



Biodiversity Net Gain Assessment

Ollerton Depot, Newark Road, New Ollerton,
NG22 9PZ

Presented to: **J. Murphy & Sons Limited**

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Report Details

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Report Title	Biodiversity Net Gain Assessment
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Quality Assurance

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1	Final	9 th February 2024		<i>B. Hodgins</i>	<i>J. Britt</i>	<i>J. Britt</i>
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About us

Delta-Simons is a trusted, multidisciplinary environmental consultancy, focused on delivering the best possible project outcomes for customers. Specialising in Environment, Health & Safety and Sustainability, Delta-Simons provide support and advice within the property development, asset management, corporate and industrial markets. Operating from across the UK we employ over 180 environmental professionals, bringing experience from across the private consultancy and public sector markets.

As part of Lucion Services, our combined team of 500 in the UK has a range of specialist skill sets in over 50 environmental consultancy specialisms including asbestos, hazardous materials, ecology, air and water services, geo-environmental and sustainability amongst others.

Delta-Simons is proud to be a founder member of the Inogen Environmental Alliance, enabling us to efficiently deliver customer projects worldwide by calling upon over 5000 resources in our global network of consultants, each committed to providing superior EH&S and sustainability consulting expertise to our customers. Through Inogen we can offer our Clients more consultants, with more expertise in more countries than traditional multinational consultancy.



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Table of Contents

1.0 INTRODUCTION	1
1.1 Context and Purpose	1
1.2 Proposed Development	1
2.0 METHODOLOGY	2
2.1 Overview	2
2.2 Biodiversity Metric.....	2
2.3 Habitat Distinctiveness.....	2
2.4 Habitat Condition	3
2.5 Baseline Assessment.....	3
2.6 Post Development Biodiversity Unit Calculation	3
2.7 Proposed Scheme	4
2.8 Future Auditing	4
3.0 ASSUMPTIONS AND APPLICATION OF PROFESSIONAL JUDGEMENT	5
3.1 Future Habitats	5
4.0 RESULTS	6
4.1 Baseline	6
4.2 Proposed Scheme	7
5.0 CONCLUSIONS.....	9
6.0 DISCLAIMER	10

Tables

- TABLE 1 – ON-SITE AREA HABITAT BASELINE SCORE
- TABLE 2 – ON-SITE HEDGEROW BASELINE SCORE
- TABLE 3 – ON-SITE WATERCOURSE BASELINE SCORE
- TABLE 4 – POST-DEVELOPMENT AREA HABITAT SCORE
- TABLE 5 – POST-DEVELOPMENT HEDGEROW SCORE
- TABLE 6 – POST-DEVELOPMENT WATERCOURSE SCORE

Figures

- FIGURE 1 – UK HABITAT PLAN
- FIGURE 2 – POST DEVELOPMENT HABITATS PLAN

Drawings

- DRAWING 1 – LANDSCAPE PROPOSAL PLAN

Appendices

- APPENDIX A – THE STATUTORY BIODIVERSITY METRIC (ISSUED SEPARATELY)

1.0 Introduction

1.1 Context and Purpose

Delta-Simons Limited (“Delta-Simons”) was instructed by J. Murphy & Sons Limited (“the Client”) to undertake a Biodiversity Net Gain (BNG) Assessment to determine whether the redevelopment (“the Proposed Development”) at Ollerton Depot, Newark Road, New Ollerton, NG22 9PZ (hereafter referred to as “the Site”) can achieve a net gain in biodiversity.

The revised National Planning Policy Framework (NPPF, 2023) states, “Planning policies and decisions should contribute to and enhance the local environment by...(d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures...”, it also places greater emphasis on achieving a measurable net gain in biodiversity.

1.2 Proposed Development

The Proposed Development includes the redevelopment of the Site including the relocation of the existing workshop facilities. The Proposed Development includes:

- New office and training building/facilities;
- New workshop facilities;
- New staff and visitor’s car parking;
- HGV parking; and
- Reconfiguration of existing open storage areas.

The development in the eastern half of the Site includes a new workshop with vehicular access proposed via a cut through of the existing central embankment/tree belt with associated hardstanding storage areas and a training area. The southern field of the Site also proposes a new training area and the construction of high voltage electricity pylons, however, the majority of the field is to be used for landscape planting and ecological enhancements.

