

Next Generation Data - Data Centre 3, Newport

Ecological Management Plan

Next Generation Data

October 2020



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This document does not purport to provide legal advice.

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Client signoff

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1. Introduction

1.1. Terms of Reference

Atkins, member of SNC-Lavalin Group, has produced this 20-year Ecological Management Plan (EMP) on behalf of Next Generation Data in connection with the development of a Data Centre on land at Imperial Park, Newport, South Wales (hereafter referred to as the Scheme). The EMP details proposed compensatory habitat for the loss of approximately 1.6 ha of scattered/ dense scrub with potential for birds and reptiles under the footprint of the development. The presence and extent of this habitat within the Scheme Application Site was confirmed during the extended Phase 1 habitat survey undertaken to inform the Ecological Impact Assessment (EclA) report¹.

This EMP supports the EclA for the Scheme as it details the habitat enhancement and management measures required to compensate for the loss of semi-natural habitats due to the proposed development.

The management functions within this document relate specifically to ecology and not to landscape, which are dealt with separately and secured by planning condition where appropriate.

1.2. The Application Site

The Application Site is located in the south eastern corner of Imperial Park, a business park on the western edge of Newport, near Junction 28 of the M4 motorway. The Application Site, as shown by the red line boundary on the Site Boundary Plan in [Appendix A](#), comprises approximately 2.5 ha of brownfield land. Next Generation Data is proposing to develop a data building within the extent of the Application Site with associated standby generators, site access, parking and landscaping.

The Application Site consists mainly of hard standing with pioneering scattered and dense scrub covering the vast majority of the Application Site. A small section of wooded area with scrub understory is located along the eastern margin. A small area of pooled water occurs in the middle of the Application Site with a base of asphalt and sparse aquatic algal vegetation. The Application Site is bounded by metal wire fencing. Surrounding the Application Site to the west, north and east is similar habitat, roads, industrial buildings and residential areas. To the south are areas of grasslands, scrub, trees and ponds.

1.3. Planning Conditions

The mitigation section of the EclA outlines a package of measures to compensate for the negative ecological impacts from the scheme, which include the production of an EMP. The EMP is prepared in anticipation of a planning condition for an EMP to compensate for the loss of semi-natural habitat. It is anticipated that the contents of the EMP should be the same as set out by planning condition for the recent planning permission 20/0039. In regard to this previous application, the Ecology Officer and Planning Officer at Newport City Council agreed that the EMP (originally referred to as a landscape and ecological management plan or LEMP) will be secured by planning condition:

A landscape and ecological management plan (LEMP) shall be submitted to, and be approved in writing by, the local planning authority prior to the commencements of the development. The content of the LEMP shall include the following:

- a) *Description and evaluation of features to be managed.*
- b) *Ecological trends and constraints on site that might influence management.*
- c) *Aims and objectives of management.*
- d) *Appropriate management options for achieving aims and objectives.*
- e) *Prescriptions for management actions.*
- f) *Preparation of a work schedule (including an annual work plan capable of being rolled forward over a five-year period).*

¹ Atkins (2020) Next Generation Data, Newport Ecological Impact Assessment, December 2020.

- g) Details of the body or organisation responsible for implementation of the plan.
- h) Ongoing monitoring and remedial measures.

The LEMP shall also include details of the legal and funding mechanism(s) by which the long-term implementation of the plan will be secured by the developer with the management body(ies) responsible for its delivery. The plan shall also set out (where the results from monitoring show that conservation aims and objectives of the LEMP are not being met) how contingencies and/ or remedial action will be identified, agreed and implemented so that the development still delivers the fully functioning biodiversity objectives of the originally approved scheme. The approved plan will be implemented in accordance with the approved details.

Reason: To mitigate and compensate for the loss of habitats in accordance with LDP policy GP5 and to provide ecological net benefit as required in Planning Policy Wales Edition 10.

1.4. Scope of the EMP

This EMP incorporates the following:

Section 2

- Description and evaluation of features to be managed;
- Ecological trends and constraints on site that might influence management;

Section 3

- Aims and objectives of management;

Sections 4 & 5

- Appropriate management options for achieving aims and objectives;
- Prescriptions for management actions;
- Remedial measures.

Section 6

- Ongoing monitoring.

Section 7

- Preparation of a work schedule (including an annual work plan capable of being rolled forward over a five-year period).

Section 8

- Details of the body or organisation responsible for implementation of the plan.

1.5. EMP Responsibility

Next Generation Data are responsible for the long-term maintenance, aftercare and habitat management of the compensation site associated with the Scheme. The land falls within the boundary of the long-term lease and as such Next Generation Data are likely to be in possession for the lifespan of the EMP i.e. 20 years. As previously stated, the management prescribed here is aimed at achieving appropriate ecological compensation; a separate landscape management plan will be produced at a later stage.

Next Generation Data will employ a landscape contractor, hereafter referred to as the 'managing body', the term will be used to represent the agent undertaking the physical site management works. Monitoring and reporting are included within the EMP to help determine the success of the management plan and allow scope for modification or improvement.

2. Habitat Evaluation

2.1. Introduction

The following section describes the habitats and habitat features to be created/ managed as part of compensation/ enhancement works. This will be referred to as the Compensation Site, as shown by the red line on the Habitat Management Plan (Drawing No. Newport_DC3_HMP_01) in [Appendix B](#). It is anticipated that the majority of the existing habitat within the Application Site will be lost to development.

