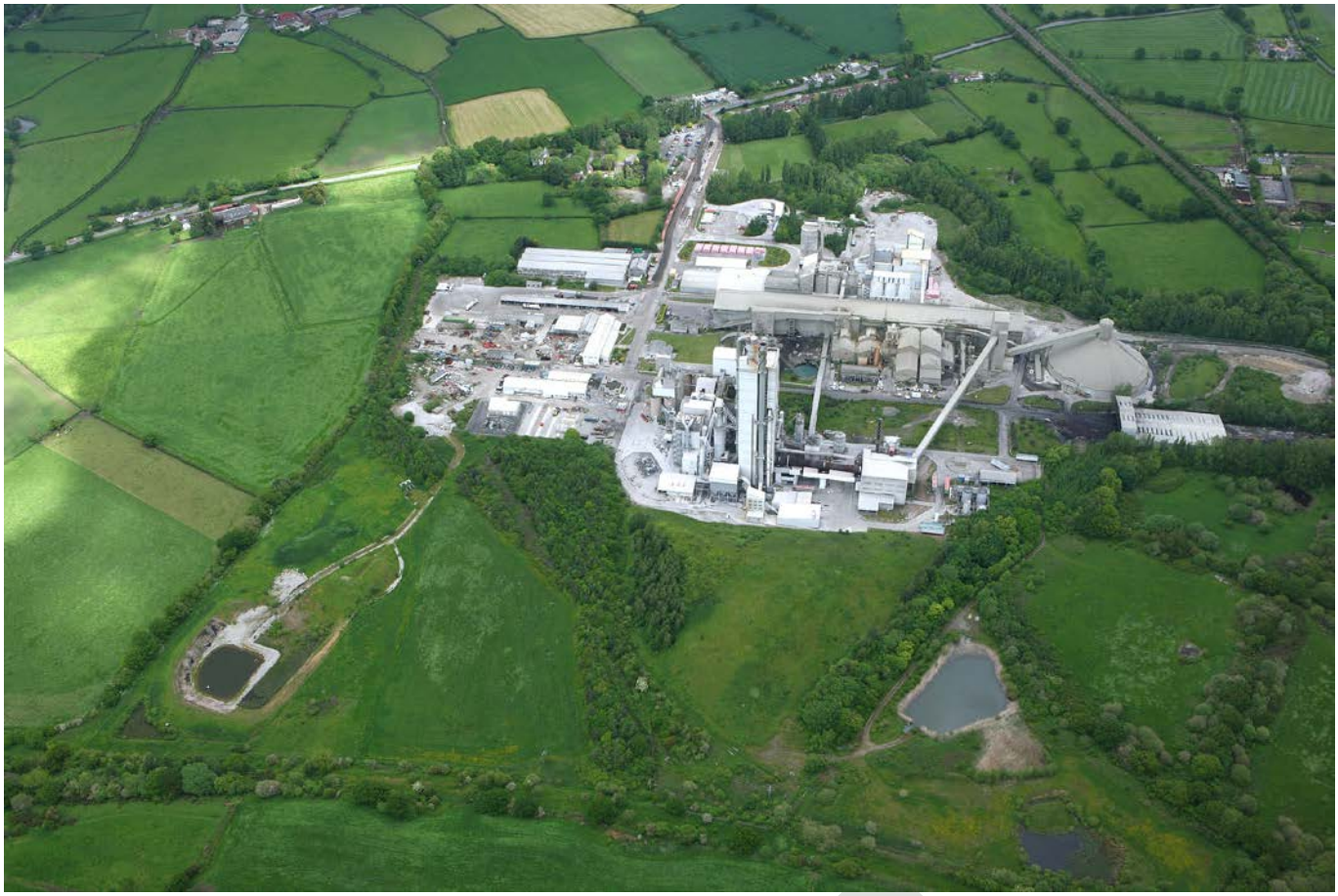

Castle Cement Limited

Carbon Capture and Storage Project – Padeswood, North Wales

Green Infrastructure Statement

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JUNE 2024

CONTENTS

TABLES

1 INTRODUCTION

1.1 Proposed Development

1.1.1 This Green Infrastructure Statement has been prepared in respect to the construction and operation of a Carbon Capture Plant (referred to as the 'Proposed Development') at the Padeswood Cement Works, Flintshire, North Wales (the 'Site').

1.1.2 The Proposed Development will comprise the following main project components:

- A Combined Heat and Power (CHP) plant with 15MWe (minimum) and 83MW (minimum) thermal of installed capacity, to produce electricity and heat to power the carbon capture equipment;
- A Post Combustion Carbon Capture and Compression (PCCCC) plant, to extract carbon dioxide (CO_2) from waste gases and compress it for transport and storage;
- Various permanent enabling development required to support and facilitate the Proposed Development, comprising;
    - Bunding;
    - Demolition of Padeswood Hall, Padeswood Hall Farm and all outbuildings;
    - Site access roads;
    - Offices and joint control centre;
    - Storm water holding pond;
    - General car park;
- Various temporary enabling development to support and facilitate the Proposed Development, comprising;
    - Materials laydown and contractors' storage area;
    - Contractor village and welfare;
    - Plant shutdown village; and
    - Laydown and construction offices.

1.1.3 The Proposed Development will be constructed on land to the south west of the existing cement works, on land that is within the existing works ownership and boundary.

1.1.4 Castle Cement Limited ('the Applicant'), a trading entity of Heidelburg Materials UK, owns and operates the existing cement works and will also be the operator of the Carbon Capture Plant.

