Biodiversity Net Gain Report

CWL01 & 02 Microsoft Ltd

October 2023

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The business of sustainability

ERM

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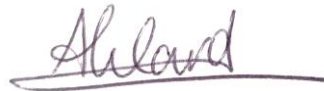
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Acronyms and Abbreviations

AIA	Arboricultural Impact Assessment
BNG	Biodiversity Net Gain
CEMP	Construction Environmental Management Plan
CIEEM	Chartered Institute of Ecology and Environmental Management
DEFRA	The Department for Environment, Food & Rural Affairs
EcIA	Ecological Impact Assessment
ECoW	Ecological Clerk of Works
LEMP	Landscape and Ecological Management Plan
LPS	Landscape Planting Schedule
LTRP	Landscape Tree Removal Plan
NBB	Net Benefits for Biodiversity
RLB	Red-Line Boundary
RPA	Root protection areas
SINCs	Sites of Importance for Nature Conservation
SSSI	Site of Special Scientific Interest
TPO	Tree Preservation Order
UK Hab	UK Habitat Classification

1.   EXECUTIVE SUMMARY

This Biodiversity Net Gain (BNG) Report has been prepared to support the planning application submitted to Newport City Council, on behalf of Microsoft Ltd, for the construction of a data centre with associated infrastructure on land within the Imperial Park business park, Newport.

The Natural England Biodiversity Metric v4.0 has been used to quantify the biodiversity value of baseline habitats within the area proposed under the Landscape Plan (Figure 1, Appendix A).

The Development, as assessed by the BNG Report, will achieve the following change in biodiversity units:

Table 1.1   Quantifiable change in biodiversity units achieved by the Development.

Biodiversity Units	Baseline Value	Post-Development Value	Change in Units	Outcome
Area-based Habitat Units	12.20	42.69	+30.57	250.61%
Hedgerow Units	0.40	2.88	+2.48	620.86%
River Units	0	0	0	0%

2.   INTRODUCTION

Environmental Resources Management Ltd (ERM) has been instructed by RED Engineering, on behalf of Microsoft Ltd ('the Developer') to undertake a Biodiversity Net Gain (BNG) Report, focused on the land previously occupied by Quinn radiator factory, within the Imperial Park business park, Newport ("the site"). This BNG Report has been prepared to accompany the planning application submitted to Newport City Council for construction of a data centre complex with associated infrastructure ('the Proposed Development') on the site.

The purpose of the Proposed Development is to provide space, power, cooling and network infrastructure to support data processing, data sharing and data storage. Data centers are essential components of digital ecosystems by meeting the increasing demand for cloud services, 5G, AI and Internet of Things (IoT) deployment. Data centres store and process the increasing amount of data generated by business, academic institutions, and the general population.

It is generally more energy and business efficient to process and store information centrally in a data centre, than storing data on millions of individual servers, PCs and laptops. In addition, housing data this way is more secure and easier to undertake maintenance. While a data centre can be located anywhere, in practice, there is a finite distance a data centre should be located from its customers. This is because of 'latency', the time it takes to send data across the internet between a user's device and the data centre. The longer the distance data must travel, the greater the latency. Having a data centre close to users improves their online experience. Environmental effects are considered in full within the Development's Ecological Impact Assessment (EcIA).

For the purposes of this BNG Report, 'the site' is defined as the extent of the red-line boundary (RLB) (the Development area) (Figure 2, Appendix A). Any habitat creation / enhancement within the RLB is considered to be 'on-site' works for this assessment. No off-site (outside the RLB) habitat creation or enhancement is included in this BNG Report or required within the assessment process.

This report sets out the baseline biodiversity units on-site and discusses the potential opportunities to achieve BNG through the habitat creation detailed in the Landscape Plan (Figure 1, Appendix A).

2.1   Site Location and Description

2.1.1   Former Quinn Radiator Factory, Newport;

The site lies to the east of Newport, south of the M4 (ST 27923 84118) and is approximately 16.5 ha. The former radiator factory site has been vacant since June 2019 and predominantly comprises warehouses, office buildings and areas of hardstanding (former parking spaces, roads, and pedestrian areas). In the eastern areas of the site there are areas of amenity grassland, ornamental planting and scattered trees, these areas were previously heavily managed but since the abandonment of the site this management now appears to be less frequent. Due to the reduced management around the site, there are areas of tall ruderal and ephemeral vegetation within the areas of hardstanding and bare ground. Other habitats within the site include scrub and semi-improved grassland.

2.2   Biodiversity Net Gain

In accordance with CIEEM's guidance[1], BNG is defined as: '*Development that leaves biodiversity in a better state than before, and an approach where developers work with local governments, wildlife groups, landowners and other stakeholders in order to support their priorities for nature conservation*'.

BNG aims to ensure a positive outcome for biodiversity, following a mitigation hierarchy which sets out that everything possible must be done to firstly avoid, then minimise or finally restore losses of

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[1] Biodiversity Net Gain: Good practice principles for development, a practical guide [Online] Available at: https://cieem.net/resource/biodiversity-net-gain-good-practice-principles-for-development-a-practical-guide/ (Accessed April 2023)

biodiversity on-site. As a last resort, where losses cannot be avoided or minimised, losses may be compensated for by off-site mitigation. This accounts for biodiversity losses which would otherwise not be fully assessed within legal and planning systems, allowing stakeholders to demonstrate adherence to national legislation and local policy through quantifiable means.

This report uses the Biodiversity Metric 4.0 Calculation Tool (republished March 2023 by Natural England[2]) to produce the baseline biodiversity unit's pre-construction and to calculate the post-construction biodiversity units.

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[2] https://publications.naturalengland.org.uk/publication/6049804846366720

3. METHODOLOGY

3.1 Overview

This report has been produced in general accordance with the methodology set out in the following guidance documents:

■ The Biodiversity Metric 4.0 – User Guide[3]; and

■ The Biodiversity Metric 4.0 – Technical Supplement[4].

Whilst the Natural England metric is not specifically required to be used under existing Welsh legislation, it is nonetheless a useful tool to quantify gains in biodiversity and therefore help illustrate how the Proposed Development can achieve Net Benefits for Biodiversity (NBB)

Appendix B provides an overview of relevant legislation and policy background.

Error! Reference source not found.C is the completed metric workbook including the inputs and results.

The baseline pre-construction biodiversity units were based on the findings of the most recently undertaken Phase 1 Habitat survey of the site. An initial Phase 1 Habitat survey was undertaken by professional ecologists in June 2021, with a second Phase 1 Habitat survey undertaken in May 2023, which is detailed in the Extended Phase 1 Habitat Survey Report[5]. The May 2023 survey also incorporated a condition assessment of habitats on site. The condition assessment for the site was based on the Biodiversity Metric 4.0. On-site habitats are described in full detail within the Extended Phase 1 Habitat Survey Report and EcIA.

The on-site post-construction biodiversity units are based on the Landscape Plan (Figure 1, Appendix A).

3.2 Good Practice Principles

CIEEM sets out a series of good practice principles for BNG[6]. Compliance with these principles at this stage of the Development process is described in Appendix D.

3.3 Assumptions

3.3.1 Baseline habitats

The baseline areas and conditions included in the BNG Report were based on the surveys conducted by experienced ecologists in May 2023. The conditions of habitats were assessed against the Biodiversity Metric 4.0 Habitat Condition Assessment Sheets[7].