The areas of habitat to be created/ managed and, therefore, covered by this EMP are described and valued below. Details of specific habitat management actions and measures are provided in Section 4, while general measures provided in Section 5.

2.2. Existing Habitats within the Compensation Site

2.2.1. Continuous scrub

2.2.1.1. Description

There are no public rights of way through the land and this section of the Compensation Site is bordered by residential housing; Pencarn Avenue to the east and properties on the A48 to the north.

This habitat comprises predominantly continuous and scattered scrub with occasional immature trees. Based on the Phase 1 habitat survey of the DC2 Application Site, trees/ scrub species include: silver birch, dog rose, goat willow and bramble.

The existing habitats within the Compensation Site are shown on the Phase 1 habitat survey plan (with target notes) for Next Generation Data's DC2 Application Site, provided in [Appendix C](#). The DC2 Application Site is immediately adjacent to the Compensation Site but not part of this planning application.

An ecological walkover survey undertaken on 3rd September 2020 confirmed the habitats and typical species present, identified any ecological constraints in relation to protected species and invasive non-native plant species (INNPS)², and determine the most suitable management approach, as per the options and measures outlined in Section 3 below.

2.2.1.2. Ecological value

It is not known if the habitat to the north was historically developed and, therefore, can be classed as a brownfield site. Historic aerial plans³ suggest it has been undeveloped since at least 2001; however, recent aerial plans⁴ strongly suggest this area comprises largely scrub with potential for an open mosaic structure. As such, it is not considered to be of high ecological value nor can it be classed as Priority Habitat, which would be of Local Value in accordance with the Ratcliffe criteria⁵.

The following management principles will be applied:

- No trees or established scrub will be removed within 10 m of the northern and eastern boundaries which abut residential properties.

2.3. Created Habitats and Habitat Features

2.3.1. Additional habitat features

To further increase the ecological value of the Compensation Site it is proposed to introduce some additional habitat features to encourage a wider variety of plant and animal species, thereby increasing its biodiversity value.

² Wildlife and Countryside Act 1981 (as amended), Schedule 9 species.

³ As shown on Google Earth Pro.

⁴ Google maps - <https://www.google.co.uk/maps>

⁵ Ratcliffe, D. 1977. *A Nature Conservation Review*. Cambridge University Press.

2.3.1.1. Invertebrates

No waterbodies will be created on the Compensation Site, but there is one waterbody approximately 225 m west with good connectivity to the Application Site, which may increase the diversity of the invertebrate assemblage using the Compensation Site for foraging, e.g. dragonflies/ damselflies.

The structural diversity created and maintained by the management works will include bare ground and areas of ephemeral/ short perennial vegetation which will benefit burrowing invertebrate species, such as solitary bees, and those whose food plants thrive in such habitats, such as dingy and grizzled skipper. Weed species, such as ragwort which is an important food source for the cinnabar moth caterpillar, will not be removed unless posing a significant nuisance (see noxious weed control, Section 5.3); however, there will be no deliberate introduction of such species.

In addition to the above, hawthorn and blackthorn scrub species will be encouraged within the Compensation Site as these species support a range of invertebrates, such as letter hairstreak butterflies.

Two log piles will be created adjacent to retained scrub/ shrub planting within the Compensation Site. The log piles will be built by stacking different diameter logs (or branches no less than 30 mm diameter) of the same length on top of each other, as per the specification in [Appendix D](#).

2.3.1.2. Reptiles

The creation of a reptile refuge will provide basking and shelter for reptiles, as per the specification in [Appendix D](#). This can be created using material arising from the Application Site vegetation clearance and will have a south-facing bank.

The refuge will have the following features incorporated into the design:

- The refuge will be at least 2 m long, by 1 m wide by 1 m high. The refuge will be sited in a sunny, south-facing position adjacent to favourable habitat (e.g. scrub edges, tussocky grassland).
- The refuge will be constructed on a gentle slope and situated in a well-drained area of the Compensation Site to prevent flooding. It will be lined with gravel if ground conditions require some form of drainage.
- Alternatively, the refuge will be sunk 500 mm into the ground so that the top of the refuge is roughly equivalent to ground level.
- Suitable, free-draining materials for construction include brush, inert hardcore, bricks, rocks, split logs and dead wood, which will be loosely filled with topsoil and covered with a layer of grass turf removed from either the Application Site or the footprint of the refuge in the Compensation Site.
- Access points will be created in the refuge through protruding timber or rubble to create crevices for reptiles to enter the bank.

The proposed location is shown on the Habitat Management Plan ([Appendix B](#)) but may be relocated subject to the findings of the site survey. The feature will require minimal management to ensure it is not overgrown with scrub, particularly on the south-facing aspect.

2.3.1.3. Birds

Maintaining habitat diversity, particularly scrub coverage, will provide suitable habitat for nesting and foraging for a range of common bird species.

A number of bird boxes (approximately four) will be installed on established trees. The number and type are dependent on the number of suitable trees, i.e. large enough and accessible for installation, and will be confirmed during the initial site management visits.

2.3.1.4. Bats

The maintenance of the current habitat connectivity and habitat diversity will provide a continued foraging and commuting habitat for bats.

Furthermore, a number of bat boxes (approximately four) will be installed on established trees. These should be general purpose bat boxes made of durable woodcrete e.g. 2F Schwegler Bat Box. The location and number will be specified by a suitably experienced ecologist during the initial site management visits. The height and position may affect use by bats; also, flight paths should not be obstructed.

