



Outline Invasive Non-Native Species Management Plan

The Common in Lifford, Co. Donegal, Éire
Presented to **Carlin Planning Limited**

Issued: May 2022




Delta-Simons Environmental Consultants Limited
Head Office: 3 Henley Office Park, Doddington Road, Lincoln, LN6 3QR
Tel: 01522 882555 | www.deltasimons.com



Report Details

Client	Carlin Planning Limited
Report Title	Outline Invasive Non-Native Species Management Plan
Site Address	The Common in Lifford, Co. Donegal, Éire
Project No.	22-0657.01
Delta-Simons Contact	David Kerr (david.kerr@deltasimons.com)

Quality Assurance

Issue No.	Status	Issue Date	Comments	Author	Technical Review	Authorised
2	Final	23rd May 2022	Updated INNS Location Map		<i>J. Britt</i>	<i>J. Britt</i>
				David Kerr Principal	Jennifer Britt Principal Ecologist	Jennifer Britt Principal Ecologist

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.

Delta-Simons is a 'Beyond Net-Zero' company. We have set a Science-Based Target to reduce our Scope 1 and Scope 2 carbon emissions in line with the Paris Agreement and are committed to reducing Scope 3 emissions from our supply chain. Every year we offset our residual emissions by 150% through verified carbon removal projects linked to the UN Sustainable Development Goals. Our consultancy services to you are climate positive.

If you would like support in understanding your carbon footprint and playing your part in tackling the global climate crisis, please get in touch with your Delta-Simons contact above who will be happy to help.

Table of Contents

1.0 INTRODUCTION.....	1
1.1 Authorisation.....	1
1.2 Aims and Objectives.....	1
1.3 Legislation and Policy.....	1
1.4 User Reliance & Limitations.....	1
2.0 OUTLINE MANAGEMENT STRATEGY.....	2
2.1 Background.....	2
2.2 Site Setting & Development Context.....	2
2.3 Management Options.....	2
2.4 Outline Management Strategy.....	3
2.4.1 Bio-security Protocols.....	3
2.4.2 Short-Term Control (Q1 and Q2 2022).....	3
2.4.3 Long-Term Control (Q3 2022 and Beyond).....	4
3.0 CONCLUSIONS & RECOMMENDATIONS.....	5
3.1 Conclusions.....	5
3.2 Recommended Actions.....	5
3.3 Future Survey(s).....	5

Drawings

Drawing 1	Site Plan (McAdam Design, Ref. ST1-00-DR-C-1000-P2)
Drawing 2	Blackstaff Ecology Map (2022)
Drawing 3	INNS Location Map
Drawing 4	Scheme Masterplan (McAdam Design Ref. ST1-00-DR-C-1001-P1)

1.0 Introduction

1.1 Authorisation

Delta-Simons Limited was commissioned by Carlin Planning Limited ('the Client') to produce an outline invasive non-native species management plan to support the construction of a recreational scheme at Letterkenny Road in Lifford, Co. Donegal, Éire (hereafter referred to as 'the Site').

A Preliminary Ecological Appraisal (PEA) was undertaken by Blackstaff Ecology (Ref. February 2022) that reports the presence of Himalayan balsam along the drainage ditch in the north of the Site.

1.2 Aims and Objectives

The principal aim of this document is to provide an outline management plan to control the Himalayan balsam *Impatiens glandulifera* infestation, the strategy for which recognises the proposed construction timeline that is scheduled to begin in late 2022. The technical objectives of this document are to:

- ▲ Outline the relevant Irish national legislation and policy regarding Himalayan Balsam.
- ▲ Summarise the nature of the infestation relevant to the proposed development scheme.
- ▲ Provide an outline management strategy that includes short and long-term control methods.

1.3 Legislation and Policy

Himalayan balsam is listed in the third schedule of the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I No. 447/2011), article 49 of which prohibits its introduction, breeding, release or dispersal. This legislation is supplemented by National Biodiversity Action Plan 2017-2021 (Oct. 2017), target 4.4 of which outlines that harmful invasive alien species are controlled.

