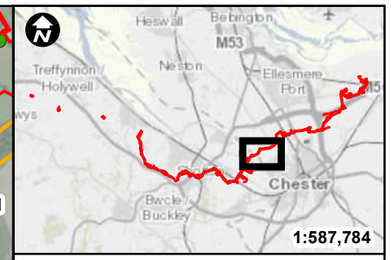
Blacon Wood Escarpment

Blacon Wood Escarpment

Blacon Wood Escarpment

The Greenway (Millennium Cycle Route 5 Blacon to Newton - Former Railway Line)

0 0.125 0.25 0.5 0.75 1 Kilometres



Key:

- Newbuild Infrastructure Boundary
- Special Area of Conservation (SAC)
- Site of Special Scientifc Interest (SSSI)
- Local Wildlife Site (LWS)
- Ancient Woodland
- Veteran tree groups
- Veteran tree points

HyNet North West

PROJECT TITLE

HyNet Carbon Dioxide Pipeline DCO

DRAWING TITLE

Biodiversity Net Gain Assessment
Figure 3 - Designated Site Map
Sheet 9 of 13

DRAWING STATUS

Final for DCO Examination - submitted at Deadline 7

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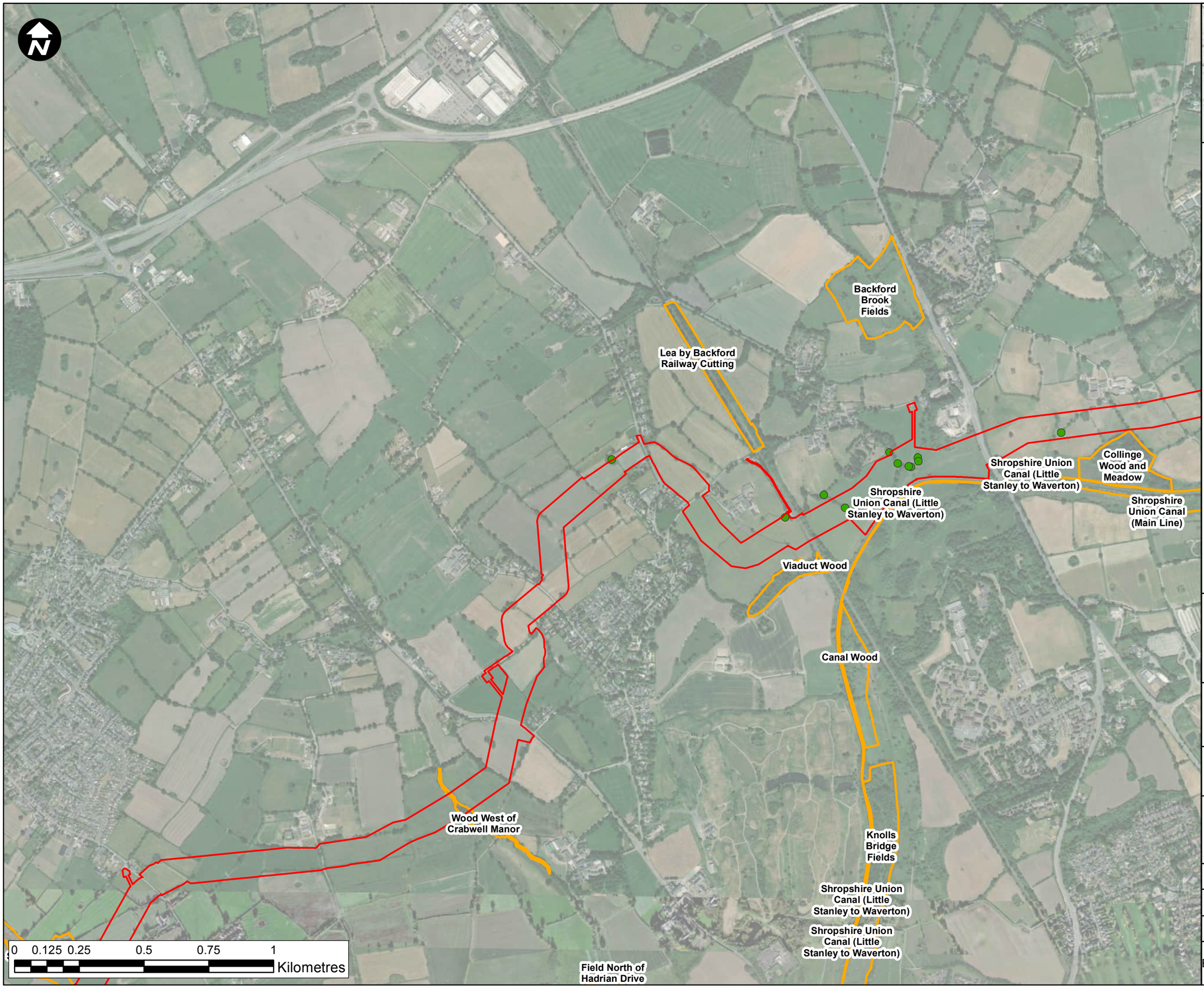
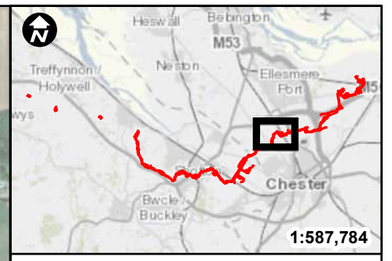
DRAWING NUMBER