2.4. Ecological Trends and Constraints Influencing Management

A number of factors may affect the ability of the management body to undertake the proposed programme of habitat management. These are likely to include:

- successional change;

- presence of protected species;
- the presence of INNPS;
- human disturbance; and
- multi-functional habitats.

The presence of rabbits would not be considered an issue on the Compensation Site, but it may be that if present, new planting within the landscaped areas will need to be protected whilst it establishes.

2.4.1.1. Successional change

As there is no grazing on site to maintain open areas and the overall habitat mosaic, inevitable successional change will drive the Compensation Site towards full scrub and tree cover. This ecological trend is widely acknowledged, and it is the cessation of this process, in maintaining a habitat mosaic, that this EMP aims to achieve. Therefore, actions such as sapling tree removal and cutting back of scrub species are recommended in Section 5.

2.4.1.2. Presence of protected species

The presence of protected species may affect how the Compensation Site is managed by imposing timing restrictions or requiring a mitigation licence from Natural England. The works programme outlined in Section 7 already allows for avoidance of the nesting bird season and seeks to minimise impacts on any common species of reptile present. All works will be conducted during daylight hours (taken to be 30 minutes after sunrise to 30 minutes prior to sunset), thereby minimising impacts to bats and other nocturnal and crepuscular wildlife using the Compensation Site, such as bats, owls and hedgehogs.

2.4.1.3. Invasive non-native plant species (INNPS)

INNPS are those listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) and which should not be planted or otherwise caused to grow in the wild. Cotoneaster, a known INNPS was identified at the Application Site during the updated walkover surveys for this EMP (undertaken 3rd September 2020). The presence/ absence of INNPS within the Compensation Site will need to be confirmed by the site survey and proposed actions implemented as necessary (see Section 5.3).

2.4.1.4. Human disturbance issues

The Compensation Site is considered unlikely to be affected by negative issues associated with public access, such as littering, vandalism and arson, as there is no public access to or through the Compensation Site. There is also a 2 m high and 4 m high fencing that surrounds the Compensation Site. However, as housing backs on to the Compensation Site, garden waste has been thrown over the boundary in some places. Any necessary action to be taken is depending on the content and nature of the waste (see Section 5.4).

3. Aims and Objectives

The aims and objectives of the EMP are to:

Create an area of mosaic habitat with good structural diversity from ephemeral/ short perennial habitat to semi-improved grassland, scrub and established trees, with associated transitions, able to support a range of animal species, including but not limited to, invertebrates, reptiles, bats and birds. The Compensation Site shall comprise 90% or above native species with no invasive non-native plant species. This will be achieved through natural regeneration and management; no planting is proposed.

A band of established scrub, approximately 10 m wide, will be retained within the Compensation Site along the northern and eastern boundaries. This approach not only fits with the aims and objectives for the Compensation Site but also maintains the visual screen between the adjacent residential properties and the Compensation Site. In order to achieve the aims and objectives outlined above, it is proposed to undertake the management actions/ options detailed within Section 4, Habitat Management Actions below.

4. Habitat Management Actions

All maintenance and management measures outlined below will take account of the likelihood of protected species being present, in terms of both methods and timings.

4.1. Existing Habitats and Habitat Features

These are existing habitats outside the Application Site within the area shown by the red line on the Habitat Management Plan in [Appendix B](#).

4.1.1. Ephemeral/ short perennial

Ephemeral/ short-perennial habitat will be created by cutting and removing scrub from an area within the Compensation site, as shown on the Habitat Management Plan ([Appendix B](#)). If the soil is sufficiently poor and shallow, exposing the lower soil horizon may be sufficient and lead to natural establishment of ephemeral short-perennial vegetation. If not, it will be necessary to import inert small-grade rubble and spread this over the area and leave to establish, with maintenance as required. Seeding is not considered necessary as, by nature, ephemeral/ short perennial vegetation is comprised of opportunistic species of open ground. The area created and maintained will be sufficiently large as to not be in shade all day, which will allow micro-climatic changes to prevail across the area.

The extent of ephemeral/ short perennial habitat will be maintained as an open habitat with low-growing herbs and few grasses by undertaking removal of tree saplings, encroaching scrub, tall ruderals and large tussock-forming grasses, such as cock's-foot, every three years. The area will also be periodically disturbed using a spade by hand to remove surface vegetation and create bare areas, allowing for colonisation by plants and utilisation by invertebrates.

An area (approximately 1,720 m²) will be created as ephemeral/ short perennial vegetation. This will be undertaken between late autumn and early spring, when neither plants nor invertebrates are likely to be significantly disturbed.

4.1.2. Dense/ scattered scrub

The existing scrub habitat will be managed to encourage a dense stand of scrub at a height of 3 - 4 m. A maximum of 25% of the scrub will be cleared by hand every three years in September to February, inclusive. Blackthorn will be favoured and encouraged over other species due to its association with hairstreak butterflies. Some irregular cutting (at different heights) will also be undertaken to create sheltered areas within the scrub for basking butterflies⁶.

INNPS, particularly those listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), such as rhododendron, will be removed.

4.1.3. Established trees

No maintenance is prescribed for established trees, but a general assessment of tree health will be made and recorded during monitoring. Unless trees that are dying or contain dead limbs pose a safety risk, they will be retained in situ. Standing deadwood features are favoured by a number of species and are important for increasing the biodiversity of a site.

Any trees, hedgerow and scrub being retained within the Compensation Site that may be affected by development works, will be protected following BS 3998:2010 British Standard⁷ for tree work.