Habitats identified on-site were converted from Phase 1 Habitat survey[8] codes into UK Habitat Classification (UK Hab)[9] codes for input into the metric following UK Hab Definitions guidance[10]. An Arboricultural Impact Assessment (AIA)[11] was undertaken in June 2023 which identified four separate

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[3] https://publications.naturalengland.org.uk/publication/6049804846366720

[4] https://publications.naturalengland.org.uk/publication/6049804846366720

[5] ERM (2023). Former Quinn Radiator Factory: Extended Phase 1 Habitat Survey Report.

[6] Baker et al (2016) Biodiversity net gain. Good practice principles for development, A practical guide. CIEEM, IEMA, CIRIA, UK. ISBN 978-0-86017-791-3.

[7] ARCHIVE SITE for the Biodiversity Metric 2.0, 3.0, 3.1 and the beta test version of the Small Sites Metric (naturalengland.org.uk)

[8] https://data.jncc.gov.uk/data/9578d07b-e018-4c66-9c1b-47110f14df2a/Handbook-Phase1-HabitatSurvey-Revised-2016.pdf

[9] https://ukhab.org/

[10] Butcher, B., Carey, P., Edmonds, R., Norton, L. and Treeweek, J. (2020) UK Habitat Classification -Habitat Definitions V1.1. Available: https//ukhab.org/.

[11] SEED (2023). Arboricultural Impact Assessment: Former Quinn Radiator Manufacturing Plant.

groups of trees which are located within or partially within the RLB. Two of these tree groupings (G3 and G4 – see Figure 3, Appendix A) were not given exact tree counts and for the purpose of this assessment were instead incorporated in the UK Hab category "mixed scrub" as this was the dominant habitat type in their respective locations.

3.3.2 Post-Development

The Development footprint for the purposes of the BNG Report is represented by the Landscape Plan shown in Figure 1, Appendix A.

Two types of grassland are to be included within the Development: native wildflower meadow mix and turf lawn. For the purpose of this assessment, native wildflower meadow mix is categorised as "other neutral grassland" while turf lawn is categorised as "modified grassland". Both of these grassland habitats were assigned a moderate target condition within the metric. Areas of proposed ornamental garden planting were assigned the UK Hab code of "vegetated garden" for the purpose of this assessment and was assigned a poor target condition within the metric.

3.4   On-Site Assessment

3.4.1 Baseline, Pre-construction Habitats

Baseline habitat information was taken from the Phase 1 Habitat Survey undertaken by a professional ecologist in June 2021. An Extended Phase 1 Habitat Survey was subsequently undertaken in May 2023 to determine any changes in habitat composition and the condition of said habitats on-site in May 2023. Survey results are detailed in the Extended Phase 1 Habitat Survey Report[12] and EcIA.

Habitats recorded within the Site include:

■ Bare ground and hardstanding

■ Amenity grassland

■ Semi-improved grassland / Ephemeral/short perennial and tall ruderals

■ Scrub / Introduced shrub

■ Scattered trees

■ Intact species-poor hedgerow

No watercourses were recorded on-site.

The list of habitats provided in the Metric 4.0 calculator are not all directly comparable with the habitats identified within the site. As a result, professional judgement has been used to best match habitat types to those available within the Metric 4.0 calculator. This follows the approach set out in the applicable guidance documents. The area or length of habitats have been estimated through an online mapping exercise.

Habitat allocation and condition assessments are detailed in Table 3.1   .

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[12] ERM (2023). Former Quinn Radiator Factory: Extended Phase 1 Habitat Survey Report.

Table 3.1 Baseline Habitat Conversions and Conditions

Phase 1 Code(s)	UK Hab Code	Condition	Notes
Bare ground and hardstanding	Other developed land / Buildings	N/A	Buildings from the former Quinn Radiator site are still present, there are seven buildings in total which are approximately 20 years old and make up the majority of the site. Bare ground and hardstanding are found throughout the site, these areas are tarmac roads, car parks and pedestrian walkways for the former Quinn Radiator Site.
Amenity grassland	Grassland – Modified grassland	Poor	There are areas of amenity grassland throughout the east of the site and located around the office buildings to the south. These areas of amenity grassland are less managed than noted during the 2021 survey but the sward height remains short. Dominant species present are *Holcus lanatus* (Yorkshire fog), *Lolium perenne* (perennial rye-grass) and *Trifolium repens* (white clover). There are areas of amenity grassland where the reduced management has resulted in bare patches and presence of scrub and tall ruderal species such as *Buddleja davidii* (butterfly-bush), *Cirsium vulgare* (spear thistle) and *Rubus fruticosus agg.* (bramble). If these areas continue under a reduced management schedule it is likely that either tall ruderals or scrub will become the dominant habitat type.
Semi-improved grassland / Ephemeral/short perennial & Tall ruderals	Grassland - Neutral grassland	Moderate	There is semi-improved grassland found to the east of the site, primarily on a west-facing bank. Although the sward is short, this area appears unmanaged and species present comprises grasses such as *Arrhenatherum elatius* (false oat-grass), Yorkshire fog and *Poa trvialis* (rough meadow grass), and herb species including *Leucanthemum vulgare* (oxeye daisy), *Lotus pedunculatus* (greater bird's foot trefoil) and *Ranunculus acris* (meadow buttercup). Due to the reduced management of the site, ephermeral/short perennial vegetation and tall ruderal species are scattered in these areas of bare ground and hardstanding. Species include *Anagallis arvensis* (scarlet pimpernel), butterfly-bush, *Centranthus ruber* (red valerian), *Helminthotheca echioides* (bristly oxtongue) and *Senecio jacobaea* (common ragwort).
Scrub / Introduced shrub	Heathland and shrub – Dense scrub	Poor	Scrub is present in the south and north-west corners of the site and to the west (with the area of semi-improved grassland on the west-facing bank). The areas of scattered scrub are dominated by *Prunus sp.* (cherry), *Rosa canina* (dog-rose), bramble and *Salix sp.* (willow). Within the scrub in the south-west corner there is dense scrub where *Alnus glutinosa* (Alder) is also present. Areas of introduced shrub is present to the east of the site (near the entrance) and along the southern boundary of the site with small pockets present across the site. The species composition of mostly non-native species includes *Acer platanoides* (Norway maple), *Acer palmatum* (Japanese maple), *Bambusa sp* (bamboo), butterfly-bush, *Carex pendula* (pendulous sedge), *Cornus sanguinea* (dogwood) and *Santolina chamaecyparissus* (lavender-cotton).
Scattered trees	Individual trees – Urban trees	Good	Scattered trees found within the amenity grassland comprise Norway maple, *Pinus sp.* (pine) and cherry all of which are mature.
Intact species-poor hedgerow	Hedgerows	Poor	Several managed *Laurus nobilis* (laurel) hedgerows bordering areas of amenity grassland are present to the south of the office buildings.

3.4.2 Important Ecological Features

No designated sites or ancient woodland are present in the site's RLB. The Gwent Levels Site of Special Scientific Interest (SSSI) is located 175 m to the south of the site and seven Sites of Importance for Nature Conservation (SINCs) are located within 2 km[13]. The AIA[14] recorded 38 individual trees on the site (see Table 6.2). In addition, the AIA also identified four groups of trees either within or partially within the RLB (see Table 6.3). Of these trees (both individual and grouped), only one group (G2 – Figure 3, Appendix A), comprising of six individual trees is to be retained, with all other identified individual and grouped trees located within the RLB to be removed. The Tree Helper tool within the metric was used to assess the 38 individual tree areas, as well as the areas of the two tree groups which were assigned individual tree counts in the AIA, Of the 38 individual trees, 28 were based on a moderate condition and ten were based on a poor condition. Both groups of trees were based on a poor condition.