Further to the Waste Management Act (1996) Disposal of material invested with invasive non-native species should be to an appropriately licenced waste management facility and disposal records (haulage and gate receipts) retained for future reference if required.

1.4 User Reliance & Limitations

This report has been produced for the benefit of the Client outlined in Section 1.1 and is intended only for use, benefit of and may be relied upon by the Client and any other party specifically identified in writing by Delta-Simons as a User of this report.

Delta-Simons cannot and will not be liable for unauthorised reliance by any other third party. The Client understands and agrees that the information contained in this report describes facts and Delta-Simons' opinions regarding conditions related to the property as of the date of this report and does not purport to describe facts or conditions subsequent to the date of the report.

Delta-Simons has not visited the Site nor inspected the infested area. The presence of Himalayan balsam at the Site is outlined in the report produced by Blackstaff Ecology in February 2021 and Delta-Simons is reliant on the information contained therein. The Blackstaff Ecology report references anecdotal evidence of other invasive non-native plant species (INNS), namely Japanese knotweed *Fallopia japonica* and Giant hogweed *Heracleum mantegazzianum*, being present, but did not find any physical evidence of this. This document refers solely to the presence and management of Himalayan balsam at the Site and not any other INNS that may be present on or near the Site.

2.0 Outline Management Strategy

2.1 Background

The PEA undertaken by Blackstaff Ecology (Ref. February 2022) records the ‘scattered presence’ of Himalayan balsam along the drains at the northern boundary of the Site. The field survey was undertaken in September 2021.

Himalayan or Indian balsam is a native plant of the western Himalayas that was introduced to Britain and Ireland in the early 19th-century. It escaped from gardens and rapidly colonised river banks and areas of damp ground. It is the tallest annual plant species in Ireland, growing up to 3m tall, and due to its rapid growth, can ‘shade out’ most native species. When in flower between May and October, the seed pods can explode when touched spreading the seeds a considerable distance¹ (up to 7m). The seeds also float in water allowing watercourses to be a prime route for dispersal and spread of the species.

2.2 Site Setting & Development Context

The Blackstaff Ecology Report and Google Earth Pro™ aerial images record that the Site comprises undeveloped agricultural fields and improved grass lands bound by hedgerows to the north, east and south, and by the Letterkenny Road to the West.

A Site Plan (McAdam Design, Ref. ST1-00-DR-C-1000-P2) is provided as Drawing 1.

The Blackstaff Ecology Report did not include a map or plan of the infested area(s) or an extent of the infestation but does provide a Habitat Survey Map that shows the location of the Drainage Ditch (FW4) along the northern boundary of the Site where the Himalayan balsam is reported to be present. A copy of this Plan is provided as Drawing 2.

Subsequently, an INNS Location Map (Drawing 3) was provided in April 2022 showing 4no. Himalayan balsam areas in or on the Site’s western boundary and an additional 4no. areas along the water course off-Site to the west, 2no. of which are within 25-metres. Two infested areas are shown off-Site to the south, circa 120-metres beyond the Site’s southern-most boundary.

The Client has informed Delta-Simons that construction works are likely to commence no earlier than Quarter (Q)3 or Q4 of 2022 and is subject to planning permission. The development Scheme Masterplan (McAdam Design Ref. ST1-00-DR-C-1001-P1) provided as Drawing 4, indicates that post development the following plots will be adjacent to the drainage ditch at the northern boundary:

- ▲ Site 4, circa 4.6-acres in the northwest.
- ▲ Site 5 that includes 2no. pitches in the direct north.
- ▲ A flood plain area with no development shown in the northeast.

The Scheme Masterplan doesn’t show any plot intersecting or crossing the infested drainage ditch.

2.3 Management Options

The Invasive Species Ireland (2008) Best Practice Management Guidelines and other documents outline that Himalayan balsam can be controlled by two methods:

- ▲ Mechanical control of larger stands by cutting, mowing or hand pulling; and/or,
- ▲ Chemical control by spraying the foliage with a common herbicide.

¹ Invasive Species Ireland (2008) Best Practice Management Guidelines Himalayan balsam *Impatiens glandulifera*

Mechanical Control

Mechanical control is effective for larger stands where they are cut below the largest node to limit regeneration. However, given the nature of the subject infestation along a drainage ditch with embankments, access for mechanical mowing may not be possible. Smaller infestations can, however, be controlled by hand-pulling from the base of the plant to remove the shallow roots.