4.1.4. Reptile refuge and invertebrate log piles

The reptile refuge and log piles for invertebrates will be installed in the locations shown on the Habitat Management Plan ([Appendix B](#)). The design of the reptile refuge and specification for the log pile are shown in [Appendix D](#). The logs for use in the log piles and refuge will ideally come from site clearance works.

Once installed these will be checked during each monitoring visit to ensure they are structurally sound and remain fit for purpose, i.e. have not been removed/ vandalised or are excessively degraded (and require additional logs on top), and in the case of the reptile refuge, have not been overgrown with vegetation, e.g.

⁶ Thomas, J. A. (1975). *The black hairstreak, conservation report*. Unpublished report ITE/NCC.

⁷ <https://www.britishstandard.org.uk/pub/bs-39982010--tree-work.-recommendations-9780580537776.aspx>

bramble, which results in the loss of potential reptile basking habitat on the south-facing side (some scrub cover is acceptable).

Additionally, a composting area will be allocated on-site where arisings from vegetation management will be placed to naturally compost. This will provide an extra habitat for wildlife and would minimise the requirement to take cuttings and arisings off-site.

4.1.5. Installed bat and bird boxes

Approximately four bat boxes and bird boxes will be installed on suitable established trees – see Habitat Management Plan for indicative locations ([Appendix B](#)). The location and number will be confirmed during initial site management visits with siting advice from a suitably experienced ecologist.

Bat boxes will be general purpose and made of durable woodcrete e.g. 2F Schwegler Bat Box. Whilst the bird boxes will be made of either wood or woodcrete and comprise at least two styles with different hole sizes or shapes so they offer potential nesting for a number of common bird species.

The bat and bird boxes installed on suitable/ established trees will be checked during each monitoring visits to check they are still in place, still intact and still appropriately sited, i.e. haven't been obscured by vegetation. Monitoring of use is not considered necessary provided they have been properly located; however, it is recommended that they are examined for use and the bird boxes are cleaned out during winter months when birds will be absent, i.e. not nesting or using summer roost sites. If during this time a box is found to be damaged or missing, they will be replaced as necessary.

5. General Maintenance Operations

The general activities that will be undertaken during management visits include vegetation clearance (e.g. cutting/ pruning), replacement of failed planting stock and noxious weed control. All actions are outlined in Table 7-1 Ecological Management Summary in Section 7.

5.1. Vegetation Clearance

Saplings will be removed through hand-pulling or dug out using a spade.

Pruning/ cutting woody material is to be carried out with sharp secateurs, hedge cutters or hand saw in a way that does not tear or damage the stem. Any ragged edges or tears are to be trimmed off using a sharp knife. All dead, dying or damaged material can be placed on the composting area or alternatively taken off-site. However, any diseased material shall be promptly removed from the Compensation Site.

Ground disturbance/ clearance within ephemeral/ short perennial vegetation will be undertaken using spades, with arisings added to reptile refuges (if required), added to an on-site compost area or removed off-site.

5.2. Replacement Planting

Next Generation Data will make allowances for replacing and replanting any tree/ shrub that fails to thrive during the initial 2 years of the management period. Any plant originating from bulb or seed mix that fails to thrive in good numbers, i.e. sufficient for representation within the planting scheme, during this time will also be considered for replacement. Failing, dead or moribund plants will be identified during the annual site checks, and a schedule for replacement planting agreed with Next Generation Data. Further failures beyond year 2 will only be replaced if a large proportion of the planted specimens have not survived. If this is the case the poor establishment will need to be investigated as it may be that the species in question is not suitable for the conditions in which it has been placed.

5.3. Noxious Weed and INNPS Control

Next Generation Data will be responsible for removing all noxious, notifiable or persistent weeds detailed below by hand removal or cutting down. Hand weeding means removing all parts of weeds including roots by hoeing, digging or forking, taking care to remove not more than a minimum amount of soil, and causing minimum disturbance to mulched surfaces or adjacent plants. The Compensation Site will then be kept clear of such weeds in accordance with the following terms:

- The undertaking of weed control will be a priority in the species-rich grassland and swales habitats. Most weed species are opportunistic and can colonise bare ground, becoming dominant and hindering germination;
- Following the establishment of the species-rich grassland and swales vegetation, low levels of weed species (as listed below) will be tolerated, provided they are not more than occasional in the sward/ habitat;
- Low levels of weed species will be tolerated in the ephemeral/ short perennial vegetation. This habitat should be low nutrient, thereby inhibiting the excessive growth of weed species, but by its nature is also comprised of ephemeral species.

Any INNPS identified on the Compensation Site will be removed. Some species, such as Japanese knotweed and giant hogweed, may need special measures and/ or a specialist contractor to remove and dispose of them. The species identification needs to be confirmed (by an ecologist or landscape manager) before any measure implemented or action taken.

The following weed species will be subject to removal (in accordance with the terms above) if they are noted within the Compensation Site:

- Ragworts;
- Creeping thistle;
- Docks;
- Stinging nettle;
- Dandelion;
- Bindweeds;

- Couch grass;
- Bramble – establishing on species-rich grassland only;
- Schedule 9 INNPS.

5.4. Other Issues

Troubleshooting of other unforeseen issues may be required. Some examples are given below. Any other issues will be dealt with and recorded.

- The tipping of garden waste over the boundary fence. This may require, removal of garden waste from the Compensation Site if it includes INNPS or vigorous non-native garden species, such as bamboo;
- Collection of wind-blown litter on to the Compensation Site may require regular litter picking as part of on-going maintenance works;
- Unauthorised public access with its associated issues (vandalism, arson and other anti-social behaviour). Depending on the extent of the problem, solutions could range from checking the boundary fence and sealing any gaps to local community liaison.