2.0 Methodology

2.1 Overview

The approach used to assess biodiversity impacts resulting from the proposed development is detailed below. This assessment has been based on The Statutory Biodiversity Metric, the Landscape Proposal Plan provided by Fabrik Landscape Architects Ltd and the Preliminary Ecological Appraisal (PEA) undertaken on 16th November 2022 and further reviews of habitats during Summer 2023.

2.2 Biodiversity Metric

The quantitative assessment is based on the Metric to provide a transparent and repeatable measure of biodiversity at each of the stages identified above. The biodiversity score considers a number of factors including:

- Habitat distinctiveness;
- Habitat condition;
- Temporal risk: time required to reach target condition;
- Difficulty to create/restore;
- Connectivity; and
- Spatial area of loss/gain of each habitat.

The pre-development value is compared to the proposed habitat composition post development to assess the change in biodiversity value using biodiversity units as a proxy numeric value.

The Metric only considers habitats and does not take protected and notable species or associated enhancement measures such as bird/bat boxes into account.

2.3 Habitat Distinctiveness

Distinctiveness refers to the relative scarcity of the habitat and its importance for nature conservation. Habitats are assigned to distinctiveness bands. These are based on an assessment of the distinguishing features of a habitat or linear feature, including the consideration of species richness, rarity (at local, regional, national and international scales), and the degree to which a habitat supports species rarely found in other habitats.

The distinctiveness band of each habitat is preassigned in the Metric. The bands are based upon the UK habitat classification system.

The Defra habitat typologies are split into five distinctiveness bands:

- **Very High** - Priority habitats as defined in Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 that are highly threatened, internationally scarce, and require conservation action;
- **High** - Priority habitats as defined in Section 41 of the NERC Act requiring conservation action;
- **Medium** - Semi-natural habitats not classed as Priority Habitat;
- **Low** - Habitat of low biodiversity value; and
- **Very low** - Little or no biodiversity value.

Under the supplementary habitat calculations for linear habitats, hedgerows are assigned a distinctiveness weighting based on their physical structure and the species composition of the woody element of the

hedgerow, and their association with physical features (ditches and banks) that may enhance their ecological value by providing additional niches or enhanced capacity to provide habitat connectivity.

2.4 Habitat Condition

The condition of a habitat is defined by its particular quality. For example, a habitat is in poor condition if it fails to support the notable/protected species for which it is valued, or if it is in unfavourable condition due to degradation from external factors, such as pollution, erosion or invasive species. Condition assessment criteria is based on the Statutory Metric Condition Assessment Sheets. Habitat condition categories are as follows:

- Good;
- Fairly good;
- Moderate;
- Fairly poor;
- Poor;
- N/A - Agricultural; and
- N/A - other.

2.5 Baseline Assessment

The baseline biodiversity score for the Site has been determined using the PEA of the Site undertaken by Delta Simons on 16th November 2022 and review of habitats during Site visits in Summer 2023. The baseline habitats are shown in Figure 1.

2.6 Post Development Biodiversity Unit Calculation

Habitat (area) Units and Linear Units resulting from ecological mitigation for the Scheme to compensate for potential losses are referred to as post-development Habitat Units/Hedgerow Units/Watercourse Units (HaUs/HeUs/WUs).

To calculate the units which may be achieved post-development, risk factors are introduced. The aim of a risk factor is to correct for a disparity or risk, associated with the uncertainty surrounding the creation of habitats. There are three main types of risk that are accounted for within the Metric. These are categorised as follows:

- **Spatial Risk** - these reflect ecological risks deriving from the change in location of the habitat or resource. By way of example, it may be that recreating a habitat in a new location distant from the area of loss could reduce its biodiversity value, through reduced connectivity and a decrease in habitat availability for the species affected by the development;
- **Temporal Risk** - the risk associated with the time required for created habitats to reach their target suitability and for the functionality of the habitat to be restored; and
- **Delivery Risk** - the risks associated with the actual delivery of the offset due to, for instance, uncertainty in the effectiveness of habitat creation/management.

Each risk multiplier is assigned a numerical score which enables post development Biodiversity Units to be calculated.

2.7 Proposed Scheme

In order to calculate the post-intervention score, the Landscape Proposal Plans (Drawing 1) has been used as well as assumptions for targeted habitat conditions as set out in Section 3.1.

2.8 Future Auditing

This Report sets out the predicted biodiversity impacts of the scheme based on a set of assumptions and professional judgement for target habitat conditions post-development. In order to ensure the development achieves the targets set out below, the scheme should be accompanied by an appropriate Landscape and Ecology Management and Monitoring Plan (LEMMP). The LEMMP should allow for regular monitoring of the habitat establishment and their progression to the desired condition target, allowing for changes to management regimes as necessary to achieve the targets set.