1.2 Context

1.2.1 Updates to Chapter 6 of Planning Policy Wales Edition 12 (PPW)[1] were published in 'a letter to Heads of Planning' on 11 October 2023[2]. This iteration of PPW states that a Green Infrastructure Statement should be submitted with all planning applications and should describe how green infrastructure has been incorporated into a proposal. The level of detail in the Green Infrastructure Statement should be proportionate to the scale and nature to the proposal.

1.2.2 In broader terms, PPW defines green infrastructure as the network of natural and semi-natural features, green spaces, rivers, and lakes that intersperse and connect places (refer to **Section 2.1** for a detailed definition).

1.2.3 These updates have now been incorporated into PPW[3] published on 05 February 2024. The requirements for a Green Infrastructure Statement are set out in Paragraphs 6.2.12 and 6.2.13 of the PPW.

1.2.4 The purpose of this Green Infrastructure Statement is to outline the wider context of natural and semi-natural features that exist in the surrounding context of the Site and how this has influenced the design of the Proposed Development, including any avoidance and minimisation of harm, mitigation, compensation, and enhancement commitments.

1.2.5 In line with updated PPW policy that states green infrastructure statements should highlight the baseline data considered and surveys and assessments undertaken as part of the planning application. This Green Infrastructure Statement should therefore be read in conjunction with the following chapters and technical appendices of the draft Environmental Statement:

- Volume 2, Chapter 2: Description of the Purpose and Nature of the Proposed Development;
- Volume 2, Chapter 3: Reasonable Alternatives Considered;
- Volume 2, Chapter 5: Biodiversity;

[1] https://www.gov.wales/sites/default/files/publications/2024-02/planning-policy-wales-edition-12_1.pdf

[2] https://www.gov.wales/sites/default/files/publications/2023-10/addressing-the-nature-emergency-through-the-planning-system.pdf

[3] https://www.gov.wales/sites/default/files/publications/2024-02/planning-policy-wales-edition-12_1.pdf

- Volume 2, Chapter 7: Climate;
- Volume 2, Chapter 9: Landscape and Visual Impact;
- Volume 2, Chapter 12: Land and Soils;
- Volume 4, Technical Appendix 2.1: Outline Construction Environment Management;
- Volume 4, Technical Appendix 5.1: Ecological Baseline Report (Botanical);
- Volume 4, Technical Appendix 5.2: Ecological Baseline Report (Animal);
- Volume 4, Technical Appendix 5.3: Habitat Regulations Assessment;
- Volume 4, Technical Appendix 9.1: Landscape and Visual Impact Assessment Methodology; and
- Volume 4, Technical Appendix 9.2: LANDMAP Datasets.

1.2.6 The Green Infrastructure Statement should also be read in conjunction with the following planning documents which have been submitted to Planning and Environment Decisions Wales as part of the DNS application:

- Planning, Design and Access Statement; and
- Habitat Creation and Management Plan (HCMP).

1.3 Structure of this statement

1.3.1 Acknowledging the content of PPW and reflecting the assessment undertaken for the Proposed Development, this Green Infrastructure Statement is structured as follows:

- Context;
- Policies and plans;
- The Application of the Step-wise Approach to the Proposed Development; and
- Summary and conclusion.

2 CONTEXT TO GREEN INFRASTRUCTURE

2.1 What is Green Infrastructure?

2.1.1 In line with PPW and the Well-being of Future Generation (Wales) Act 2015[4], Green Infrastructure encourages a wider, sustainable and problem-solving outlook, focusing on integrating and addressing multiple issues.

2.1.2 Paragraph 6.2.1 of the PPW defines Green Infrastructure as:

> *'component elements of green infrastructure can function at different scales and some components, such as trees and woodland, are often universally present and function at all levels. At the landscape scale green infrastructure can comprise entire ecosystems such as wetlands, waterways, peatlands and mountain ranges or be connected networks of mosaic habitats, including grasslands. At a local scale, it might comprise parks, fields, ponds, natural green spaces, public rights of way, allotments, cemeteries and gardens or may be designed or managed features such as sustainable drainage systems. At smaller scales, individual urban interventions such as street trees, hedgerows, roadside verges, and green roofs/walls can all contribute to green infrastructure networks.'*

2.1.3 Green Infrastructure measures on a small development scale can include landscaping, grass verges and sustainable drainage systems. Larger scale development mitigation can consist of species rich meadows, woodlands and the improvement of linkages between areas of biodiversity value.

2.2 Declaration of a Climate & Nature Emergency

2.2.1 The Welsh Government declared a climate emergency in 2019[5] and recognised that climate change threatens health, economy, infrastructure, and the natural environment. As part of their response to the threat to the natural environment, the need for nature recovery was recognised, specifically in the form of a Nature Recovery Action Plan to enhance ecosystem resilience and reverse habitat decline.

2.2.2 The Welsh Government has since declared a nature emergency on 30 June 2021. The Senedd, through the Climate Change, Environment, and Infrastructure Committee are undertaking work to identify Wales response to the UN Biodiversity Conference (COP 15) held in December 2022 and how these will shape the Welsh Government's response to the nature emergency and related matters. As part of this work, the Committee is considering how Wales can implement the COP15

[4] https://www.futuregenerations.wales/about-us/future-generations-act/

[5] https://www.gov.wales/welsh-government-makes-climate-emergency-declaration

international agreement on biodiversity at a local level, whether through legislation or updating policies.