6. Monitoring and Reporting

6.1. Monitoring

Annual monitoring by Next Generation Data will be undertaken of the Compensation Site, with additional visits in the first two years to ensure establishment. As there will be activities on site that need undertaking more than once a year, this is considered reasonable.

The results of all monitoring will be used to inform changes to the EMP post-implementation, which shall be undertaken by a suitably qualified and experienced person, either an ecologist or landscape manager with nature conservation experience (hereafter referred to as the suitably qualified person).

The suitably qualified person carrying out the monitoring will consider triggers for actions that may be required as a result of the monitoring, these (in addition to programmed maintenance) may include but are not limited to:

- The need for replacement planting (primarily in years one and two);
- Reactive works, such as litter picking or bird box replacement;
- Scrub clearance at or repair to reptile refuges;
- Spot treatment of noxious weeds;
- Remediation work (creating bare ground) within the ephemeral/ short perennial habitat.

6.2. Reporting

The management proposals outlined in this EMP provide a basis for management of existing and created habitats within the Compensation Site to achieve suitable ecological compensation. To a certain extent, natural processes will dictate appropriate management practices for the habitats, both those newly created and retained. Therefore, an annual review of habitat management measures will be undertaken with any outstanding issues reported back to Next Generation Data in a short, written document within that maintenance year. The information within will be used by the suitably qualified person to update the EMP and each year's report appended.

The aim of this process will be to review progress on habitat management to date and set conservation management priorities for the forthcoming year, specifying in detail what tasks will be undertaken and how they will be timetabled and resourced. The review will also provide a feedback mechanism to report on the outcomes of conservation management undertaken on the Compensation Site.

Copies of the monitoring reports will be made available to the Newport City Council Ecologist on request. The monitoring prescriptions provided here may be altered, if necessary, by a suitably qualified person post-construction to maximise the benefits to wildlife and the overall biodiversity of the Compensation Site. There must be scope for the EMP to evolve, as this will allow for adaptation, particularly to climate change, and subsequently allow some habitat resilience.

7. Ecological Management Summary

Table 7-1 Ecological Management Summary

Ecological Feature	Prescription	Years									Comments
		Timing	Annually	Year 1	Year 2	Year 3	Year 4	Year 5	Every 3 Years (from 6 to 20)	Every 5 Years (from 10 to 20)	
Ephemeral/ short perennial vegetation	Habitat creation comprising turf/ vegetation removal and (if necessary) import of clean rubbles	October to March		X							See Section 4.1.1
	Removal of tree saplings, encroaching scrub, weeds and vigorous grasses	October to March				X			X		
	Bare ground creation (as required)	October to March				X			X		
Established scrub	Scrub management/ pruning	September to February				X			X		See Section 4.1.2
Reptile refuge and invertebrate log piles	Build refuge and log piles	October to March		X							See Section 4.2.6
	Scrub cutting (reptile refuges only)	October to February	X								
Noxious weeds	Inspection and control where necessary	May - June		X	X	X	X	X	X		See Section 5.3
Monitoring and reporting	Site check	March or October	X								See Section 6
	Review of EMP	End of year	X								

8. Implementation and Mechanism for Long-term Management

8.1. Implementation

The initial implementation of the reinstatement works, as outlined above under Section 4.3 will be the responsibility of the developer and will be completed as part of the Scheme whilst occupying the Site.

8.2. Long-term Management Provision

This section is to be completed by the developer post-completion and contains details of the mechanisms by which the long-term implementation of the plan will be secured and those responsible for its delivery.

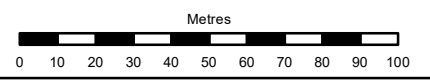
Developer:	Next Generation Data
Legal mechanism(s) for protection of the site:	Direct appointment of contractor under a commercial contract.
Funding mechanism(s):	Direct appointment of contractor under a commercial contract.
Body or bodies responsible for management:	Morris Grounds Maintenance.

Appendices



Appendix A. Site Boundary Plan

- Red Line Boundary
- Blue Line Boundary



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Atkins Limited®
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Client