Root protection areas (RPA) identified within the arboricultural assessment should be considered when implementing protection buffers during construction to avoid long term damage to retained trees. Such RPA's should be considered within the Construction Environmental Management Plan (CEMP) and implemented on-Site by a suitably experienced Ecological Clerk of Works (ECoW). Trees on-site would be protected to the requirements of BS 5837 (2012) Trees in Relation to Design, Demolition, and Construction. Newport City Council have confirmed that there are no Tree Preservation Orders (TPOs) or any conservation areas within the site[15].

Table 3.2   Individual trees identified within the arboricultural assessment.

Tree Condition	Size Class[16]	Area (ha)
Good	Small	-
	Medium	-
	Large	-
Moderate	Small	0.10
	Medium	0.11
	Large	-
Poor	Small	0.04
	Medium	-
	Large	-
Total Area (Ha)		0.25

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[13] Gensler (2023). Quinn Site Newport – CWL01-02 Data Centre. Design Access Statement

[14] SEED (2023). Arboricultural Impact Assessment: Former Quinn Radiator Manufacturing Plant.

[15] SEED (2023). Arboricultural Impact Assessment: Former Quinn Radiator Manufacturing Plant.

[16] The Biodiversity Metric 4.0 – User Guide (https://publications.naturalengland.org.uk/publication/6049804846366720)

Table 3.3   Grouped trees identified within the arboricultural assessment.

Tree Group Ref	Within RLB?	Number of Trees	Tree Condition	Size Class[17]	Area (ha)
G1	Yes	7	Poor	Small	0.03
G2	Yes	6	Poor	Small	0.02
G3	Partially	Unknown	Poor	Small / Medium	N/A – incorporated within "mixed scrub" in the UK Hab metric
G4	Yes	Unknown	Poor	Small	N/A – incorporated within "mixed scrub" in the UK Hab metric
G5	No	Unknown	Poor	Small	N/A

3.4.3   Strategic significance

Strategic significance is assigned to a habitat based on its local significance. The habitats on-site were assessed against the Newport Biodiversity Action Plan and the list of priority habitats in Wales[18]. A strategic significance of '*Formally identified in local strategy*' was allocated to the native hedgerows and ponds on-site as hedgerows and ponds are listed as habitats of principle importance in Section 7 of the Environment (Wales) Act 2016. All other habitats were assigned to '*Area/compensation not in local strategy / no local strategy*'.

3.5   Post Construction Biodiversity Units

The post-construction biodiversity units are based on the Landscape Plan (Figure 1, Appendix A) and the Landscape Planting Schedule (LPS) (Figure 4, Appendix A). Following construction, new habitats to be created include:

- Neutral grassland
- Mixed woodland
- Mixed scrub
- Ponds with marginal vegetation
- Urban trees
- Species-rich native hedgerow
- Non-native ornamental hedgerow
- Rain garden
- Modified grassland
- Biodiverse green roof
- Vegetated garden

Areas of hardstanding will be replaced by areas of species-rich woodland, scrub and grassland habitat. Whilst only a single group of trees will be retained, additional trees and species-rich hedgerows will be planted around the perimeter of the site. Three new attenuation ponds will be created with associated species-rich marginal planting mix. Newly created habitat will be complimented by artificial wildlife boxes[19]. Proposed habitat creation and enhancement will be delivered through the Proposed Development with the Landscape and Ecological Management Plan

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[17]The Biodiversity Metric 4.0 – User Guide (https://publications.naturalengland.org.uk/publication/6049804846366720)

[18] Welsh Government (2016). Environment (Wales) Act 2016. Available online at: https://www.biodiversitywales.org.uk/environment-wales-act

[19] Gensler (2023). Quinn Site Newport – CWL01-02 Data Centre. Design Access Statement

(LEMP) outlining management and monitoring activities to achieve and maintain target conditions. Habitat creation will also be implemented in line with the LPS (Figure 4, Appendix A).

The habitats within the LPS are translated into the UK Habitat Classification and condition assessments are detailed in Table 3.4.

Table 3.4   Post Development Habitat Translations and Condition Assessments

Landscape reference	UKHab	Condition	Notes
Proposed Native Trees	Urban – Urban trees	Poor	As detailed in the LPS, species include: Field maple (*Acer campestre*), cut leaved alder (*Alnus glutinosa 'Imperialis'*), silver birch (*Betula pendula*) and mountain ash (*Sorbus aucuparia*).
Garden Hedges	Non-native and ornamental hedgerow	Poor	As detailed in the LPS: Ready Hedge *Prunus lusitanica 'Angustifolia'*.
Species Rich Hedgerow to Boundary	Species-rich native hedgerow	Poor	As detailed in the LPS, species include: Field maple, common hawthorn (*Crataegus monogyna*), blackthorn (*Prunus spinosa*), purging buckthorn (*Rhammus cathartica*), gorse (*Ulex europaeus*) and guelder-rose (*Vilburnum opulus*).
Native Wildflower Meadow Mix	Grassland – Other neutral grassland	Moderate	As detailed in the LPS: Mix to comprise of 51% wildflowers and 49% grasses.
Native Woodland Planting Mix	Woodland and forest – Other woodland; mixed	Poor	As detailed in the LPS, species include: Pink purslane (*Claytonia sibirica*), common hazel (*Corylus avellana*), bluebell (*Hyacinthoides non-scripta*), Holly (*Ilex aquifolium*), common privet (*Ligustrum vulgare*), wood-sorrel (*Oxalis acetosella*), woolly willow (*Salix lanata*), common elder (*Sambucus nigra*) and greater stitchwort (*Stellaria holostea*).
Native Woodland Scrub Mix	Heathland and shrub – Mixed scrub	Moderate	As detailed in the LPS, species include: Dogwood, common hazel, common hawthorn, holly, blackthorn, and field rose (Rosa arvensis).
Native Rain Garden Planting Mix	Urban – Rain garden	Poor	As detailed in the LPS, species include: Bellflower (*Campanula glomerata*), pendulous sedge, true fox-sedge (*Carex vulpine*), dogwood, meadowsweet (*Filipendula ulmaria*), stinking hellebore (*Helleborus foetidus*), common rush (*Juncus effusus*), ragged robin (*Lychnis flos-cuculi*), royal fern (*Osmunda regalis*), and lesser spearwort (*Ranunculus flammula*).
Native Marginal Planting Mix	Lakes – Ponds (non-priority habitat)	Poor	As detailed in the LPS, species include: Water foxtail (*Alopecurus geniculatus*), marsh-marigold (*Caltha palustris*), landy's smock