EN070007-APP-ES-D.6.5.12.3 Sheet 9





Key:

- Newbuild Infrastructure Boundary
- Local Wildlife Site (LWS)
- Veteran tree points

HyNet North West

PROJECT TITLE

HyNet Carbon Dioxide Pipeline DCO

DRAWING TITLE

Biodiversity Net Gain Assessment
Figure 3 - Designated Site Map
Sheet 10 of 13

DRAWING STATUS

Final for DCO Examination - submitted at Deadline 7

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SCALE @ A3 SIZE	DATE	REVISION
1:13,300	01/09/2023	C

DRAWING NUMBER

EN070007-APP-ES-D.6.5.12.3 Sheet 10

Shropshire Union Canal (Little Stanley to Waverton)

Wervin Meadows

Shropshire Union Canal (Little Stanley to Waverton)

Gowy Meadows and Ditches

Shropshire Union Canal (Little Stanley to Waverton)

Backford Brook Fields

Shropshire Union Canal (Main Line)

Bridge Trafford North

Collinge Wood and Meadow

Shropshire Union Canal (Little Stanley to Waverton)

Chester Zoo Ponds

Chester Zoo Ponds

Chester Zoo Ponds

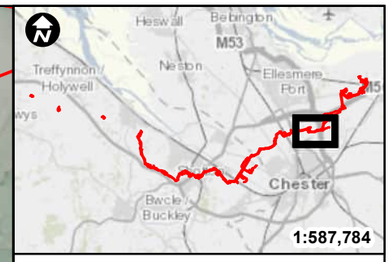
Chester Zoo Ponds

Picton Green Lane

Chester Zoo (Butter Hill - Millenium Cycle Route 56)

Chester Zoo (Butter Hill - Millenium Cycle Route 56)

0 0.125 0.25 0.5 0.75 1 Kilometres



Key:

- Newbuild Infrastructure Boundary
- Local Wildlife Site (LWS)
- Veteran tree points

HyNet North West

PROJECT TITLE

HyNet Carbon Dioxide Pipeline DCO

DRAWING TITLE

Biodiversity Net Gain Assessment
Figure 3 - Designated Site Map
Sheet 11 of 13

DRAWING STATUS

Final for DCO Examination - submitted at Deadline 7

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DRAWING NUMBER

EN070007-APP-ES-D.6.5.12.3 Sheet 11

Shropshire Union Canal (Little Stanley to Waverton)

Shropshire Union Canal (Little Stanley to Waverton)

Shropshire Union Canal (Little Stanley to Waverton)

Shropshire Union Canal (Little Stanley to Waverton)

Shropshire Union Canal (Little Stanley to Waverton)

Shropshire Union Canal (Little Stanley to Waverton)

Shropshire Union Canal (Little Stanley to Waverton)

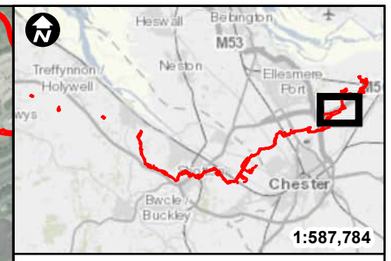
Gowy Meadows and Ditches

Wervin Meadows

Hoblane Ponds

Bridge Trafford North

0 0.125 0.25 0.5 0.75 1 Kilometres



Key:

- Newbuild Infrastructure Boundary
- Local Wildlife Site (LWS)
- Veteran tree points

HyNet North West

PROJECT TITLE

HyNet Carbon Dioxide Pipeline DCO

DRAWING TITLE

Biodiversity Net Gain Assessment
Figure 3 - Designated Site Map
Sheet 12 of 13

DRAWING STATUS

Final for DCO Examination - submitted at Deadline 7

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EN070007-APP-ES-D.6.5.12.3 Sheet 12

Mersey Estuary

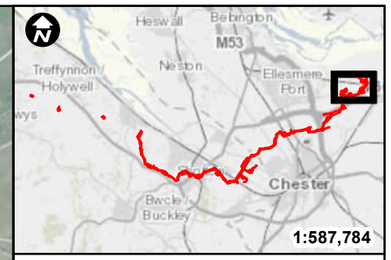
Frodsham, Helsby and Ince Marshes

Station Road Railway Site

Frodsham, Helsby and Ince Marshes

Gowy Meadows and Ditches

0 0.125 0.25 0.5 0.75 1 Kilometres



Key:

- Newbuild Infrastructure Boundary
- Site of Special Scientifc Interest (SSSI)
- Local Wildlife Site (LWS)
- Veteran tree points