2.2.3 Flintshire County Council has yet to declare a climate emergency, however, they have stated their support to the Welsh Government's ambition for the public sector to be Carbon Neutral by 2030. The Council acknowledges that return of services and investment in some areas will increase demand for energy and therefore further investment around renewable energy generation is necessary[6]. The current Climate Change Strategy aims to ensure green infrastructure is considered throughout all existing Council assets and future schemes.

2.2.4 The council has also addressed Green Infrastructure within the Flintshire Local Development Plan 2015 – 2030[7][8]. A series of action plans have been developed to set the directions for future investments that will maximise the economic, social, and environmental benefits of the county's green infrastructure.

2.3 Planning Policy Wales

2.3.1 PPW states that a Green Infrastructure Statement should be '*proportionate to the scale and nature of the development proposed and will describe how green infrastructure has been incorporated into the proposal*'. In addition, PPW envisages '*the Green Infrastructure Statement will be an effective way of demonstrating positive multi-functional outcomes which are appropriate to the site in question and must be used for demonstrating how the step-wise approach has been applied'* (Paragraph 6.2.12 of the PPW).

2.3.2 PPW (Paragraph 6.2.13) notes that a Green Infrastructure Statement should highlight any baseline data considered and surveys and assessments undertaken, including habitats and species surveys, arboricultural surveys and assessments, and landscape and ecological management plans.

2.3.3 PPW states that the quality of a development should be enhanced through integrating Green Infrastructure through appropriate site selection and use of creative design. Section 6.2.11 'Integrating Green Infrastructure and Development' states:

'With careful planning and design, informed by an appropriate level of assessment, green infrastructure can embed the benefits of biodiversity and ecosystem services

[6] https://committeemeetings.flintshire.gov.uk/documents/s69719/Appendix%201%20FCC%20Climate%20Change%20Strategy%202022%202030.pdf?LLL=0

[7] https://www.flintshire.gov.uk/en/PDFFiles/Planning/Examination-Library-Documents/LDP-Version-8.pdf

[8] Ensure green infrastructure is considered throughout all existing Council assets and future schemes.

into new development and places, help to overcome the potential for conflicting objectives, and contribute to health and well-being outcomes'.

2.3.4 PPW (Paragraph 6.2.14) goes on to outline that the twelve 'Building with Nature standards'[9] represent good practice and are an effective prompt for developers to improve the quality of their schemes and demonstrate the sustainable management of natural resources.

The DECCA Framework

2.3.5 PPW (Paragraph 6.4.5) states that '*development should not cause any significant loss of habitats or populations of species (not including non native invasive species), locally or nationally and must work alongside nature and it must provide a net benefit for biodiversity and improve, or enable the improvement, of the resilience of ecosystems. A net benefit for biodiversity is the concept that development should leave biodiversity and the resilience of ecosystems in a significantly better state than before, through securing immediate and long-term, measurable and demonstrable benefit, primarily on or immediately adjacent to the site.*'

2.3.6 Under Section 6 of the Environment (Wales) Act 2016[10], Natural Resources Wales and local authorities must seek to maintain and enhance biodiversity and the resilience of ecosystems. This means that a development should not cause any significant loss of habitat or populations of species and a net benefit for biodiversity should be provided. Paragraph 6.4.5 notes that '*A net benefit for biodiversity is the concept that development should leave biodiversity and the resilience of ecosystems in a significantly better state than before, through securing immediate and long-term, measurable and demonstrable benefit, primarily on or immediately adjacent to the site.*'

2.3.7 The step-wise approach (detailed in **Section 2.5**) provides the means in which to demonstrate the steps taken to provide a net benefit for biodiversity. In doing so, local authorities must take into account of and promote the resilience of ecosystems, in particular the following five attributes, referred to as the DECCA framework (Paragraph 6.4.5 of the PPW):

- **Diversity** between and within ecosystems;
- The **extent** or scale of ecosystems;
- The **condition** of ecosystems including their structure and functioning;
- The **connections** between and within ecosystems; and
- **Adaptability** of ecosystems including their ability to adapt to, resist and recover from a range of pressures likely to be placed on them through climate change, for example.