Vantage

Project

Vantage DC3, Newport

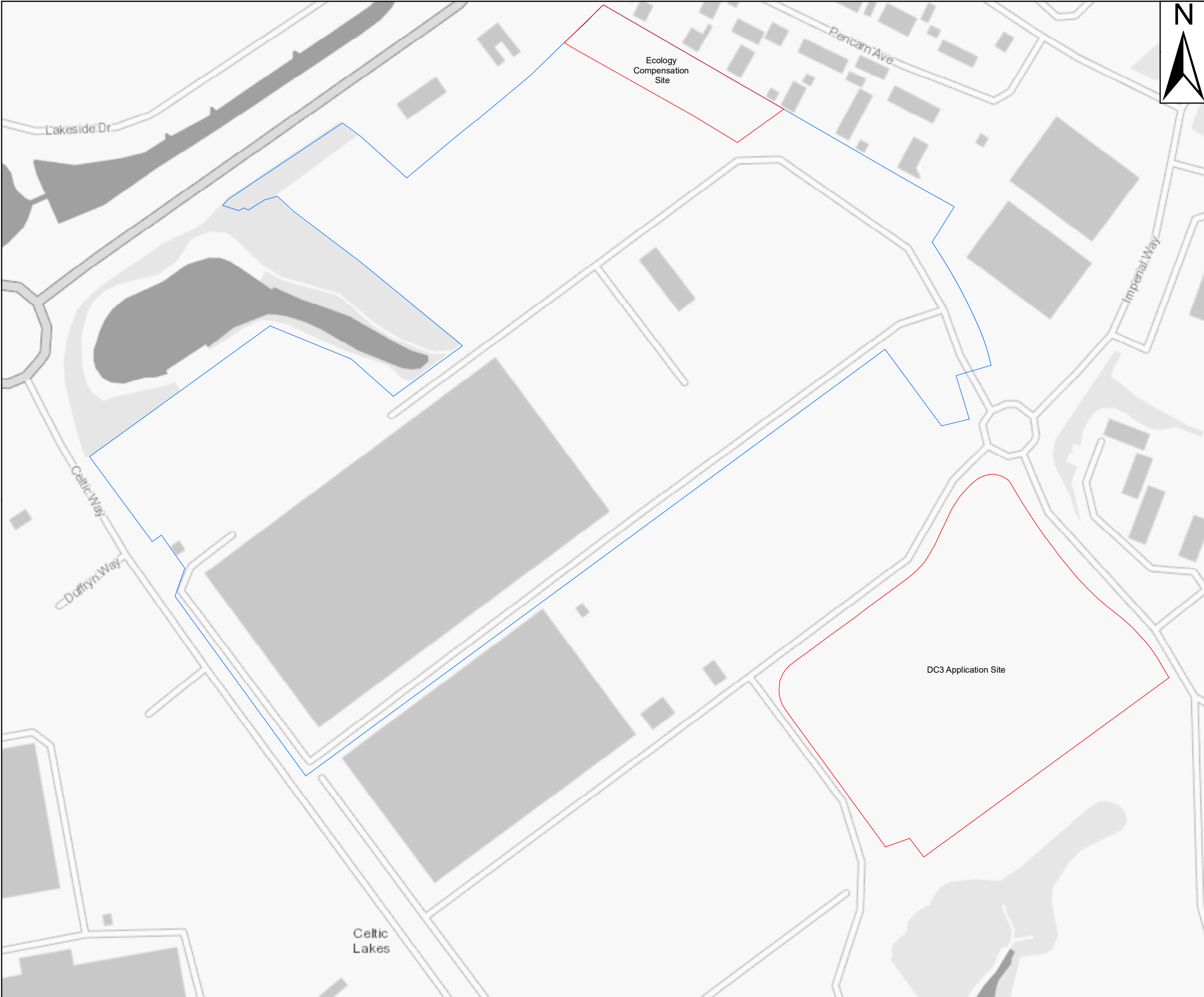
Title

EMP - Habitat Management Plan
 Site Boundary Plan

Sheet Size	Original Scale	Designed / Drawn	Checked	Authorised
A3	1:2,000	JAM	PW	AW
		Date	Date	Date
		19/10/20	19/10/20	19/10/20

Drawing Number
 Newport_DC3_Boundary Plan_01

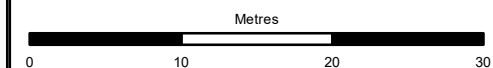
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Appendix B. Habitat Management Plan



- Ecology Compensation Site Boundary
- Blue Line Boundary
- Bat box
- Bird box
- Log pile
- Reptile refuge
- Bare Ground and Hardstanding
- Dense Scrub
- Ephemeral/Short Perennial Vegetation
- Scattered Scrub
- Short Ephemeral Wet Grassland Mosaic



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Client
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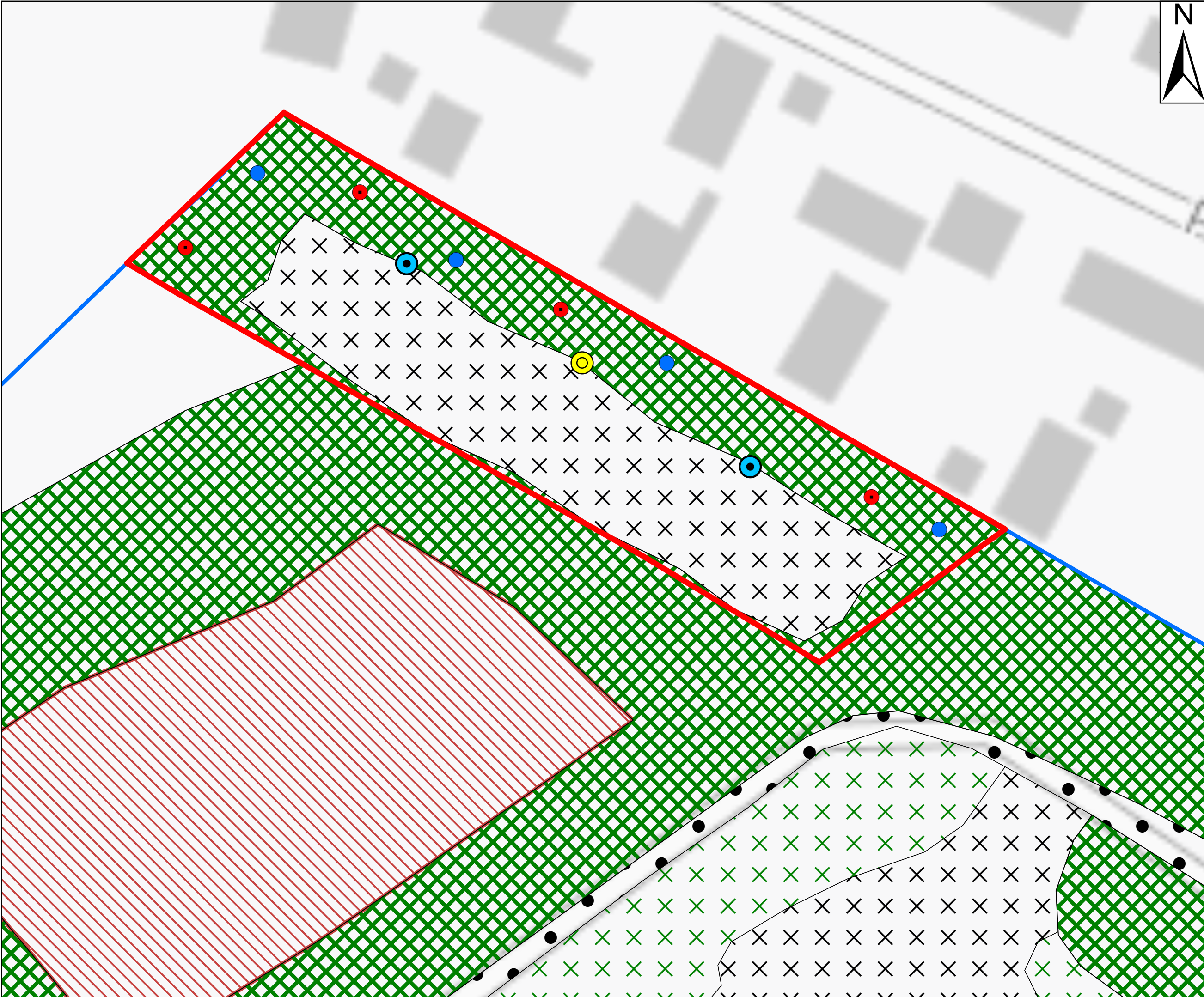
Project
 Vantage DC3, Newport