Landscape reference	UKHab	Condition	Notes
			(*Cardamine prantensis*), foxglove (*Digitalis purpurea*), yellow iris (*Iris pseudacorus*), common rush, purple loosestrife (*Lythrum salicaria*), royal fern, common fleabane (*Pulicaria dysenterica*), and bur reed (*Sparganium erectum*).
Ornamental Garden Planting	Urban – Vegetated garden	Condition Assessment N/A	As detailed in the LPS, species include: *Archillea 'terracotta'*, bishop's wort (*Betonica officinalis*), leather leaf sedge (*Carex buchanii*), white coneflower (*Enchinacea purpurea*), plantain lily (*Hosta fortune*), soft shield fern (*Polystichum setiferum*), wood betony (*Stachys officinalis*), feather grass (*Stipa tenuissima*), and tall verbena (*Verbena bonariensis*).
Turf Lawn to Fence Perimeter	Grassland – Modified grassland	Moderate	As detailed in the LPS, species include: Tall fescue (*Festuca arundinacea*), perennial rye-grass, and smooth-stalked meadow grass (*Poa pratensis*).
Sedum Green Roofs	Urban – Biodiverse green roof	Poor	As detailed in the LPS, species include: Sticklewort (*Agrimonia eupatoria*), common bird's-foot trefoil (*Lotus corniculatus*), bladder campion (*Silene vulgaris*), common sorrel (*Rumex acetosa*), common toadflax (*Linaria vulgaris*), cowslip (*Primula veris*), hoary plantain (*Plantago media*), kidneyvetch (*Anthyllis vulneraria*), Lady's bedstraw (*Galium verum*), corn marigold (*Chrysanthemum segetum*), cornflower (*Centaurea cyanus*), meadow buttercup, field scabious (*Knautia arvensis*), yellow rattle (*Rhinanthus minor*), cat's ear (*Hypochaeris*), betony, red campion (*Silene dioica*), black medic (*Medicago lupulina*), lesser knapweed (*Centaurea nigra*), harebell (*Campanula rotundifolia*), viper's bugloss (*Echium vulgare*), oregano (*Origanum vulgare*), wild thyme (*Thymus polytrichus*), yarrow (*Achillea millefolium*), field poppy (*Papaver rhoeas*), clustered bellflower (*Campanula glomerata*), oxeye daisy, rough hawkbit (*Leontodon hispidus*), salad burnet (*Sanguisorba minor*), small scabious (*Scabiosa columbaria*), sweet vernal grass (*Anthoxanthum odoratum*), St John's wort (*Hypericum perforatum*), red clover (*Trifolium pratense*), and common self-heal (*Prunella vulgaris*).

4.   RESULTS

Full results produced by the Defra Metric v4.0 can be found in **Error! Reference source not found.**C of this report.

The results of the Natural England Metrics v4.0 calculations have shown that there will be a 250.61% net gain in biodiversity habitat units on-site. The number of habitat units on-site will increase from 12.20 to 42.69, predominantly due to the reduction of hardstanding / bare ground and the planting of grassland, woodland, and scrub habitats as well as the creation of three ponds. Hedgerow units will also increase from 0.40 to 2.88 units (a 620.86% increase) due to additional hedgerow planting.

The Natural England Biodiversity Metric 4.0 User Guide outlines Rule 3 regarding the metric trading rules. Rule 3 of the metric sets out the principal that trading down must be avoided for habitat creation/enhancement activities based on the baseline habitat distinctiveness and condition. Losses of habitat are to be compensated for on a "like for like" or "like for better" basis. New or restored habitats should aim to achieve a higher distinctiveness and/or condition than those lost. Mixed scrub and individual urban trees both fall short of this trading rule, as a 'like for like' basis is not possible. This is due to the area of mixed scrub on site post-development being smaller than what is present pre-development. Whilst more trees are proposed to be planted on Site post-development, as they have been assigned a poor target condition, a "like for like" compensation has not been achieved. Despite not all trading rules not being met through the Development, the Project can still demonstrate clear potential to deliver on NBB.

A Landscape Tree Removal Plan (LTRP) (Figure 5, Appendix A) indicates that 0.12 ha of dense scrub habitat will be lost outside of the RLB during hoarding installation. This habitat loss has not been accounted for within the BNG Report. This is because the proposed post-development habitat creation already provides substantial gains in biodiversity.

The proposed development will secure measurable biodiversity net gain which broadly accords with national planning policy as set out in Section 6 of the Environment (Wales) Act 2016 and local planning policy.

5. SUMMARY

Through habitat creation and enhancement detailed in the LPS the Development will deliver an overall net gain of 250.61% Habitat Units and 620.86% Hedgerow Units

The Proposed Development will secure measurable biodiversity net gain, providing greater ecological value and species diversity across the whole of the Site, which broadly accords with national planning policy as set out in Section 6 of the Environment (Wales) Act 2016 and local planning policy.
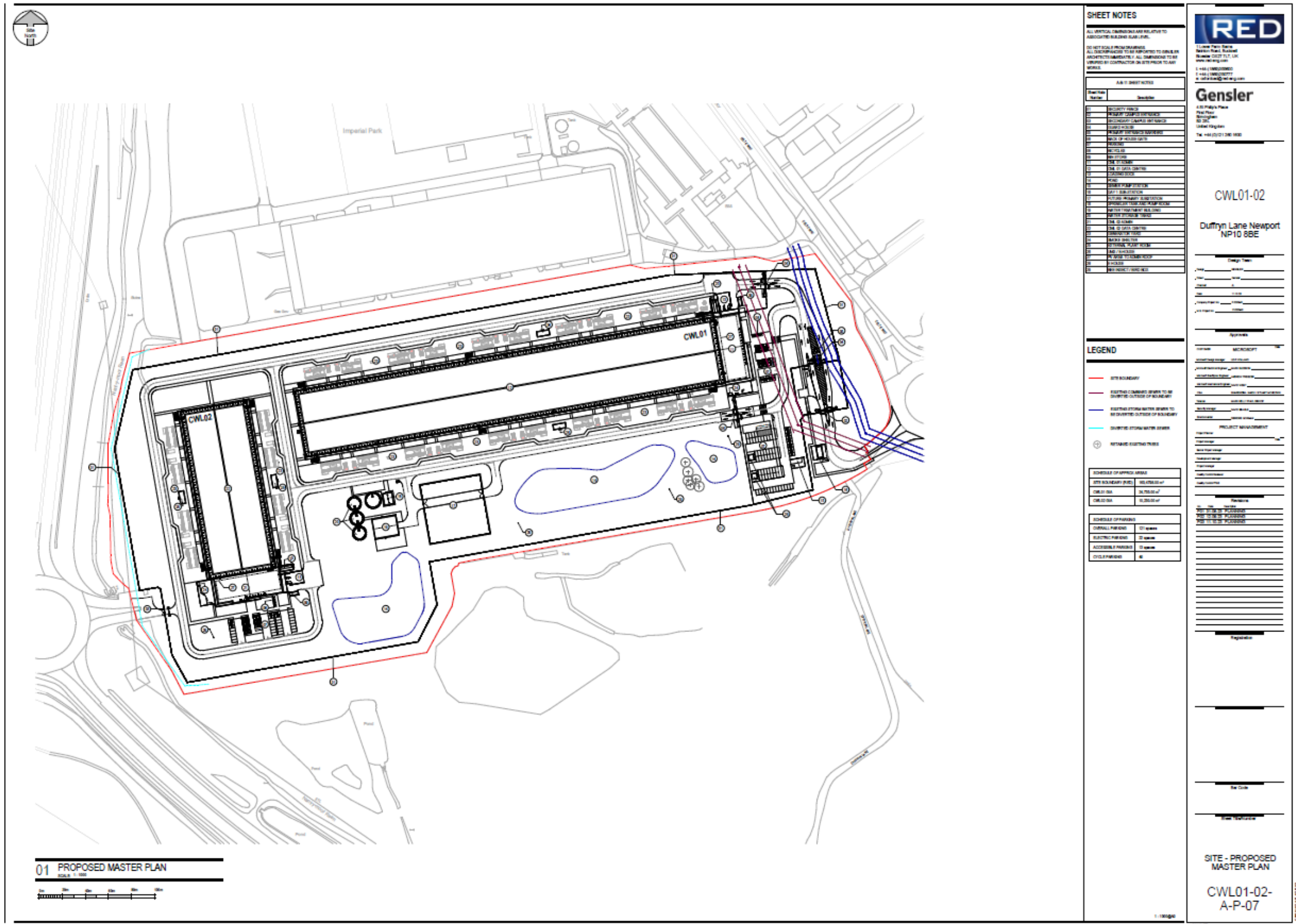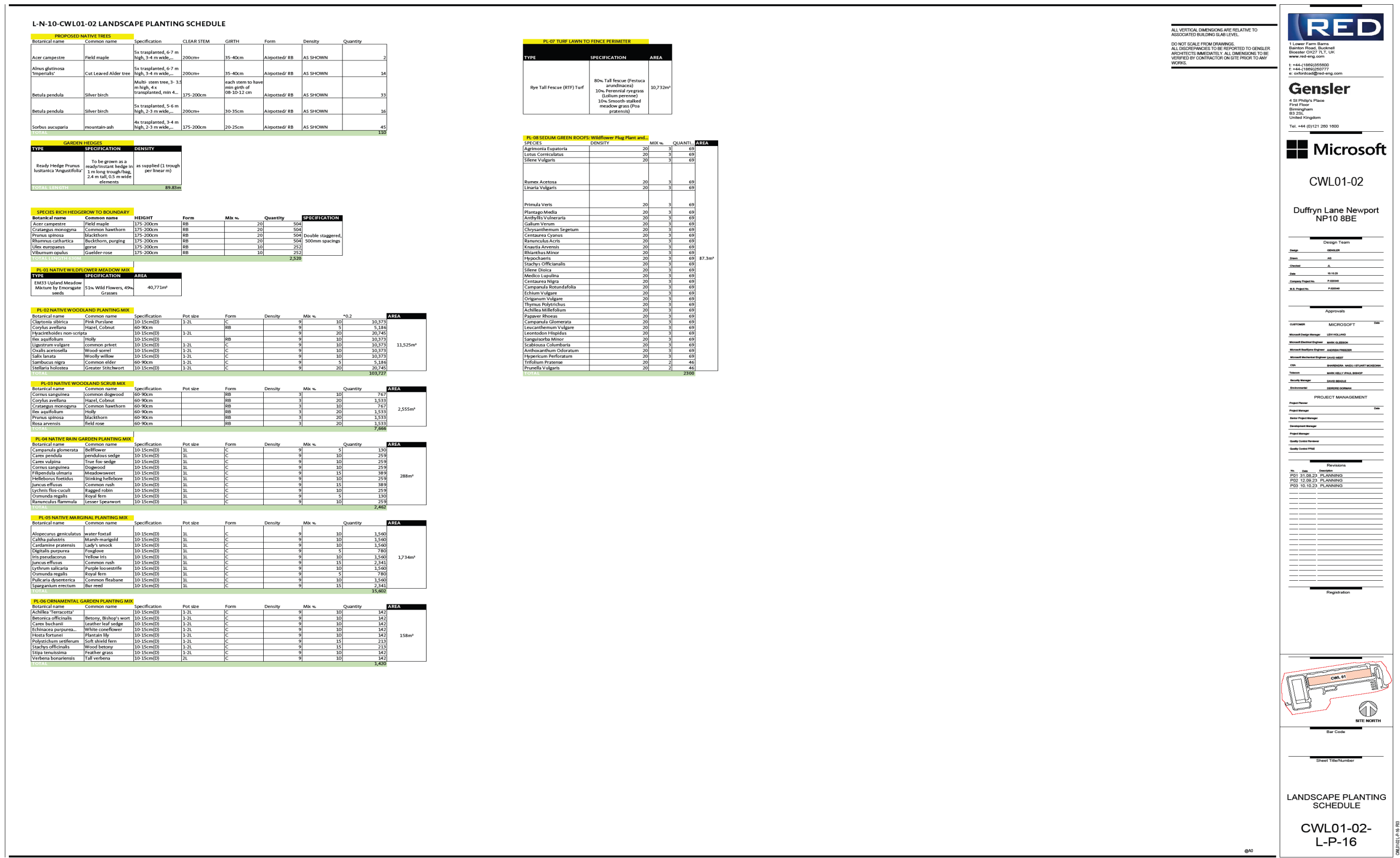
APPENDIX A   FIGURES