3.0 Assumptions and Application of Professional Judgement

3.1 Future Habitats

Assumptions and professional judgement have been applied in relation to the habitat target condition. These judgements are based on realistic targets according to the location and context of the development. Future management of the landscaping at the Site should be informed by an appropriate management and monitoring plan to achieve these target conditions.

4.0 Results

4.1 Baseline

Baseline habitats are shown in Figure 1.

Tables 1-3, below, provide a summary of the baseline habitats, areas/lengths and biodiversity units for the Site. Overall, the baseline for the Site is calculated to provide 72.88 HaUs, 6.22 HeUs and 1.74 WUs.

Table 1 - On-Site Area Habitat Baseline Score

Existing Habitats (Area)	Condition	Area (ha)	Habitat Units
Cropland - Cereal crops	n/a	5.294	10.59
Grassland - Modified Grassland	Poor	5.866	11.73
Heathland and Scrub - Mixed Scrub	Poor	1.087	5.00
Ruderals/ephemerals	Poor	0.138	0.28
Urban - Developed land; sealed surface	n/a	6.301	0.00
Urban - Developed land; sealed surface	n/a	0.442	0.00
Other Woodland; Broadleaved	Moderate	4.657	42.84
Watercourse Footprint	n/a	0.0483	0.00
Urban Tree	Moderate	0.3054*	2.44
Total		23.83	72.88

*As trees do not provide a groundcover area, their areas are not included in the total within this table, meaning that the total areas presented remain the same as the area of the Site. Within the calculator, however, they are included in addition to the ground vegetation areas.

Table 2 - On-Site Hedgerow Baseline Score

Existing Habitats (Area)	Condition	Length (km)	Hedgerow Units
Native hedgerow - associated with a bank or ditch	Moderate	0.778	6.22
Total		0.778	6.22

Table 3 - On-Site Watercourse Baseline Score

Existing Habitats (Area)	Condition	Length (km)	Watercourse Units
Ditch	Poor	0.482	1.74
Total		0.482	1.74

4.2 Proposed Scheme

Post-development habitat compositions are shown in Drawing 1 and Figure 2 and are detailed in Table 4-6 below. With reference to the mitigation hierarchy, the majority of woodland, trees, scrub and hedgerow is to be retained and protected as part of the development. New landscape planting is also proposed including additional tree planting, wildflower grassland, modified grassland, introduced shrubs and hedgerow. Areas of retained scrub and the ditch are to be enhanced through improved management.

It is anticipated that habitat creation in the east of the Site can be completed at the start of the development activities. A delay of 2-3 year has been applied to planting around the development footprint to reflect the delay from the commencement of works on-Site and the phased approach to development.

Table 4 - Post-Development Area Habitat Score

Proposed Habitats (Area)	Target Condition	Area (ha) Retained	Area (ha) Created	Area (ha) Enhanced	Habitat Units Delivered
Grassland - Modified Grassland	Poor	0.427	1.334		3.17
Heathland and Scrub - Mixed Scrub	Poor (enhancement to Moderate)		0.067	0.771	6.96
Urban - Developed land; sealed surface	n/a	4.524	4.265		0.00
Urban - Developed land; sealed surface	n/a	0.126	0.631		0.00
Other Woodland; Broadleaved	Moderate	4.657			42.84
Watercourse Footprint	n/a	0.0483			0.00
Urban Tree	Moderate	0.2321*	1.421*		6.20
Other Neutral Grassland	Moderate		1.16		6.98
Other Neutral Grassland	Moderate		5.306		35.52
Other Neutral Grassland	Poor		0.246		0.82
Introduced Shrubs	n/a		0.222		0.39
Rain garden	Poor		0.049		0.09
Total		10.01	13.28	0.771	102.97

*As trees do not provide a groundcover area, their areas are not included in the total within this table, meaning that the total areas presented remain the same as the area of the Site. Within the calculator, however, they are included in addition to the ground vegetation areas.

Table 5 - Post-Development Hedgerow Score

Proposed Habitats (Linear)	Target Condition	Length (km) Retained	Length (km) Created	Length (km) Enhanced	Hedgerow Units Delivered
Native hedgerow - associated with a bank or ditch	Moderate	0.778			6.22
Native Hedgerow	Moderate		0.2		0.62
Total		0.778	0.2		6.85

All of the hedgerows to be delivered on-Site have been combined to provide the above length measurement.