Title
 EMP - Habitat Management Plan
 Ecology Compensation Site

Sheet Size	Original Scale	Designed / Drawn	Checked	Authorised
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		Date	Date	Date
		19/10/20	19/10/20	19/10/20

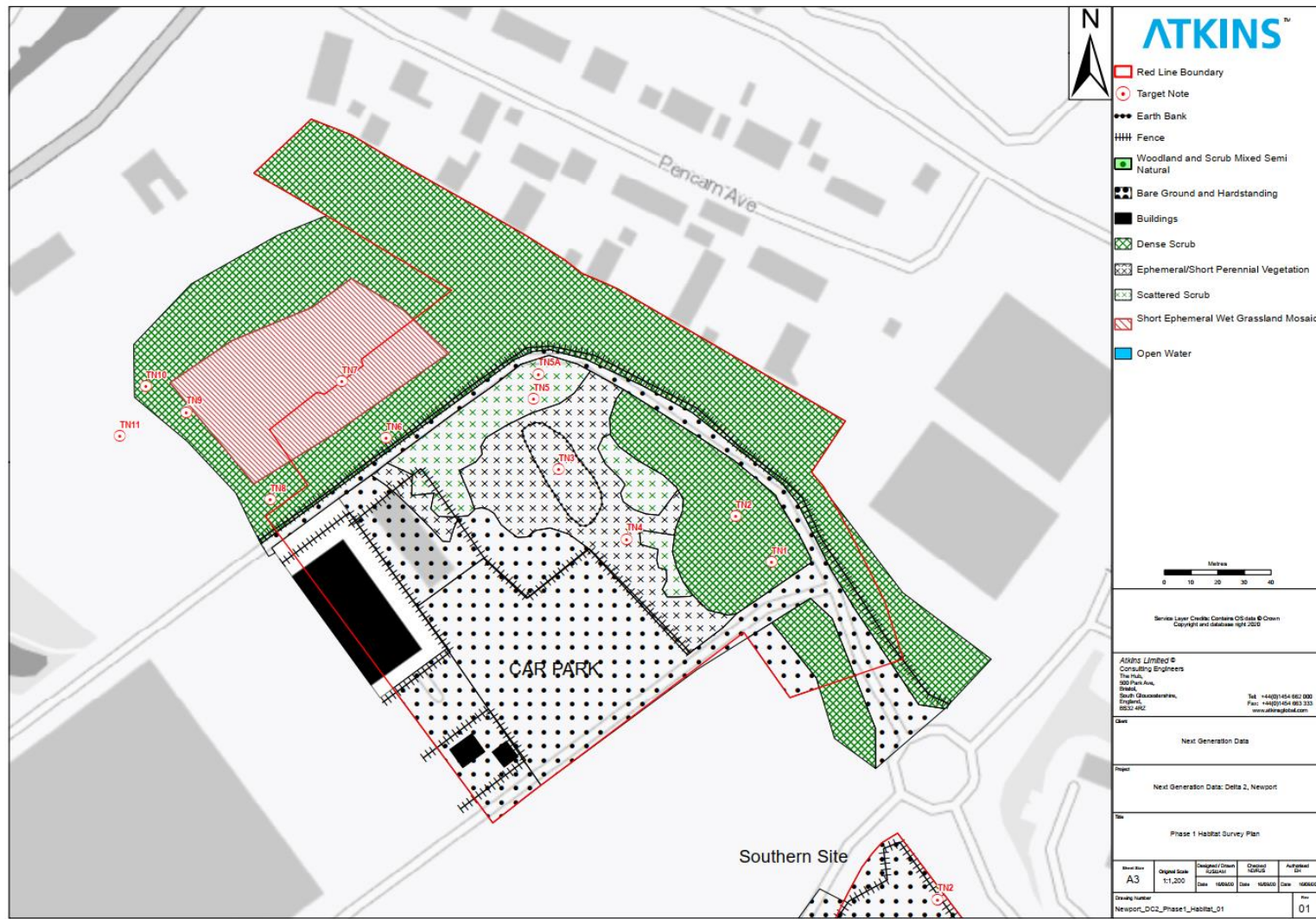
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Appendix C. Phase 1 Habitat Plan and Target Notes