HyNet North West

PROJECT TITLE

HyNet Carbon Dioxide Pipeline DCO

DRAWING TITLE

Biodiversity Net Gain Assessment
Figure 3 - Designated Site Map
Sheet 13 of 13

DRAWING STATUS

Final for DCO Examination - submitted at Deadline 7

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SCALE @ A3 SIZE	DATE	REVISION
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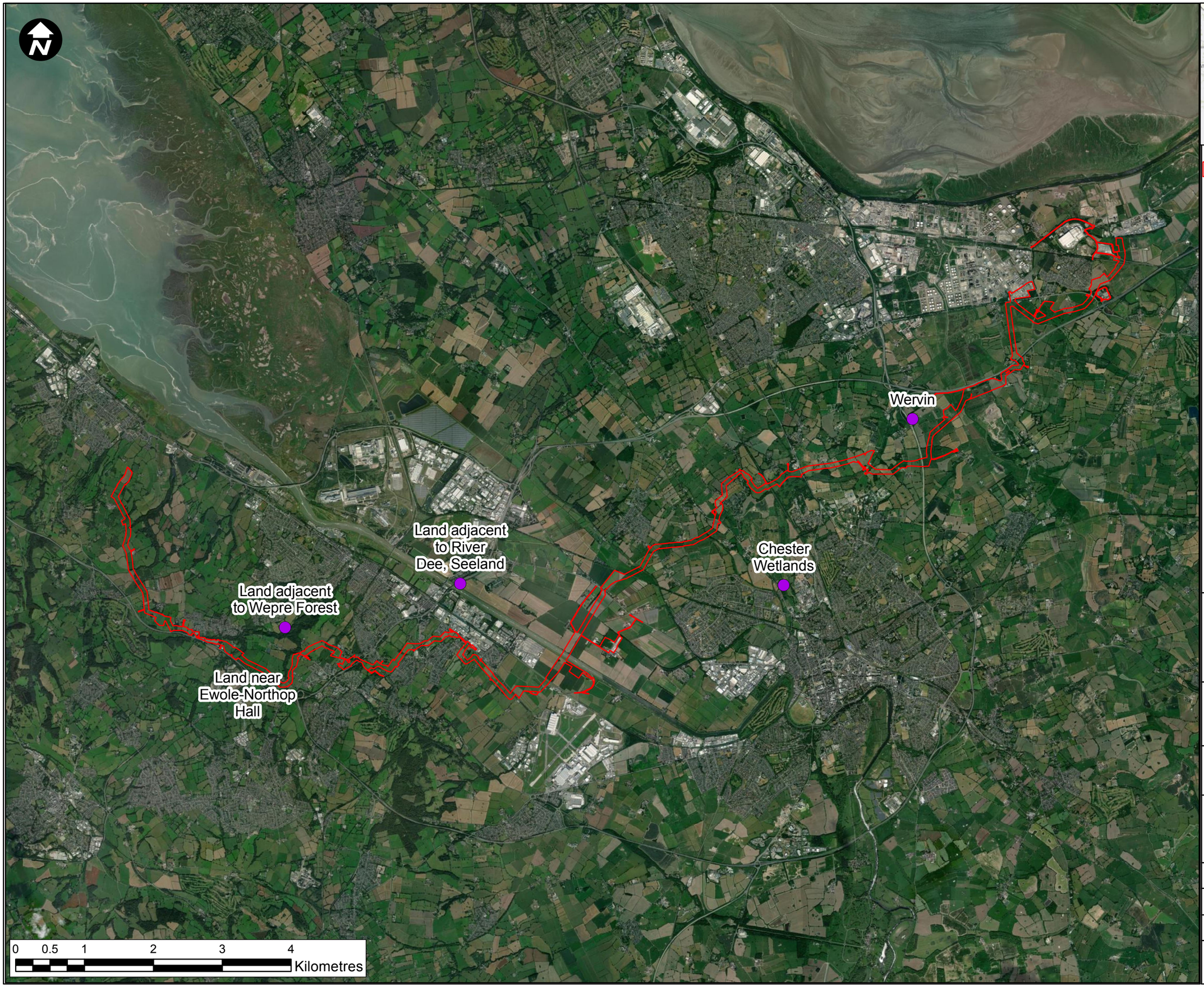
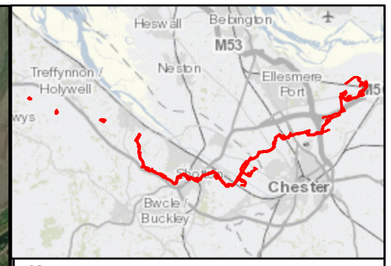
EN070007-APP-ES-D.6.5.12.3 Sheet 13





Key:

- Newbuild Infrastructure Boundary
- Offset Sites

HyNet North West

PROJECT TITLE

HyNet Carbon Dioxide Pipeline DCO

DRAWING TITLE

Biodiversity Net Gain Assessment
Figure 4 - Offset Site Location Map
Sheet 1 of 1

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Final for DCO Examination - Submitted at Deadline 7

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EN070007-APP-ES-D.6.5.12.4-Sheet 1

ANNEX C

BIODIVERSITY METRICS FOR ENGLAND AND WALES