Where possible, the pulled and cut plants should be left to dry and decompose on-Site. Where off-Site disposal is required, any plant material and seed-infested soils should be disposed of to a suitably licenced waste management facility and all haulage and disposal information retained.

Mechanical control is most effective in April and early May when the seed pods are not visible. If this is not possible, prior to any control works, the canopy of the plant can be covered with bags to limit the dispersing of the seeds to surrounding soils and watercourses.

Chemical Control

Himalayan balsam can be controlled with common herbicides like glyphosate and 2,4-D amine that can be purchased through a variety of common brand names. Application can be by a targeted spraying regime or by weed wiping for smaller infestations.

Chemical control is most successful in April and early May prior to forming of the seed pods. However, spraying and weed wiping can be undertaken between May and October with care taken to limit disturbance of the seed pods. Selection of the appropriate herbicide will depend on the Site and infestation setting as Glyphosate-based herbicides are suitable for use in most environments whilst 2,4-D amine should not be used near waterbodies. Chemical treatment should be undertaken by an appropriately trained and licensed contractor.

Considering the above treatment options, the nature of the development and the rough timeline for construction works, an outline management strategy is provided below.

2.4 Outline Management Strategy

An outline management strategy based on the available information is presented below. Delta-Simons recommends that a follow up Site survey is undertaken prior to any treatment works to evaluate the nature and full extent of the infestation to develop a more detailed strategy for control through the pre-construction, enabling works and construction-phase programme.

2.4.1 Bio-security Protocols

The following bio-security protocols should be implemented as soon as possible, and prior to each phase of the enabling and construction phases to limit the potential for spread on and off-Site.

- ▲ **Segregation, Access and Egress** – The infested area should be fenced off with a perimeter of at least 7-metres from the outermost stand(s) and sign-posted to prevent access by unauthorised personnel. Where access is required, it should be through a single point where washdown facilities can be provided. When any plant and machinery enter the segregated area, they should remain in place until the relevant phase of works is complete and washed down using brushes and herbicide before exiting.
- ▲ **Communication** – All site workers and visitors should be informed of the presence of invasive Himalayan balsam, the risk of illegal spreading and the location of the infested area, which should be avoided where possible.

2.4.2 Short-Term Control (Q1 and Q2 2022)

Considering the proposed development programme, the following measures should be implemented in April and early May prior to the seed pods forming.

- ▲ **Mechanical Control** – Should mowing not be possible, then plants should be hand pulled and left to dry and decompose in a controlled area of the Site. If practicable, the pulled plants should be placed on an impermeable membrane. The plants should be pulled from the base of the stem to ensure that the full root is removed.

- ▲ **Chemical Control** – Where access to pull the plants is not possible, then the remaining infestation should be sprayed with a Glyphosate-based herbicide that is suitable for use adjacent to a watercourse. 2,4-D amine should not be used. Spraying should be undertaken by an appropriately trained and licensed contractor.

2.4.3 Long-Term Control (Q3 2022 and Beyond)

Subject to the development of the roadway in the north and west, and Plots 1,2, 4 and 5 in the north, and any other works adjacent to the infested areas:

- ▲ **Material Movement and Disposal** – Any soil imported to or removed from the infested area (7m from the nearest viable stand) for re-use should be placed beneath hardstanding (e.g. the roadway) where possible.

Any material stripped from the infested area should be stored outside the active development area before mechanical and/or chemical treatment of any new growth within the effective window (April to October). As above, any chemical treatment should be undertaken by a licenced contractor.