Figure 1: Landscape Plan

Figure 2: Red-Line Boundary

Figure 3: Tree Constraints Plan

Figure 4: Landscape Planting Schedule

L-N-10-CWL01-02 LANDSCAPE PLANTING SCHEDULE

PROPOSED NATIVE TREES

Botanical name	Common name	Specification	CLEAR STEM	GIRTH	Form	Density	Quantity
Acer campestre	Field maple	5x trasplanted, 6-7 m high, 3-4 m wide,...	200cm+	35-40cm	Airpotted/ RB	AS SHOWN	2
Alnus glutinosa 'Imperialis'	Cut Leaved Alder tree	5x trasplanted, 6-7 m high, 3-4 m wide,...	200cm+	35-40cm	Airpotted/ RB	AS SHOWN	14
Betula pendula	Silver birch	Multi- stem tree, 3- 3.5 m high, 4 x transplanted, min 4...	175-200cm	each stem to have min girth of 08-10-12 cm	Airpotted/ RB	AS SHOWN	33
Betula pendula	Silver birch	5x trasplanted, 5-6 m high, 2-3 m wide,...	200cm+	30-35cm	Airpotted/ RB	AS SHOWN	16
Sorbus aucuparia	mountain-ash	4x trasplanted, 3-4 m high, 2-3 m wide,...	175-200cm	20-25cm	Airpotted/ RB	AS SHOWN	45
TOTAL							**110**

GARDEN HEDGES

TYPE	SPECIFICATION	DENSITY
Ready Hedge Prunus lusitanica 'Angustifolia'	To be grown as a ready/instant hedge in 1 m long trough/bag, 2.4 m tall, 0.5 m wide elements	as supplied (1 trough per linear m)
TOTAL LENGTH		**89.83m**

SPECIES RICH HEDGEROW TO BOUNDARY

Botanical name	Common name	HEIGHT	Form	Mix %	Quantity	SPECIFICATION
Acer campestre	Field maple	175-200cm	RB	20	504	
Crataegus monogyna	Common hawthorn	175-200cm	RB	20	504	
Prunus spinosa	blackthorn	175-200cm	RB	20	504	Double staggered, 500mm spacings
Rhamnus cathartica	Buckthorn, purging	175-200cm	RB	20	504	
Ulex europaeus	gorse	175-200cm	RB	10	252	
Viburnum opulus	Guelder-rose	175-200cm	RB	10	252	
TOTAL X LENGTH TO SUM					**2,520**	

PL-01 NATIVE WILDFLOWER MEADOW MIX

TYPE	SPECIFICATION	AREA
EM33 Upland Meadow Mixture by Emorsgate seeds	51% Wild Flowers, 49% Grasses	40,771m²

PL-02 NATIVE WOODLAND PLANTING MIX

Botanical name	Common name	Specification	Pot size	Form	Density	Mix %	*0.2	Quantity	AREA
Claytonia sibirica	Pink Purslane	10-15cm(D)	1-2L	C	9		10	10,373	
Corylus avellana	Hazel, Cobnut	60-90cm		RB	9		5	5,186	
Hyacinthoides non-scripta		10-15cm(D)	1-2L		9		20	20,745	
Ilex aquifolium	Holly	10-15cm(D)		RB	9		10	10,373	
Ligustrum vulgare	common privet	10-15cm(D)	1-2L	C	9		10	10,373	11,525m²
Oxalis acetosella	Wood sorrel	10-15cm(D)	1-2L	C	9		10	10,373	
Salix lanata	Woolly willow	10-15cm(D)	1-2L	C	9		10	10,373	
Sambucus nigra	Common elder	60-90cm		RB	9		5	5,186	
Stellaria holostea	Greater Stitchwort	10-15cm(D)	1-2L	C	9		20	20,745	
TOTAL								**103,727**	