C.1. Phase 1 Plan for DC2 showing existing Compensation Site habitat

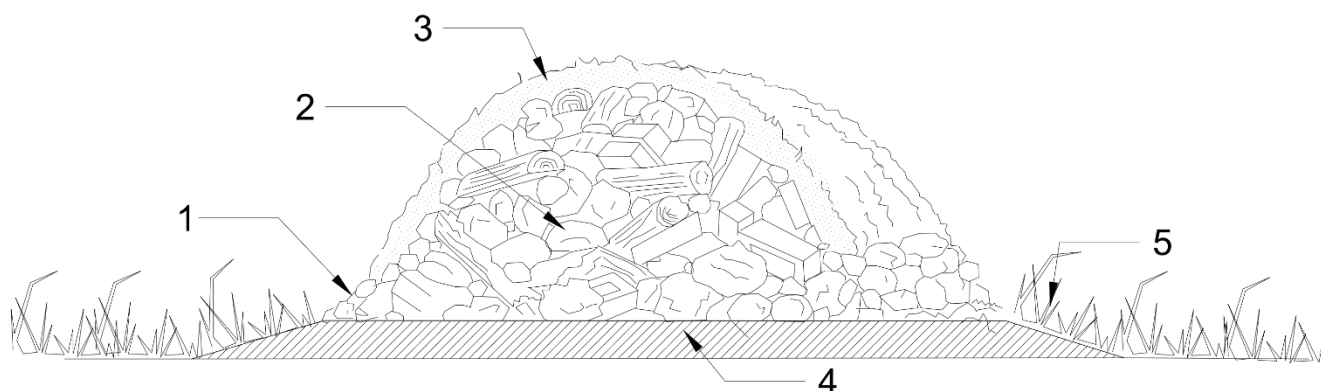


C.2. Target Notes

Target Note	Description
TN1	Mature oak tree with cavity in small limb on north aspect of tree, potentially suitable for roosting bats. Other features could also be present but was difficult to determine from the ground due to heavy foliage and dense scrub surrounding tree, preventing easy access.
TN2	Dense scrub comprising a mixture of native and non-native species, including bramble, dog rose, dogwood (ornamental variety) and willow sp.
TN3	Earth bund supporting mosaic of ephemeral/ short perennial vegetation, species rich. The following species were noted: black medick, grass vetchling, ribwort plantain, selfheal, ragwort, bristly oxtongue, common field speedwell, common fleabane, pendulous sedge, smooth tare, creeping buttercup, common bird's-foot trefoil, spear thistle, redshank, scarlet pimpernel, perforate St John's wort, prickly sow thistle, teasel, soft brome, scented mayweed, Guernsey fleabane, pearly everlasting and square-stalked willowherb.
TN4	Mosaic of scattered scrub/ bare ground/ephemeral/ short perennial vegetation. Species recorded: yellow-wort, ragwort, common fleabane, black medick, bee orchid, selfheal, creeping buttercup, Yorkshire fog, scarlet pimpernel, white clover, bristly oxtongue, scented mayweed, grass vetchling, common mouse-ear, ribwort plantain, crested dog's-tail, false oat-grass and creeping thistle.
TN5	Cotoneaster shrubs lining scrub road boundaries
TN6	Old bird's nest in semi mature tree
TN7	Area of dense scrub
TN8	Wet ephemeral grassland mosaic habitat
TN9	Laurel bush
TN10	Small sunken ree/ditch depression in wet, short ephemeral grassland
TN11	Wetland area habitat

Appendix D. Reptile Refuge and Log Pile Specification

D.1. Reptile Refuge Design



NOTES:

- 1 – Margins of refuge to have fill exposed, allowing access.
- 2 – Insert clean fill (hardcore, brick, rubble, logs, sleepers, etc.) overlaid with loose subsoil/ topsoil sources from site if possible, alternatively, clean imported soil can be used.
- 3 – Graded topsoil to cap construction, ideally with site-won turf covering.
- 4 – Build up base to minimum of 150 mm above ground level to ensure base of refuge sits above winter surface water levels.
- 5 – Surrounding rough vegetation.

Based on a design in Langton, T.E.S., Beckett, C.L., and Foster, J.P. (2001), Great Crested Newt Conservation Handbook, Froglife, Halesworth.

D.2. Log Pile Specification

The log piles or stacks will be constructed as follows:

- It will be built by stacking different diameter logs (or branches no less than 30 mm diameter) of the same length on top of each other;
- Logs should be at least 0.5 m long and not much longer than 0.7 m, otherwise they may become too heavy to lift;
- To help keep the wood damp, the lower logs need to be buried a few centimetres into the soil;
- The pile or stack should be at least 1 m in length;
- To stop the logs rolling away a stake needs to be driven into the ground at each end of the stack;
- On-site logs should be used for this where possible;
- A shady spot near scrub/ bramble scrub or along a boundary would be a good place for a log pile, but the under established trees should be avoided due to the risk of compacting the root zone.



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