[9] https://www.buildingwithnature.org.uk/

[10] https://www.legislation.gov.uk/anaw/2016/3/contents/enacted

The Step-Wise Approach

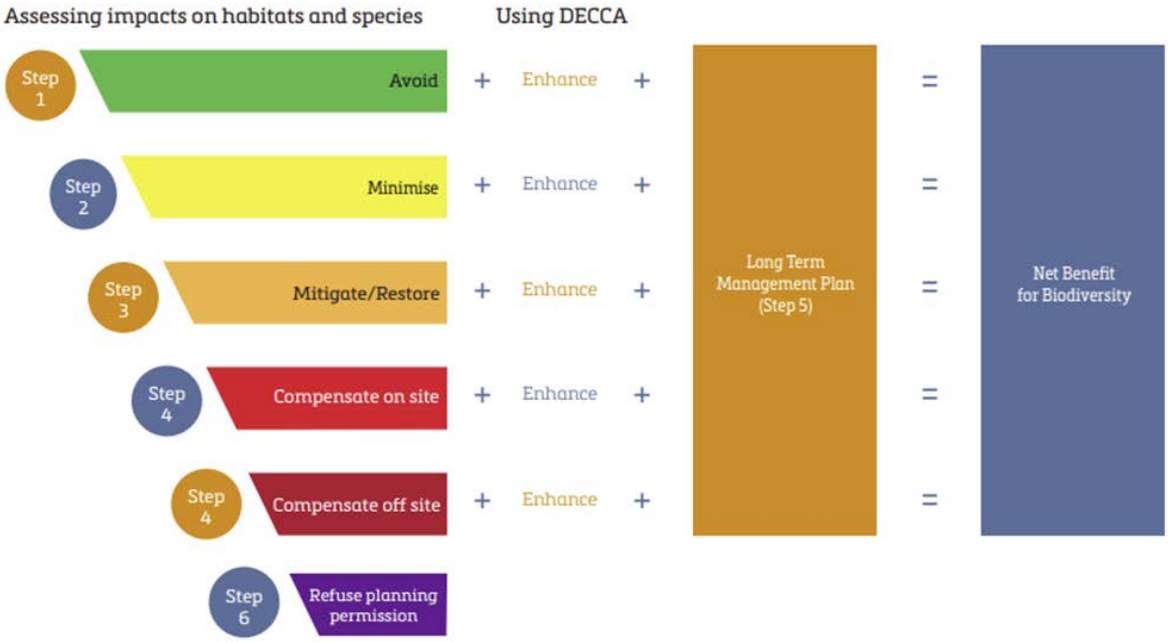
2.3.8 The step-wise approach seeks to help developments secure a net benefit for biodiversity. Applicants are required to prepare proposals which will achieve a net benefit for biodiversity and must demonstrate how they have used the step-wise approach.

2.3.9 The step wise approach is summarised in **Table 2.1** and depicted in **Figure 2.1**. It is noted that there is a mistake in **Figure 2.1** as Step 4 is mentioned twice (the figure is re-produced as it appears in PPW). As detailed in Paragraph 6.4.15; Step 5 requires that a management plan must be prepared. **Figure 2.1** reflects the step-wise approach detailed in Paragraph 6.4.15.

Table 2.1 Description of the step-wise approach (Amended from PPW: 149-151)

Step	Description
Step 1: Avoid	The first priority is to avoid damage to biodiversity. Planning authorities are be satisfied that any alternative sites have been fully considered.
Step 2: Minimise	When all locational, siting and design options for avoiding damage to biodiversity have been exhausted, applications must seek to minimise impact on biodiversity (i.e., maintaining the largest possible area of existing habitat, ensuring any retained habitats remain well connected, developing management plans).
Step 3: Mitigate/Restore	If, after measures to minimise impact, biodiversity could be still be lost, damaged by residual impacts; mitigation measures must be put in place to limit the negative effects of a development.
Step 4: Compensate off site	When steps 1 to 3 have been exhausted, as a last resort option off-site compensation for unavoidable damage must be provided. Off-site compensation would normally take the form of habitat restoration, or creation or the provision of long-term management agreements.
Step 5: Management plan	Each stage of the step-wise approach must be accompanied by a long-term management plan which details the avoidance, minimisation, mitigation/restoration and compensation measures alongside the enhancement measures.
Step 6 Refuse planning permission	Where the adverse effect on biodiversity and ecosystem resilience clearly outweighs other material considerations, the development should be refused.

Figure 2.1 PPW Summary of the step-wise approach (Source: Planning Policy Wales 12[11])



2.3.10 The step-wise approach should be worked through iteratively, with the result being a scheme of enhancement secured through the Proposed Development to provide a net benefit for biodiversity, with the improvement of ecosystem resilience, particularly improving the connectivity to the immediate surroundings, being a key contribution to on-site avoidance, minimisation, and mitigation strategies and enhancement.

Designated Sites

2.3.11 In considering biodiversity and ecological networks within PPW, the third bullet point in Paragraph 6.4.3 of PPW notes that development plan strategies, policies and development proposals must consider the need to '*ensure statutorily and non-statutorily designated sites and habitats are properly protected and managed and their role at the heart of resilient ecological networks is safeguarded*'.

2.3.12 As detailed in Paragraph 6.4.18 of PPW, both statutorily and non-statutorily designated sites make a vital contribution to protecting biodiversity, maintaining the resilience of ecosystems and are important in providing opportunities for achieving wider well-being objectives. Paragraph 6.4.19 states that '*…all designated sites must be able to continue to protect the biodiversity and features for which they were designated and contribute to the resilience of ecosystems at the appropriate scale. This ability should not be compromised by inappropriate development or other activity*'.

2.3.13 The following designated sites are subject to a higher-tier of protection within the step-wise approach where development should be avoided: Special Areas of

[11] https://www.gov.wales/sites/default/files/publications/2024-02/planning-policy-wales-edition-12_1.pdf

Conservation, Special Protection Areas, RAMSAR sites, Sites of Special Scientific Interest, and National Nature Reserves. However, non-statutory and development plan designations should still be considered in line with the step-wise approach.

3 POLICIES AND PLANS

3.1 Introduction

3.1.1 This Section provides an overview of the policy and planning setting within which green infrastructure and green infrastructure assessments in the Flintshire County Council jurisdiction fall. It includes an overview of Area Statements which identify areas where action at the right scale can maximise ecological networks and ecosystem benefits.

3.2 Flintshire County Council

3.2.1 A series of action plans and strategies have been developed for protecting and enhancing Green Infrastructure within Flintshire.

3.2.2 Flintshire County Council has a Green Infrastructure Assessment as part of the Flintshire Deposit Local Development Plan 2015 – 2030[12].