PL-03 NATIVE WOODLAND SCRUB MIX

Botanical name	Common name	Specification	Pot size	Form	Density	Mix %	Quantity	AREA
Cornus sanguinea	common dogwood	60-90cm		RB	3	10	767	
Corylus avellana	Hazel, Cobnut	60-90cm		RB	3	20	1,533	
Crataegus monogyna	Common hawthorn	60-90cm		RB	3	10	767	2,555m²
Ilex aquifolium	Holly	60-90cm		RB	3	20	1,533	
Prunus spinosa	blackthorn	60-90cm		RB	3	20	1,533	
Rosa arvensis	field rose	60-90cm		RB	3	20	1,533	
TOTAL							**7,666**	

PL-04 NATIVE RAIN GARDEN PLANTING MIX

Botanical name	Common name	Specification	Pot size	Form	Density	Mix %	Quantity	AREA
Campanula glomerata	Bellflower	10-15cm(D)	1L	C	9	5	130	
Carex pendula	pendulous sedge	10-15cm(D)	1L	C	9	10	259	
Carex vulpina	True fox-sedge	10-15cm(D)	1L	C	9	10	259	
Cornus sanguinea	Dogwood	10-15cm(D)	1L	C	9	10	259	
Filipendula ulmaria	Meadowsweet	10-15cm(D)	1L	C	9	15	389	288m²
Helleborus foetidus	Stinking hellebore	10-15cm(D)	1L	C	9	10	259	
Juncus effusus	Common rush	10-15cm(D)	1L	C	9	15	389	
Lychnis flos-cuculi	Ragged robin	10-15cm(D)	1L	C	9	10	259	
Osmunda regalis	Royal fern	10-15cm(D)	1L	C	9	5	130	
Ranunculus flammula	Lesser Spearwort	10-15cm(D)	1L	C	9	10	259	
TOTAL							**2,462**	

PL-05 NATIVE MARGINAL PLANTING MIX

Botanical name	Common name	Specification	Pot size	Form	Density	Mix %	Quantity	AREA
Alopecurus geniculatus	water foxtail	10-15cm(D)	1L	C	9	10	1,560	
Caltha palustris	Marsh-marigold	10-15cm(D)	1L	C	9	10	1,560	
Cardamine pratensis	Lady's smock	10-15cm(D)	1L	C	9	10	1,560	
Digitalis purpurea	Foxglove	10-15cm(D)	1L	C	9	5	780	
Iris pseudacorus	Yellow Iris	10-15cm(D)	1L	C	9	10	1,560	1,734m²
Juncus effusus	Common rush	10-15cm(D)	1L	C	9	15	2,341	
Lythrum salicaria	Purple loosestrife	10-15cm(D)	1L	C	9	10	1,560	
Osmunda regalis	Royal fern	10-15cm(D)	1L	C	9	5	780	
Pulicaria dysenterica	Common fleabane	10-15cm(D)	1L	C	9	10	1,560	
Sparganium erectum	Bur reed	10-15cm(D)	1L	C	9	15	2,341	
TOTAL							**15,602**	

PL-06 ORNAMENTAL GARDEN PLANTING MIX

Botanical name	Common name	Specification	Pot size	Form	Density	Mix %	Quantity	AREA
Achillea 'Terracotta'		10-15cm(D)	1-2L	C	9	10	142	
Betonica officinalis	Betony, Bishop's wort	10-15cm(D)	1-2L	C	9	10	142	
Carex buchanii	Leather leaf sedge	10-15cm(D)	1-2L	C	9	10	142	
Echinacea purpurea...	White coneflower	10-15cm(D)	1-2L	C	9	10	142	
Hosta fortunei	Plantain lily	10-15cm(D)	1-2L	C	9	10	142	158m²
Polystichum setiferum	Soft shield fern	10-15cm(D)	1-2L	C	9	15	213	
Stachys officinalis	Wood betony	10-15cm(D)	1-2L	C	9	15	213	
Stipa tenuissima	Feather grass	10-15cm(D)	1-2L	C	9	10	142	
Verbena bonariensis	Tall verbena	10-15cm(D)	2L	C	9	10	142	
TOTAL							**1,420**	

PL-07 TURF LAWN TO FENCE PERIMETER

TYPE	SPECIFICATION	AREA
Rye Tall Fescue (RTF) Turf	80% Tall fescue (Festuca arundinacea) 10% Perennial ryegrass (Lolium perenne) 10% Smooth-stalked meadow grass (Poa pratensis)	10,732m²

PL-08 SEDUM GREEN ROOFS: Wildflower Plug Plant and...

SPECIES	DENSITY	MIX %	QUANTI	AREA
Agrimonia Eupatoria	20	3	69	
Lotus Corniculatus	20	3	69	
Silene Vulgaris	20	3	69	
Rumex Acetosa	20	3	69	
Linaria Vulgaris	20	3	69	
Primula Veris	20	3	69	
Plantago Media	20	3	69	
Anthyllis Vulneraria	20	3	69	
Galium Verum	20	3	69	
Chrysanthemum Segetum	20	3	69	
Centaurea Cyanus	20	3	69	
Ranunculus Acris	20	3	69	
Knautia Arvensis	20	3	69	
Rhianthus Minor	20	3	69	
Hypochaeris	20	3	69	87.3m²
Stachys Officianalis	20	3	69	
Silene Dioica	20	3	69	
Medico Lupulina	20	3	69	
Centaurea Nigra	20	3	69	
Campanula Rotundafolia	20	3	69	
Echium Vulgare	20	3	69	
Origanum Vulgare	20	3	69	
Thymus Polytrichus	20	3	69	
Achillea Millefolium	20	3	69	
Papaver Rhoeas	20	3	69	
Campanula Glomerata	20	3	69	
Leucanthemum Vulgare	20	3	69	
Leontodon Hispidus	20	3	69	
Sanguisorba Minor	20	3	69	
Scabiousa Columbaria	20	3	69	
Anthoxanthum Odoratum	20	3	69	
Hypericum Perforatum	20	3	69	
Trifolium Pratense	20	2	46	
Prunella Vulgaris	20	2	46	
TOTAL			**2300**	

Design Team

Design	GENSLER
Drawn	AS
Checked	A
Date	10.10.23
Company Project No.	P-00040
W.E. Project No.	P-00040

Approvals

PROJECT MANAGEMENT

Revisions

No.	Date	Description
P01	31.08.23	PLANNING
P02	12.09.23	PLANNING
P03	10.10.23	PLANNING

Registration

SITE NORTH

Bar Code

Sheet Title/Number

LANDSCAPE PLANTING SCHEDULE

CWL01-02-L-P-16

Figure 5: Landscape Tree Removal Plan

APPENDIX B   LEGISLATION AND POLICY BACKGROUND

The Environment (Wales) Act 2016

The Environment (Wales) Act was introduced in 2016 to establish the legislation required to plan and manage Wales's natural resources sustainably. The Environment (Wales) Act introduced a new duty, Section 6, which requires all public authorities, when undertaking their various functions in Wales, to seek to "*maintain and enhance biodiversity*" where it is within the proper exercise of their functions. In doing so, public authorities must also seek to "*promote the resilience of ecosystems*" [20].

National Biodiversity Net Gain Policy

Planning Policy Wales instructs planning authorities to take account of and promote ecosystem resilience, particularly the five attributes of ecosystem services (DECCA)[21]:

- **Diversity:** Maintaining and enhancing diversity at every scale, including genetic, structural, habitat and in-between habitat levels. This supports the complexity of ecosystem functions and interactions that deliver services and benefits.