Any surplus material that requires disposal off-Site should be removed to an appropriately licenced waste management facility. Any excavation areas should be fenced off and considered controlled-works zones. The slew of any excavators should take care not to extend outside the segregated works area. Haulage vehicles should be filled to no more than ¾ capacity to prevent overspill. Where material is being transported for disposal off-Site, a single access point should be created, and haulage vehicles cleaned and inspected before leaving. Also, designed haulage routes should be created within the works area and any overspill cleaned as soon as it is identified.
- ▲ **On-going Control** – Any remaining infested areas not impacted by the construction works should be subject to control by mowing and hand-pulling where access is possible, and by an on-going treatment regime using glyphosate-based herbicides applied by a licenced contractor where needed. Chemical treatment should be applied in April and May where possible, but no later than October.
- ▲ Himalayan balsam may be present in surrounding areas that may result in reinfestation following successful treatment subject to eradication efforts by surrounding landowners. As previously outlined, it is an offence to introduce, plant, spread or disperse this plant. If appropriate, the adjacent landowner(s) should, therefore, be contacted and made aware of the potential presence of the species and their duty to manage this weed should it occur on their land in accordance with the legislation.

3.0 Conclusions & Recommendations

3.1 Conclusions

The PEA undertaken by Blackstaff Ecology (Ref. February 2022) records the 'scattered presence' of Himalayan balsam along the drains at the northern boundary of the Site. This invasive non-native plant species is listed in the third schedule of the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 447/2011), article 49 of which prohibits its introduction, breeding, release or dispersal.

3.2 Recommended Actions

Considering the proposed development programme with works expected to commence in Q3 or Q4 of 2022, the following short and longer-term control measures are recommended:

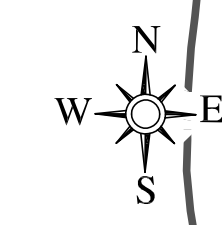
- ▲ Bio-Security – In the immediate term, the infested area should be fenced off with a boundary of 7m from the outermost stand. Access should be restricted to key persons and only granted through a single point. Any persons, plant and machinery entering the infested area should be cleaned down with brushes and diluted herbicide before leaving.
- ▲ Short Term – Mechanical control by mowing and hand-pulling where access is possible, and chemical control by spraying and weed wiping where access is remote. The effective treatment window for this plant is April to October.
- ▲ Longer Term – Any material excavated from the infested area for reuse should be placed below hardstanding where possible or relocated outside any active development area for further treatment by mechanical and chemical methods as outlined above.
- ▲ Any infested areas not affected by the construction works should be further segregated and the controlled by the aforementioned mechanical and chemical measures.

3.3 Future Survey(s)

It is recommended that a follow up Site survey is undertaken before any enabling or construction groundworks to:

- ▲ Quantify and the extent of the infested areas;
- ▲ Define the controlled works areas; and,
- ▲ Provide more detailed recommendations for short and long-term controls prior, during and following works.

Drawing 1 – Site Plan (McAdam Design, Ref. ST1-00-DR-C-1000-P2)



NOTES

1. All measurements shown are in metres, and all levels are to ordnance datum unless otherwise indicated
2. All Coordinates are to Irish Grid, unless otherwise noted.

Site Boundary

Lifford Centre

P2	01/03/2022	Red Line Amendment	PA
Rev	Issue Date	Description	App

Status **PRELIMINARY**

Client **Donegal County Council**

Project **The Common, Lifford
Multi-Use Development**

Drawing **Site Location Plan**

Scale **1:2500 @ A1**



Contact Details
 1c Montgomery House
 478 Castlereagh Road
 Belfast, BT5 6BQ
 T: 028 9040 2000
 E: admin@mcadamdesign.co.uk
 www.mcadamdesign.co.uk