Table 6 - Post-Development Watercourse Score

Proposed Habitats (Linear)	Target Condition	Length (km) Retained	Length (km) Created	Length (km) Enhanced	Hedgerow Units Delivered
Ditch	Poor (Enhancement to Fairly Poor)	0.33		0.15	1.98
Total		0.33		0.15	1.98

5.0 Conclusions

The above assessment results in a total net unit change of:

Habitat Units = +30.09	Total net % change = +41.28%
Hedgerow Units = +0.62	Total net % change = +10.04%
Watercourse Units = +0.24	Total net % change = +14.08%

In addition, the Trading rules are satisfied.

See the attached completed Defra Metric for detailed results (Appendix A).

Based on the information currently available, this assessment indicates that the development will achieve a net gain in biodiversity over 10% for each assessment criteria in line with national and local policy.

It should be noted that any habitat creation is required to be managed in perpetuity to ensure habitats meet the target conditions (which for the purposes of BNG is considered to be 30 years). Monitoring of this should be implemented through an appropriate LEMMP.

6.0 Disclaimer

The recommendations contained in this Report represent Delta-Simons' professional opinions, based upon the information referred to in Section 1.0 of this Report, exercising the duty of care required of an experienced Ecology Consultant. Delta-Simons does not warrant or guarantee that the Site is free of Bats or other protected species.

This Report was prepared by Delta-Simons for the sole and exclusive use of the Client and for the specific purpose for which Delta-Simons was instructed as defined in Section 1.0 of this Report. Nothing contained in this Report shall be construed to give any rights or benefits to anyone other than the Client and Delta-Simons, and all duties and responsibilities undertaken are for the sole and exclusive benefit of the Client and not for the benefit of any other party. In particular, Delta-Simons does not intend, without its written consent, for this Report to be disseminated to anyone other than the Client or to be used or relied upon by anyone other than the Client. Use of the Report by any other person is unauthorised and such use is at the sole risk of the user. Anyone using or relying upon this Report, other than the Client, agrees by virtue of its use to indemnify and hold harmless Delta-Simons from and against all claims, losses and damages (of whatsoever nature and howsoever or whensoever arising), arising out of or resulting from the performance of the work by the Consultant.

Figure 1 - UK Habitat Plan

Figure 2 - Post Development Habitats Plan



Legend

- Tree planting
- Retained tree
- h2b - other hedgerows
- r1 - running water
- Retained building
- Retained g4
- Retained h3h
- Retained sealed surface
- Retained w1g
- Building
- GT1
- GT2
- GT3
- GT4
- GT5
- Hedge planting
- Native scrub planting
- Sealed surface
- Shallow water marginals
- Shrub planting
- Site boundary

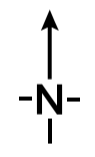


Figure	Post Dev Habs		
Job	Ollerton Depot, Newark Road, Ollerton		
Client	J. Murphy & Sons Limited		
Figure No.	2	Revision	A
		Date	08/02/2024
Drawn	BB	Checked	BH
		Scale	1:1,500 @ A3
Job No.	87854.579674		Central GR 467143E 366926N