3.2.3 The Green Infrastructure Framework for North East Wales, Cheshire and the Wirral provides a guide for Green Infrastructure planning, investment and delivery. The Framework considers the natural environments of Denbighshire, Flintshire, Wrexham, Cheshire West and Chester, Cheshire East and the Wirral, and sets out a vision of how a healthy natural environment can help sustain economic growth and thriving communities.

3.2.4 The framework is supported by six long term aims:

- Create a setting for urban and rural prosperity;
- Support and enhance the visitor experience and economy;
- Build healthier communities;
- Maintain and enhance quality of place;
- Ensure urban and rural areas are resilient to effects of climate change; and
- Protect and enhance biodiversity and natural networks, providing opportunity for people to experience the natural environment.

3.3 Natural Resources Wales's Area Statements

3.3.1 In 2020, Natural Resources Wales published the first version of the Area Statements which cover seven, different parts of Wales. The seven Area Statements are a collaborative response to the National Resources Policy, published by the Welsh

[12] https://www.flintshire.gov.uk/en/PDFFiles/Planning/Evidence-Base-Documents/Background-Papers/LDP-EBD-BP2-Background-Paper-LDP02-Green-Infrastructure.pdf

Government in 2017[13]. The National Resources Policy sets out the key challenges and opportunities for sustainable management of Wales natural resources in the future[14]. Area Statements are to be utilised in the preparation of local development plans.

3.3.2 Area Statements set out the key challenges and opportunities to better manage natural resources, strengthen ecological networks and ecosystem services at the local scale. They identify areas where taking action at the right scale can maximise benefits.

3.3.3 Natural Resources Wales's Area Statements are delineated by local authority boundaries and in this case, the Site and Proposed Development is located within the North East area.

Natural Resources Wales's North East Area Statement

3.3.4 The North East Area Statement encompasses Denbighshire, Flintshire and Wrexham counties.

3.3.5 The North East Area Statement consists of five key themes[15]. These are:

- Climate emergency: resilience and adaptation;
- Develop and improve urban/rural green infrastructure;
- Increasing woodland cover for social, environmental and economic benefits;
- Promoting the resistance of ecosystems in maintaining and enhancing biodiversity; and
- Protecting water and soil through farming and sustainable land management.

3.3.6 Central to these five themes is the need to address climate change, whilst making the natural and built environment more adaptable and resilient in the face of the current climate emergency[16].

3.3.7 Green infrastructure is defined in the North East Area Statement as a range of natural and semi-natural features, greenspaces, parks, rivers, and lakes; including hedgerows, roadside verges, and allotments. These features/spaces provide a range

[13] https://naturalresources.wales/about-us/what-we-do/strategies-and-plans/area-statements/?lang=en

[14] https://naturalresources.wales/about-us/what-we-do/strategies-and-plans/area-statements/?lang=en

[15] https://naturalresources.wales/about-us/what-we-do/strategies-and-plans/area-statements/north-east-wales-area-statement/?lang=en

[16] https://naturalresources.wales/about-us/what-we-do/strategies-and-plans/area-statements/north-east-wales-area-statement/?lang=en

of functions i.e. connectivity through footpaths, cycles, linking habitats and recreational facilities.

3.3.8 The North East Area Statement also details how green infrastructure can help with achieving the following Natural Resource Policy priorities[17]:

- Climate change adaptation;
- Reverse the decline in biodiversity;
- Reduce pollution levels in our air, enhance air quality, and reduce noise pollution;
- Develop resilient ecological networks;
- Improve the quality, and ensure the quantity, of our water;
- Improving the management of existing woodlands and more widespread use of trees;
- Safeguarding and increasing carbon stores in soils and biomass; and
- Reducing the risk of land and coastal flooding.

17 Natural Resources Wales / Develop and improve urban and rural green infrastructure

4 APPLICATION OF THE STEP-WISE APPROACH TO THE PROPOSED DEVELOPMENT

4.1 Introduction

4.1.1 This section demonstrates how the principles set out in the step-wise approach outlined in the PPW have inherently informed the site selection and design of the Proposed Development. This section also highlights the positive biodiversity outcomes that will be realised as a result of the Proposed Development.

4.1.2 This section describes how the following step-wise approach has been undertaken throughout the design evolution of the Proposed Development:

- Step 1 Avoid;
- Step 2 Minimise;
- Step 3 Mitigate;
- Step 4 Compensate; and
- Step 5 Development of management plans.

4.1.3 PPW[18] notes that pre-application surveys, research, and data searches by developers will be necessary to establish the baseline state of biodiversity and ecosystem resilience on-site, taking into account the Site's contribution to resilient ecological networks through its diversity, extent, connectivity and condition and the provision of ecosystem services.

4.1.4 In support of the Proposed Development, and informed by both pre-application dialogue and the Environmental Impact Assessment scoping direction process, the Applicant has prepared a draft Environmental Statement which includes chapters focusing on: biodiversity, air quality, climate, cultural heritage, landscape and visual, noise and vibration, traffic and transport, land and soils, major accidents and disasters, and material assets and waste. These chapters are supplemented by technical assessments (refer to **Volume 3** and **Volume 4** of the draft Environmental Statement) which include baseline data, survey methodology and results.

4.1.5 The assessments undertaken in the draft Environmental Statement inform this step-wise approach for the Proposed Development's contribution to achieving the PPW aim of net benefit for biodiversity.