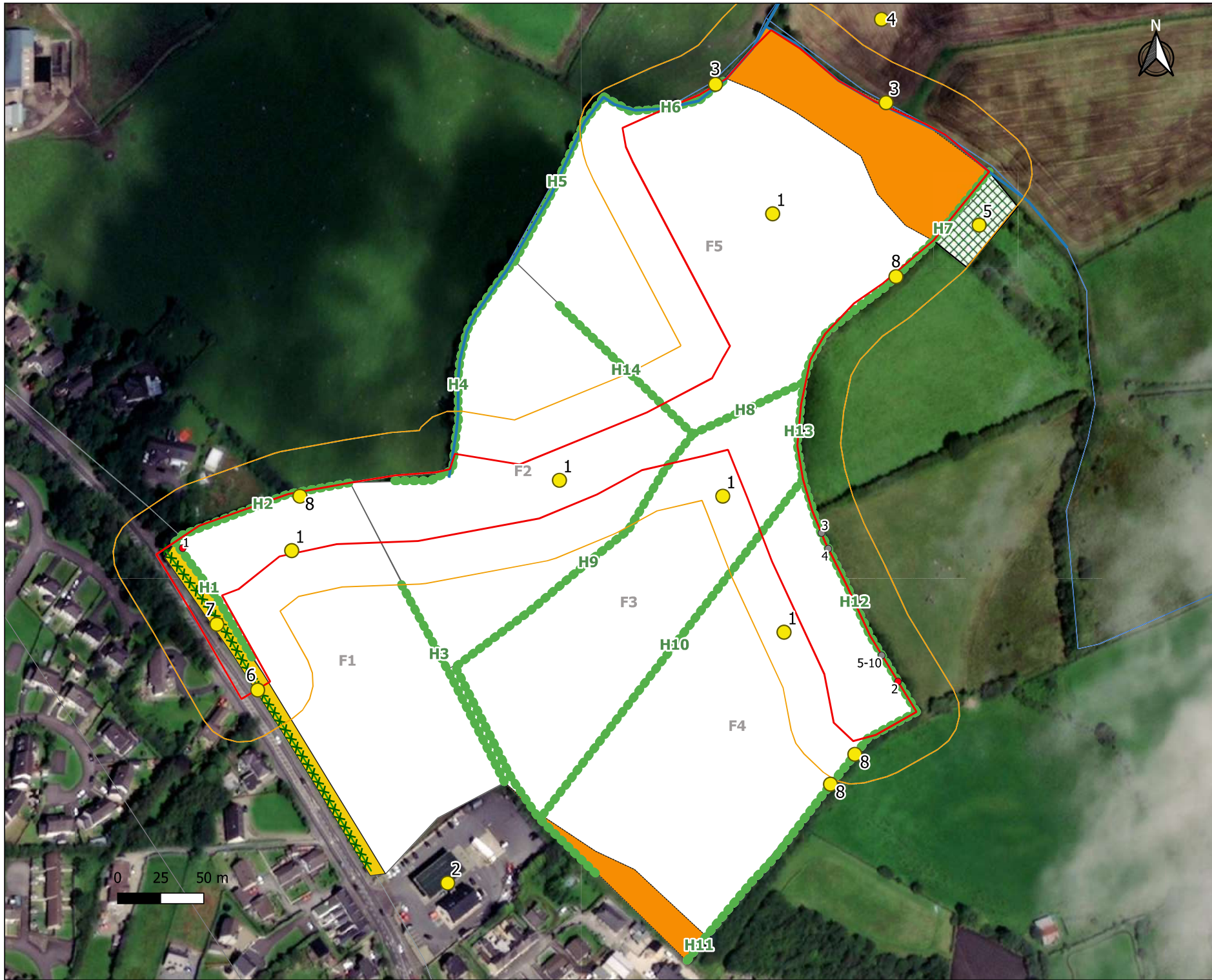
Drawn	DWW	Checked	PA	Approved	PA
Date	2022-02-09	Date	2022-02-09	Date	2022-02-09

Project - Organisation - Zone - Level - Type - Role - Number - Revision
LIF - MCA - ST1-00 - DR - C - 1000 - P2

Project Number	Status code & Description
E2324	S2 - For Information

All dimensions are in metres. Figured dimensions to be taken in preference to scale dimensions. Dimensions to be checked on site. © 2021 McAdam Design Ltd.

Drawing 2 – Blackstaff Ecology Map (2022)



KEY

- Target notes
- Site boundary
- 25 m buffer
- FW4 Drainage ditch
- GA1 Improved grassland
- GA2 Amenity grassland
- GS3 Dry humid acid grassland
- WL1 Hedgerows
- WL2 Line of trees
- WS1 Scrub
- Watercourse
- Tree with moderate BRP
- Tree with low BRP

FIGURE 2 - HABITAT SURVEY MAP

DRAWING INDICATIVE ONLY AND NOT TO SCALE. HABITAT BOUNDARIES ARE ONLY REPRESENTATIVE DUE TO THE LACK OF IDENTIFIABLE FEATURES (I.E. FENCES) AGAINST WHICH TO MAP THE SITUATION ON THE GROUND.