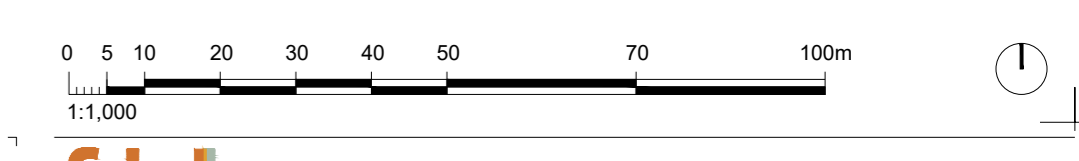
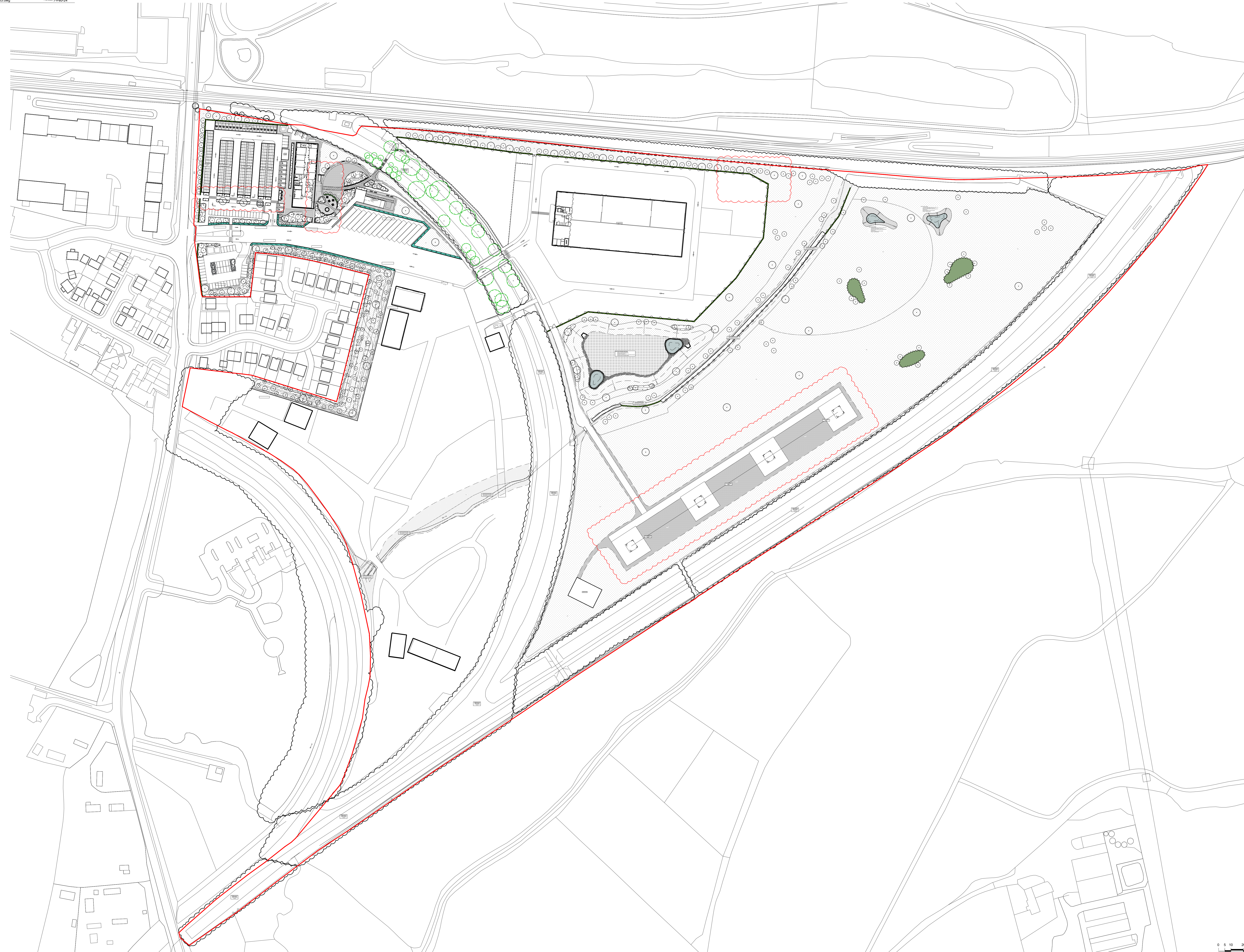
fbk landscape architects
 The One Murphy Ollerton
 Soft Landscape Global Strategy Plan
 PRELIMINARY
 00296 FAB 00 XX

draft

DO NOT SCALE.
NOT FOR CONSTRUCTION.



Drawing 1 - Landscape Proposal Plan



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The One Murphy Orlerton Hill
 Site Landscape Concept Arrangement Plan

Project No: 2023-001
 Date: 02/07/24
 Scale: 1:1,000 @ A0

Client: The One Murphy
 Designer: J. Murphy
 Checker: J. Murphy
 Date of Plot: 02/07/24

Sheet: 00 of 02
 Title: DR L 9003 P02

draft

Rev	Date	Description	By	Check
01	02/07/24	Issue for Review	JM	
02	02/07/24	Revised	JM	

1. This drawing is prepared in accordance with the standards of the International Professional Practices Conference (IPPC) and the American Society of Landscape Architects (ASLA).
 2. Do not build from this drawing. Only qualified professionals should be allowed to build from this drawing.
 3. All dimensions are in feet and inches unless otherwise noted.
 4. This drawing does not constitute a contract. Please refer to the contract documents for a complete description of the project.

Appendix A - The Statutory Biodiversity Metric (Issued Separately)