[18] https://www.gov.wales/sites/default/files/publications/2024-02/planning-policy-wales-edition-12_1.pdf

4.2 Step 1 – Avoid

4.2.1 Paragraph 6.4.15 (1b) of PPW[19] highlights that proposals in statutory designated sites are, as a matter of principle, unacceptable and therefore must be excluded from site searches undertaken by developers. It goes on to state that this principle also extends to those sites containing protected species and habitats which are irreplaceable. PPW defines habitats that are irreplaceable as those which would be technically very difficult to restore, recreate or replace once destroyed i.e. ancient woodland, sand dunes, peatland, salt marsh and lowland fen.

4.2.2 The Site does not contain any statutory or non-statutory designated sites. The closest designated site is Buckley Claypits and Commons Site of Special Scientific Interest and Deeside and Buckley Newt Special Area of Conservation is located approximately 900m to the north. Therefore, the principles of avoidance as advocated by PPW have been applied.

4.2.3 Great crested newts (GCN) are known to be present in the ponds located within the Applicant's landholding. The removal of potential GCN habitat is unavoidable however, as detailed in **Section 4.4**, mitigation measures will be utilised to mitigate any adverse impacts on the GCN population and habitat (i.e. translocation prior to works commencing and the creation of four new ponds).

4.2.4 It is noted that ecological areas within the Site which have been enhanced through previous projects have also been avoided.

4.3 Step 2 – Minimise

4.3.1 Once options for avoiding loss of or damage to biodiversity have been exhausted, Paragraph 6.4.15 (2) of PPW[20] requires that applicants must seek to minimise the initial impact on biodiversity and ecosystems by e.g. maintaining the largest possible area of existing habitat supporting biodiversity and functioning ecosystems, particularly habitats and species where present; ensuring that retained habitats continue to be well connected to adjacent habitats; and retaining existing features.

4.3.2 The Padeswood Cement Works is a long established industrial site focused on the production of cement. The proposed Carbon Capture Plant will be located on the existing Padeswood Cement Works as its purpose is to support the decarbonisation of the cement making process; there is therefore no other alternative off site location where it could be sited. **Volume 2, Chapter 3: Reasonable Alternatives Considered** of the draft Environmental Statement assessed reasonable

[19] https://www.gov.wales/sites/default/files/publications/2024-02/planning-policy-wales-edition-12_1.pdf

[20] https://www.gov.wales/sites/default/files/publications/2024-02/planning-policy-wales-edition-12_1.pdf

technological and design alternatives and provides reasons for the selection of the preferred option.

4.3.3 There are areas of agricultural land around the fringes of the works, together with semi-natural habitats and ecological mitigation and enhancement areas implemented for previous projects. The proposed Carbon Capture Plant will be located in a field to the south west of the existing cement works area, and currently compromises agricultural grassland.

4.3.4 The location for the proposed Carbon Capture Plant will be adjacent to the existing kiln and associated operational areas. If located elsewhere onsite, this would result in significant quantities of additional ducting to transport CO_2 to the Carbon Capture Plant, resulting in likely increased land take. The location of the new Carbon Capture Plant adjacent to the existing works therefore reduces the extent of land required for the Proposed Development and minimises environmental impacts.

4.3.5 The location of the Proposed Development has been shaped by species and habitats present on-site and the need to minimise any ecological and wider environmental effects. For example, tree and habitat removal have been minimised as much as practicable.

4.4 Step 3 – Mitigate

4.4.1 Paragraph 6.4.15 (3a) of PPW[21] states that where, biodiversity and ecosystems could still be damaged or lost after measures to minimise impact, a proposal should mitigate that damage to limit the negative effects of the development.

4.4.2 Extensive ecological surveys have been undertaken (detailed in **Volume 2, Chapter 5: Biodiversity** of the draft Environmental Statement) and have informed the mitigation measures detailed in the OCEMP, which includes (but not limited to):

- Dust suppression;
- Measures to protect surface waters, e.g. from spillage or run-off;
- Employment of ecological clerk of works during construction to oversee ecologically sensitive activities;
- Fencing around the retained trees and woodland areas to exclude vehicles and the storage of materials;
- Modification of the GCN license issued by Natural Resources Wales to facilitate the establishment of compensatory habitat and GCN translocation. Mitigation techniques for GCN include the creation of four new ponds, translocation, phased vegetation clearance, the installation of exclusion fencing, site supervision and habitat restoration;
- Mitigation for roosting bats in confirmed roosts will be detailed in a mitigation licence acquired from Natural Resources Wales. The Site will be enhanced post-construction through the installation of new roosting opportunities (e.g. bat boxes) for bats across the Site; and

[21] https://www.gov.wales/sites/default/files/publications/2024-02/planning-policy-wales-edition-12_1.pdf

- Sensitive lighting measures to be installed during operational phase.

4.4.3 An HCMP has been prepared which seeks to minimise the effects on foraging and commuting bats during the construction and operation phases. Any lighting uses during the construction phase will be undertaken in accordance with a lighting management plan; minimising the impact on nocturnal animals and to avoid ecological sensitive areas.

4.5 Step 4 – Compensate

4.5.1 Paragraph 6.4.15 (3b) of PPW[22] notes that where like-for-like mitigation measures are not possible it may be necessary to consider on-site or off-site compensation measures in the first instance.

4.5.2 Paragraph 6.4.15 (4) of PPW indicates that measures that are immediately proximate to the Site may be regarded as on-site compensation. Paragraphs 6.4.5 and 6.4.11 of the PPW also state that net benefit for biodiversity should be provided either on or immediately adjacent to a subject site.