LAYOUT DWG	FLAYOUT NO.
------------	-------------

DRAWING NUMBER

SCALE - 1: 2000 @ A3

PRELIMINARY ECOLOGICAL ASSESSMENT

THIS DRAWING IS THE PROPERTY OF BLACKSTAFF ECOLOGY LIMITED AND NO REPRODUCTION MAY BE MADE IN WHOLE OR IN PART WITHOUT PERMISSION

Drawing 3 – INNS Location Plan



KEY





-  Himalayan Balsam
-  Site boundary
-  25 m buffer
-  Watercourse

FIGURE 3 - INNS MAP

****DRAWING INDICATIVE ONLY AND NOT TO SCALE. HABITAT BOUNDARIES ARE ONLY REPRESENTATIVE DUE TO THE LACK OF IDENTIFIABLE FEATURES (I.E. FENCES) AGAINST WHICH TO MAP THE SITUATION ON THE GROUND.****

LAYOUT DWG: _____ LAYOUT NO.: _____

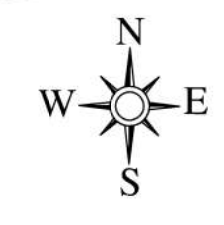
DRAWING NUMBER: _____

SCALE - 1: 2000 @ A3

PRELIMINARY ECOLOGICAL ASSESSMENT

THIS DRAWING IS THE PROPERTY OF BLACKSTAFF ECOLOGY LIMITED AND NO REPRODUCTION MAY BE MADE IN WHOLE OR IN PART WITHOUT PERMISSION

Drawing 4 – Scheme Masterplan (McAdam Design Ref. ST1-00-DR-C-1001-P1)



NOTES

- All measurements shown are in metres, and all levels are to ordnance datum unless otherwise indicated
- All Coordinates are to Irish Grid, unless otherwise noted.

Site Plan Notes.

- Right hand turn lane
Design traffic to be determined.
Assumed lane widths as existing with central hatched area for right turn pocket.
- Roads within development - Design speed 50 kph
Widths indicated at 6.0m wide (3.0m lanes).
Footway/verge indicated at 3.0m.
Junction radii with N14 10m.
Junction within development 6.0m.
Horizontal radii 105m.
Vertical 'K' factor 5 used.
Embankments to access roads 1 in 3.
- Development sites
Embankments indicated at 1 in 3.
Areas as shown include embankments.
Access locations to each site indicative.
- Site 5
Site 5 is extensively within the flood plain.
Changes to existing levels to facilitate development to be agreed.
- Pumping station
Location of pumping station moved outside of the flood plain extents.
- Future Development
Topography of lands beyond required consider vertical geometry.

LEGEND

- Proposed Roads
- Proposed Building / Pumping station
- Proposed Footways / Verges
- Proposed Platforms
- Proposed Pitches

Rev	Issue Date	Description	App
P5	01/02/2022	Minor Layout Amendment	PA
P4	23-11-2021	Road Alignment Alteration	PA
P3	04-11-2021	Red Line Boundary Added	PA
P2	11-10-2021	Plot Contours Added	PA

Status: **PRELIMINARY**

Client: **Donegal County Council**

Project: **The Common, Lifford Multi-Use Development**

Drawing: **Scheme Masterplan**

Scale: **1:1000 @ A1**



Contact Details: 1c Montgomery House, 478 Castlereagh Road, Belfast, BT5 6BQ. T: 028 9040 2000. E: admin@mcadamdesign.co.uk, www.mcadamdesign.co.uk

Drawn	Checked	Approved
Date	Date	Date
DWW	PA	PA
2021-09-21	2021-09-21	2021-09-21

Project: LIF - MCA - ST1-00 - DR - C - 1001 - P5

Project Number: **E2324** | Status code & Description: **S2 - For Information**

All dimensions are in metres. Figure dimensions to be taken in preference to scale dimensions. Dimensions to be checked on site. © 2021 McAdam Design Ltd.