- **Extent:** Incorporating measures which maintain and increase the area of semi-natural habitat/features and linkages between habitats. In general, smaller ecosystems have reduced capacity to adapt, recover or resist disturbance.

- **Condition:** The condition of an ecosystem is affected by multiple and complex pressures acting both as short term and longer-term types of disturbance. Both direct and wider impacts should be considered, for example, avoiding or mitigating pressures such as climate change, pollution, invasive species, land management neglect etc.

- **Connectivity:** This refers to the links between and within habitats, which may take the form of physical corridors, stepping stones in the landscape, or patches of the same or related vegetation types that together create a network that enables the flow or movement of genes, species and natural resources. Developments should take opportunities to develop functional habitat and ecological networks within and between ecosystems, building on existing connectivity.

- **Aspects of ecosystem resilience (adaptability, recovery and resistance):** Ecosystem resilience is a product of the above four attributes. Adaptability, recovery and resistance to/from a disturbance are defining features of ecosystem resilience.

BNG is encouraged through DECCA via a Net Benefits for Biodiversity (NBB) approach. NBB can be achieved through a range of actions, from bat and bird box installations to large-scale habitat creation and/or restoration. Biodiversity enhancements that achieve NBB must be delivered following implementation of the stepwise approach of firstly avoiding, then minimising, mitigating and as a last resort compensating for, the adverse environmental impacts of a development. Where the adverse environmental impacts clearly outweigh other material considerations, the development should be refused.

Local Biodiversity Net Gain Policy

The Future Wales National Plan[22] includes Policy 9: *"...In all cases, action towards securing the maintenance and enhancement of biodiversity (to provide a net benefit), the resilience of ecosystems and green infrastructure assets must be demonstrated as part of development proposals through innovative, nature-based approaches to site planning and the design of the built environment.*"

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[20] CIEEM (2022). Welsh Government's Approach to Net Benefits for Biodiversity and the DECCA Framework in the Terrestrial Planning System, Available online at: https://cieem.net/wp-content/uploads/2022/08/Net-Benefits-briefing.pdf

[21] CIEEM (2022). Welsh Government's Approach to Net Benefits for Biodiversity and the DECCA Framework in the Terrestrial Planning System, Available online at: https://cieem.net/wp-content/uploads/2022/08/Net-Benefits-briefing.pdf

[22] Welsh Government (2021) Future Wales: The National Plan 2040. Available online at: https://www.gov.wales/sites/default/files/publications/2021-02/future-wales-the-national-plan-2040.pdf

The Nature Recovery Action Plan for Wales 2020-2021 sets out a Strategy for Nature which includes amongst its objectives, to "*increase the resilience of our natural environment by restoring degraded habitats and habitat creation*" [23].

Newport City Council is dedicated to stopping the decline in biodiversity across the county and values the importance of conservation and habitat enhancement. Newport City Council's Local Biodiversity Action Plan features a number of priority habitats and species in the area and outlines how they and their partners aim to protect and enhance them[24]. Among these priority habitats are brownfield and urban habitats such as derelict factory sites which if unused for many years can lead to the development of a complex mosaic of habitats. Such brownfield sites can also provide alternative habitat for species which have declined due to habitat loss in the wider area.

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[23] Welsh Government (2020) The Nature Recovery Action Plan for Wales 2020-2021. Available online at: https://www.gov.wales/sites/default/files/publications/2020-10/nature-recovery-action-plan-wales-2020-2021.pdf

[24] Newport City Council (2023) Biodiversity action plan. Available online at: https://www.newport.gov.uk/en/Leisure-Tourism/Countryside--Parks/Biodiversity/Biodiversity-action-plan.aspx

APPENDIX C   BNG CALCULATION RESULTS

On-Site Habitat Baseline

	Existing Area Habitats			Distinctiveness		Condition		Strategic Significance			Required Action to Meet Trading Rules	Ecological Baseline
Ref	Broad Habitat	Habitat Type	Areas (hectares)	Distinctiveness	Score	Condition	Score	Strategic Significance	Strategic Significance	Strategic Significance Multiplier		Total Habitat Units
1	Urban	Developed land; sealed surface	14.25	Very low	0	N/A – Other	0	Formally identified in local strategy	High strategic significance	1.15	Compensation Not Required	0.00
2	Grassland	Other neutral grassland	0.68	Medium	4	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low strategic significance	1	Same broad habitat or a higher distinctiveness habitat required (≥)	5.44
3	Grassland	Modified grassland	0.78	Low	2	Poor	1	Area/compensation not in local strategy/ no local strategy	Low strategic significance	1	Same distinctiveness or better habitat required ≥	1.56
4	Heathland and shrub	Mixed scrub	0.79	Medium	4	Poor	1	Area/compensation not in local strategy/ no local strategy	Low strategic significance	1	Same broad habitat or a higher distinctiveness habitat required (≥)	3.16
5	Individual trees	Urban tree	0.21	Medium	4	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low strategic significance	1	Same broad habitat or a higher distinctiveness habitat required (≥)	1.68
6	Individual trees	Urban tree	0.04	Medium	4	Poor	1	Area/compensation not in local strategy/ no local strategy	Low strategic significance	1	Same broad habitat or a higher distinctiveness habitat required (≥)	0.16
7	Individual trees	Urban tree	0.05	Medium	4	Poor	1	Area/compensation not in local strategy/ no local strategy	Low strategic significance	1	Same broad habitat or a higher distinctiveness habitat required (≥)	0.20
Total Habitat Area			**16.80**								**TOTAL UNITS**	**12.20**
Site Area (excluding area of individual trees and green walls)			**16.50**									

	Retention Category Biodiversity						Comments
Ref	Area Retained	Area Enhanced	Baseline Units Retained	Baseline Units Enhanced	Area Habitat Lost	Units Lost	
1			0.00	0.00	14.40	0.00	
2			0.00	0.00	0.85	5.44	
3			0.00	0.00	0.71	1.56	
4			0.00	0.00	0.54	3.16	
5			0.00	0.00	0.21	1.68	
6			0.00	0.00	0.04	0.16	
7	0.02		0.08	0.00	0.03	0.12	1x group of trees retained
					TOTAL UNITS LOST	**12.12**	

On-Site Habitat Creation

	Existing Area Habitats			Distinctiveness		Condition		Strategic Significance		
Ref	Broad Habitat	Habitat Type	Areas (hectares)	Distinctiveness	Score	Condition	Score	Strategic Significance	Strategic Significance	Strategic Significance Multiplier
1	Grassland	Other neutral grassland	4.08	Medium	4	Moderate	2	Formally identified in local strategy	High strategic significance	1
2	Woodland and forest	Other woodland; mixed	1.15	Medium	4	Poor	1	Area/compensation not in local strategy/ no local strategy	Low strategic significance	1
3	Heathland and shrub	Mixed scrub	0.26	Medium	4	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low strategic significance	1
4	Lakes	Ponds (non-priority habitat)	1.07	Medium	4	Poor	1	Formally identified in local strategy	High strategic significance	1.15
5	Individual trees	Urban tree	0.44	Medium	4	Poor	1	Area/compensation not in local strategy/ no local strategy	Low strategic significance	1
6	Urban	Rain garden	0.03	Low	2	Poor	1	Area/compensation not in local strategy/ no local strategy	Low strategic significance	1
7	Urban	Vegetated garden	0.02	Low	2	Condition Assessment N/A	1	Area/compensation not in local strategy/ no local strategy	Low strategic significance	1
8	Urban	Biodiverse green roof	0.00	Medium	4	Poor	1	Area/compensation not in local strategy/ no local strategy	Low strategic significance	1
9	Grassland	Modified grassland	1.07	Low	2	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low strategic significance	1
10	Urban	Developed land; sealed surface	8.82	Very low	0	N/A - Other	0	Area/compensation not in local strategy/ no local strategy	Low strategic significance	1
Total Habitat Area			16.94							
Site Area (excluding area of individual trees and green walls)			16.50							