4.5.3 Habitat loss associated with the Proposed Development will be compensated for within a Landscape and Biodiversity Mitigation Area (shown as the Proposed Landscape and Habitat Enhancements in **Volume 4, Technical Appendix 9.4**) which will be located within the Site. The Landscape and Biodiversity Mitigation Area will contain broadleaved woodland, rough neutral grassland, enhanced hedgerows and four new ponds designed for GCN, with associated hibernacula and refugia. This area will be managed through the HCMP specifically to create greater biodiversity value than that provided by the existing habitats. The HCMP sets out the proposed habitat creation and management measurements, designed to compensate for the loss of habitats and provide additional biodiversity enhancement.

4.5.4 The habitat creation measures are designed to be inter-connecting with each other, and with other existing habitats both on site and the wider local area. Hence, the measures proposed are intended to benefit the biodiversity of the Site and of the surrounding area.

4.5.5 The HCMP objectives will be achieved, in summary, by the following commitments to ecologically-led management:

- Creation of 7.69ha of new habitat within the Site boundary that will include:
  - Creation of new woodland and tree planting;
  - Creation and enhancement of conservation orientated grassland;
  - Creation of four new ponds to be managed for GCN; and
  - Creation of hibernacula and refugia for GCN. Measures for GCN will be designed to complement the existing habitat and GCN management plans.

[22] https://www.gov.wales/sites/default/files/publications/2024-02/planning-policy-wales-edition-12_1.pdf

- Installation of bat boxes suitable for a range of bat species;
- Installation of bird boxes suitable for a range of bird species; and
- Long term ecological monitoring to assess the effectiveness of the measures in the HCMP and to identify and apply further measures as required.

4.5.6 The Landscape and Biodiversity Mitigation Area has been designed specifically for GCN; however, this area will provide high quality foraging areas i.e., for bats, owls and raptors. Through the implementation of the HCMP, the Landscape and Biodiversity Mitigation Area will be of higher quality than what is currently on site.

4.5.7 The proposed Landscape and Biodiversity Mitigation Area will support surrounding green infrastructure in the area by providing better connectivity with the Site and between ecological features in the wider area (i.e. acting as a stepping stone or an ecological corridor).

4.5.8 No significant effects on biodiversity are likely through the adherence of the avoidance, minimisation and mitigation measures set out above.

4.6 Management and ongoing monitoring

4.6.1 The Landscape and Biodiversity Mitigation Area will be managed through the measures and recommendations outlined in the HCMP. This is to ensure the long-term survival and high quality of the new habitats.

4.6.2 7.69ha of new habitat will be created or enhanced as part of the Proposed Development. This will include the following habitats:

- Aquatic habitat will be created in the form of four new ponds;
- Creation of broadleaved woodland; and
- Creation and enhancement of conservation managed grassland.

Construction and Ongoing Management of the Landscape and Biodiversity Mitigation Area

4.6.3 Four new ponds will be created to provide suitable aquatic breeding habitat for GCN. The ponds will located to ensure they will be well linked to areas of good quality terrestrial habitat, suitable resting places, nine hibernacula and 14 refugia. The construction of the ponds will be managed through:

- Regular cutting of vegetation prior to construction to minimise the potential of GCN to be present in the proposed pond locations;
- If practicable, construction of the ponds will be undertaken ideally during winter when GCN are hibernating or during late spring when a high proportion of GCN will be in existing ponds;
- An amphibian fence will be erected to enclose each pond to prevent incidental incursion of animals during construction;

- Arisings, brash and felled wood from the site clearance and construction activities will be used to construct the hibernacula; and
- Plant material for the new ponds will be sourced from existing ponds on-site.

4.6.4 New areas of broadleaved woodland will be created on Site, with the majority of woodland proposed to be located in the north east section of the Site near the existing ponds. The woodland habitat will be created to provide suitable habitat for GCN and opportunities for foraging, resting and hibernation. The proposed woodland areas will be subject to ongoing management to ensure their suitability for GCN and to increase the biodiversity value. The following management measures will be undertaken to create the desired structural diversity:

- Planted trees will be inspected for signs of damage and disease;
- Trees and shrubs which have failed to establish or have died will be replaced;
- All areas of woodland will be enhanced through the provision of dead wood piles for hibernating amphibians and invertebrates;
- Tree guards will be checked and re-firmed when necessary within the first 1-4 years. Guards will be removed from Year 4 or 5 as required;
- Control of weeds around planted trees will be carried out twice a year between Years 1 – 5;
- Areas of woodland will be allowed to grow into high canopy woodland with selective removal of certain species;
- Rotational coppicing and thinning regime will be carried out on a five-year cycle depending on growth rates. The regime is to be reviewed after each cycle;
- Areas of bare ground in the woodland area will be planted with a seed mix suitable for woodland habitats;
- Sown woodland mixture exposed to high light levels will be managed as grassland until the canopy development begins to close and create shade; and
- If monitoring finds colonisation of invasive non-native plant species in the area, these will be eradicated using an appropriate method immediately.

4.6.5 Grassland structures will be improved to create suitable foraging habitats for GCN by encouraging greater invertebrate diversity and by increasing available resting areas. Existing grassland to the north east of the Site that has historically been used for livestock grazing will be enhanced to low nutrient rough grassland/meadow to improve the suitability for GCN foraging. Management prescriptions will include:

- All grassland for enhancements to rough grassland will be subject to an annual ‘hay cut’. Arisings are to be raked and cleared to limit nutrient inputs with some cuttings to be used to create habitat piles; and
- A 10m wide margin of uncut vegetation will be maintained along field boundaries and hedges to ensure some dense cover remains present throughout the year.

4.6.6 Bat boxes will also be installed in open habitat and attached to suitable retained mature trees. A variety of bird boxes will also be installed on retained trees to provide

additional nesting habitat for breeding birds. Bat and bird boxes will be inspected annually for signs of significant damage or if missing.

Ongoing Monitoring

4.6.7 Post construction monitoring will be carried out for the new habitat creation provided as mitigation for effects (both those of an ecological nature and those associated with other technical disciplines) to ensure the new habitats are established and maintained successfully. The monitoring will focus on botany success, as this will have associated benefits for the animal species the habitats support.

4.6.8 All habitats and enhancements for protected species will be monitored on an annual basis to make sure that they retain their maximum value for nature conservation, and to check that habitats are establishing themselves effectively. Monitoring will run for a period of 25 years, with a full review of the HCMP will be conducted at the end of rolling five-year management programmes.

4.6.9 As part of the existing GCN licensing on the Site, habitat management and monitoring will continue to be carried out on all the existing ponds, including population class assessment surveys. Monitoring of colonisation and population sizes of the newly created ponds will be undertaken annually over a 25-year period. Population monitoring of GCN will be subject to agreement with Natural Resources Wales.

4.6.10 Habitat monitoring for new planting (woodland and waterbodies) will take place every two months during the first year of establishment (April – August). Following this, a bi-annual check will be completed during the growing season between Years 2 and 10.

4.6.11 The habitat monitoring for enhanced habitat, primarily grassland is to take place bi-annually during the growing seasons between Years 1 and 10. The HCMP recommendations are for general guidance and subject to change should a more effective management method or schedule become more appropriate for the habitats.

4.6.12 For more detail refer to the HCMP, which has been provided as part of the planning application.

4.7 Green Infrastructure Improvements in the context of Climate Change

4.7.1 In 2019 the Welsh Government declared a climate emergency in order to co-ordinate action nationally and locally to help combat threats of climate change. Welsh Government planning policy recognises an energy hierarchy and expects all new developments to mitigate the causes of climate change in accordance with the energy hierarchy for planning. These are set out in the following energy policies, reducing energy demand, increasing energy efficiency, renewable energy generation,

minimising carbon impact of other green generation and minimised extraction of carbon intensive energy materials.

4.7.2 PPW[23] discusses how green infrastructure helps to improve ecosystem resilience resulting in positive benefits to well-being including climate change mitigation. The benefits of which are important in urban environments where they can facilitate health and well-being related benefits of open space and clean air.

4.7.3 The proposed Landscape and Biodiversity Mitigation Area will not only provide habitat for GCN but also act as an ecological corridor, increase green space and contribute to green infrastructure in the Flintshire area.

4.7.4 In addition, the Proposed Development aims to capture up to 800,000t of CO_2 per year from the current cement works, which is currently being emitted to the atmosphere. This project will be the first of its kind in the UK and support the transition of the construction industry and the UK economy to the 'net zero' CO_2 emission target.

[23] https://www.gov.wales/sites/default/files/publications/2024-02/planning-policy-wales-edition-12_1.pdf

5 SUMMARY AND CONCLUSIONS

5.1.1 This Green Infrastructure Statement, and the Environmental Statement submitted with the planning application demonstrates the Proposed Development has been developed in accordance with a range of legislative and policy matters, including but not limited to: Planning Policy Wales[24]; Future Wales[25], Flintshire Council Local Development Plan[26], and the North East Wales area statements[27].

5.1.2 The principles set out in the PPW step-wise approach have inherently been followed in the design of the Proposed Development and demonstrated in **Section 4**.

5.1.3 The Site is located 900m from the closest statutory designated site for nature conservation and impacts on statutory designated sites for nature conservation have therefore been avoided. A range of mitigation measures are also proposed to further reduce and off-set potential adverse effects.

5.1.4 The measures proposed in the HCMP are of a significant magnitude. Habitat loss associated with the Proposed Development will be compensated for within a Landscape and Biodiversity Mitigation Area which will be located within the Site. The Landscape and Biodiversity Mitigation Area will contain broadleaved woodland, rough neutral grassland, enhanced hedgerows and four new ponds designed for GCN. As detailed in **Section 4.6**; post construction monitoring will be carried of the Landscape and Biodiversity Mitigation Area to ensure the new habitats are established and maintained successfully. A net benefit for biodiversity will therefore be achieved by the Proposed Development.

5.1.5 Mitigation measures will be implemented during construction including bat, badger and GCN licenses, invasive species method statement and a lighting strategy. In addition to this standard practice pollution prevention measures will be undertaken and measures will be put in place to avoid non-chemical pollution.

5.1.6 The positive enhancements resulting from the Proposed Development will therefore support wider local, regional, and national objectives in enhancing biodiversity and green infrastructure in Wales.

[24] https://www.gov.wales/sites/default/files/publications/2024-02/planning-policy-wales-edition-12_1.pdf

[25] https://www.gov.wales/future-wales-national-plan-2040

[26] https://www.flintshire.gov.uk/en/PDFFiles/Planning/Examination-Library-Documents/LDP-Version-8.pdf

[27] https://naturalresources.wales/areastatements?lang=en

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