	Temporal Multiplier						Difficulty Multipliers				Habitat Units Delivered
Ref	Standard Time to Target Condition (Years)	Habitat Created in Advance (Years)	Delay in Starting Habitat Creation (Years)	Standard or Adjusted Time to Target Condition	Final Time to Target Condition (Years)	Final Time to Target Multiplier	Standard Difficulty of Creation	Applied Difficulty Multiplier	Final Difficulty of Creation	Difficulty Multiplier Applied	
1	5	0	0	Standard time to target condition applied	5	0.837	Low	Standard difficulty applied	Low	1	27.31

2	5	0	0	Standard time to target condition applied	5	0.837	Low	Standard difficulty applied	Low	1	3.85
3	5	0	0	Standard time to target condition applied	5	0.837	Low	Standard difficulty applied	Low	1	1.74
4	1	0	0	Standard time to target condition applied	1	0.965	Low	Standard difficulty applied	Low	1	4.75
5	10	0	0	Standard time to target condition applied	10	0.700	Low	Standard difficulty applied	Low	1	1.23
6	1	0	0	Standard time to target condition applied	1	0.965	Low	Standard difficulty applied	Low	1	0.06
7	1	0	0	Standard time to target condition applied	1	0.965	Low	Standard difficulty applied	Low	1	0.04
8	1	0	0	Standard time to target condition applied	1	0.965	Medium	Standard difficulty applied	Medium	0.67	0.00
9	4	0	0	Standard time to target condition applied	4	0.867	Low	Standard difficulty applied	Low	1	3.71
10	0	0	0	Standard time to target condition applied	0	1.000	Low	Standard difficulty applied	Medium	0.67	0.00
										TOTAL UNITS	**42.69**

Area Habitat Summary

Total Net Unit Change	30.57
Total Net % Charge	250.61%

On-Site Hedge Baseline

	Existing Hedgerow Habitats			Distinctiveness	Condition	Strategic Significance	Required Action to Meet Trading Rules	Ecological Baseline	Retention Category Biodiversity Value					
Ref	Hedge Number	Hedgerow Type	Length (km)					Total Hedgerow Units	Length Retained	Length Enhanced	Units Retained	Units Enhanced	Length Lost	Units Lost
1	1	Non-native and ornamental hedgerow	0.4	Very low	Poor	Area/compensation not in local strategy/ no local strategy	Same distinctiveness band or better	0.40	0	0	0	0	0.40	0.40
Total Length			**0.4**				**TOTAL UNITS**	**0.40**					**0.40**	**0.40**

On-Site Hedge Creation

Proposed Habitats			Distinctiveness		Condition		Strategic Significance		
New Hedge Number	Hedgerow Type	Length (km)	Distinctiveness	Score	Condition	Score	Strategic Significance	Strategic Significance	Strategic Position Multiplier
1	Non-native and ornamental hedgerow	0.09	Very low	1	Poor	1	Area/compensation not in local strategy/ no local strategy	Low strategic significance	1
2	Species-rich native hedgerow	0.63	Medium	4	Poor	1	Formally identified in local strategy	High strategic significance	1.15
Total Length		**0.72**							

	Temporal Multiplier						Difficulty Multipliers				Hedge Units Delivered
Ref	Standard Time to Target Condition (Years)	Habitat Created in Advance (Years)	Delay in Starting Habitat Creation (Years)	Standard or Adjusted Time to Target Condition	Final Time to Target Condition (Years)	Final Time to Target Multiplier	Standard Difficulty of Creation	Applied Difficulty Multiplier	Final Difficulty of Creation	Difficulty Multiplier Applied	
1	1	0	0	Standard time to target condition applied	1	0.965	Low	Standard difficulty applied	Low	1	0.09
2	1	0	0	Standard time to target condition applied	1	0.965	Low	Standard difficulty applied	Low	1	2.80
										TOTAL UNITS	**2.88**

Area Habitat Summary	
Total Net Unit Change	30.35
Total Net % Charge	244.40%

APPENDIX D   CIEEM'S UK GOOD PRACTICE PRINCIPLES FOR BIODIVERSITY NET GAIN AND EVIDENCE OF COMPLIANCE

Principle	In Practice	Site Specific Commentary
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.	Habitat loss will be unavoidable on this project. Protective buffers to be enforced around trees to minimise impacts. Any lost habitat is to be replaced by higher value habitats, including, grassland, scrub, hedgerows and ponds.
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.	No high distinctiveness irreplaceable habitats will be lost in line with the Development. Any habitat loss is low or medium distinctiveness habitat. Where possible, losses are replaced with habitat of a comparable category with equal or higher distinctiveness and ecological value.
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.	Stakeholders have been engaged in the development of the project and their comments considered.
4. Address Risk	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 reduction of bare ground and hardstanding, and subsequent replacement by woodland, grassland, scrub, hedgerow and pond habitats will significantly contribute to a net gain outcome. A Landscape and Ecological Management Plan (LEMP) will be produced, detailing appropriate woodland, grassland, scrub and hedgerow management measures. It will include monitoring of plant losses in the first five years following planting and how to go about replacement where there have been failures. Regular condition assessment monitoring for each habitat type is additionally proposed to ensure each habitat type meets target condition in the expected timeframe, in line the BNG calculation.
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.	Measurable net gain demonstrated through the Natural England biodiversity metric, with a net gain on all assessed metrics in excess of 10%. Proposed habitats reflect those that are typically present in the local landscape and will improve connectivity. Planting hedgerows and pond creation would align with the hedge planting encouraged by the Newport Local Biodiversity Action Plan.
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	The development will contribute to the local biodiversity through the creation of new hedgerows and ponds, improving habitat connectivity in the surrounding area which is encouraged by the Newport Local Biodiversity Action Plan. The creation of new grassland, woodland and scrub habitats, as well as the overall reduction of hardstanding / bare ground will also contribute towards a net gain in biodiversity on Site.

Principle	In Practice	Site Specific Commentary
	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; and enhancing ecological connectivity by creating more bigger, better, and joined areas for biodiversity.	
7. Be additional	Achieve nature conservation outcomes that demonstrably exceed existing obligations (i.e., do not deliver something that would occur anyway).	Without Development the Site would be retained at its current hardstanding baseline, providing limited ecological opportunities. In line with the Development, significant habitat creation will occur providing enhancements both on-Site and in the local area due to increased connectivity.
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.	Long term benefits to local biodiversity will be ensured through a LEMP, detailing appropriate woodland, grassland, scrub and hedgerow management measures. It will include monitoring of plant losses in the first five years following planting and how to address replacement where there have been failures.
9. Optimise sustainability	Prioritise Biodiversity Net Gain and, where possible, optimise the wider environmental benefits for a sustainable society and economy.	The Development is a data centre which will enable for more efficient internet usage for local communities. The Development incorporates a number of sustainable design feature to minimise its overall carbon footprint, e.g. utilising more energy efficient cooling systems and the integration of renewable energy production. Habitat creation with contribute towards a net gain in biodiversity on-Site.
10. Be transparent	Communicate all Net Gain activities in a transparent and timely manner, sharing the learning with all stakeholders.	All BNG calculations, the BNG report and EcIA have been submitted in line with this application. Combined, these provide significant detail on the baseline, potential impacts, mitigation, and enhancement opportunities of the Development.

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